HISTORIC STRUCTURE PRESERVATION GUIDE

for the

Civilian Conservation Corps Buildings
Bandalier National Monument
Sandoval, County
New Mexico

Volume 1

General Instructions

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Prepared by
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Code of Federal Regulations ..... CFR

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General Services Administration ..... GSA

Harper's Ferry Center ..... HFC

Historic American Building Survey ..... HABS

Historic Structure Preservation Guide ..... HSPG

Historic Structure Report ..... HSR

Maintenance Management System ..... MMS

National Park Service ..... NPS

Programmatic Memorandum of Agreement ..... PMOA

State Historic Preservation Officer ..... SHPO

Washington Office ..... WASO

This document is intended for use by the maintenance staff and cultural resources management staff of Bandalier National Monument (BAND), and others designated, expressly for use on the buildings constructed by Civilian Conservation Corps (CCC) in the administration and residential areas in the lower Canyon de los Frijoles, plus the entrance station and the fire look-out tower.

This document is a "special resource plan" as identified by the National Park Service (NPS) "Cultural Resource Management Guidelines" (NPS-28). It is defined in the guideline as follows:

> Historic Structure Preservation Guide (HSPG): Directs preservation maintenance activities on specific historic and prehistoric structures once the structures are in a maintainable condition. It serves as a reference for programming, continued housekeeping, and routine and cyclic preservation maintenance for park maintenance personnel. Tailored to the needs of historic or prehistoric structures, the document provides necessary information for orderly, timely, and proper inspection and maintenance.

In addition, it provides a way to evaluate maintenance activities, determine their strengths and weaknesses, and adopt appropriate corrective measures. Any proposed action not covered by the HSPG which affects the fabric or historic appearance of structures, or the archeological integrity of structures, or of associated sites must be submitted to the Southwest Regional Office for professional evaluation and certification. An HSPG has three basic sections: general instructions, technical instructions, and reference materials. (From NPS-28, Release Number 3, Chapter 2, page 21.)

The three basic sections of the HSPG are presented in three companion volumes: Volume 1 contains general instructions (called Division 1) and the schedules for inspecting the buildings and organizing work, Volume 2 contains the technical instructions (divided by materials into Divisions 2 through 16), and Volume 3 contains reference material. As a matter of economy, Volume 3 is not reproduced as part of the set for general distribution. It is a cumbersome volume, continually growing as the HSPG users incorporate pertinent documents. It is the record system of the maintenance management process and would be of little value outside the park.

The materials, procedures, and preventive maintenance schedules, as specified herein, have been carefully chosen for the best combination of authenticity of appearance and preservation. Unauthorized deviations from the requirements of this document can only serve to dull or destroy the careful attention to historical

authenticity which went into the restoration work, as well as the original fabric and workmanship of the resources that have been preserved.

It is not the intent of this document to impose hardships upon the park maintenance staff. Rather, it is intended as an aid and to facilitate the proper maintenance of the resources. To this end, it contains detailed checklists and instructions relative to maintenance procedures to be carried out on this resource, and will ensure consistency in the materials and procedures utilized even though personnel changes, etc., may occur.

This is not a static document. It is intended that this be a working document, to be actively used by the park maintenance staff for the implementation of appropriate maintenance procedures on the resource. Change is not only encouraged through additions and/or amendments; correct use of this guide requires it. Changes and additions are to be made as new information becomes available and as better methods to maintain and preserve the structure are developed. Additions are also to be made when the rehabilitation of the structure is complete.

Working copies of the guide in loose-leaf form are being supplied to the park as well as other appropriate offices. The loose-leaf format of this document was designed to make it easy to incorporate changes, deletions, and additions. It also encourages the actual use of the guide as portions can be pulled out, copied, and used individually as required. Particular care of these documents is important.

Ongoing maintenance and repair of historic structures has proven to be an important factor in their preservation and in fulfilling the NPS mandate to "conserve and protect" our nation's cultural resources for the benefit and enjoyment of present and future generations. It is hoped that this HSPG will play a meaningful role in this stewardship process.

VOLUME 1

DIVISION 1

GENERAL INSTRUCTIONS

PART 1: ACKNOWLEDGEMENT

1-1 COMPILER: This document was prepared by the Historical Architecture Section, Central Team, Denver Service Center (DSC), National Park Service (NPS), Denver, Colorado, by Historical Architect David Scherer.

1-2 ASSISTANCE: The assistance of the superintendent and staff of the BAND is acknowledged and appreciated, with particular thanks to Archie Valdez.

PART 2: INTRODUCTION

2-1 PURPOSE: This HSPG has been prepared in compliance with NPS-28 which requires that such a document be prepared when a historic structure has received its ultimate treatment. The guide identifies continuous and systematic maintenance procedures, and provides information pertaining to the present condition of the structure. It also provides maintenance personnel with an information base to use as a reference guide to facilitate planning, programming, budgeting, and performing preventive, cyclic, and routine maintenance of the CCC buildings at BAND.

In addition, it provides a means for evaluating maintenance activities, for ascertaining their strengths and weaknesses, and for adopting appropriate corrective measures. It is the official document guiding all preservation maintenance activities.

The HSPG presents a maintenance management process whose overall purpose includes the following objectives:

- To provide maximum effectiveness for the protection and preservation of the cultural resources.
- To immediately identify problems, thus reducing the loss of historic fabric.
- To provide information for planning and setting priorities.
- To guide the programming funds, or provide justification for budget requests.
- To reduce costs.
- To assure continuity from one year to another, one maintenance worker to another, and one manager to another.

. To reduce crisis maintenance by maximizing scheduled maintenance.

. To establish a system of accountability for maintaining historic structures.

. To maintain an effective record system and to provide maintenance personnel with pertinent information about the structures.

2-2 INTENTION: It is intended that the structures be kept well maintained, clean, safe, and attractive to visitors and staff. Visual inspection will be the primary tool for determining when maintenance of the CCC buildings is required beyond housekeeping and cyclic projects which are preplanned and scheduled in the HSPG.

The maintenance treatments proposed in this guide have been carefully chosen for the optimum authenticity of appearance and serviceability. Deviations from the requirements of this document will, more than likely, destroy or alter the careful attention that has gone into the restoration work, as well as the preservation of historic fabric and original workmanship.

2-3 LEGAL AUTHORITY: Cultural resources under the jurisdiction of the NPS are protected by the provisions of the National Historic Preservation Act, as amended, 1980. Regulatory procedures are promulgated in 36 CFR 800. This HSPG falls under "Preservation Maintenance" compliance procedures established by the Programmatic Memorandum of Agreement (PMOA) between the NPS, the Advisory Council on Historic Preservation (ACHP), and the National Conference of State Historic Preservation Officers (SHPO). Maintenance of the CCC buildings legally requires specific materials and tools which may not be available through normal General Services Administration (GSA) procurement channels, and may also require procedures to be followed even though they are not the most expedient in terms of park operations. Expediency or economy are not sufficient justification for disregarding the provisions of this document. Any such deviation resulting in an adverse effect on the historic appearance or integrity of the historic structure may be in violation of the law.

PART 3: DOCUMENTATION ORGANIZATION

3-1 FORMAT: This HSPG is designed and formatted to assist the park maintenance staff in the appropriate maintenance of the CCC buildings to ensure consistency in materials and procedures utilized, even in the event of personnel changes. Although the

format has been designed to be self-evident, the way in which the HSPG is intended to work is as follows:

A. Throughout are references to the process of preservation maintenance as a system composed of components which are cross-referenced in this document by volume and section number. In a sense, this process is a journey or excursion through several stages of annual and multi-year cycles.

B. This language of traveling through steps is used in order to reinforce the concept that preservation maintenance (all maintenance, for that matter) is more meaningful and effective when it can be visualized and pursued as a logical planned journey through a series of preconceived phases and not simply taken as a random, chance process.

3-2 MULTI-VOLUMES: The multi-volume format has been selected to facilitate concentration on one component of the maintenance system at a time. (The use of these components in the overall HSPG process is described in Section 01200.) The information collected, compiled, researched, and investigated for inclusion in the HSPG will be presented in a format compatible to the Maintenance Management System (MMS).

A. Volume 1: Instructions and schedules are always the starting point as they describe the entire process; provide the overall view; are the basis for the logic of the system; and include general organizational instructions (Division 1 and especially Section 01020), the core maintenance management task organizing instruments, and the scheduling forms. It is three-ring bound to encourage changes to refine the maintenance management process. (See Section 01020-3.0, Amendment Procedure). Volume 1 is used to establish a consistent approach to planning, organizing and directing preservation maintenance, and to define appropriate performance standards.

Volume 1 contains specially designed maintenance schedules, the active working component of the HSPG. The schedules form a workbook to plan, organize, and direct three types of preservation activities to meet budgetary and personnel objectives, and to enable a foreman to track the process of maintenance task implementation. It is the intention of the Volume 1 schedules to preidentify and schedule as much of the annual maintenance work as possible. Housekeeping tasks are a basic set of given workload elements; the most obvious level of good preservation maintenance. Over a multi-year cycle, specific preidentified replacement and renewal projects are listed in the cyclic schedules. When these

projects are to occur in the subject year, that particular workload and cost factor can be planned and added to the annual schedule. The third schedule type is the inspection schedule which is designed to identify previously unscheduled problems and deficiencies for routine adjustment, correction, or repair on a time cycle as necessary and determined through semi-annual inspections. To plan the annual workload, the use of good judgement and scheduling creativity to accommodate these less predictable routine maintenance tasks will be necessary. Volume 1 is three-ring bound so that a schedule can be removed, reproduced, worked on, updated, and when tracked through to completion, can then be inserted into Volume 3 to become part of the permanent park records.

B. Volume 2 contains the technical instructions. These instructions are a continuation of the general instructions of Volume 1, but focus on specific maintenance tasks divided for convenience according to material types. The 16-division format of the Construction Specification Institute (CSI) is used and is compatible with the records in Volume 3. Each material division is addressed in a series of paragraphs which provide instructions for inspecting the material assemblage (Part 1.0), conducting the appropriate preservation maintenance (routine adjustments, housekeeping and/or repair/replacement (Part 2.0)), and delineates the appropriate material specifications (Part 3.0).

The technical instructions are designed to be educational and a supplement to staff training. Volume 2 is three-ring bound to facilitate the addition of technical instructions, when necessary, and to enable amendment of specific task instructions as the state-of-the-art in preservation maintenance evolves. (See Section 01020-3.0, Amendment Procedure.)

C. Volume 3's reference material/records, will naturally grow into many binders or file documents. Volume 3 is the title of the vehicle used to store records of use in maintenance operations. By cross reference, it may be tied into the entire park filing system. It provides a place to document preservation endeavors and record resource problems/records. It also becomes a useful reference for planning, estimating, and organizing the maintenance program in following years. Because of sound record keeping in Volume 3, a clearly defined basis for changing or amending various sections of Volume 1, or components of Volume 2, may be established. By comparison, between planned or projected activities and the actual record of accomplishments in Volume 3, a natural feedback loop is created enabling an evaluation of progress and refinement of process.

PART 1: SUBJECT BUILDING INTRODUCTION

1-1 CCC BUILDINGS, BANDELIER NATIONAL MONUMENT: The buildings covered in this document include the CCC constructed buildings in the Frijoles Canyon area plus the fire lookout and entrance station on the entrance road.

1-2 GENERAL SUBJECT STRUCTURE DESCRIPTION: Specific descriptions of the structures contained in the following pages under Section 01010, Part 2, are taken from the Historic Structures Report (HSR) prepared by Laura Soulliere Harrison, Randall Copeland, and Roger Buck (1988). The following narrative describes the park history, it's resources, and the cultural resources for which it was established.

A. The Park: Even though the Bandelier area was proposed for national park status as early as 1888, it was nor until February 11, 1916 that Banbdelier National Monument was established. It was initially under the jurisdiction of the U. S. Forest Service as part of the Santa Fe National Forest. President Woodrow Wilson signed the bill setting the area aside to protect "certain prehistoric aboriginal ruins....of unusual ethnologic, scientific and educational interest."

By September 1930, Horace Allbright, Director of the National Park Service, was expanding the national park system. One of the areas he wanted studied for the feasibility of inclusion in the system was Bandelier. Allbright also wanted to consider expanding the existing boundries of Bandelier to include other archeological sites of similar importance in the vicinity.

On February 25, 1932, President Herbert Hoover signed a proclomaton turning Bandelier National Monument over to the National Park Service and excluding it from the Santa Fe National Forest. The proclomation also enlarged the existing monument to include nearby Otowi and Tsankawi ruins.

B. The Buildings: The park buildings that are the subject of this document were constructed by the Civilian Conservation Corps (CCC). The first permanent building constructed by the CCC was the comfort station (B-1) in the canyon campground (now the picnic area) and was completed in 1934. This building, and all subsequent buildings covered in this document, except for the fire look-out tower, were designed and built in the Santa Fe style of architecture. This style is now referred to as Pueblo Revival or Spanish-Pueblo style.

The last of the thirty one (31) buildings constructed by the CCC was completed in 1941. The buildings fall into four basic locational groupings - the headquarters, cabin, canyon, and entrance road areas.

Construction in the Santa Fe style consisted of battered stone exterior walls, a flat roof surrounded by a papapet and drained by canales, log vigas projecting beyond the exterior walls and supporting the roof, wood latias for the exposed ceilings, and heavy timber lintels over the window and door openings.

C. Signifigance: For many years the value of the park's primary resource, the prehistoric Indian ruins of the 12th - 16th centuries greatly overshadowed the significance of the CCC buildings in the park. The buildings were eventually duly regognized as being historically and architecturally significant for their own intrinsic merit. This group of 31 CCC buildings in the administrative, campground, lodge, maintenance, and residential areas in Frijoles Canyon, and the fire look-out and entrance station on the entrance road were designated a National Historic Landmark District in 1987 by the Secretary of the Interior.

Most of the changes to the buildings over the years have mainly been necessitated by a change in usage. Most of the changes were done on the interior of the buildings and are reversible. Despite these changes, the buildings remain the largest and most unified collection of buildings designed by the National Park Service and executed by the CCC, in the entire park system.

1-3 GENERAL SUBJECT STRUCTURE MAINTENANCE REQUIREMENTS

A. Introduction: In order that a high standard of physical appearance, operations, repair and safety be maintained, appropriate inspections will be carried out by the park maintenance staff. The deficiencies identified by the inspections will be scheduled for correction and added to the basic workload of housekeeping and cyclic replacement and renewal projects. A listing of performance standards describing how the building is to be maintained can be found in Section 01030, Performance Standards.

PART 1: GENERAL INSTRUCTIONS

1-1 INTENTION: Maintenance, at its best, prevents problems from occurring. This is especially important in historic structure preservation maintenance because "problems" may result in the irreversible physical loss of cultural resource's values and a degradation of the resources for which the park was established. On the other hand, it is important not to fix something that is not broken, or to perform tasks that are not really necessary. For example, washing a wall because it is scheduled to be washed, when in fact it is not dirty; or painting something because the schedule calls for painting this year, when the aesthetic effect present is actually something we could live with for another year.

It is the intention of the HSPG to assist in conducting as much preventive maintenance as possible while conducting only that work which is actually needed, as confirmed through routine inspections.

The maintenance staff is the front line of protection and conservation of the resource and, to a very real degree, the authenticity and value of the park resource depends on the "hands-on" maintenance worker. The HSPG has been created to assist in these responsibilities.

1-2 FIRST: Become familiar with the resource that has been trusted to your stewardship. Know the significant features and materials of the building. Know the areas of potential weakness--the points at which the materials and features may fail. Know where rain may enter. Know points where protective skins and membranes may rupture, where accumulations of dirt may deface, where severe temperatures may damage, and where unsafe conditions are likely to occur. Become familiar at which points mechanical/electrical/security systems might break down. Be knowledgeable to where authentic colors, textures, finishes or architectural details are most vulnerable to wear and tear. Know where rainwater control systems (canales, gutters, drains, etc.) may fail, where ice buildup could cause problems, where water lines may freeze, and where the unexpected deficiency is most likely to occur, etc.

1-3 SECOND: Become thoroughly familiar with the HSPG from the beginning of Volume 1 through all reference material in Volume 3. Know how the preservation maintenance management process is supposed to work. Visualize the logic of the entire process from planning and organizing work to directing and implementing tasks to documentation/record keeping and reviewing performance. Develop

an overall vision of this process and know where you fit within that larger context, no matter what task you are currently doing.

1-4 THIRD: As you implement the HSPG and use the guide, make sure you have a copy (especially Volumes 1 and 2) that is yours. A copy that you can write in the margins, underline pertinent information, insert additions and, in general, make it work for you. If it doesn't feel useful to you or if it does not work for you, change it to fit your situation. In time, you may want to formalize changes and make official revisions and amendments. If you should do this, follow the procedures outlined in this section, Part 3.0.

1-5 INSTRUCTIONS: Throughout the HSPG are cross references to other sections or other volumes. These references are an attempt to direct the maintenance process logically through the various preconceived steps or phases. Additional "cookbook" directions should be added as the NPS Maintenance Management program is implemented and it is an ongoing process to inform others on how to proceed most efficiently from one step to the next.

1-6 SUMMARY OUTLINE OF THE MAINTENANCE PROCESS: Refer to the flow chart in Part 2.0 of this section. Below is an outline of sections that follow:

A. 1-7 PLAN AND ORGANIZE WORK
- A. Identify Work
  - 1. Types of Work
    - a. Preventive Maintenance
    - b. Corrective Maintenance
  - 2. Inspection
    - a. Housekeeping Verification
    - b. Cyclic Work Verification
    - c. Routine Work Verification
    - d. Work Location Identification
    - e. Estimated Time and Materials Identification
    - f. Documentation of Conditions
  - 3. Housekeeping Tasks
  - 4. Routine Tasks (from inspection)
  - 5. Cyclic Work
- B. Plan Work
  - 1. Annual Workload Budget

B. 1-8 DIRECT WORK
- A. Schedule and Order Work (organizing)
  - 1. Housekeeping
  - 2. Routine
  - 3. Cyclic

4. Unscheduled Tasks
B. Perform Work (directing and controlling)
1. Job Orders
2. Pretask Briefing
3. Inspection
4. Track Work
C. 1-9 RECORD AND REVIEW WORK (control feedback)
A. Document Work
1. Record Work
2. Documents
B. Review
1. Analysis
C. Update Task Quantities

1-7 PLAN AND ORGANIZE WORK

A. Identify Work

1. Types of Work: Preservation maintenance is conducted for two reasons. They differentiate the major types of work or "categories of maintenance tasks" which are used throughout the HSPG: (a) preventive maintenance, an item that can be scheduled and, depending on frequency, called either "housekeeping" (when performed at least once a year) or "cyclic/project" (when performed more often than annually), and (b) corrective maintenance, when scheduled, is called "routine."

An additional maintenance task of recurring concern in this HSPG is the division of work between those tasks which can be planned and scheduled, and those tasks which were unscheduled. A major job of the maintenance manager is to schedule as much of the workload as possible while planning for those unexpected and unidentified problems or emergency situations.

The two reasons (preventive maintenance and corrective maintenance) for conducting maintenance work and the three categories of maintenance tasks (housekeeping, cyclic maintenance, and routine maintenance) are the following:

a. Preventive Maintenance: The first reason to conduct a maintenance task is to prevent a future problem from arising. An overriding goal of this HSPG and every conscientious maintenance management process is to identify and schedule as much preventive maintenance as is possible and which is necessary to prevent problems from arising. These tasks are invariably repetitive and conducted on a predictable timetable: cleaning, adjusting, oiling, servicing, inspecting, and testing. Or, on a larger scale, entire

system renewal, repainting, reroofing, and replacing features and systems which have a predictable life expectancy. For the purpose of this HSPG, preventative maintenance tasks are divided into two categories: "housekeeping," which is conducted regularly within an annual cycle, and "cyclic" work, which is conducted regularly over a multi-year schedule. The need to conduct preventive maintenance tasks of both types is predictable and therefore can be preplanned and scheduled.

b. Corrective Maintenance: The second reason to undertake a maintenance task is to correct a problem after it has occurred. These corrective tasks are usually routine in nature: repairing something damaged, replacing something worn out, refastening something which has become loose, etc. It is also the nature of corrective maintenance that, although the task itself may be preidentified, precisely when it will become necessary is unpredictable. By their very nature, corrective tasks are only conducted after a deficiency has arisen and only then when that deficiency has been recognized. Therefore, the importance of performing inspections is obvious to the conduct of corrective maintenance.

For the purposes of this HSPG, corrective maintenance tasks (those identified through the inspection checklist process) are called "routine" even though they may be of an unforeseen nature or conducted in response to an emergency problem. We can anticipate various types of routine work: the need to renail loose boards, to reattach hardware which has come apart, to remove an area of rust that was missed during normal housekeeping or that developed between scheduled times for cleaning, to tighten a rattling window, to repair a leaky roof, to replace a broken stair tread, etc. But, these routine tasks can only be identified, quantified, and scheduled for correction after they have been discovered.

A systematic means of discovering these unscheduled maintenance work elements is conducting an inspection. The deficiencies identified can then be scheduled for corrective action along with other tasks already scheduled (on the housekeeping and cyclic schedules).

While most "routine" corrective tasks are small and manageable within the park operating program, occasionally the lines between this work and the "cyclic" work may blur because the task is large, more complex, or expensive. Such tasks, through consultation with the regional historical architect, may require regional funding, either through emergency sources or through a future year cyclic program.

Begin the procedure of planning and organizing the maintenance process by identifying the types of tasks to be conducted. This is done by using the schedules provided in this volume and by conducting an inspection.

2. Inspection: Conduct a comprehensive semiannual inspection using the inspection checklist provided in Volume 1, Section B. The inspection will enable you to compile data to achieve the following objectives:

a. Housekeeping Verification: Verification of housekeeping tasks.

b. Cyclic Work Verification: Verification of the need for larger cyclic work.

c. Routine Work Verification: Identification of other "routine" preservation and corrective work.

d. Work Location Identification: Identification of corrective work location.

e. Estimated Time and Materials Identification: Identification of the extent of problems or deficiencies which hold implications for estimated time and material costs necessary for performing corrections.

f. Documentation of Conditions: For record purposes, establish documentation of the subject resource's conditions at a particular point in time.

After the inspection has been conducted, summarize the results on the inspection summary report (in Volume 1, Section B). In particular, address the objectives listed above. Review the inspection summary report with the area manager who should forward a copy to the regional historical architect for information or to elicit consultation.

3. Housekeeping Tasks: The purpose of the inspection is to confirm the need for and refine the frequency of all the housekeeping tasks identified on the housekeeping schedule (Volume 1, Section A). Compile a field-verified or revised housekeeping task list using the housekeeping worksheets (Volume 1, Section A). Housekeeping worksheets can be drawn up to reflect different periods of the year.

4. Routine Tasks: As noted, performing the inspection will help verify housekeeping and cyclic work already scheduled. In the case of "routine" maintenance, the inspection form itself is the identifying document. For example, we know that the floors need to be swept (a "housekeeping" task) and the inspection will help refine this scheduled task in terms of frequency or work time allotment. And we can predict the need to repaint a building's exterior every 10 years (a "cyclic task), and the inspection will help verify that need this year or allow you to postpone that task. In the same way, we can predict that a wood door will warp, split, or be otherwise damaged (a "routine" maintenance problem), but only the inspection can identify when it needs to be done and how extensive the work is. The inspection checklists (Volume 1, Section B) are organized to help identify unscheduled work of a routine and preventive nature. The checklists are worksheets used to locate deficiencies, prioritize the severity of need, and begin to quantify the work necessary. Transferring the inspection data to the inspection summary report will provide an opportunity to cluster tasks logically and by priority, further define the corrective action to be taken, and quantify the labor/material budget involved for each work element. The worksheets of the inspection summary report are the work planning and organizing schedules. A copy of the inspection summary report should be forwarded to the regional historical architect, through the regional director, with any supporting documentation, under the superintendent's signature.

5. Cyclic Work: The cyclic maintenance schedule in Volume 1, Section C, is an attempt to predict when to anticipate major repairs, replacements, or renewals of material systems (new roofs, painting, etc.). The inspection should confirm their need or lack thereof. Because cyclic work tends to be of a larger scale and more complex than normal housekeeping and routine maintenance, more open-ended or generalized worksheets are provided to plan and organize this work. Like special projects, cyclic tasks tend to have individual characteristics that require special planning. Some cyclic tasks may be contracted out and some may be accomplished by temporary staff increases. At this early stage of identifying work, it is best to list the cyclic work to be done and prepare an outline including each of the major steps necessary to accomplish the job properly. Allot sufficient staff time to execute each subtask or step (e.g., prepare purchase order, request for proposal, contract documents, and drawings; hire personnel; prepare work instructions/specifications; coordinate with park operations; confer with area manager; consult with regional historical architect; prepare and submit an Assessment of Actions Having an Effect on Cultural Resources (Form XXX), check and

develop cost estimates and budgets, purchase materials, perform work, supervise and inspect work, document work, etc.).

B. Plan Work

1. Annual Workload Budget: In this step, all of the above work identified on the various worksheets is simply added together and totaled, giving a picture of the annual workload. (See schedule in Volume 1-D.) If the annual workload identified exceeds the park staff capacity/budget, the lower priority work may be postponed. Discuss priority and postponement of work with the area manager and consult with the regional historical architect. When totaling the annual maintenance workload, add time for maintenance management and inspections and an additional block(s) of time for unexpected problems, unscheduled tasks, emergencies, and unforeseen repairs/corrective tasks. Using the annual workload budget, prepare an annual maintenance calendar.

1-8 DIRECT WORK

A. Schedule and Order Work: Directing work, the second major phase illustrated on the flow diagram in Part 2.0, is based on having preplanned the work schedules derived above (from Volume 1) and doing so according to the HSPG instructions contained in Volume 2, Divisions 2-16. The annual workload budget is composed of a set of identified jobs, much of which has already been time-scheduled. It is essential that the annual workload budget be broken down (organized) into manageable monthly, daily, or seasonal time budgets, work schedules, or maintenance calendars.

The HSPG is organized to plan and direct work within the following task categories:

1. Housekeeping: Several housekeeping worksheets are provided in Volume 1 - Schedules, Section A, Housekeeping Task Schedules. These worksheets are to be used to plan the annual workload scheduling and budgeting. These worksheets are designed to cover any useful length of time. They can be copied and handed out to the staff and function as a job order/work calendar.

2. Routine: Inspection and summary worksheets, as part of the inspection summary report, are provided in Volume 1 - Schedules, Section B, Inspection/Routine Task Schedules. These worksheets, with some elaboration, may be used as job orders (or Form 10-577 may be used) to specifically designate and delegate the routine work involved. The routine preservation maintenance in this category should have been time scheduled as part of the annual

workload budget planning. If it was not done then, now is the time to add this routine work to the work calendar.

3. Cyclic: Summary worksheets (Form XXX) and equipment inventory sheets are provided in Volume 1 - Schedules, Section C, Cyclic/Project Schedules. Special projects and cyclic work have been identified and the substeps that are necessary to execute the projects have been outlined in the planning and organizing step. Estimates for the time and material cost involved on the cyclic/project worksheet have been completed. If the time schedule for implementation has not been designated, now is the time to add this work to the annual work calendar so that individual substeps can be ordered or assigned and the project accomplished in a timely manner.

4. Unscheduled Tasks: A time slot(s) for unscheduled tasks should always be included as part of the daily, weekly, monthly, seasonal, or whatever time period or master calendar. A reasonable factor for supervision, inspection of progress, administration, and other unscheduled corrective maintenance and emergencies should also be included. Mid-year and periodic inspections will likely be tasks to the workload schedule which were previously "unscheduled."

B. Perform Work: The execution of maintenance tasks should include four substeps: issuing job orders, conducting a pretask briefing, performing spot checks or inspections, and tracking the work. Time for each of these activities should be allotted in the work budget above.

1. Job Orders: Job orders, whether on Form 10-577, worksheet schedules, or some other written or oral format, have been preplanned and scheduled (above). Issuing the job order simply needs to be done clearly and with confidence that all parties mutually understand the job or task.

2. Pretask Briefing: Whether a so-called "simple" housekeeping task or a "complex" cyclic project, it is essential that those performing the work adhere to the technical instructions contained in the HSPG, Volume 2. (You may want to copy pertinent instruction/specification sections to give to the work crew.)

This is not only a matter of your responsibility to give clear and proper instructions to the staff, but is also a matter of cultural resources preservation compliance. It is desirable in the pretask briefing to not only confirm the individual's knowledge of how to execute the task and to meet the task objectives and performance

standards, but also to have an understanding and appreciation for the overall cultural resource preservation intention. You may want to make copies of sections of the HSPG (such as Section 01030, Performance Standards) and hold general staff briefings occasionally to discuss various concerns. Training is another aspect of the pretask briefing. It may be necessary to demonstrate the task or conduct on-the-job training. In any event, the pretask briefing offers the opportunity to identify training needs.

3. Inspection: The major inspection task using the inspection checklists should have been scheduled and budgeted in the planning phase. The inspection at this phase of performing work is periodic as the work progresses. This is not done so much as a check on the crew, but rather to be available for questions and to collect ongoing documentation for work by taking an occasional photograph, especially at the conclusion of the work, to insert in Volume 3.

4. Track Work: As part of the periodic inspections, note progress and check off and date work completed on the various worksheets and job order schedules. As work is tracked, gather appropriate samples of the work (e.g., paint colors) and manufacturer's product literature to compile a record of the work.

1-9 RECORD AND REVIEW

A. Document Work: The third major phase of the maintenance management process shown on the flow chart, recordation and review is contingent upon your keeping good documentation of work as it progresses (performance and cost reports) by tracking tasks through to completion. The data gathered throughout each task will be useful for future reference but, more importantly, it will be useful in updating future time and cost estimates (workload budgeting) and in making procedural requirements in the maintenance management process.

1. Record Work: The table of contents of Volume 1, Section 00000, includes a description of the contents of Volume 3. Copies of these sections are inserted at the front of Volume 3. Become familiar with the lists of "contents" to gather appropriate information for record keeping purposes. Gather as much of this documentation as possible while the work is underway and at its immediate completion, rather than waiting until the end of the year when assembly of the data is much more difficult.

2. Documents: Compile whatever has been collected into a labeled report, staple it together as appropriate, and make sure it

includes the date when the work was done. Place the documents in the appropriate three-ring binder of Volume 3.

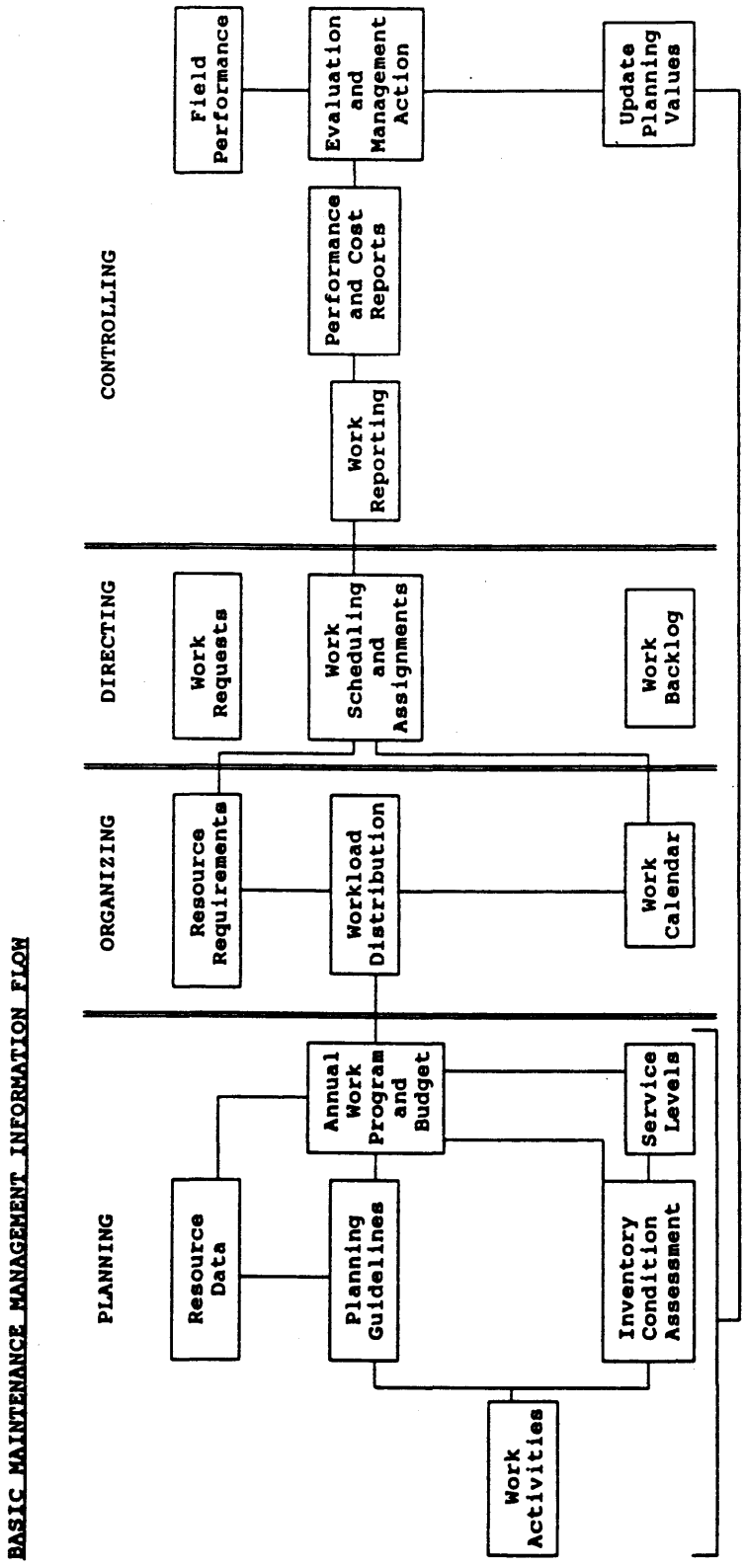
B. Review

1. Analysis: Prior to filing the documentation away as reference material in Volume 3, examine it to the extent necessary to make immediate useful observations. In particular, compare the actual time and cost with the scheduled estimates, and mark up the revised and updated information. Be especially attuned to increases or decreases in time required for a task, differences in cost of materials, and the amount of time allotted for "unscheduled" work.

C. Update Task Quantities: Prior to identifying work in the planning phase for the annual workload budget, you should update time/cost estimates based on actual data and analysis as noted above. However, it is recommended to update the master schedules and inspection checklists throughout the year as observations are made. One purpose of this final phase of the maintenance system is to increase the quality of predictions, increase the quantity (percentage) of work to be scheduled, and increase the accuracy of time/cost estimating. When this task is an ongoing concern, rather than done at the end of the year (hindsight), it will be fresh in mind and most valuable.

PART 2: FLOW CHART

2-1 GENERAL: The maintenance management process flow chart does not represent a time cycle per se, but is rather a conceptual and graphic description of the maintenance process which may cycle through the various steps several times a year. This model is generally based on the General Accounting Office's (GAO) research.



BASIC MAINTENANCE MANAGEMENT INFORMATION FLOW

PART 3: AMENDMENT PROCEDURE

3-1 WHEN: Changes, revisions, and additions (all called amendments) in this document can be undertaken at any time.

3-2 WHO: Anyone can initiate an amendment. Users, in particular, are encouraged to initiate amendments. Others who may amend the document include the regional historical architect, chief historical architect (Washington Office (WASO)) or curatorial specialist (Harpers Ferry Center (HFC)), and preservation architects (DSC). Approved amendments shall be distributed under the signature of the park superintendent to all document holders, who are: WASO, regional office, DSC, and the park.

3-3 APPROVAL: The cultural resource preservation staff of the regional office shall approve all amendments to the HSPG. The assessment of effect (Form XXX) may be used as appropriate.

3-4 EXCLUSION: Amendments in the form of additions of reference materials and records in Volume 3 do not require either approval or distribution. However, an information copy of reference materials added to Section 3 will be provided to the Southwest Regional Office.

3-5 HOW: Amendments to the process of preservation maintenance management and technical or procedural instructions shall be typed as replacement pages (or new pages) for insertion in the appropriate section(s) of the HSPG. The revised (or new) page(s) should have headers (section name and number) and footers (park code/section number, page number and date) matching the HSPG format. Using the amendment date will indicate the time of the "update." The proposed amendment should be submitted to the regional cultural resource preservation staff, attention regional historical architect, for approval and certification. The approved amendment is then transmitted to the park superintendent for distribution. Document holders simply remove old pages and insert the new ones.

PART 4: REFERENCES

Building Failures: Diagnosis and Avoidance, W.H. Ransom, E. and F.N. Spon Ltd. New York, 1981.

Common Defects in Buildings, H.J. Eldridge, Her Majesty's Stationery Office, London, 1976.

Building Defects and Maintenance, British Royal Engineer's Digest, Building Research Station and Princes Rinsborough Laboratory, 1977.

PART 1: INTRODUCTION

1-1 STANDARDS: Unless otherwise stipulated by individual sections of technical instructions/specifications, the following performance standards should be met. The preservation through maintenance on the subject structures is dependent upon adherence to the following standards. Other information in this document in Volume 2, Divisions 2-16 and sections concerning policies and laws are also designed to assist in meeting the maintenance performance standards, however, they should always be considered as a means by which the standards are met and not an end in themselves. The list of standards is divided into areas of concern and is the responsibility of the park staff.

PART 2: GENERAL STANDARDS

2-1 MAINTENANCE WORK

A. Make repairs as needed to all surfaces and building features necessary to maintain a satisfactory appearance, a sound watertight building envelope, and to prevent any safety and health problems from occurring.

B. All repair and maintenance will be undertaken within the constraints specified in the HSPG or as otherwise approved by the regional historical architect, if not covered specifically in this document.

C. All maintenance work shall be done by qualified technicians, artisans, or trade mechanics in accordance with the HSPG or regional historical architect approval.

D. Replacement not in kind must be approved by the regional historical architect through the Form XXX approval process.

E. Repairs necessary to protect the safety of the occupants are designated as "emergency" and shall be made within 48 hours. Protective barriers, as required, will be erected within 2 hours after the problem is detected.

F. Repair and maintenance necessary to insure a sound watertight building envelope must be made within 30 days but is designated as second to safety considerations in priority.

G. As determined by the NPS during a regularly scheduled or an unscheduled inspection, all repair and maintenance deficiencies

shall be corrected in a timely fashion appropriate to the level of repair.

H. Unscheduled routine maintenance deficiencies detected during inspection shall be completed within a timely schedule but will not exceed one half the time between the regularly scheduled tasks. As an example, if canales are scheduled for cleaning every 3 months, an identified deficiency must be corrected within 1-1/2 months.

I. Cyclic repair and maintenance deficiencies detected during inspection, not of an emergency or watertight building envelope nature, shall be made within a timely schedule but will not exceed 120 days.

J. Maintenance does not include the complete replacement of any system or feature, nor the extension or addition of existing system. An example of the addition or extension would be the addition of another water fountain in a room which already has a water fountain. Such changes, additions, remodeling, or rehabilitation must be submitted in writing for approval by the regional historical architect through the Form XXX approval process.

K. Normal maintenance will not consist of replacement of historic fabric with the following exceptions (which may be replaced as necessary in a manner duplicating similar adjacent work):

1. Nonornamental paint applications.

2. Pointing mortar.

3. Nondecorative window, skylight and protective housing over skylights, and door glass.

4. Floor and wall tile.

5. Nondecorative wall and ceiling plaster.

6. Roof drainage features such as flashing, canales, and subsurface inlet drains.

7. Insulation.

8. Electrical lights, switches, outlets, plates, wiring, and equipment.

9. Water, and gas distribution lines.

10. Air handling ducts and equipment. Does not include grilles and radiators.

11. Weather stripping, caulking, and sealants.

12. Glazing putty.

13. Nonhistoric hardware.

14. Nonhistoric plumbing fixtures, sewer and waste lines, and equipment.

15. Necessary components of the electrical or security systems to insure continuing function, not necessarily in kind.

16. Necessary components of the mechanical systems to insure continuing function, not necessarily in kind. This would not include extant features such as grilles and radiators.

17. Necessary components of the plumbing system to insure continuing function, not necessarily in kind.

L. Maintain all significant architectural features as identified during the HSR development process to the level approved by the NPS. Those architecturally distinctive features, whether damaged or not, are not to be removed from the building or altered after the rehabilitation without the written approval of the regional historical architect.

M. Maintain drinking fountains and toilet fixtures in a clean and sanitary condition at all times. Make repairs when required due to vandalism, damage, or deterioration for whatever reason to maintain fixtures in proper working order.

N. Repairs to the parapet walls will be made when seals or coping elements are broken or otherwise pervious to free moisture.

PART 3: DRAINS

A Wood canales will be repaired/maintained when they show signs of rot or deterioration; when the lead coated copper liners are rusted, corroded, bent, torn, ripped, or otherwise damaged.

B. Maintain the ground drains in a condition so that overflow or backup does not occur and the runoff is directed to the storm water system.

C. Maintain interior building drains without leaks and condensation.

PART 4: SITE

A. Grounds shall be kept uncluttered and free of debris. This includes entrances, stairways, walkways, and other areas.

B. Site drainage shall be maintained so that water does not accumulate at the base of walls or other building components. Sprinklers shall be directed so that they will not wet the building.

C. Maintain walks, ramps, steps, and stairs in a safe condition at all times. Keep them free of snow, ice, and other debris.

D. All metal features permanently attached to the building, porticoes, walks, ramps, or walls are to be maintained free of rust and/or corrosion, and firmly attached as appropriate for their function. Such items include: rails, vents, flagpole, brackets, sprinkler piping, ventilators, hoods, fences, and other decorative features.

E. Trim grass, weeds, etc., to provide and maintain proper access to any and all utility facilities and to the level specified as part of a consistent landscape plan for the park.

F. Maintain all exterior lights, electrical outlets, fixtures, and features permanently attached to the structure, and those which are used to light the structure itself. Supply and replace all burned out and defective electric lamps serving the building and walks, ramp, stairs, and porticoes associated with the building. Included are all emergency and safety related lights.

PART 5: WALLS AND OPENINGS

A. Repair wall surfaces when any portion of a wall plane or architectural feature is loose or damaged, when greater than 5 percent of the paint has peeled or flaked or when details are loose, have been broken, or are missing.

B. Maintain doors and windows in an operative condition. Repair doors and windows when hinges are loose, wood is rotten, door or

sash drags, glass is broken, hardware is loose, stops and sides are damaged, or when paint has flaked or peeled from more than 5 percent of the surface of the door or doorframe facing.

PART 6: INTERIOR

A. Ceiling and Wall Plaster: Maintain ceiling and wall plaster and sheetrock surfaces without exposure of the substrate or plaster lath, with no more than 1 percent of the paint peeling or flaking, and with no more than 2 percent of the plaster soft, crumbling, cracked, or broken on any feature or wall or ceiling plane.

B. Ceilings: Maintain ceilings free of rot, separating layers, and cracks which threaten the stability of the element, peeling and flaking paint, stains, and inappropriate patches and repairs.

C. Tile, Wood, and Stone Floors: Floors shall be maintained without loose or missing sections or inappropriate repairs. Wood floors shall be maintained without loose or missing boards or inappropriate repairs and damage to finish coating.

D. Windows: Windows shall be maintained without broken, missing, or cracked glass; loose or missing putty to the extent that moisture penetrates; or peeling, flaking, or otherwise deteriorated paint.

E. Skylights: Skylights shall be maintained without leaks; missing, broken or cracked glass to the extent that moisture penetrates; and damaged seams and flashing.

F. Stair Treads, Risers, and Railings: Maintain stair treads, risers, and railings in a safe condition without deterioration, or loose or broken members.

G. Electrical System: The complete electrical system shall be maintained in a safe and efficient manner. Repairs shall be undertaken when wiring is loose, not attached securely, frayed, or insulation missing, and switches, outlets, etc., are damaged. Also, when overloading of any of the circuits occurs more than once per week.

H. Mechanical System: The mechanical system shall be maintained in a safe and efficient manner. Air exchange requirements shall meet the requirements specified by the government after the use of the specific spaces has been designated. Temperature range requirements will be as prescribed by the park.

I. Plumbing System: The plumbing system shall be maintained in an operative condition, free of leaks and condensation on nonexposed piping. Fixtures will also be maintained in an operative condition and clean from stains, dirt, and mildew.

J. Trash Containers: Trash containers shall be conveniently located. Waste shall not be allowed to accumulate in trash containers to the point of overflowing or producing an odor.

K. Toilet Areas: Toilet areas shall be maintained clean, odorless, free of litter, well lighted, and ventilated. Toilet bowls, sinks, and urinals shall be clean and reasonably free of stains. Soap and towels or air drying devices shall be provided. Walls, floors, ceilings, mirrors, waste receptacles, drains, and other furnishings shall be clean and well maintained.

L. Interior Surfaces: All interior surfaces including ceilings, walls, and floors shall be maintained clean and free of debris and stains.

M. Safety Systems: All safety systems including but not limited to alarm systems, lighting, handrails, treads, fire suppression devices, door hardware, door closers, and ventilators, shall be 100 percent operational at all times.

N. Pest Control: Maintain the structures free of carpenter ants, black widow spiders, moths, and mice.

PART 1: DEFINITIONS

1-1 GENERAL: The following terms, documents, and agencies have an effect on the management and preservation of cultural resources. Users of this guide should be familiar with them.

PART 2: TERMS

2-1 RESOURCES

A. Archives and Records: Includes historic letters, manuscripts, maps, drawings, specifications, photographs, and other written and graphic materials, and modern records of field investigations related to the subject resources.

B. Cultural Resources: Includes historic and prehistoric sites, structures, districts, and objects associated with or representative of earlier people, cultures, and human activities and events. They include, as well, the primary data for interpretation and understanding of these entities.

C. Historic Object (or Artifact): A material thing of functional, aesthetic, cultural, symbolic, or scientific value. It is usually moveable by nature or design. Historic objects are ordinarily regarded as museum specimens. Objects that are large (e.g., nautical vessels, monumental statuary) are treated as structures.

D. Historic District: A geographically definable area, urban or rural, possessing a significant concentration, linkage, or continuity of historic sites, structures, or objects, unified by past events, or aesthetically by plan or physical developments, or by similarity of human use. A district also may be composed of individual elements that are separated geographically but are linked by association of history.

Historical units of the NPS are ordinarily historic districts in themselves.

E. Historic Scene: Constituted by the overall appearance of all cultural resources and their surroundings as they were in the historic period. It is at once the environment in which a historic place reposes and the appearance of that historic place in its environment. To the extent that modern development, exotic or altered vegetation, and topographic changes have intruded upon the environment of a historic place, or that the cultural resources themselves have visibly changed, the historic scene has been altered.

F. Rehabilitation: The treatment that improves the utility or function of a structure and often involves life safety and other code improvements. Alternatives or improvements to historic structures shall be acceptable if they do not destroy significant historic, architectural, or cultural material and such design is compatible with the structure, neighborhood, and environment. New additions or alterations to historic structures shall be done in such a manner that if they are removed at some future date, the essential form and integrity of the structure will be unimpaired.

G. Historic Site: A distinguishable place of ground or area upon which occurred some historic event, or which is associated with historic events, persons, or cultures, or which was subject to sustained human activity. Examples of historic sites (apart from other types of cultural resources they may encompass) are battlefields, trains, middens, farmlands, or places occupied by structures now gone.

H. Historic Structure: A relatively large work of humans, consciously created to serve some form of human activity. It is usually immovable by nature or design. Examples are buildings of various kinds, dams, roads, railroad tracks, canals, mill races, bridges, tunnels, automobiles, locomotives, ships, stockades, forts and associated earthworks, Indian mounds, ruins, fences, gardens, and monumental statuary.

I. Historic Landmark: A site, structure, or object of national significance. The 1935 Historic Sites Act authorized the NPS to survey the nation for sites, buildings, or objects of national significance and to record and carry out necessary research on them. All national historic landmarks are entered in the National Register of Historic Places.

2-2 TREATMENTS

A. Adaptive Use: The act or process of adapting a structure to a use other than that for which it was designed.

B. Preservation: The application of measures to sustain the existing terrain and vegetative cover of a site and the existing form, integrity, and material of an object or structure. It includes initial stabilization work, where necessary, as well as ongoing maintenance.

C. Preservation Maintenance: The act or process of applying preservation treatment to a cultural resource. It includes housekeeping, routine, and cyclic work scheduled to mitigate wear and deterioration without altering the appearance of the resource;

repair or replacement in kind of broken or worn out elements, parts, or surfaces so as to keep the existing appearance and function of the structure; and emergency work necessary to protect damaged historic fabric from additional damage.

1. Housekeeping: That portion of maintenance which removes undesirable or harmful deposits of soil from the surface of building elements. The goal of historic structure housekeeping is to remove soil in a manner which does the least amount of harm to the surface treated. Housekeeping is repeated at short time intervals so that soil removal can be done with the gentlest and least radical methods. Housekeeping needs are highly predictable and can be scheduled to the greatest extent. Many "routine" tasks (those which can be predictably scheduled) are included in the housekeeping schedules.

2. Routine Maintenance: That portion of maintenance including mostly service activities such as cleaning, repairing, tightening, adjusting, oiling, etc., as opposed to cyclic maintenance which usually involves more extensive replacement or renewal of fabric. Routine maintenance is anticipated but on an unpredictable time schedule throughout the year and is generally funded from the park's operating base. Routine work is identified through the inspection checklist; only then can it be quantified and scheduled. Routine work which can be predictably scheduled is included in the "housekeeping" category.

3. Cyclic Maintenance: That portion of maintenance which usually involves replacement of fabric. Cyclic maintenance is funded from the regional cyclic maintenance program. Cyclic work and special projects occur on a multi-year basis and are usually much more complex and costly in time and materials than either housekeeping or routine work. Cyclic maintenance is somewhat predictable (reroofing, repainting, etc.) but its actual need should be (re)confirmed by an inspection.

D. Protection: The act or process of applying measures designed to affect the physical condition of a property by defending or guarding it from deterioration, loss, or attack, or to cover or shield the property from danger or injury. In the case of buildings and structures, such treatment is generally of a temporary nature and anticipates future treatment; in the case of archeological sites, the protective measure may be temporary or permanent.

E. Reconstruction: The process of accurately reproducing an object or structure, in whole, or in part.

F. Restoration: The process of recovering the general historic appearance of a site or the form and details of an object or structure, or portion thereof, by the removal of incompatible natural or human-caused accretions and the replacement of missing elements, as appropriate. For structures, restoration may be for exteriors and interiors and may be partial or complete.

G. Stabilization: The act or process of applying measures designed to reestablish a weather-resistant enclosure and the structural stability of an unsafe or deteriorated property while maintaining the essential form as it exists at the present.

H. Unscheduled Maintenance: A workload element set aside to accommodate emergency activities and any unpredictable needs. It is included in the workload budget as a percentage factor indicating the predicted ratio between scheduled work and unforeseen work. Unscheduled maintenance tasks are usually of a "routine" nature (e.g., repairing a broken window, replacing a burned-out fan motor) and can be identified and quantified only after arising.

PART 1: SECTION 106 COMPLIANCE PROCEDURES

1-1 COMPLIANCE: A series of procedures created to insure that all NPS actions and treatments of properties listed on, or eligible for inclusion on, the National Register of Historic Places conform to law and the requirements of the law. The primary law relating to cultural resources responsibilities is the National Historic Preservation Act of 1966, as amended 1980, particularly Section 106. The regulations for implementation of Section 106 is 36 CFR 800 "Procedures for the Protection of Historic and Cultural Properties." (See Section 10300, Laws.)

1-2 NATIONAL REGISTER OF HISTORIC PLACES: The CCC buildings are in a National Historic Landmark District as a contributing element of BAND. As such, any actions affecting these properties, including preservation maintenance, are subject to compliance procedure.

1-3 PROGRAMMATIC MEMORANDUM OF AGREEMENT (PMOA): To expedite routing compliance procedures, the NPS, the ACHP, and SHPO executed a PMOA pursuant to 36 CFR 800.6 for preservation maintenance that stipulates such actions are to be made and carried out in consultation with historical architects or other pertinent preservation professionals and are to conform to the definitions and standards contained in NPS-28 and NPS "Management Policies." The PMOA also directed NPS to maintain credence of this compliance in a form acceptable to the ACHP and available for review if requested by SHPO and ACHP. (See Section 01400 Policies, Guidelines and Agreements.)

1-4 RECORDS: The treatments contained in this HSPG were developed in accordance with approved NPS policies and guidelines. Documentation for NPS compliance purposes of all treatments other than routine maintenance and housekeeping will be made on the appropriate assessment of effect (Form XXX) included in the cyclic maintenance schedule. The forms will be reviewed in the regional office by the appropriate professionals and forwarded to WASO for recordation. Unless a significant variance from the recommended treatment is noted, no further compliance action will be required. Additional documentation and recordation procedures are described in HSPG Section 01720, Records.

1-5 NONCONFORMING TREATMENTS: Any action, including routine maintenance and housekeeping, that does not conform to the prescribed treatments will require a separate compliance undertaking pursuant to 36 CFR 800.4 including consultation with the SHPO and, in cases of adverse and no adverse effect, with the ACHP. The park staff should notify the regional historical

architect at the earliest time when such a potential variance is anticipated.

PART 1: PRESERVATION POLICIES

1-1 GENERAL: Policies pertaining to cultural resources management and preservation are contained primarily in Chapter 5 of "Management Policies." These policies define the various types of cultural resources. They define procedures for inventorying, clarifying, and registering such resources and also define the various levels of treatment to be accorded to the different types of resources. Policies have been established regarding the research, acquisition, usage, damage, neglect, movement, alteration, and protection of cultural resources. "Management Policies" is continually updated to reflect current NPS objectives regarding the management of cultural resources.

For further information regarding preservation policies, refer to:

"Management Policies," NPS 1988 Rev., p. I-1 and p. V-1.

"A Manager's Guide," NPS-28, 1985, Chapter 1, p. 1-2 and Chapter 3, p. 6-10.

The condition of cultural resources subject to natural and human impacts will be systematically and professionally monitored, documented, and evaluated so that appropriate recommendations for their preservation or salvage can be implemented.

All undertakings that may affect cultural resources must be reviewed in advance by regional cultural resources specialists to ensure that all feasible planning or design measures are taken to avoid or minimize impairment of those resources. Unavoidable adverse effects must be mitigated in accordance with the requirements of this guideline.

All proposed and current cultural resource treatments (preservation/stabilization, restoration, reconstruction, historical furnishing, adaptive use, neglect, removal, etc.) must be in a park's general management plan or cultural resources management plan and then programmed into the park program for accomplishment.

Cultural resources preservation guides and maintenance guides are to be completed and followed by each park. Pending their completion, preservation treatment must be conducted in accordance with the preservation maintenance standards in this guideline.

All treatments and actions must be consistent with relevant NPS management policies, with the standards and guidelines in this document, and with approved planning documents.

Significant cultural resources that will (or are being) adversely affected by managerial actions, visitor use, or natural causes will be salvaged, unless effective means can be implemented to preserve them in place.

The distinguishing qualities or character of a structure and its environment must not be destroyed. Historic material or distinctive architectural features are not to be altered or removed.

All structures will be recognized as products of their own time. Alterations that have no historical basis are prohibited.

Changes that may have taken place in the course of time are evidence of the history and development of a structure and its environment. If these changes have significance in their own right, that significance should be recognized and respected.

Distinctive stylistic features or examples of skilled craftsmanship which characterize a structure are to be treated with sensitivity and preserved.

Deteriorated architectural features will be repaired rather than replaced wherever possible. If replacement is necessary, the new material should match the old in composition, design, color, texture, and other visual qualities such as weathering characteristics. Repair or replacement of missing architectural features will be based on accurate duplications rather than on conjectural designs or the availability of different architectural elements from other structures.

New or replacement fabric will be identified or permanently marked in an unobtrusive manner to distinguish it from original fabric. The manner of identification and location of marks shall be recorded in park files and the HSPG.

Structure surfaces must be cleaned by the gentlest means possible and only when required for preservation. Cleaning methods that will damage the historic materials or accelerate deterioration are prohibited.

All treatment work that may affect surface or subsurface archeological resources must be evaluated by an archeologist. Conversely, all proposed ground-disturbing activity, including archeological work near a structure, must be evaluated by a historical architect to assess possible impacts on the structure.

Contemporary design for alterations and additions to existing structures is acceptable when such alterations and additions do not destroy significant historical, architectural, or cultural material; and such design is compatible with the size, scale, color, material, and character of the structure and its neighborhood or environment.

New additions or alterations may not impair a building's essential form, integrity, and structural system.

Preservation or stabilization work on ruined historic or prehistoric structures will be preceded by an appropriate level of archeological investigation or archeological salvage, provided the regional archeologist has determined there are significant archeological data that will be adversely affected by the proposed work.

PART 1: GENERAL

1-1 A number of federal laws govern activities associated with the treatment and use of cultural resources under NPS jurisdiction and makes their preservation not just a matter of policy but ,rather, a legal requirement. The section lists those laws which have bearing on cultural resources management and summarizes the pertinent constraints imposed by each of them.

PART 2: LAWS

2-1 ANTIQUITIES ACT, 1906

A. Enacted June 8, 1906
Public Law 59-209
34 Stat. 225
15 USC 431

B. Summary: Provides protection for archeological sites which exist on federal lands and establishes criminal sanctions for unauthorized destruction or appropriations of antiquities.

2-2 ACT OF AUGUST 25, 1916

A. Enacted August 25, 1916
Public Law 64-335
39 Stat. 535
16 USC 1-4

B. Summary: Establishes the NPS to promote and regulate the use of federal areas whose purpose is to "conserve the scenery and the natural and historic objects and the wildlife therein and to provide for the enjoyment of the same in such manner and by such means as will leave them unimpaired for the enjoyment of future generations." Further stipulates that violations of the regulations are punishable by law.

2-3 HISTORIC SITES ACT, 1935

A. Enacted August 21, 1935
Public Law 74-292
49 Stat. 666
16 USC 461-467

B. Summary: Makes it a national policy to preserve for public use historic sites, buildings, and objects of national significance, and to operate and manage those resources for future

generations. Establishes criminal sanctions for violations of regulations pursuant to the act.

2-4 NATIONAL HISTORIC PRESERVATION ACT, 1966, AS AMENDED 1980

A. Enacted October 15, 1966
Public Law 89-665
80 Stat. 915
16 USC 470

B. Summary: Maintains the National Register of Historic Places which includes historic properties of local and regional significance as well as those of national significance. Establishes the Advisory Council on Historic Preservation and requires prior review by the Advisory Council on those actions which might affect National Register properties. Amendments incorporated Executive Order 11593 "Protection and Enhancement of the Cultural Environment as Section 110."

2-5 NATIONAL ENVIRONMENTAL POLICY ACT, 1969

A. Enacted January 1, 1970
Public Law 91-190
83 Stat. 852
42 USC 4321-4347

B. Summary: Declared in Section 101-B(4) that it is the policy of the federal government to "preserve important historic, cultural and natural aspects of our national heritage." In order to carry out this policy, the act required an interdisciplinary study of the impacts associated with federal programs.

2-6 ARCHEOLOGICAL RESOURCES PROTECTION ACT, 1979

A. Enacted 1979
Public Law 96-95
93 Stat. 712
16 USC 470

B. Summary: Provided for the protection of archeological resources located on public lands and Indian lands; defined archeological resources to be any material remains of past human life or activities that are of archeological interest; encouraged cooperation between groups and individuals in possession of archeological resources from public or Indian lands with special permit; provided that information regarding the nature and location of archeological resources may remain confidential; and established civil and criminal penalties including forfeiture of vehicles and

equipment used, fines of up to $100,000, and imprisonment of up to 5 years for second violations for the unauthorized appropriation, alteration, exchange or other handling of archeological resources, with rewards for furnishing information about each unauthorized act. Archeological resources covered by the Antiquities Act of 1906 are covered by this act.

2-7 EXECUTIVE ORDER 11593, "PROTECTION AND ENHANCEMENT OF THE CULTURAL ENVIRONMENT"

A. Enacted May 13, 1971
36 FR 8921

B. Summary: Directs federal agencies to take leadership in preserving cultural resources under their jurisdiction. Directs these agencies to ensure that known or potential resources are not damaged. Further directs those agencies to identify all cultural resources, determine the worthiness of such potential resources, and to place all such cultural resources on the National Register.

PART 1: GENERAL

1-1 The legal mandates placed on the NPS impose an obligation "to locate, identify, evaluate, preserve, manage, and interpret qualified cultural resources in every park in such a way that they may be handed on to future generations unimpaired." The Service has adopted a number of internal policies and guidelines, and external agreements to accomplish these goals. This section identifies and summarizes those pertinent policies, guidelines, and agreements.

PART 2: POLICIES

2-1 Policies pertaining to cultural resources management are contained primarily in Chapter 5 of "Management Policies." These policies define the various types of cultural resources. They define procedures for inventorying, classifying, and registering such resources, and also define the various levels of treatment to be accorded to the different types of resources. Policies have been established regarding the research, acquisition, usage, damage, neglect, movement, alteration, and protection of cultural resources. Management policies are continually updated to reflect current Park Service objectives regarding the management of cultural resources.

PART 3: GUIDELINES

3-1 The guidelines which comprise NPS-28 determine how NPS policy objectives regarding cultural resources are to be implemented. These guidelines deal with a wide range of issues concerning the ongoing management of cultural resources including preservation, research, planning, and development.

Form XXX was developed to implement the PMOA between the NPS and the ACHP. When any action affecting cultural resources is proposed, and that action is not specifically covered by approved sections of this HSPG, Form XXX is submitted to the regional office for certification by the regional cultural resources management professionals. The form is prepared at the park, regional office, or center where the undertaking originates. It provides information on the affected National Register or National Register Eligible Property, the proposed undertaking, the effects of that undertaking on the subject property, and measures planned to avoid or mitigate any adverse effects.

The regional cultural resources management professionals, comprised of the regional historical architect, the regional archeologist, the regional historian, and the regional curator must all certify

that the proposed undertaking is consistent with all applicable management policies, standards, and guidelines. If not, the proposal must be revised or dropped, as appropriate.

PART 4: AGREEMENTS

4-1 PROGRAMMATIC MEMORANDUM OF AGREEMENT WITH THE ADVISORY COUNCIL ON HISTORIC PRESERVATION

All activities having a real or potential effect on the physical fabric of cultural resources must receive prior review by the ACHP and certification by the cultural resources management professionals at the regional level. The PMOA establishes the procedures for obtaining such certification.

All activities specified in this HSPG have received such review and certification, and no further clearance is required. Any deviation from the provisions of this guide, or activities not contained within it, or other planning documents for which such review and certification has been secured must obtain certification by the regional cultural resources management professionals and possible review by the ACHP and SHPO before implementation.

Any actions, such as maintenance, affecting cultural resources on historic properties which are not specifically covered by this document, or which result from new NPS directives (such as energy retrofit or handicapped access), must be certified by the regional cultural resources management professionals through the Form XXX approval process.

4-2 ADVISORY COUNCIL COMMENT (SECTION 106 COMPLIANCE PROCEDURES)

Compliance is the network of activities designed to insure that Park Service actions conform to law and the requirements of law. The central law in cultural resources compliance matters is the National Historic Preservation Act of 1966, particularly Section 106.

Section 106 states that all actions which may have an effect on cultural resources listed on or eligible for the National Register of Historic Places must receive review by the ACHP. All resources covered by this Historic Preservation Act are listed on the National Register. Therefore, any actions affecting these cultural resources must be reviewed by the ACHP prior to their implementation.

4-3 PROGRAMMATIC MEMORANDUM OF AGREEMENT

To simplify this review process, the ACHP has executed a PMOA with the NPS which eliminates the requirements for council review of designated maintenance actions implementing a planning document which has been previously reviewed by the council.

Any action affecting cultural resources on historic properties maintenance, or otherwise not specifically covered by this document, must be certified by the regional cultural resources management professionals resulting from new NPS directives, such as energy retrofit or handicapped access which affects cultural resources or historic properties.

PART 1: GENERAL

1-1 When the use of the subject structures appears to cause safety problems and the solution to these problems is an apparent conflict with either historical or structural integrity, the use of the structure must then be altered or modified to eliminate the conflict.

1-2 Safety goals can many times be achieved by modifying the function of the structure slightly. Physical modification will be acceptable only if the following conditions are met:

A. Such modifications are the only viable solutions.

B. There will be no physical damage to the structure.

C. Modifications will cause no unacceptable visual or audible intrusions on the historic scene.

D. Modifications have no effect on the qualities that qualify the structure for the National Register.

E. Modifications are meant to replicate historic features and should be readily identified as modern additions.

1-3 Any proposed modifications for safety reasons shall be submitted to the Division of Cultural Resources and Management of the Southwest Regional Office for Section 106 Compliance review by the assessment of effect (Form XXX). Submittal and review of all proposals is required prior to implementation.

PART 2: SAFETY EVALUATION

2-1 The Structures can be divided into three catagories of usage as follows:

A. Staff residences, which are private and open only to the inhabitants and invited guests.

B. Administration areas, work areas, maintenance areas, and storage areas, which are open to staff members, and autorized visitors.

C. Visitor use areas, which are open to the public during designated hours.

2-2 EGRESS:

A. The interior functions of the structures designated as public use areas vary from structure to structure and within a structure. However, emergency egress will be properly maintained during all periods of public or staff access.

B. The interior functions of the structures designated for staff use only vary. However, emergency egress will be properly maintained during all periods of staff access.

2-3. INSPECTIONS: Random inspections shall be conducted by NPS staff in order to identify potential safety concerns and correct them immediately. A formal inspection should be performed at least two times per year.

2-4. HAZARDS: No hazards to public or staff egress are apparent as long as the aforementioned procedures are followed when the structures are in operation.

PART 1: GENERAL

1-1 When security problems result because of a certain use and solutions to these problems conflict with the physical or historical integrity of the structures, then the use of the structure shall be modified to mitigate or eliminate the conflict.

1-2 Security systems must be justified on the basis of the following:

A. Cost effectiveness.

B. The system is the only viable option.

C. Causes no appreciable physical damage to the historic structure.

D. Causes no unacceptable visual intrusion on the historic scene.

E. Maintains the qualities and characteristics that qualify the structure for listing on the National Register of Historic Places.

1-3 Any proposed action that has an effect on the structures must be reviewed prior to implementation by the Division of Cultural Resources Management, Southwest Regional Office. An assessment of effect (Form XXX) must be filled out so that the required Section 106 review procedures can be initiated.

PART 2: SECURITY EVALUATION (Check type of security systems)

A. The following structures have an intrusion alarm and fire monitoring system. The Visitor Center, the administrative buildings, the library/jail complex, and the concession facility. A radio signal is broadcast on a frequency set aside for the system. All alarms are recorded on a computer print-out. The main computer terminal is located in the visitor center.

B. One NPS employee will be designated and available within the district during all periods of public and/or staff access to respond to security concerns. Doors will be locked at all other times. The park rangers at BAND will provide security.

C. No hazards to public egress are apparent as long as the aforementioned procedures are followed when the structure is in operation.

PART 1: GENERAL

1-1 Laws and regulations require that all federal programs or activities not discriminate against the handicapped. With respect to historic structures, accessibility to programs or activities means that when programs are viewed in their entirety, they are accessible to handicapped persons.

1-2 Maximum efforts shall be made to provide access to structures without making alterations or structural changes that will have an adverse impact on historic fabric or scene. When alterations or changes cannot be done without impacting the values of the historic scene or structures, accommodation by administrative or program means should be considered. These methods may include, but are not limited to:

A. Delivering programs or activities in an alternative accessible location.

B. Assigning staff to aid handicapped individuals into or to otherwise inaccessible locations.

C. Construction of a new structure or rehabilitation of an existing structure for use by the handicapped.

1-3 Any proposed handicapped accessibility projects shall be reviewed by the regional cultural resource management professionals prior to implementation. The assessment of effect (Form XXX) should be filled out to initiate this process with the Southwest Region.

PART 2: HANDICAPPED ACCESSIBILITY EVALUATION OF HISTORIC STRUCTURES

2-1 Access to and within the visitor center:

A. Access from the exterior to the reception area is through a pair of doors swinging out. To provide adequate width for handicapped access, both doors need to be opened similtaneously. This would require a remotely activated automatic door opener, which is not presently installed.

B. Access to the exhibit area from the reception area is up two risers. A portable ramp is provided, but the slope is greater than allowed by UFAS. The exhibit area does have a level access from the rear portal, but there is no accessible route from the parking area or front portal to the rear portal.

C. Access to the theater for wheelchair users is difficult at best. The door is too narrow and the ramp is too steep for UFAS requirements. In addition, the door swings into the theater onto the ramp. Also, there is no accessible emergency exit for visitors, or staff, with disabilities.

D. The public restrooms that serve the visitor center are accessible from the exterior. At the present time, neither has an adequately accessible water closet stall. The accessibility of the lavatories is also inadequate.

2-2 Access to and within the administration building:

A. The main entrance is through a pair of doors off the main portal. Access from the sidewalk in front of the building to the portal varies from one to three risers. Handicapped access is via a ramp down to the portal from the courtyard between the administration building and the snack bar.

B. There are two main levels within the administration building with an intermediate level which houses one office. Staff restrooms are on the upper level. The intermediate and upper levels are not accessible to the handicapped. Also, most of the offices on the second level have either a step up or a step down.

2-3 Access to the gift shop/snack bar:

A. Entry to the snack bar is from the lower courtyard through a pair of doors, which are up one riser from the courtyard. From the interior, entry to the snack bar is down three risers from the gift shop. The snack bar is not accessible to wheelchair users.

B. Entry to the gift shop is from the upper courtyard through a pair of doors and down one riser, approximately two feet inside the door. Entry from the snack bar is up three risers. In it's present configuration, the gift shop is inaccessible to the handicapped.

C. Entry to the lower courtyard is on a level route through a pair of doors. Although both doors must be opened simultaneously to provide adequate width for wheelchair access, the lower courtyard is accessible.

D. Entry to the upper courtyard is up two risers from the sidewalk, which makes it inaccessible to wheelchair users.

PART 1: GENERAL

1-1 The policy of the NPS is to reduce the use of chemical pesticides to a minimum; however, it may be necessary to use chemical pesticides if alternatives are not available or acceptable. In such cases, all federal laws and regulations apply. In no case shall a park use a pesticide without the concurrence of the region and WASO.

PART 2: DETERMINATION OF USE

2-1 The first step when there is a problem is to accurately identify the pest, if need be with the assistance of a local specialist. The problem should be carefully evaluated along with the benefits and risks of each potential remedy. Methods which cause the least amount of harm to the resource and environment and that will do the job should be chosen. The region and WASO should then be contacted for concurrence.

2-2 A Form 10-21 is the form for approval of any pesticide project proposals. All parks should have current guidelines and instructions for making pesticide proposals and completing the approval form. The assessment of effect (Form XXX) must also accompany Form 10-21 for the review of regional cultural resource management professionals.

PART 3: EVALUATION OF HISTORIC STRUCTURES IN TERMS OF PEST CONTROL

3-1 The maintenance staff should observe treatments as specified in appropriate divisions herein. Pests are taken care of according to the park's Intergrated Pest Management Plan.

3-2 Identified Pests.

A. Carpenter Ants: Carpenter ants excavate through damp or rotted wood for nesting purposes, which can hasten the destruction of historic fabric. They have been found burrowing through foam roofs on historic buildings which allows water to run through channels and into the building's interior.

Some methods used to help control carpenter ants is to try and eliminate the causes of damp wood from occuring in the first place, keeping good clearances between wood and soil, maintaining good drainage, and installing proper flashing.

B. Black Widow Spiders: The main concern of the black widow is due to it's poisonious bite.

Since they feed on insects, removal of their food source will have a direct affect on their population. Tight fitting screens and doors and weatherstripping will help keep out the adult spiders. Good housekeeping practices of removing wood and scraps from around the buildings will remove this type of habitat. Webs and egg cases should be vacuumed up and the vacuum bag disposed of immediately outdoors in a can. The use of chemical treatments, such as silica aerogel, diazinon, malathion, pyrethrins or resmethrins, is limited. The recommended treatments for the control of black widow spiders are proper housekeeping and silica gel or pyrethrin. Resource management would be responsible for any chemical control.

C. Moths: Moths can cause damage to museum specimens such as; rugs, blankets, clothing, hides, etc.

Prevention of moth infestation should be done by inspecting all incoming specimens for the collection. Those highly subject to damage should be kept in insect proof cases. Humidity and temperature control will also help reduce infestations. Frequent vacuuming of the area and specimens will also help. Chemical pesticides have to be used with caution because they can damage the objects we are trying fo protect or cause human health problems. The recommended integrated treatment is to brush and vacuum objects, use sealed display cases and install environmental controls. Fumigation/freezing of individual specimens can also be done. The museum staff or resource division will be responsible for moth control.

D. Wasps and Bees: These insects do not cause structural damage to historic fabric, but they can be a problem to people due to their stings. They may build their nests around buildings and they may feed on refuse around garbage cans or obtain water from public drinking fountains.

Elimination of their food source through frequent trash collection, tight fitting lids on trash cans, and elimination of their nests can take care of the greater part of the problem. Chemical agents containing pyrethrins are effective when sprayed in the nests. The recommended integrated treatment is proper trash collection as outlined above and the elimination of nests with an approved aresol.

E. Mice: The common house mouse is the main concern. It can cause considerable damage to building interiors and electrical wiring. They can also spread disease and the damage to artifacts from gnawing can be extensive.

Elimination of mice from buildings by snap trapping or live trapping is an effective method. Entrances where they come into the building interiors should be plugged with steel wool or wire mesh. Chemical methods include the use of anti-coagulants in bait containig chlorolphainone or fumarin. Resource management would be the responsible office in handling these chemicals.

PART 1: GENERAL

1-1 The law requires that federal agencies reduce energy consumption. These measures shall be undertaken with historic structures only when it is possible to make these alterations or changes without an adverse effect to the historic scene or fabric.

1-2 All proposed energy reduction projects shall be reviewed by the regional resources management professionals by submitting an assessment of effect (Form XXX) to the regional office.

PART 2: ENERGY EVALUATION OF THE CCC BUILDINGS

2-1 ...

PART 1: GENERAL

1-1 PURPOSE: Any deterioration, damage, maintenance, and repair occurring to a historic resource becomes part of its history. For this reason, as well as providing data to assist in problem solving, it is vital that ongoing records of the structure be maintained.

1-2 RECORDS: The following are records that should be established and maintained as an integral part of this HSPG. If not actually located in Volume 3, then by written reference to other locations.

A. Photographs: Photographs of general conditions, as well as noting specific areas of concern, should be taken periodically. Black and white 35MM prints are preferred.

Photographs should be dated, the photographer identified, and a description of what is photographed should be noted. These photographs should be stored in the photographic section of this guide, located in Volume 3.

B. Drawings: Existing condition drawings (as-builts) have been furnished as a part of this guide. Any changes, structural repairs, etc., should be noted on these drawings, and at the same time this information shall be furnished to the regional historical architect.

C. Inspection Records: Inspection records of such concerns as safety, security, maintenance, etc., should be inserted in Volume 3 of this guide.

D. Contract Documents: It is important to keep copies of project manuals/specifications, purchase orders, invoices, service contracts, completion reports, etc., to document the materials and supplies purchased and used in connection with the maintenance of this resource.

E. Product Literature: As a result of the building treatment program, manufacturer's product literature has been collected for various materials and equipment used. This material often includes operating instructions, warranties, guarantees, and technical specifications. These records are essential to proper maintenance and repair and should be part of the Volume 3 records.

F. Samples: In some cases, product/material samples and color chips have been collected during the various treatment projects. These may be one-of-a-kind and of great value to future efforts of

replication. Such samples should be inserted in Volume 3 or referenced to a permanent storage location.

G. Other Records: Job order requests (Form 10-577) when executed should be placed in Volume 3.

Copies of lease/concession agreements often define areas of particular maintenance responsibility and, if not inserted in Volume 3, should be referenced to appropriate park files.

Emergency plans/procedures and appropriate telephone numbers should be prepared for overall park operations and for each building. Copies of these should be placed in Volume 3 or other easily accessible location for quick reference.

Forms XXX are the recommended means of documenting cyclic work and the required means of documenting all work beyond the scope of this HSPG. Copies of the assessment of effect (Form XXX) may be inserted in Volume 3.

National Register forms/List of Classified Structures printout/ individual building data (Form 10-768) and other basic data documents should be accessible through the Volume 3 storage system, if not inserted therein.

PART 2: PROCEDURE

2-1 INSTRUCTIONS: The above listed records, and any other pertinent data which may prove useful, should be placed in Volume 3 of the HSPG. Volume 3 is actually a reference material/storage system which will grow in size and number of volumes of binders/files.

2-2 RECORD MANAGEMENT: Data collected in Volume 3 should never be culled or discarded, but rather should remain in some form (microfilm, for example) in permanent park storage for future generations.

SCHEDULES PREFACE: The following sections contain schedules and worksheets to be reproduced and used by the maintenance staff of BAND. Original "masters" should not be used for any other purpose except reproduction. Insert completed forms in Volume 3.

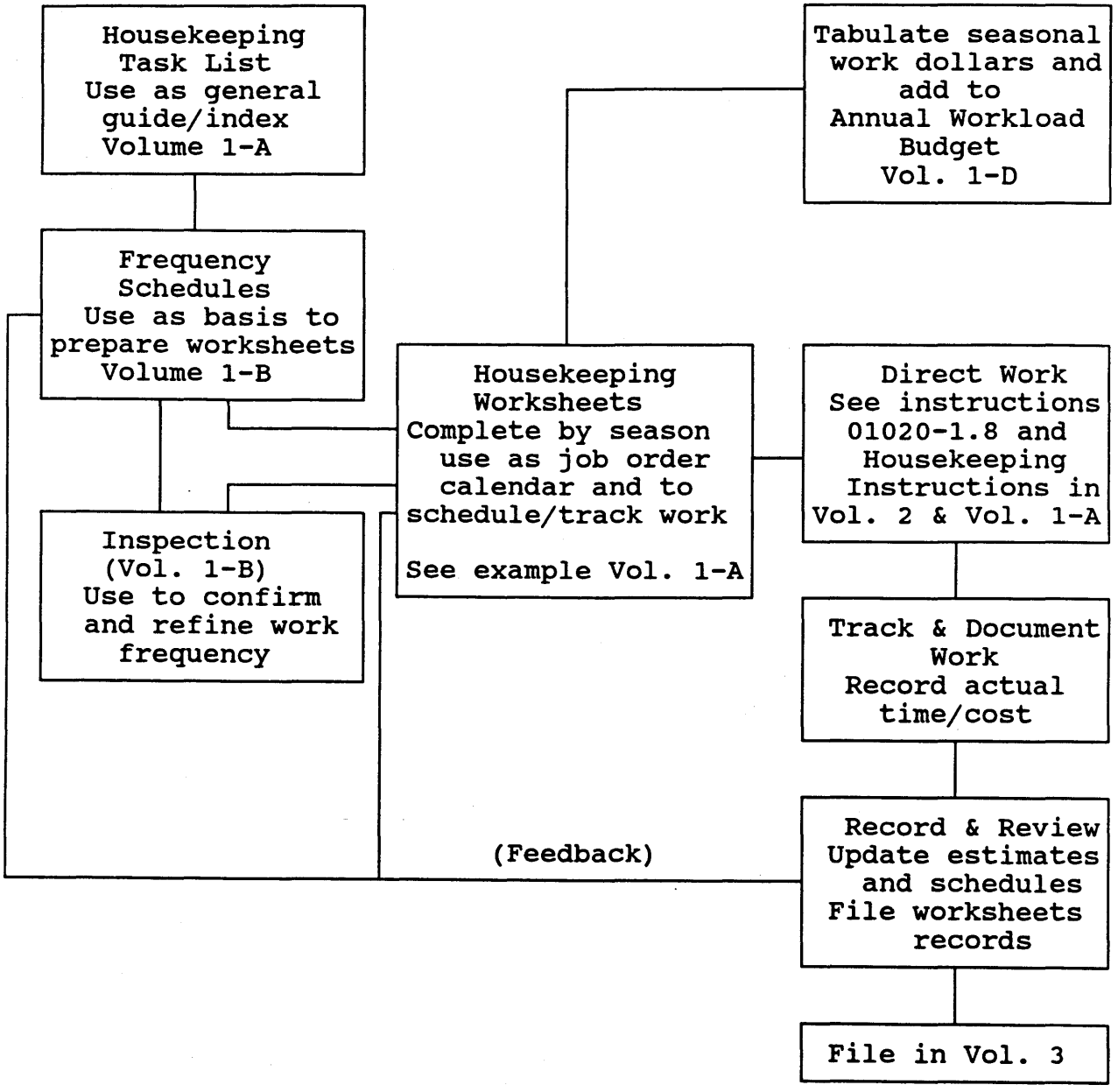
VOLUME 1

SECTION A

HOUSEKEEPING SCHEDULES

- HOUSEKEEPING ACTIVITY FLOW DIAGRAM
- HOUSEKEEPING SCHEDULES
  - GENERAL
  - HOUSEKEEPING TASKS--MASTER LIST INDEX
  - HOUSEKEEPING FREQUENCY SCHEDULE INSTRUCTIONS
  - HOUSEKEEPING FREQUENCY SCHEDULE
  - HOUSEKEEPING WORKSHEET INSTRUCTIONS
  - HOUSEKEEPING WORKSHEET FORM
- FIRE SUPPRESSION SYSTEM--HOUSEKEEPING

HOUSEKEEPING ACTIVITY FLOW DIAGRAM



HOUSEKEEPING SCHEDULES

GENERAL

The ongoing and frequent task of housekeeping is one of the most important preventative maintenance activities to conduct. The housekeeping staff can be crucial eyes and ears on a daily basis; they can do ongoing inspection and policing of the resources while routinely carrying out their assigned tasks.

The amount of housekeeping and policing will, for practical reasons, depend upon weather conditions and extent of visitation, but generally these tasks are performed throughout the day, to some extent throughout every season, as indicated on the schedules. They may involve a large share of the preservation maintenance workload, and although at the simplest level of treatment, must be conducted with care. They are as important as the more involved (major repairs or projects) level of preservation for three primary reasons:

1. Frequent inspections while conducting routine housekeeping by a sensitive observer is the primary line of defense against unnecessary damage and deterioration, and safeguards the resource by recognizing physical changes or potential problems that might be developing before they require more intensive or extensive treatments. (If necessary, use the inspection forms to document observations.)

2. Frequent policing and housekeeping can provide the gentlest and least radical approach to preservation, before litter and soil build-up, and before minor problems become major.

3. Well kept buildings and the historic scene compliment the staff, and state to the public that the staff takes seriously the creed of the NPS to maintain for present and future generations the historic resources of our country and, proudly so!

HOUSEKEEPING TASKS--MASTER LIST INDEX

There are over 50 specified housekeeping tasks to be performed at the 31 CCC buildings on a regularly scheduled basis. The scope and frequency of housekeeping task performance varies depending on the location and the time of year. (See Housekeeping Frequency Schedules.) A listing of the housekeeping tasks follows with its instruction section reference nubmer. (See Volume 2.) This list is provided as a quick reference index for locating the instructions for housekeeping activities.

HOUSEKEEPING FREQUENCY SCHEDULE INSTRUCTIONS

The annual housekeeping schedules are the best-guess predictions of housekeeping tasks and their frequency at each historic structure. Through use, these master schedules can be refined and revised to better reflect actual resource needs. These schedules are used as a starting point for identifying this part of the preservation maintenance workload. In conjunction with inspections, the specific housekeeping task schedules for various periods of time (seasons or months, for example) can be more accurately estimated and drawn up on the companion worksheets which become components of the annual workload budget (the last schedule in Volume 1). The instructions for conducting the various housekeeping tasks is contained in the "housekeeping" sections of Division 2-16 in Volume 2.

Code:
- D - Daily
- W - Weekly
- M - Monthly
- Q - Quarterly (once within seasonal quarter)
- A - Annually
- R - As Required

Note: It is understood that frequency may change based on practice, and that "as required" performance (R) is understood as the basic frequency interval for every task as determined by inspection. Baseline frequency varies from season to season.

Identify and place the frequency code from the list above in the column under Code on the following HOUSEKEEPING FREQUENCY SCHEDULE pages.

Use the following housekeeping task frequency schedules as a guide for preparing housekeeping worksheets for the time periods selected.

HOUSEKEEPING FREQUENCY SCHEDULE

Reference Numbers MMS	CSI	Task	Code
3331	02510	Clean debris from drain grates.	
1341	02620	Clean debris from sidewalk gutters	
2991	02630	Sweep concrete walks and steps	
2151	02630	Clean snow/ice from concrete walks and steps	
2992	02631	Sweep brick walks and plazas	
2152	02631	Clean snow/ice from brick walks and plazas	
2993	02632	Sweep stone walks, steps, and plazas	
2993	02632	Clean snow and ice from stone walks, steps, and plazas	
2211	02722	Clean signs	
4241	03000	Sweep and buff concrete floors	
4114	04215	Clean stucco walls	
4115	04400	Sweep stone floors	
4115	04400	Damp mop stone floors	
4115	04400	Buff stone floors	
4810	06220	Dust millwork, trim, and wainscot	
4810	06220	Clean millwork, trim, and wainscot	
4271	06431	Clean and sweep exterior wood stairs	
4315	07520	Remove debris from flat roofs	
4351	07631	Remove mildew from gutters/downspouts	
4351	07631	Clean gutters	
4351	07631	Flush downspouts	
4142	07810	Clean skylights	
4154	08120	Clean aluminum storm doors	
4151	08210	Clean wood doors	
4151	08210	Clean glass in wood doors	
4152	08390	Clean wood screen doors	
4143	08510	Clean steel windows	
4141	08610	Clean windows	
4151	08710	Clean door/window hardware	
4151	08710	Correct sticking hardware	
4148	08810	Wash window glass	
4149	08840	Wash plexi-glass	
4230	09160	Clean plaster surfaces	
4231	09250	Clean gypsum wallboard	
4293	09310	Clean ceramic tile and grout	
4239	09512	Clean acoustical ceiling tiles	
4240	09560	Clean wood floors	
4242	09665	Sweep vinyl floors	
4242	09665	Mop vinyl floors	
4246	09682	Vacuum carpets	

4246	09682	Shampoo carpets
4580	10160	Dust toilet partitions
4680	10160	Wash toilet partitions
4680	10160	Disinfect toilet partitions
4655	10200	Clean louvers, vents, and grilles
4618	10800	Clean and sanitize toilet accessories
4591	12501	Clean window blinds and shades
4594	12504	Clean drapes
4610	15400	Clean and sanitize plumbing fixtures
4616	15421	Clean floor drain grates
4615	15424	Clean exterior of water heater
4615	15455	Clean and sanitize water coolers
4615	15455	Polish chrome parts on water coolers
4631	16510	Clean light fixtures and cover plates
4632	16620	Clean emergency lights
4632	16620	Test emergency light system
4635	16721	Clean fire alarm and detector panel
4635	16721	Test fire alarm and detector panel

HOUSEKEEPING WORKSHEET INSTRUCTIONS

Use the housekeeping worksheets to plan/organize and direct the housekeeping component of preservation maintenance. Based on the annual housekeeping schedule verified by inspection, develop worksheets as job order vehicles drawn up in convenient time periods and/or by work areas.

By multiplying the frequency of a task (entered in the frequency column) by the estimated number of hours needed to complete the task (entered in etimated column under man hours heading) the estimated housekeeping workload can then be reorded in the estimated column under the labor sub-heading, under the cost heading.

Then, by multiplying the estimated labor cost by the estimated material cost, if any, the total estimated cost can be determined and entered in the estimated columnm under the total cost heading.

The same procedure applies for arriving at the total costs upon completion of the task, when the total actual hours and costs are known. The actual time and cost figures can then be used for refining future worksheet estimates.

Upon completion of the worksheet time period, place the document in Volume 3 as potentially useful reference material.

HOUSEKEEPING WORKSHEET

TASKS FOR PERIOD INDICATED, THEIR FREQUENCY, WORKDAYS ALLOTTED FOR EACH TASK AT LOCATION, AND TOTAL WORKDAYS AND COSTS, BOTH ESTIMATED AND ACTUAL.

PREPARED BY: _____

DATE: _____

LOCATION: _____

PERIOD: _____

FROM: _____

TO: _____

CODE: D=DAILY W=WEEKLY M=MONTHLY Q=QUARTERLY A=ANNUALLY R=AS REQUIRED

SECT. NO.	TASK	FREQ. CODE	MAN HOURS		COST				TOTAL COST	
					LABOR		MATERIAL			
			EST.	ACT.	EST.	ACT.	EST.	ACT.	EST.	ACT.

FIRE SUPPRESSION SYSTEM--HOUSEKEEPING

Because of the short frequency interval and scheduled regularity of fire suppression system inspection/testing/maintenance it is included here as a housekeeping activity. Several forms are provided to plan, direct, and record this activity. Place completed forms in Volume 3, Division 15. User shall be completely familiar with the system.

Use the maintenance schedule to record weekly, monthly, 2-month, 3-month, and 6-month activities. When the form is completed for the 6-month period, file it in Volume 3.

Complete a report of inspection and a dry-pipe valve trip test report for each sprinkler system every 6 months and file them in Volume 3.

Record semiannual pressure gauge readings on the record form. When the page is full, file it in Volume 3 and start a new record.

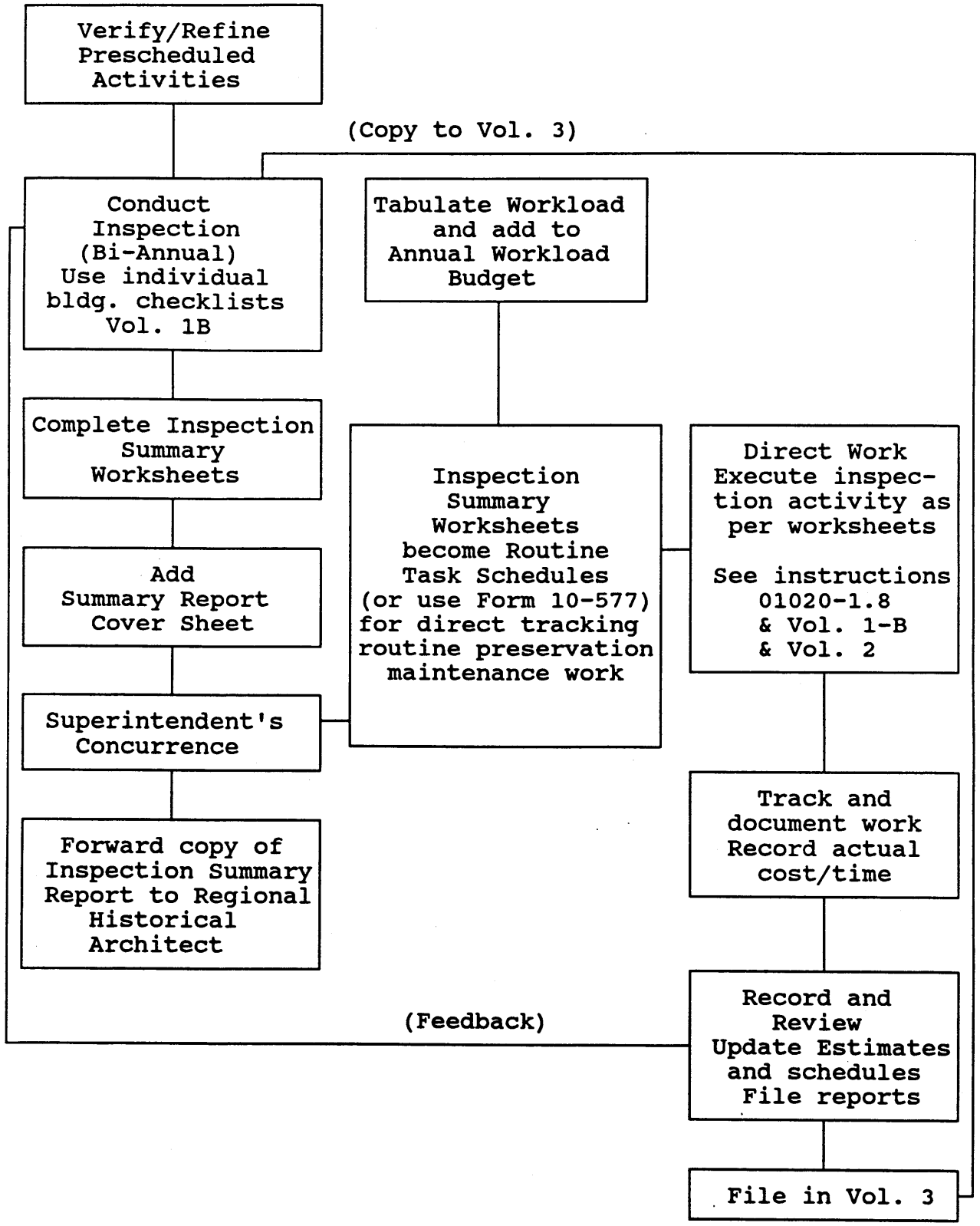
VOLUME 1

SECTION B

INSPECTION/ROUTINE TASK SCHEDULES

- INSPECTION/ROUTINE ACTIVITY FLOW DIAGRAM
- INSPECTION/ROUTINE MAINTENANCE SCHEDULES
  - INSPECTION SUMMARY WORKSHEET INSTRUCTIONS
  - INSPECTION SUMMARY REPORT INSTRUCTIONS
  - INSPECTION TASKS--MASTER LIST INDEX
  - INSPECTION TASKS SCHEDULE
  - INSTRUCTIONS FOR INSPECTION SUMMARY WORKSHEET
  - INSPECTION SUMMARY WORKSHEET FORM
  - INSPECTION SUMMARY REPORT FORM
  - DRAWINGS OF CCC BUILDINGS
  - ROUTINE MAINTENANCE SCHEDULES INSTRUCTIONS
  - ROUTINE MAINTENANCE WORKSHEET INSTRUCTIONS
  - ROUTINE MAINTENANCE SUMMARY REPORT INSTRUCTIONS
  - ROUTINE TASKS--MASTER LIST INDEX
  - ROUTINE TASKS SCHEDULE
  - ROUTINE MAINTENANCE WORKSHEET FORM
  - ROUTINE MAINTENANCE SUMMARY REPORT
- JOB ORDER REQUEST, FORM 10-577

INSPECTION/ROUTINE ACTIVITY FLOW DIAGRAM



INSPECTION/ROUTINE MAINTENANCE SCHEDULES

INSPECTION SUMMARY WORKSHEET INSTRUCTIONS

The inspection summary worksheet will be used to record information gathered during the inspection of the building so that any necessary corrective action can be planned and scheduled. It will also be used to assist in the preparation of annual inspection reports and to inspect the building to insure that the performance standards are being met. The inspection summary worksheets are used to identify "routine maintenance" needs as per sections of technical instructions in Volume 2.

The inspection summary worksheet is oriented for an inspection to begin on the exterior and proceed from the roof to the foundation and the grounds before continuing the inspection on the interior of the building. The checklist uses a series of prompts or "concerns" to remind the inspector of the building features and systems which should be inspected and of the problems which may occur. See "inspection" paragraphs of each technical instruction section in volume 2 for elaboration.

Use the inspection summary worksheet to record the condition of the building at the time of inspection. Carefully look at each element as directed in the "subject." Then describe the condition in detailed and quantifiable terms, give recommendations for corrective maintenance and identify source of problems in the "comment/quantities" column. Specific quantity estimates, such as number of workdays necessary to correct the deficiency, should also be indicated for future considerations. Record physical condition and location of problems on the illustrations. Summarize the condition of each element by writing either S, E, R, or F. (S = Satisfactory; E = Emergency, rapidly deteriorating, immediate attention needed; R = Routine, shows some deterioration, possible attention needed within 2 years; or F = Future, shows slight deterioration, possible attention within 2 to 5 years or possible addition to cyclic program.)

It is the intent of the inspection summary worksheet to identify all problems that must be corrected. Some problems are created by the design itself or the original material selection and, although these cannot be changed, they should be noted. Others may be beyond the scope of current budget allocations, may demand the expertise of an outside specialist, or may demand extensive study to determine cause and appropriate solutions. These, too, should be noted.

A comprehensive inspection using the checklist should be conducted at least once a year and probably twice (fall and spring), but may be used in whole or in part to document inspections at any time. The inspection summary worksheet can be used for the following purposes:

1. Verification of housekeeping tasks.

2. Verification of the need for larger cyclic project work.

3. Identification of routine preservation and preventive work.

4. Identification of work location.

5. Identification of extent of problems or deficiencies which hold implications for estimated time and materials costs necessary for performing corrections.

6. Establish documentation for record purposes of the condition of the subject resource at a particular point in time.

Use the worksheets to list and prioritize all the deficiencies/corrective tasks or work elements identified by the inspection.

Some tasks may naturally lend themselves to listing on the housekeeping worksheets (see Volume 1, Section B), and some work elements may require much more elaboration and treatment as a project becoming the subject of a project/cyclic worksheet. (See Volume 1, Section C.)

The inspection summary worksheets also provide the opportunity to analyze a condition in terms of its possible causes, encouraging corrective measures to alleviate <u>problems</u> rather than <u>symptoms</u> only. Filling in the "probable cause" column may not be necessary for most routine situations; on the other hand, the opportunity to get at root problems is always available on the worksheet.

As noted, you may address some identified work elements more appropriately on other worksheets, or you may use a job order request (Form 10-577) to elaborate. For the work elements listed on the summary sheet, be as comprehensive as possible in the "description of work" column as this column, in effect, will function as a job order if you do not use Form 10-577. You should indicate the task objective and performance standards to be met. Insert the appropriate instruction section number from Divisions 2-15 in Volume 2. You should also quantify the work element in

terms of workdays/salary and materials costs for scheduling and budgetary planning purposes.

INSPECTION SUMMARY REPORT INSTRUCTIONS

When satisfied with the completed inspection summary report worksheets, compile them under the inspection summary report cover sheet and present the document to the area manager for concurrence and forward a copy to the regional historical architect.

The report now becomes the ongoing routine preservation maintenance tracking schedule. As work is accomplished, track progress by inserting the appropriate date in the final column "date corrected." When all work elements have been corrected and by inspection approved, sign off on the cover sheet and insert the document in Volume 3. Work elements, for various reasons, may not be accomplished as intended within the time period covering the report. These tasks should be forwarded to other current or future summary report worksheets.

INSPECTION TASKS--MASTER LIST INDEX

There are at least 40 inspection tasks that are to be performed on a biannual basis, or as the need arises, on the historic structure or its modern systems. The inspection tasks are a major workload element and a key step in identifying the preservation maintenance workload. (See Volume 1, Section 01020 for instructions.) The scope of these activities is covered in detail in Volume 2 under the inspection instructions for each section. The inspection summary worksheet forms provided in Volume 1, Section B, are designed to focus the inspector's attention on each of the subjects to be inspected. A listing of the inspection task subjects follows with its instruction section number and a brief description of the scope. This listing is provided as a quick reference index for locating the instructions performing the proper inspections.

Code:
- S = Stable condition.
- E = Emergency situation, rapidly deteriorating, immediate attention needed.
- R = Routine, shows some deterioration, possible attention needed within 2 years.
- F = Future attention, shows slight deterioration, possible attention within 2 to 5 years, or possible addition to cyclic program.

INSPECTION TASKS SCHEDULE

Reference Numbers MMS	CSI	Task	Code
3290	02210	Inspect grades around buildings for proper drainage	
3290	02210	Inspect soil around buildings for erosion	
3994	02252	Inspect for unwanted vegetation	
3331	02510	Inspect site drains for debris, clogging, etc.	
1341	02620	Inspect curbs and gutters for dirt, leaves, debris, etc.	
1341	02620	Inspect curbs and gutters for deterioration	
2991	02630	Inspect concrete walks and steps for cracks, spalling, etc.	
2992	02631	Inspect brick walks for loose or deteriorated brick and deteriorated mortar joints	
2211	02722	Inspect exterior signs for deterioration and stability	
3410	02730	Inspect wood fences, gates, grilles, screens, and trellises for broken, missing, or loose components and other deterioration	
3410	02730	Inspect gates for proper operation etc.	
3230	02830	Inspect trees and shrubs for proper growth and damage	
4241	03300	Inspect interior concrete floors for cracks, spalling, etc.	
4199	04110	Inspect mortar joints for deterioration	
4191	04210	Inspect brick floors for deteriorated and missing units	
4114	04215	Inspect stucco for deterioration	
4191	04220	Inspect concrete masonry units for deterioration	
4191	04220	Insprct conctete masonry untis for loose or missing unitss	
4115	04400	Inspect stone masonry for loose or missing units	
4115	04400	Inspect stone masonry for dererioration	
4192	04510	Inspect exteior wall surfaces for dirt and stains	
4275	05321	Inspect steel floor paltes for looseness and deterioration	
4194	06134	Inspect log columns for deterioration, wood rot, looseness, etc.	
4810	06220	Inspect wood millwork, trim, and wainscot for warping, loose parts, raised nails, etc.	
2719	06431	Inspect wood stairs for secureness, damaged components, etc.	
4315	07520	Inspect roll roofing for leaks, blisters,etc.	

4315	07520	Inspect roll roofing for build up of debris
4317	07540	Inspect urethane roofing for leaks
4317	07540	Inspect urethane roofing for build up of debris
4341	07620	Inspect flashing for leaks, rusting, etc.
4351	07631	Inspect gutters and downspouts for debris, leaks, etc.
4145	07810	Inspect skylights for leaks, damaged glass, etc.
4342	07951	Inspect sealants and caulking for deterioration, etc.
4154	08120	Inspect aluminum storm doors for proper operation
4154	08120	Inspect aluminum storm doors for build up of dirt and deterioration
4151	08210	Inspect wood doors for smooth operation, weathering, dirt build-up, etc.
4152	08390	Inspect wood screen doors for proper operation
4152	08390	Inspect wood screen doors for build up of dirt and deterioration
4143	08510	Inspect steel windows for dirt and rust
4143	08510	Inspect steel windows for leaks and deterioration
4141	08610	Inspect wood windows for smooth operation, weathering, dirt build-up, leaks, damaged glass, etc.
4151	08710	Inspect door and window hardware for smooth operation, dirt build-up, looseness, etc.
4142.9	08810	Inspect glass for damage, dirt build-up, etc.
4292.9	09100	Inspect plaster for water damage, cracks, etc.
4293.9	09310	Inspect ceramic tile and grout for damage, stains, dirt build-up, etc.
4245.9	09560	Inspect wood floors for splinters, loose boards, worn areas, etc.
4246.9	09682	Inspect carpets for wear, stains, soil build-up, etc.
4161.9	09910	Inspect exterior paint for dirt, stain, weathering, etc.
4261.9	09920	Inspect interior paint for dirt, stain, wear, etc.
4619.9	10162	Inspect toilet partitions for dirt, tightness, etc.
4618.9	10800	Inspect toilet accessories for cleanliness, leaks, etc.

4591.9	12501	Inspect window blinds and shades for dirt, proper operation, wear, etc.
4617.9	15100	Inspect water heaters for leaks, general cleanliness, etc.
4616.9	15421	Inspect floor drains for proper drainage, loose grates, etc.
4610.9	15400	Inspect water supply and waste for leaks, pressure changes, etc. Inspect plumbing fixtures for leaks, damage, etc.
4615.9	15455	Inspect water coolers for cleanliness, leaks, etc.

INSTRUCTIONS FOR
INSPECTION SUMMARY WORKSHEET

1. CHECK EVERY ITEM LISTED
2. CROSS CHECK WITH EACH SECTION IN VOLUME 2 FOR ADDITIONAL CONCERNS (PART I : INSPECTION INSTRUCTIONS)
3. INDICATE CONDITION OF ITEMS AS FOLLOWS
   S = STABLE
   E = EMERGENCY
   R = ROUTINE
   F = FUTURE
4. RECORD COMMENTS AND OBSERVATIONS
5. ESTIMATE QUANTITIES NEEDED AND COSTS
6. ESTIMATE TIME NEEDED TO COMPLETE
7. USE DRAWINGS AND/OR PHOTOS TO LOCATE ITEMS NEEDING WORK

INSPECTION SUMMARY WORKSHEET

PREPARED BY: _____ DATE: _____ TIME: _____ PAGE ____ OF ____

LOCATION: _____ CODE: S=STABLE E=EMERGENCY R=ROUTINE F=FUTURE

SECT. NO.	FEATURE	CONCERNS	CODE	COMMENTS / PROBABLE CAUSE	QUANTITIES			
					MAN HRS	COSTS		
						LABOR	MAT'L	TOTAL
					EST. / ACT.	EST. / ACT.	EST. / ACT.	EST. / ACT.
					____	____	____	____
					____	____	____	____
					____	____	____	____
					____	____	____	____
					____	____	____	____
					____	____	____	____
					____	____	____	____
					____	____	____	____

INSPECTION SUMMARY REPORT

A. LOCATION: _____

B. ITEM: _____

C. PREPARED BY: _____ DATE: _____

D. RECOMMENDED BY: _____ (SUPT.) DATE: _____

E. COPY OF REPORT SENT TO REGIONAL OFFICE DATE: _____

F. COPY OF REPORT CHECKED BY
REG. HIST. ARCHITECT: _____ DATE: _____

RECORD OF ACTION:

G. DEFICIENCIES SCHEDULED FOR CORRECTIVE ACTION
INSTRUCTIONS BASED ON HSPG: DATE: _____

H. APPROVED BY: _____ DATE: _____

J. EXCEPTIONS: _____

K. DEFICIENCIES CORRECTED DATE: _____

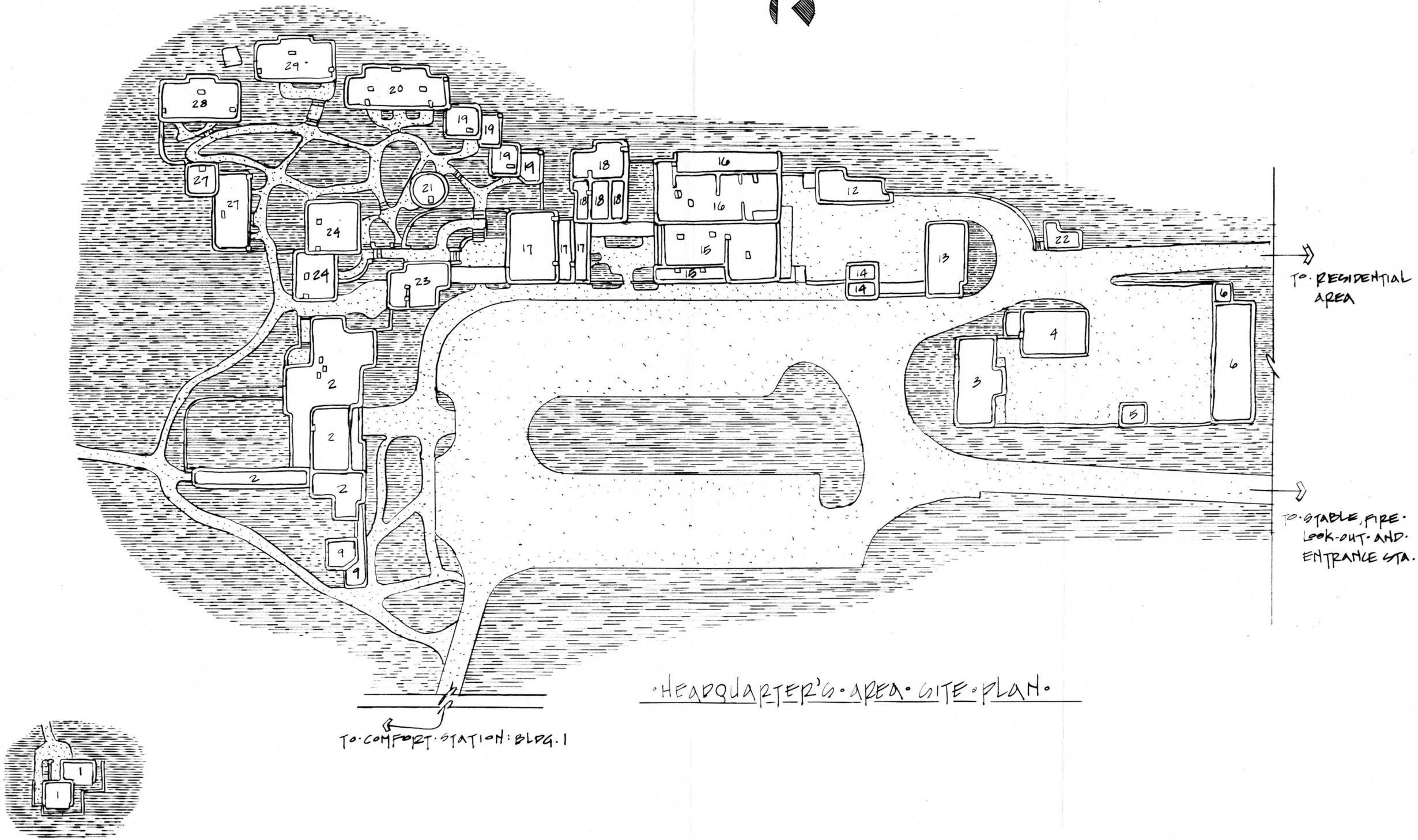
L. APPROVED BY: _____ DATE: _____

M. RECORDS PLACED IN HSPG, VOLUME 3
BY: _____ DATE: _____

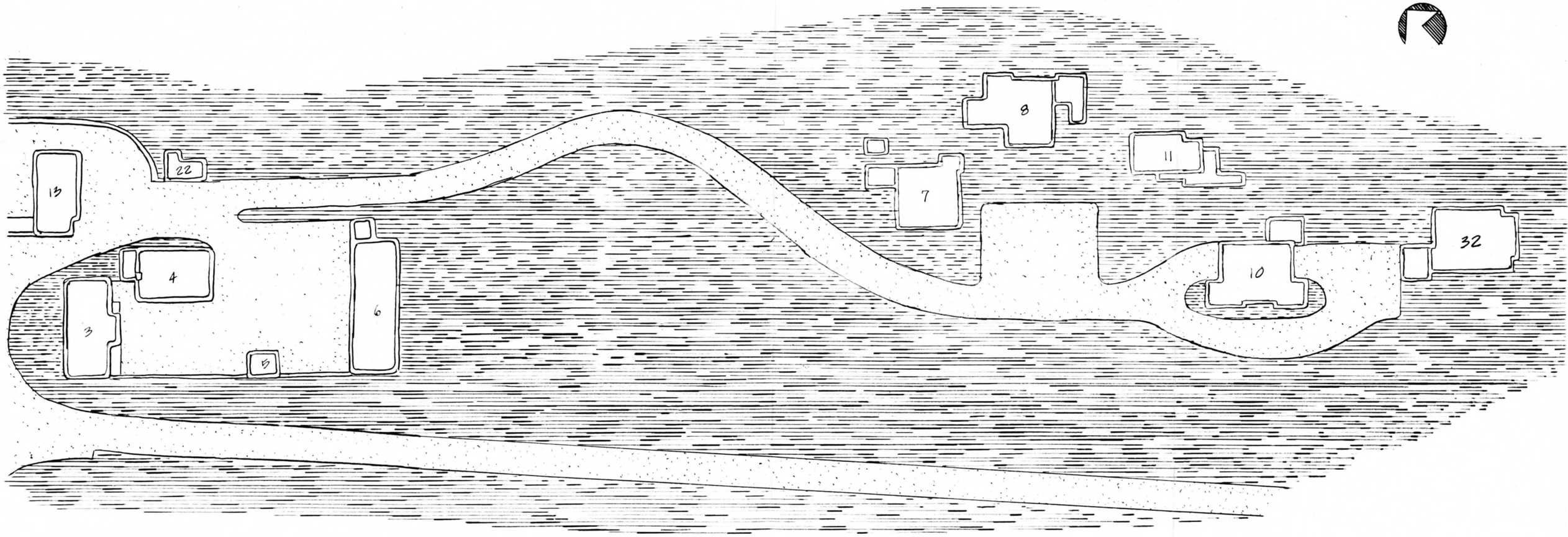
N. EXCEPTIONS/COMMENTS: _____

DRAWINGS OF CCC BUILDINGS

Copies of these drawings are to be used to make field notes during the inspection task. (Do not use the sheets included in the HSPG for notes. Make copies of these sheets and return the originals to the HSPG.)

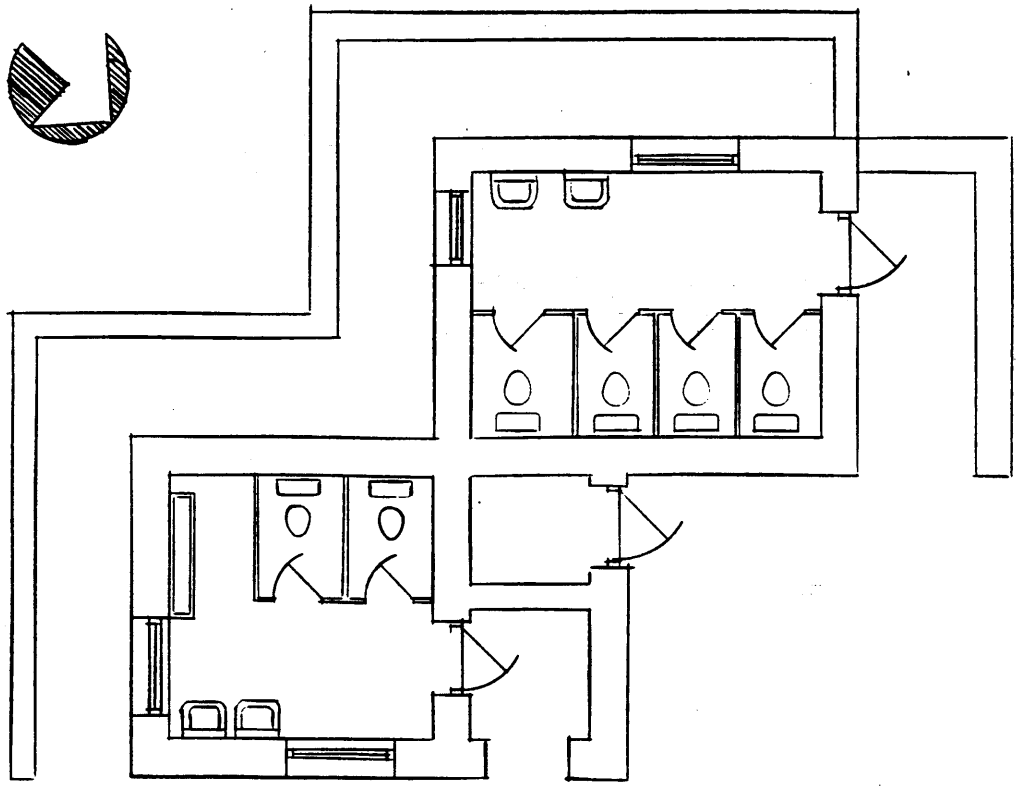


.HEADQUARTER'S. AREA. SITE. PLAN.

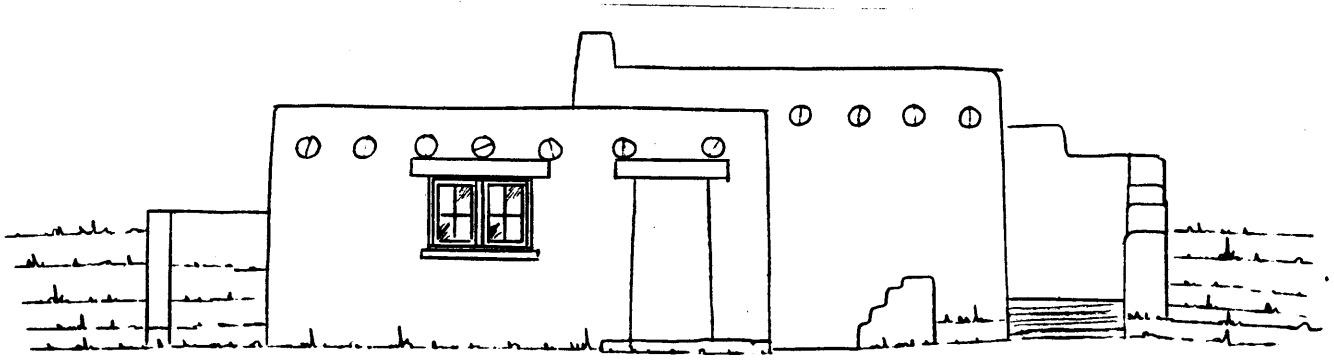


·SITE·PLAN·RESIDENTIAL·AREA

SCALE 1" = 50'



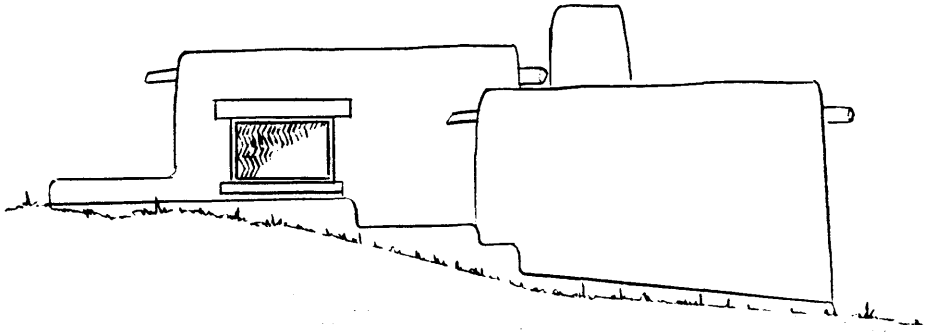
FLOOR PLAN



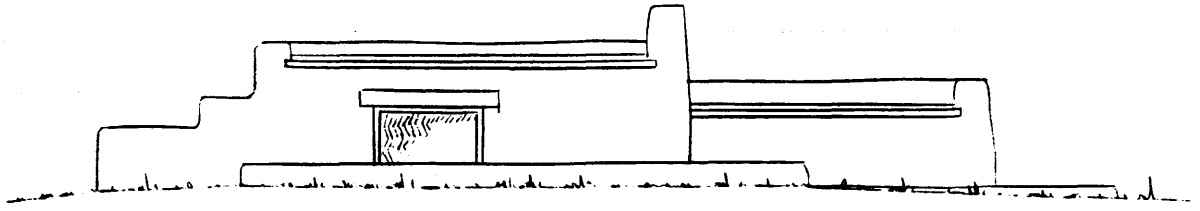
NORTHEAST ELEVATION

COMFORT · STATION : BLDG. 1

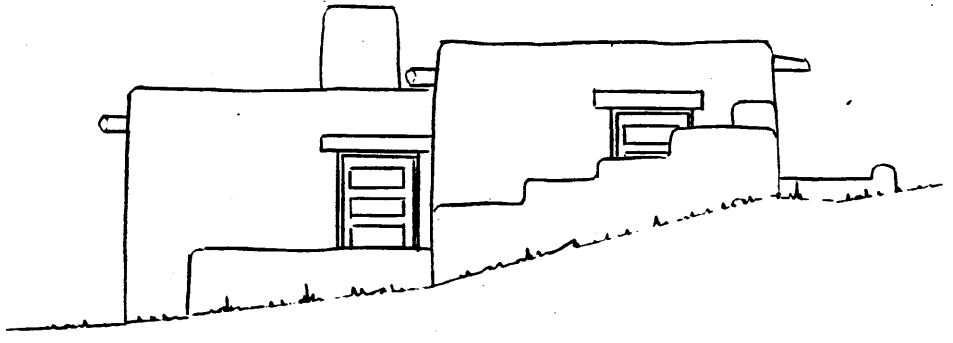
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SOUTHEAST ELEVATION

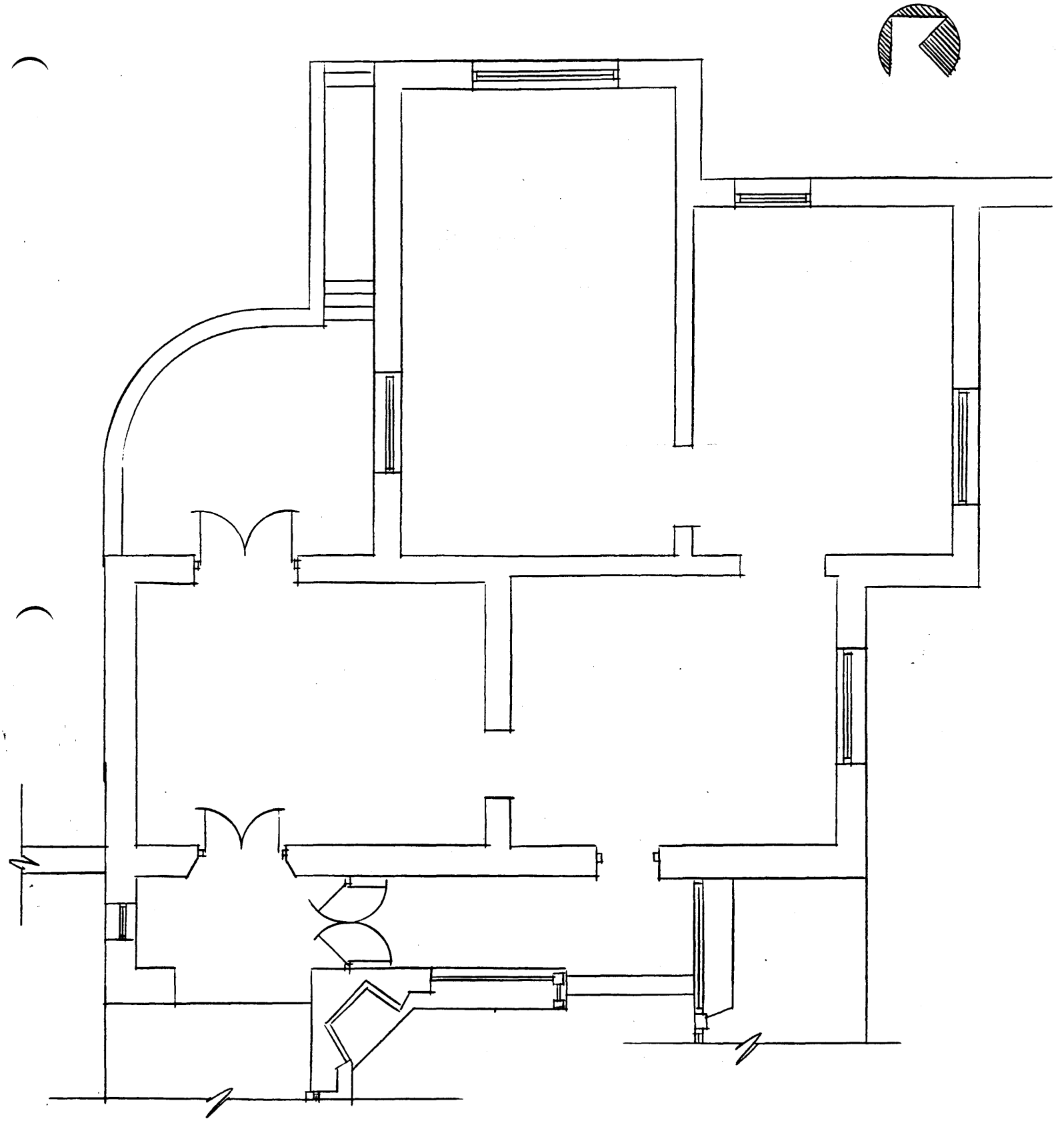


SOUTHWEST ELEVATION



NORTHWEST ELEVATION

COMFORT STATION : BLDG. 1

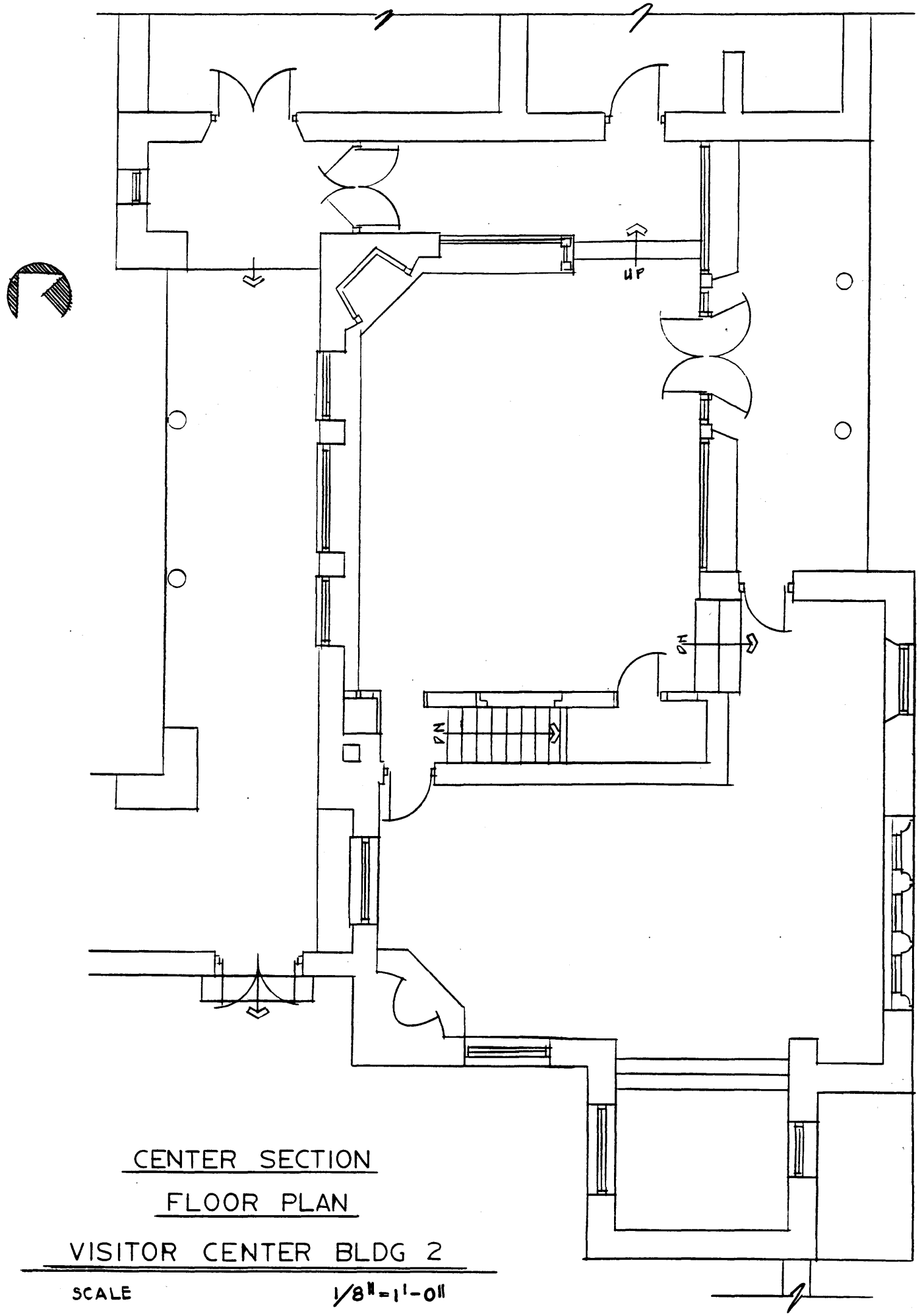


EAST END

FLOOR PLAN

VISITOR CENTER : BLDG. 2

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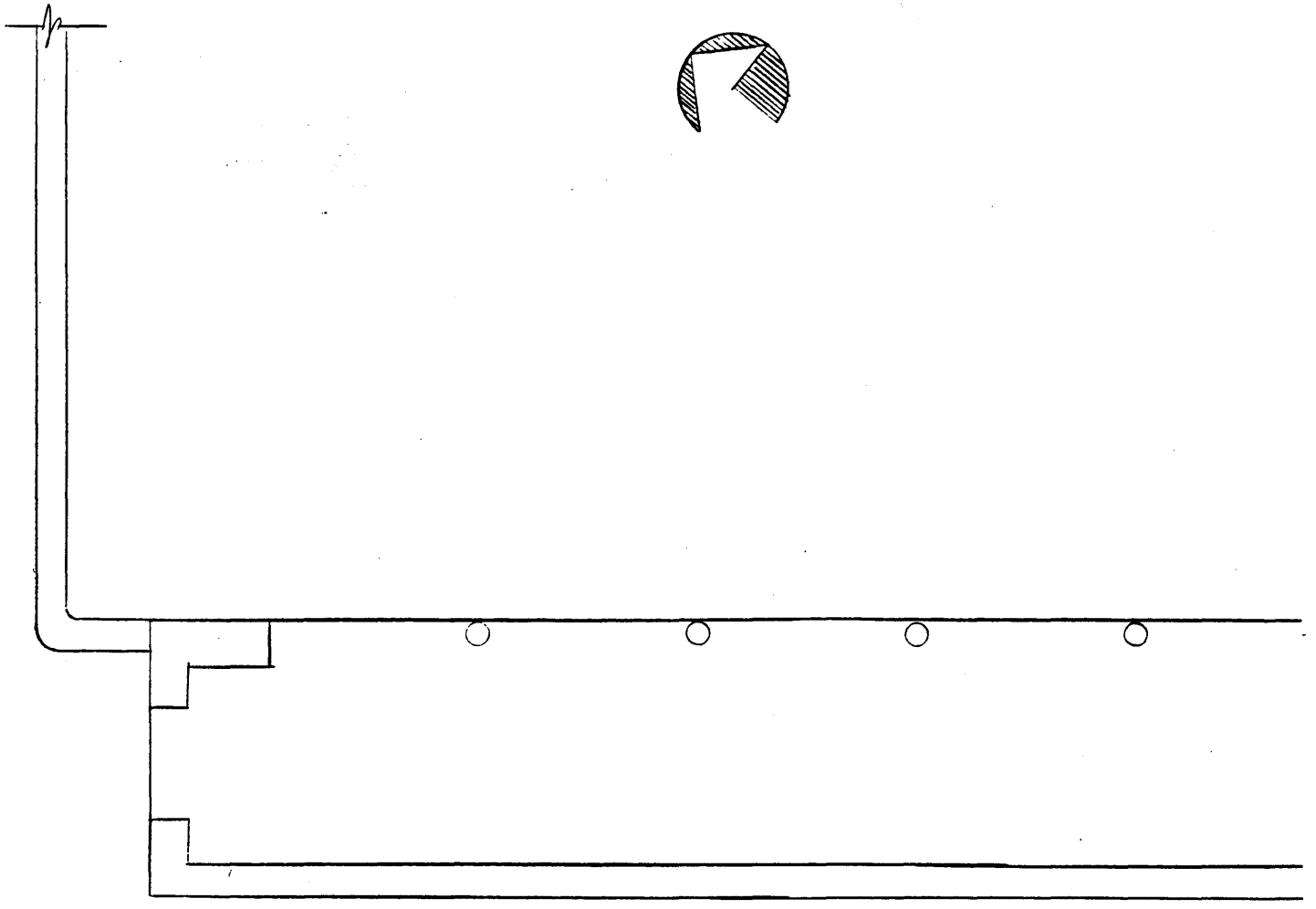


CENTER SECTION

FLOOR PLAN

VISITOR CENTER BLDG 2

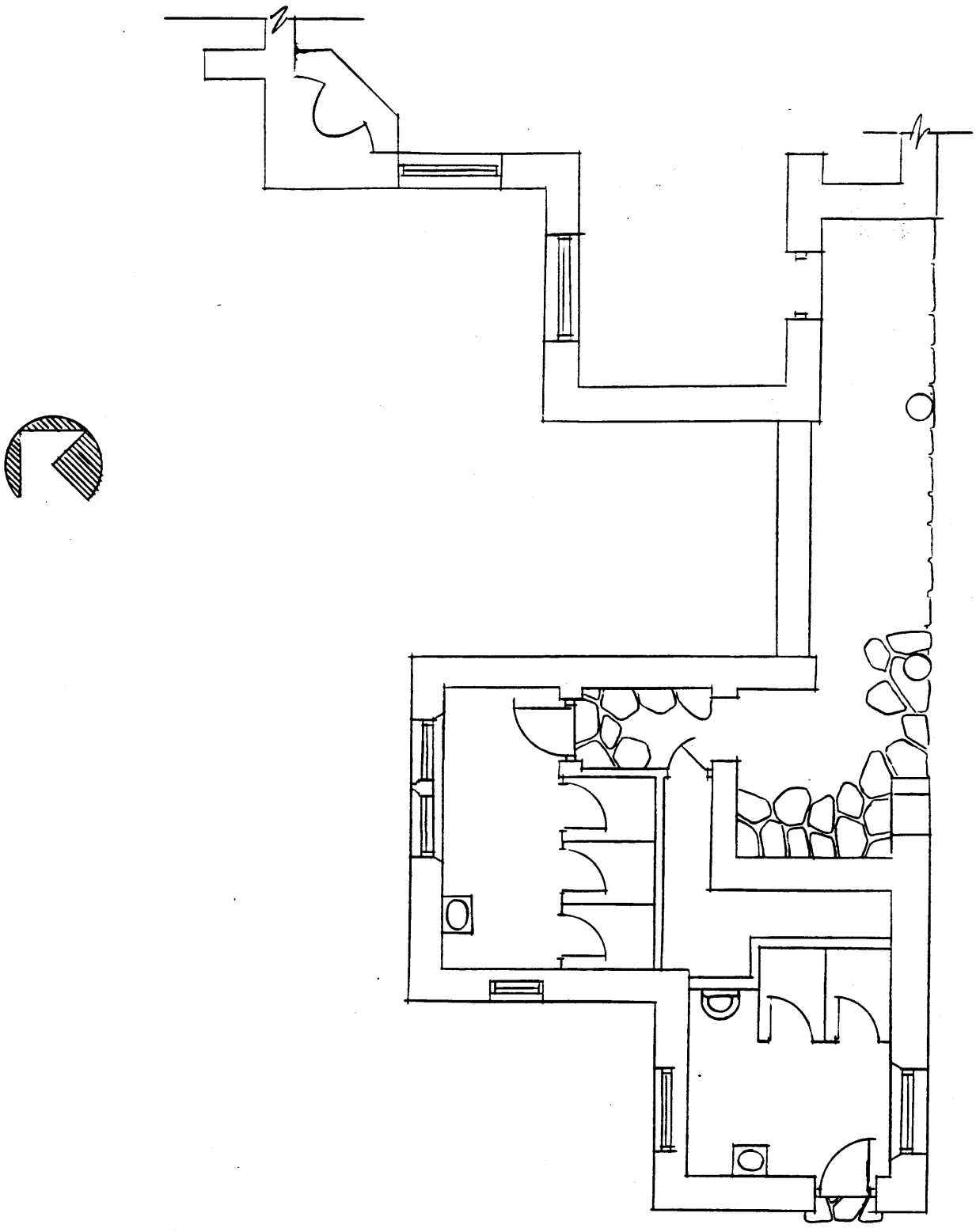
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LOGGIA FLOOR PLAN

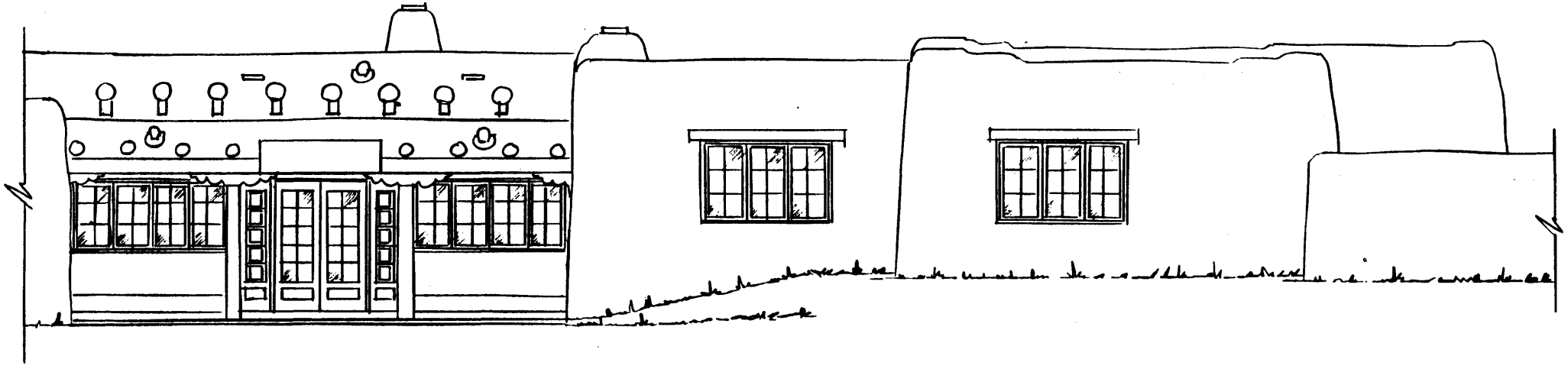
VISITOR CENTER: BLDG. 2

SCALE 1/8" = 1'-0"

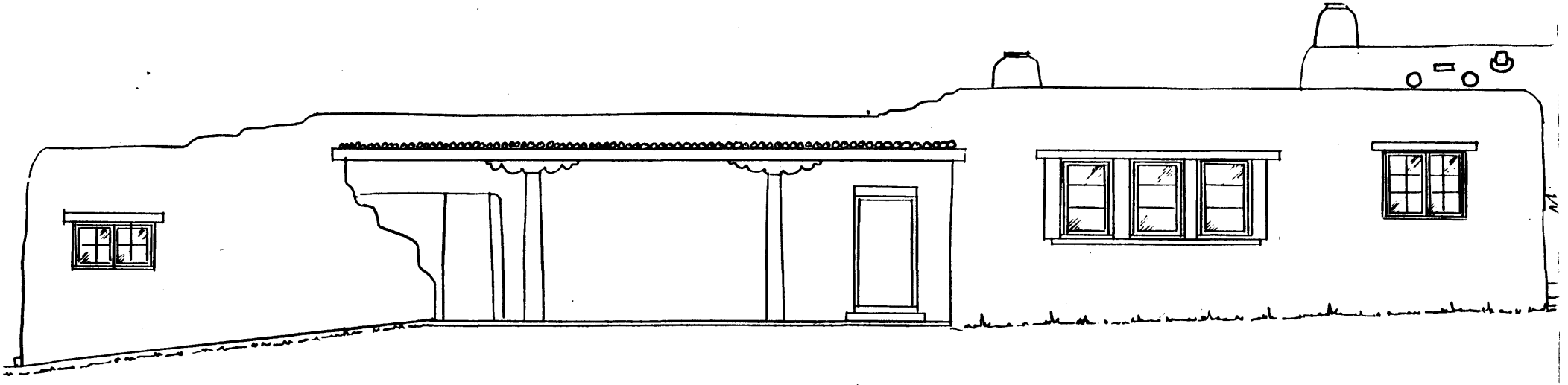


FLOOR PLAN

COMFORT STATION: BLDG. 9



SOUTHEAST ELEVATION: EAST SIDE



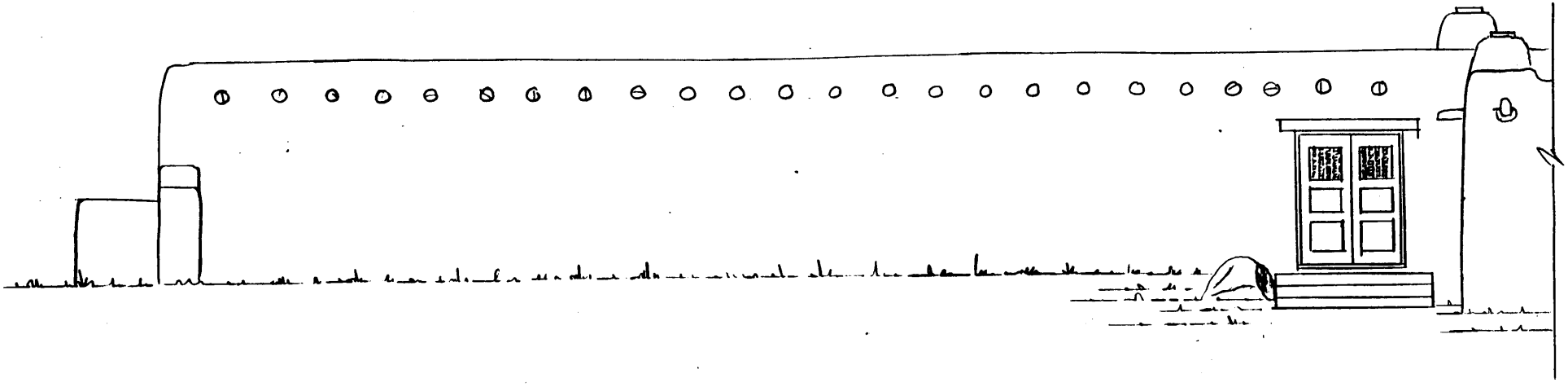
SOUTHEAST ELEVATION: WEST SIDE

VISITOR CENTER: BLDG. 2 & COMFORT STATION: BLDG. 9

SCALE 1/8" = 1'-0"



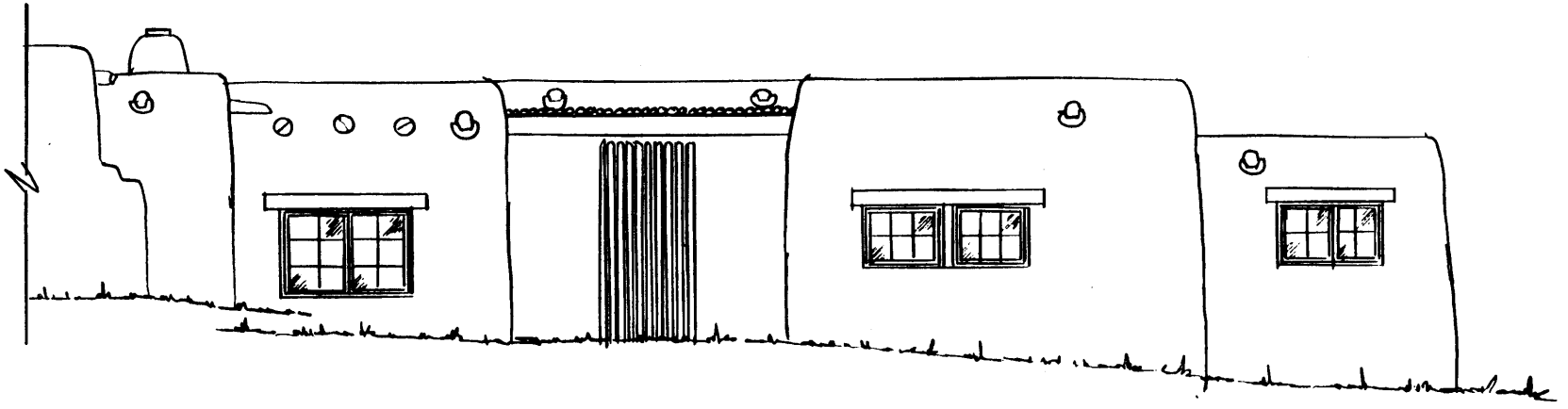
SOUTHWEST ELEVATION: SOUTH SIDE



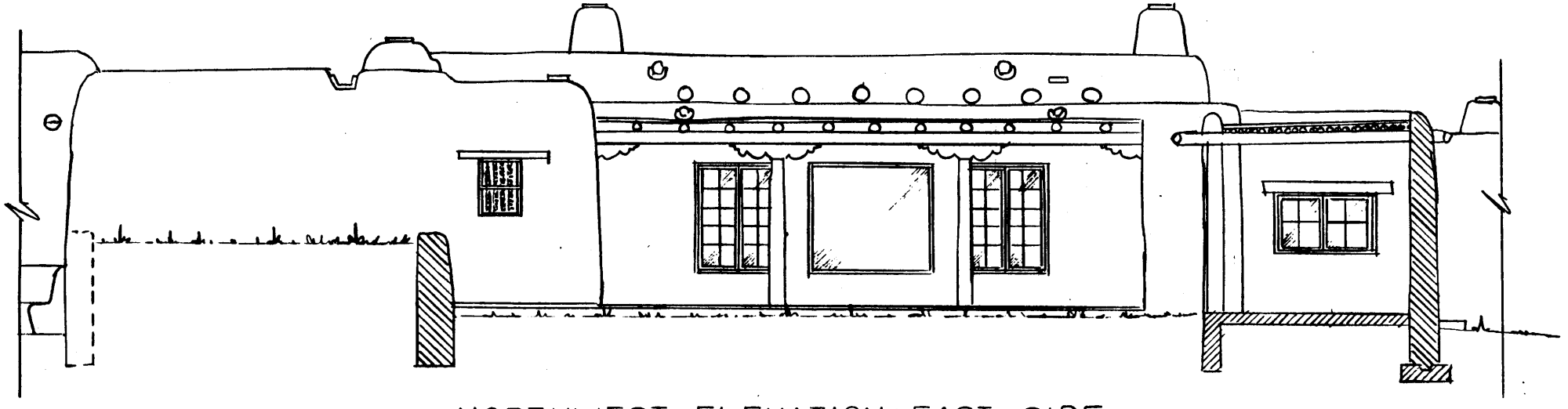
SOUTHWEST ELEVATION: NORTH SIDE

VISITOR CENTER: BLDG. 2 & COMFORT STATION: BLDG. 9

SCALE 1/8" = 1'-0"



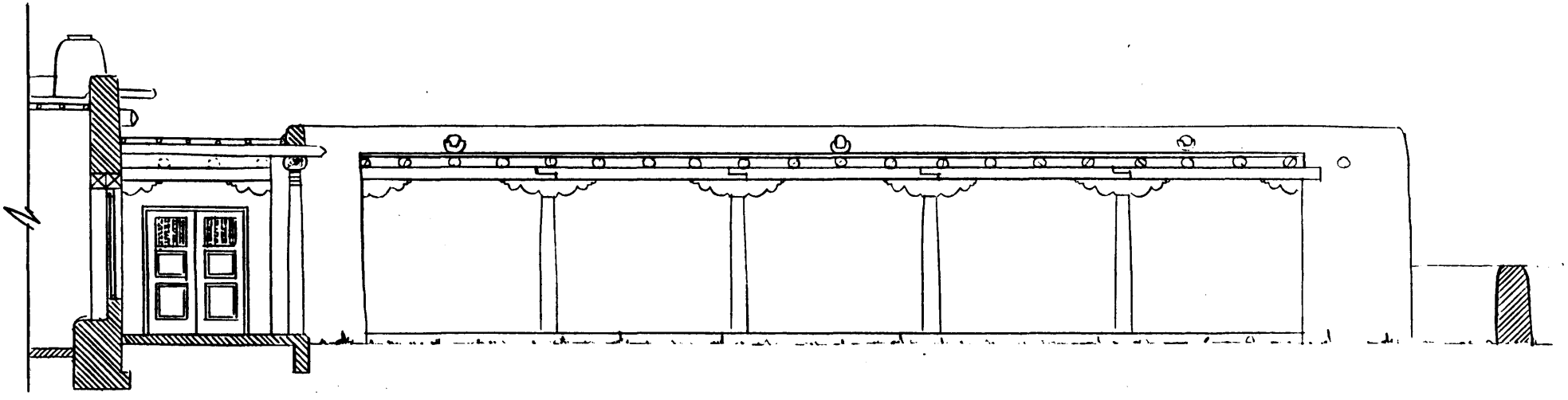
NORTHWEST ELEVATION: WEST SIDE



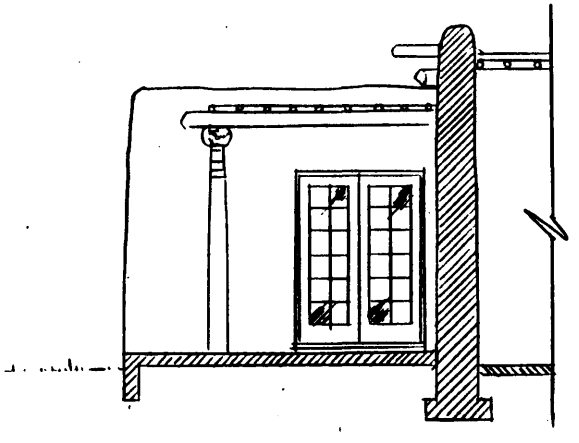
NORTHWEST ELEVATION: EAST SIDE

VISITOR CENTER: BLDG. 2 & COMFORT STATION: BLDG. 9

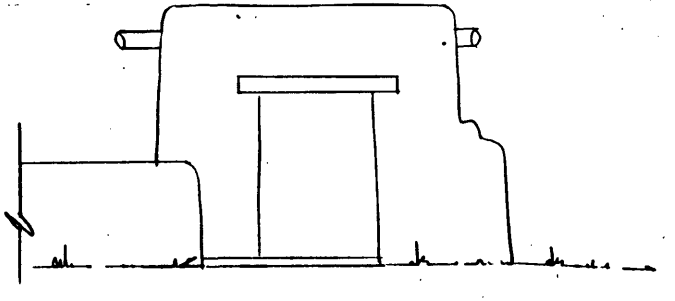
SCALE 1/8" = 1'-0"



NORTHEAST ELEVATION: LOGGIA



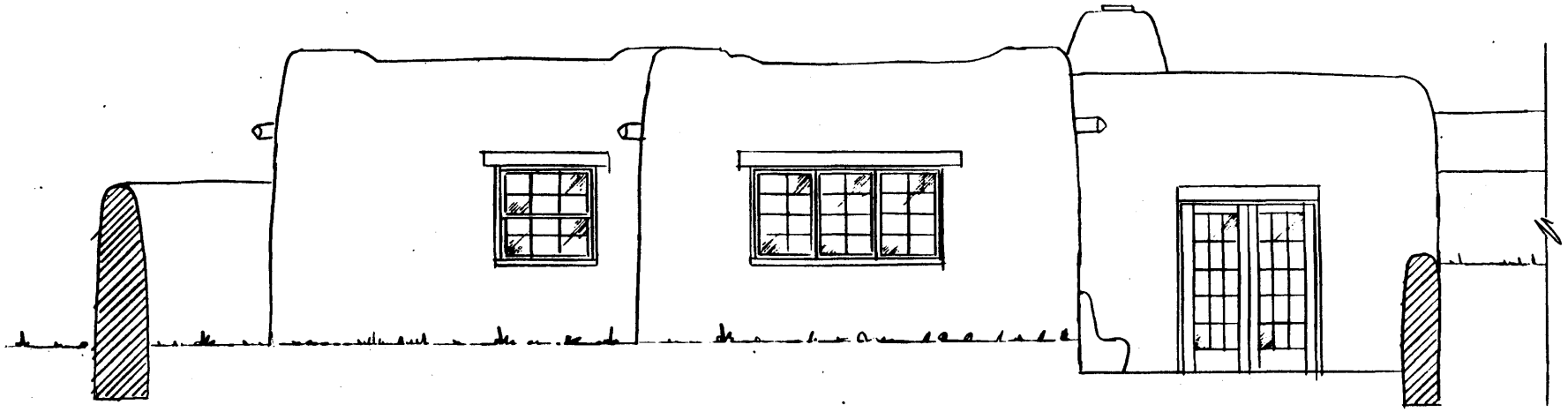
SOUTHWEST ELEVATION
BUILDING LOGGIA



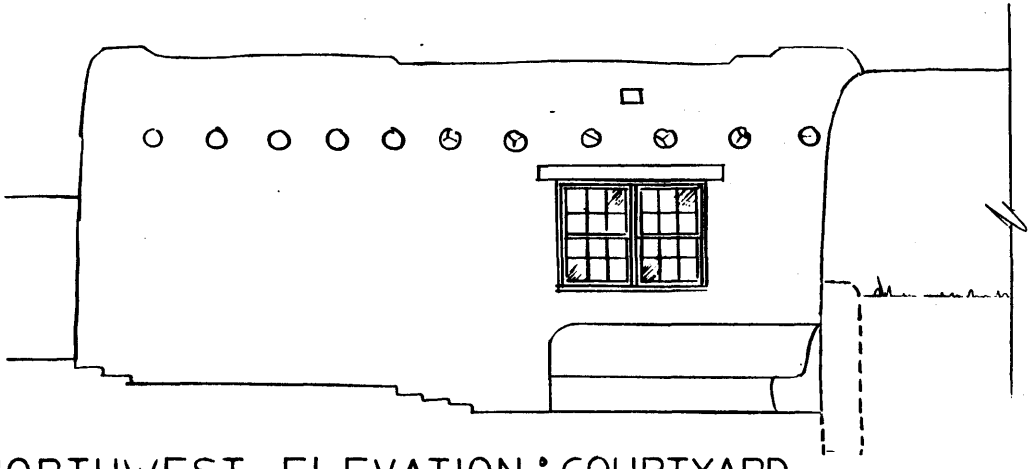
NORTHWEST ELEVATION
LOGGIA ENTRANCE

VISITOR CENTER: BLDG. 2 & COMFORT STATION: BLDG. 9

SCALE 1/8" = 1'-0"



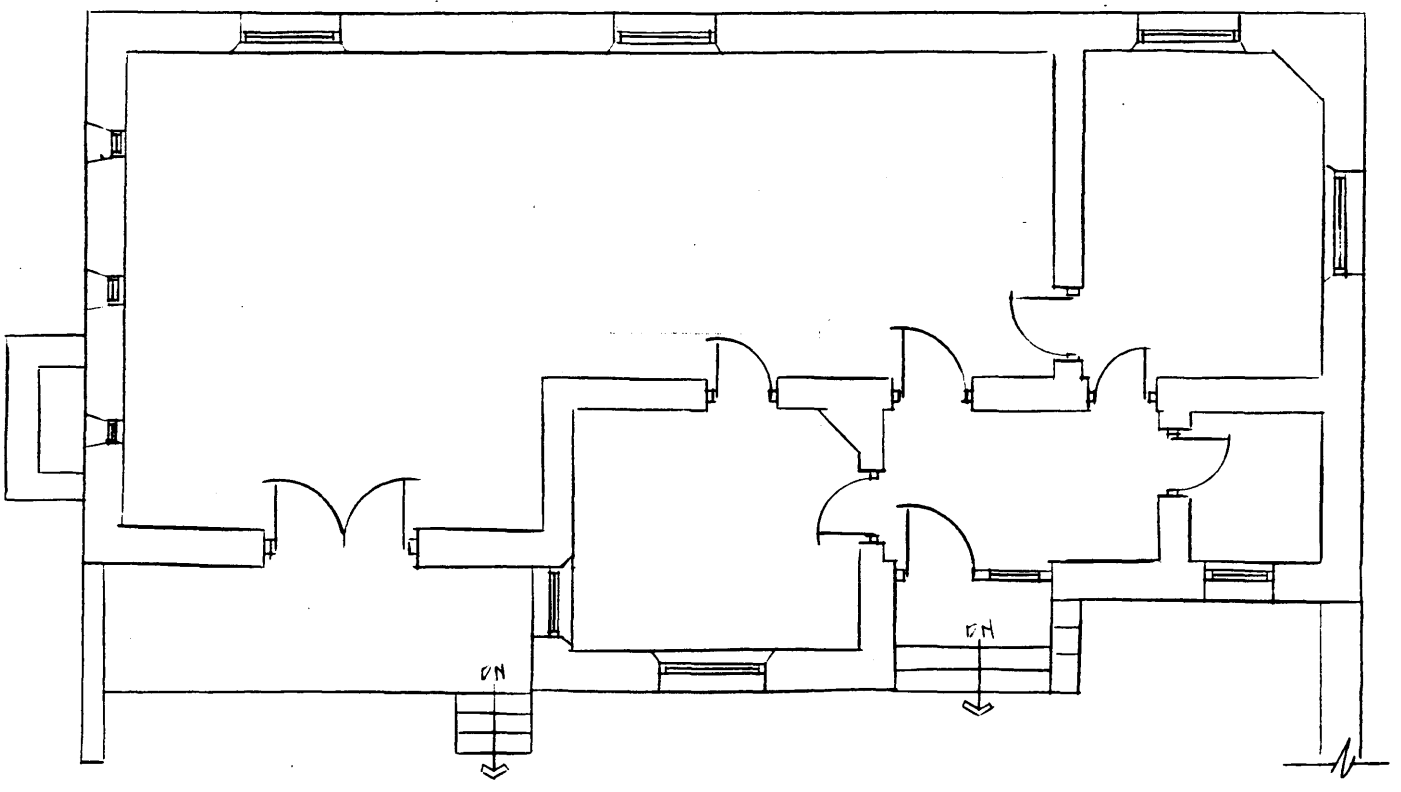
NORTHEAST ELEVATION



NORTHWEST ELEVATION : COURTYARD

VISITOR CENTER : BLDG. 2 & COMFORT STATION : BLDG. 9

SCALE 1/8" = 1'-0"



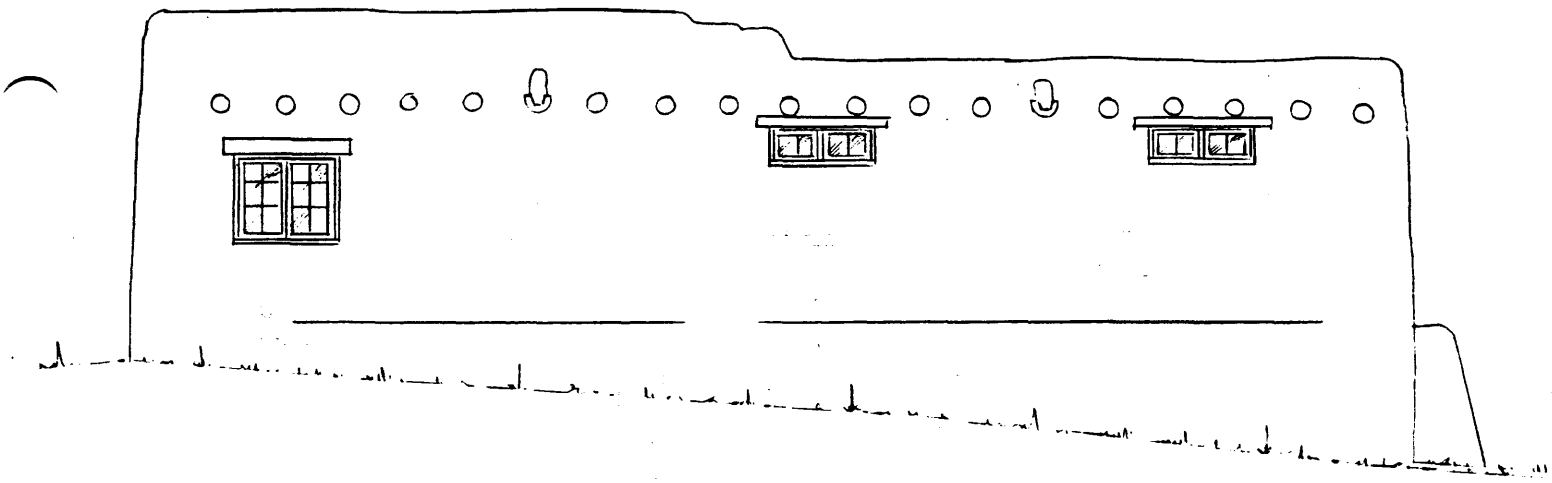
FLOOR PLAN



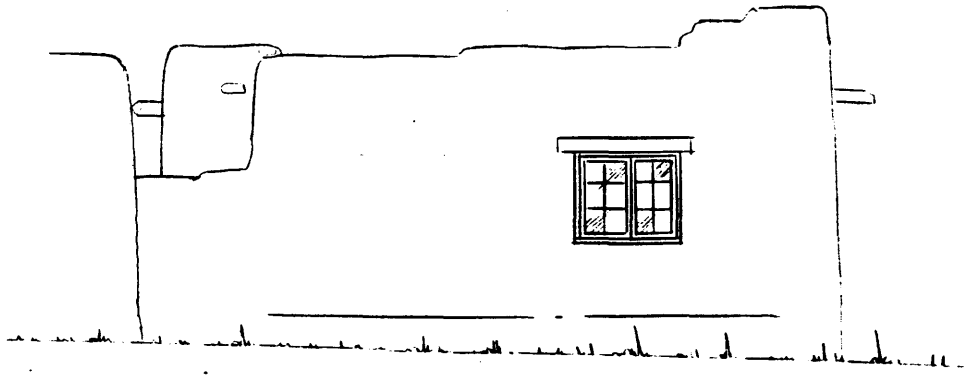
SOUTHEAST ELEVATION

WAREHOUSE: BLDG. 3

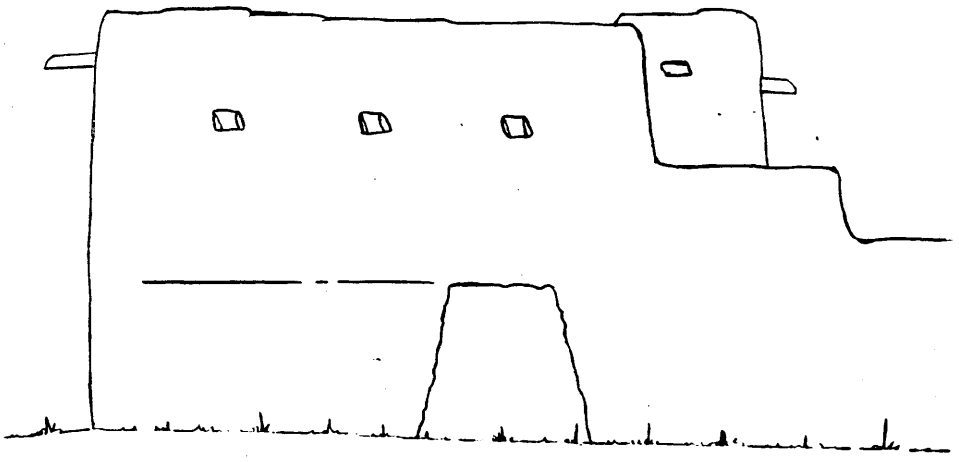
SCALE 1/8" = 1'-0"



NORTHWEST ELEVATION



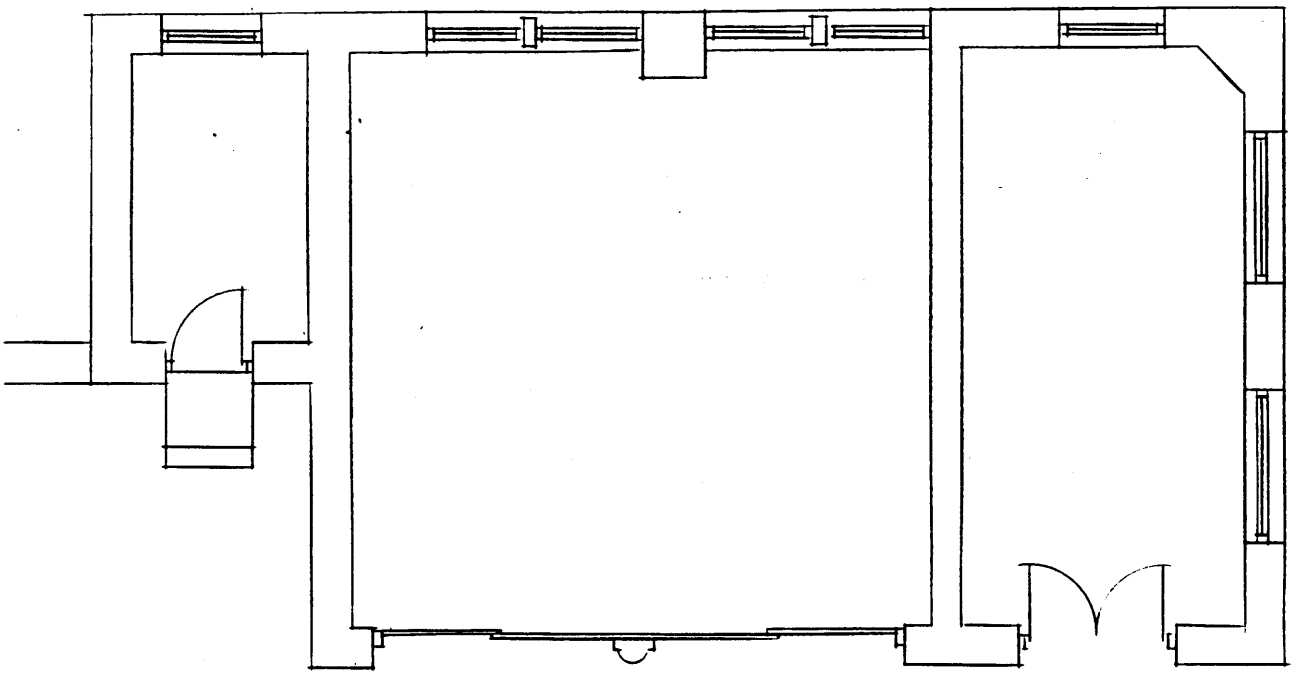
NORTHEAST ELEVATION



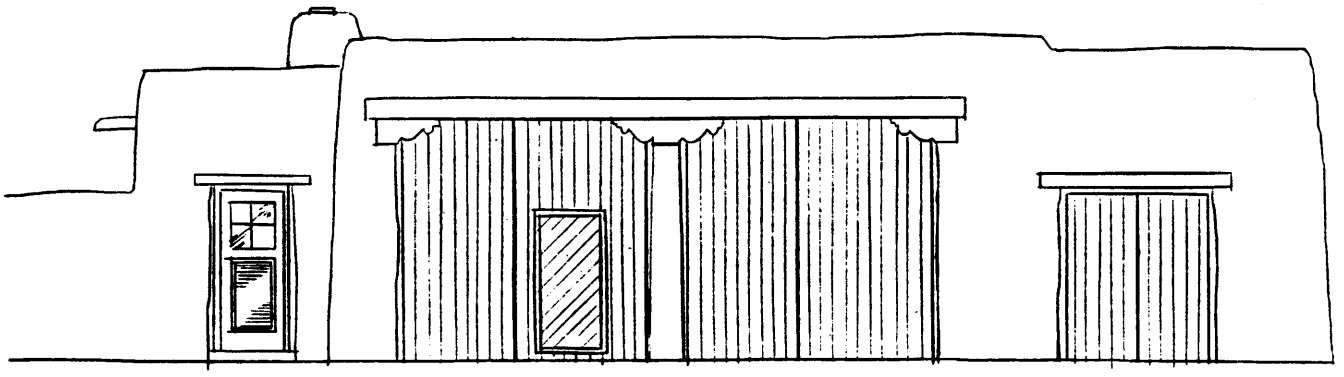
SOUTHWEST ELEVATION

WAREHOUSE : BLDG. 3

SCALE 1/8" = 1'-0"



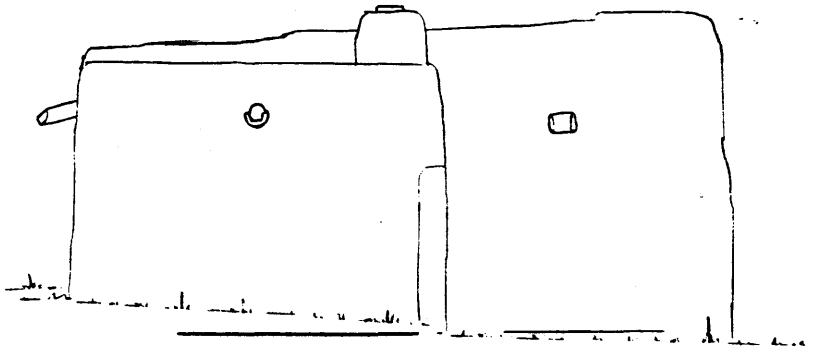
FLOOR PLAN



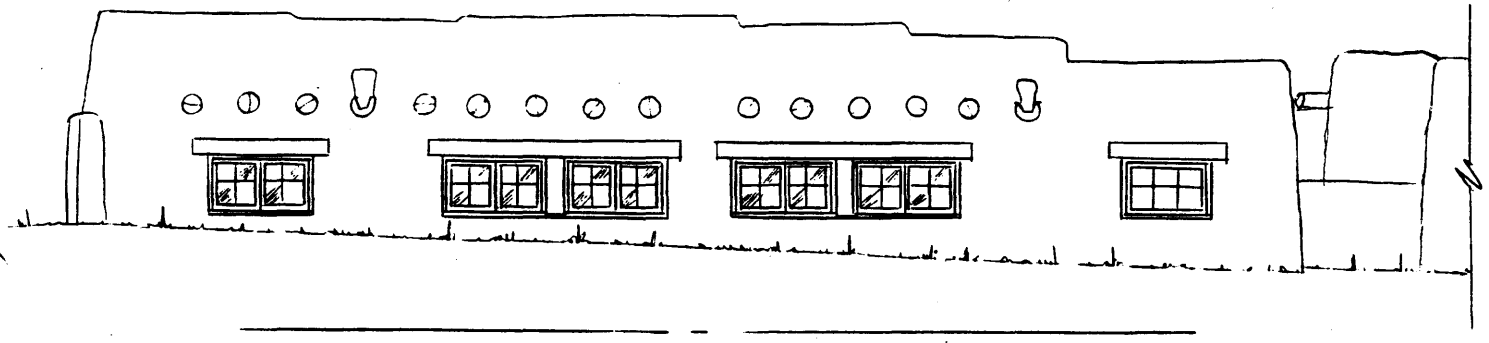
SOUTHWEST ELEVATION

GARAGE AND BLACKSMITH: BLDG. 4

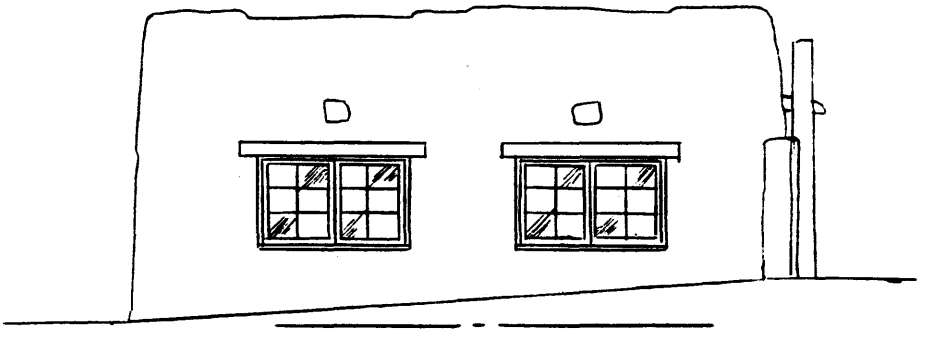
SCALE 1/8" = 1'-0"



NORHWEST ELEVATION



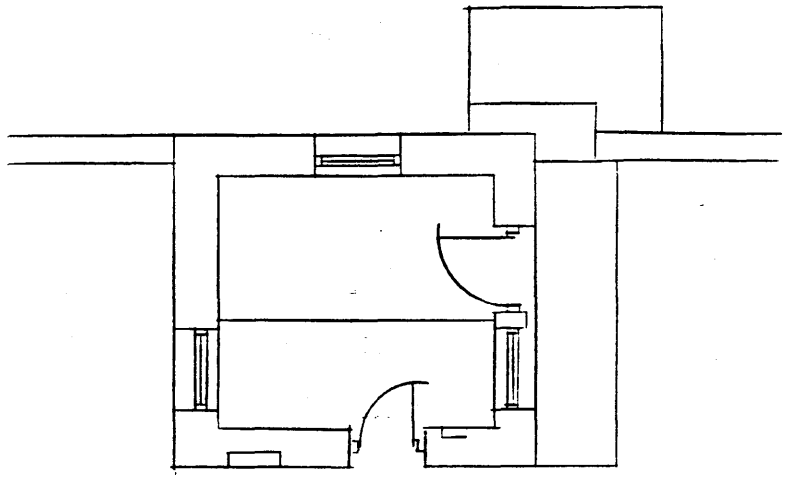
NORTHEAST ELEVATION



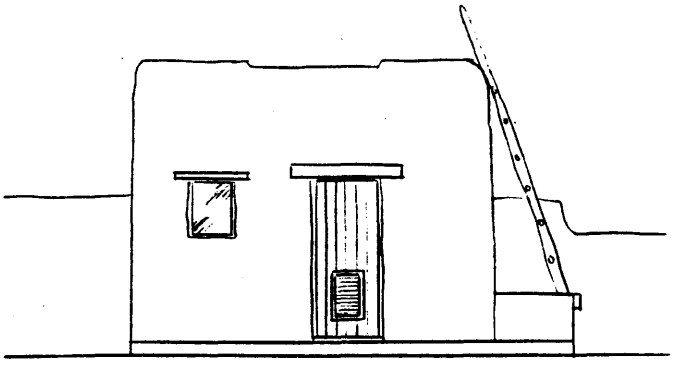
SOUTHEAST ELEVATION

GARAGE AND BLACKSMITH : BLDG. 4

SCALE 1/8" = 1'-0"



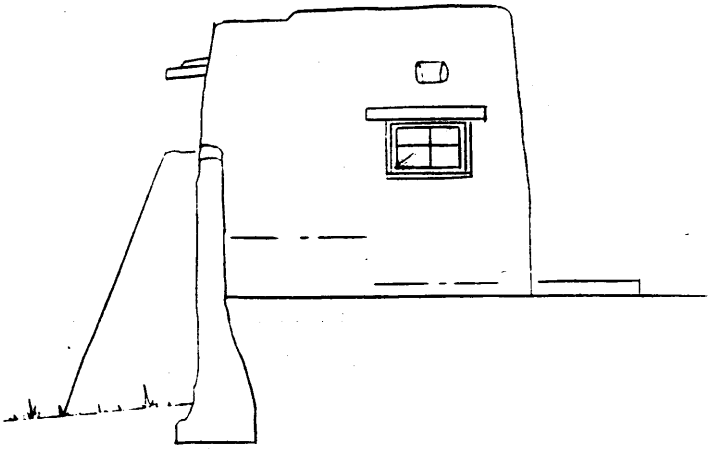
FLOOR PLAN



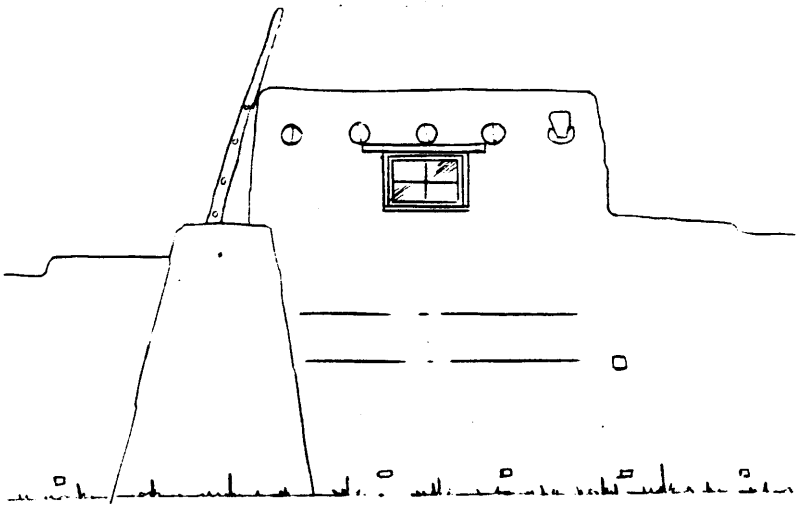
NORTHEAST ELEVATION

GAS AND OIL HOUSE : BLDG. 5

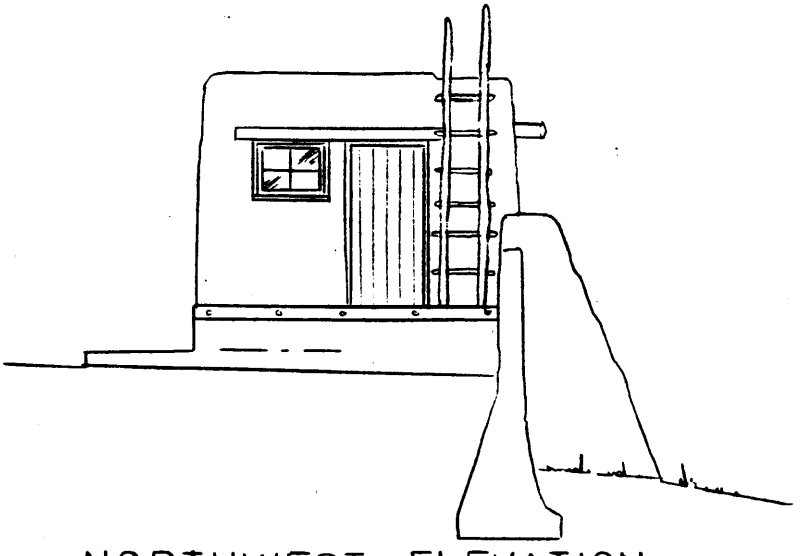
SCALE 1/8" = 1'-0"



SOUTHEAST ELEVATION



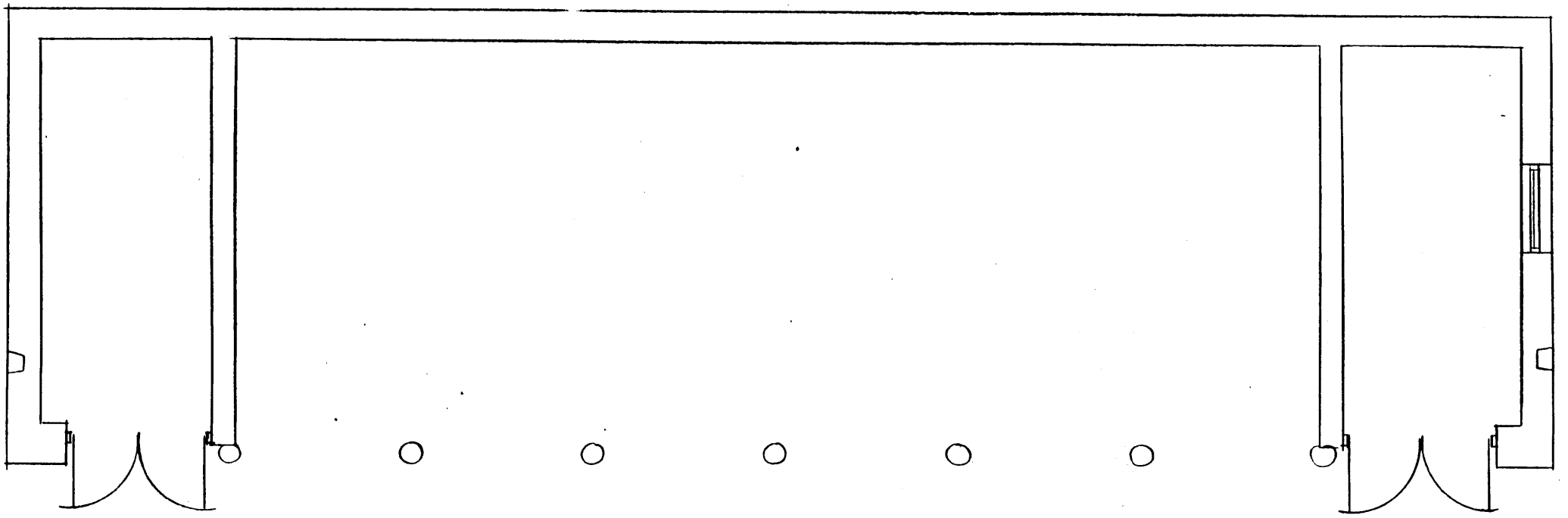
SOUTHWEST ELEVATION



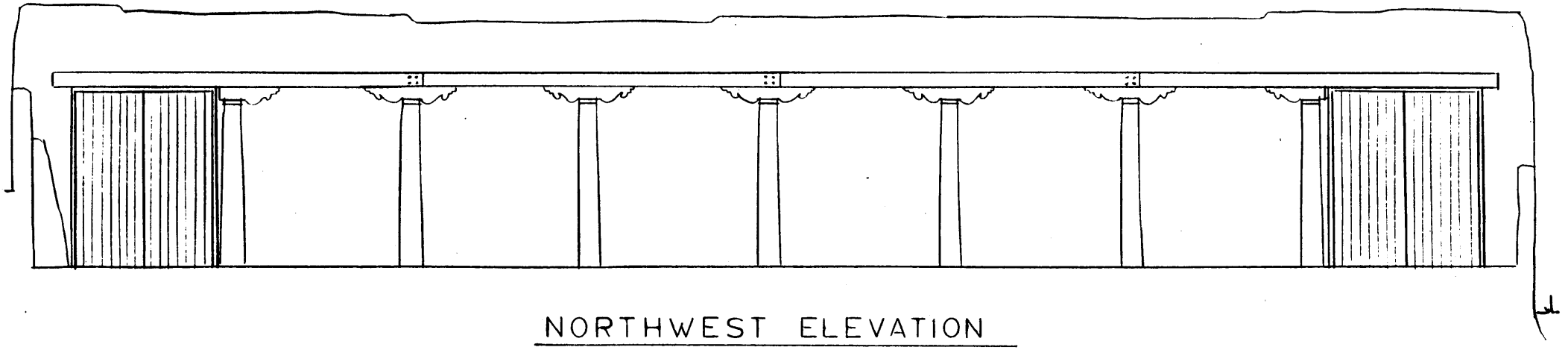
NORTHWEST ELEVATION

GAS AND OIL HOUSE: BLDG. 5

SCALE 1/8" = 1'-0"



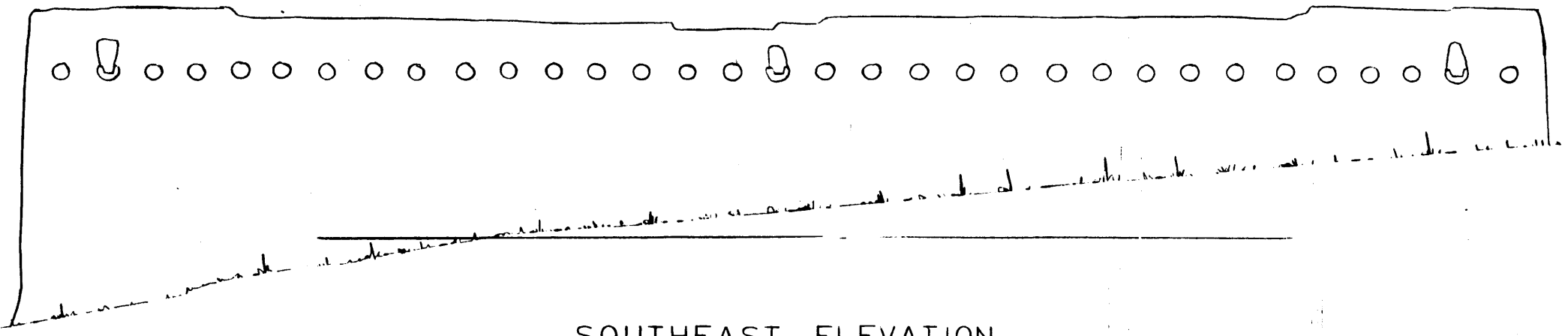
FLOOR PLAN



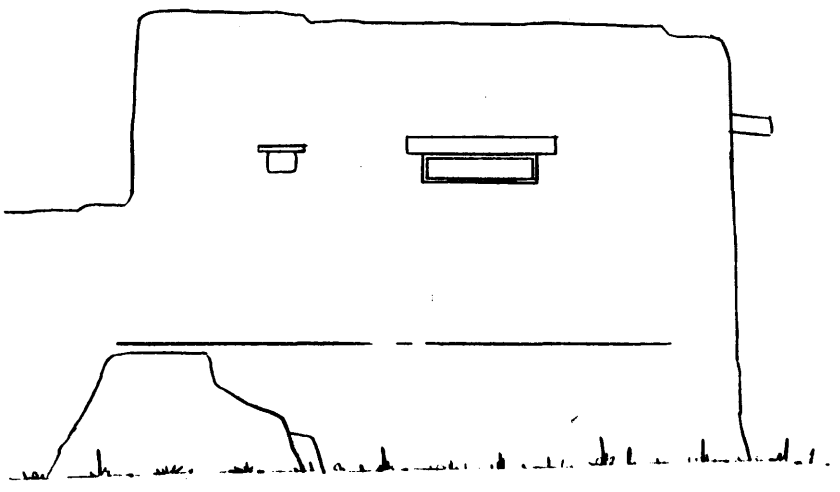
NORTHWEST ELEVATION

GARAGE : BLDG. 6

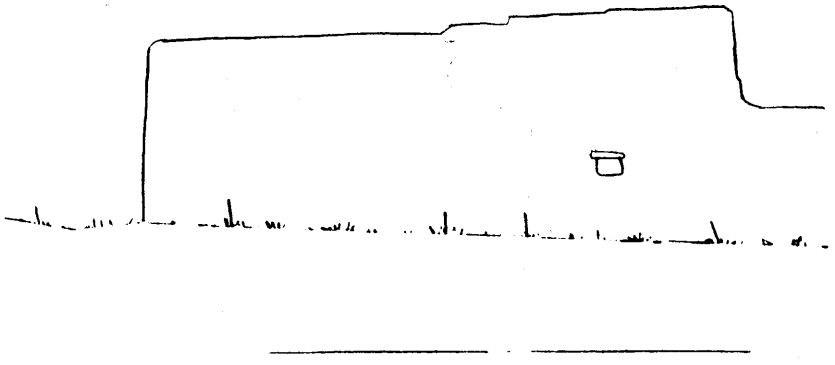
SCALE 1/8" = 1'-0"



SOUTHEAST ELEVATION



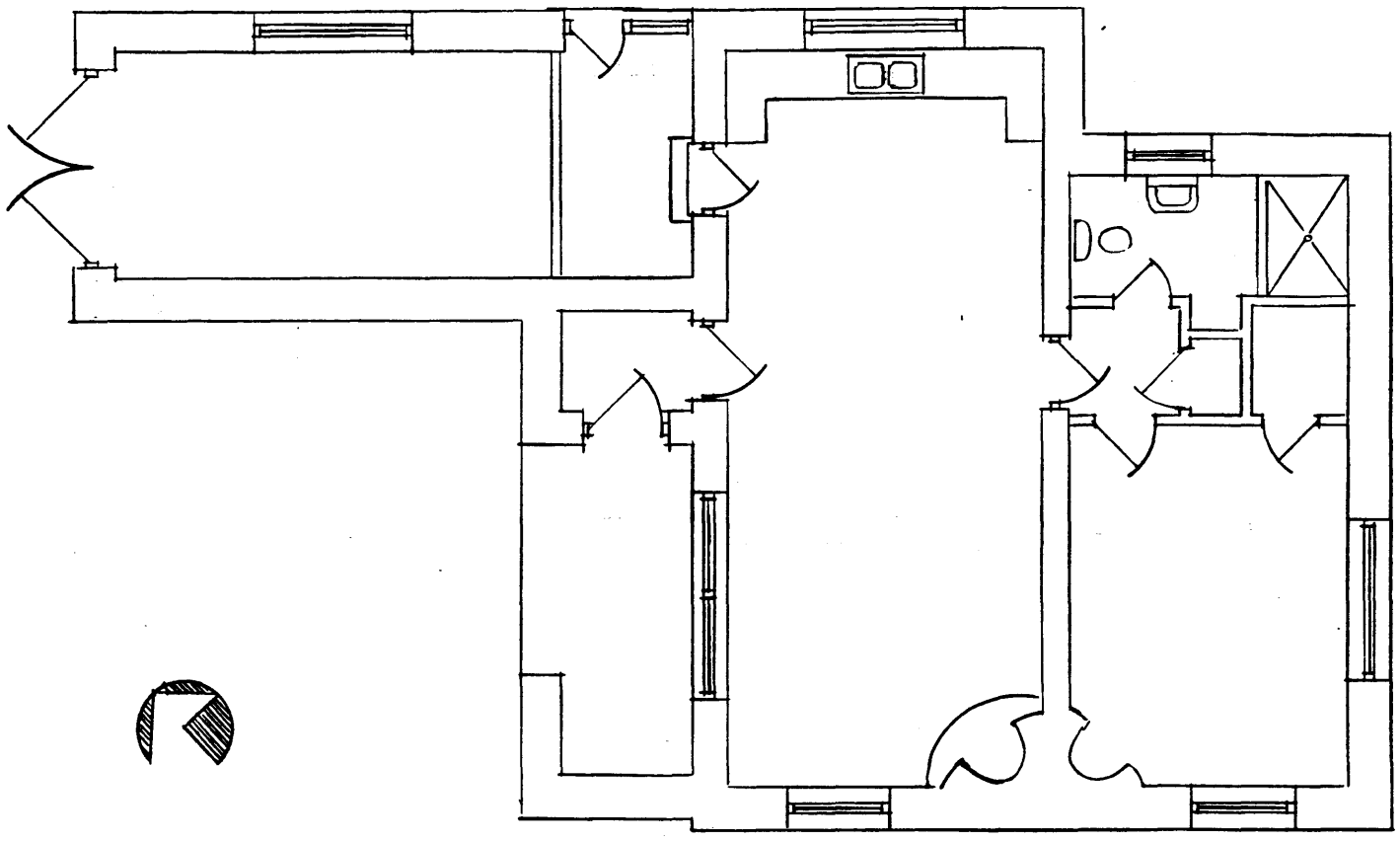
SOUTHWEST ELEVATION



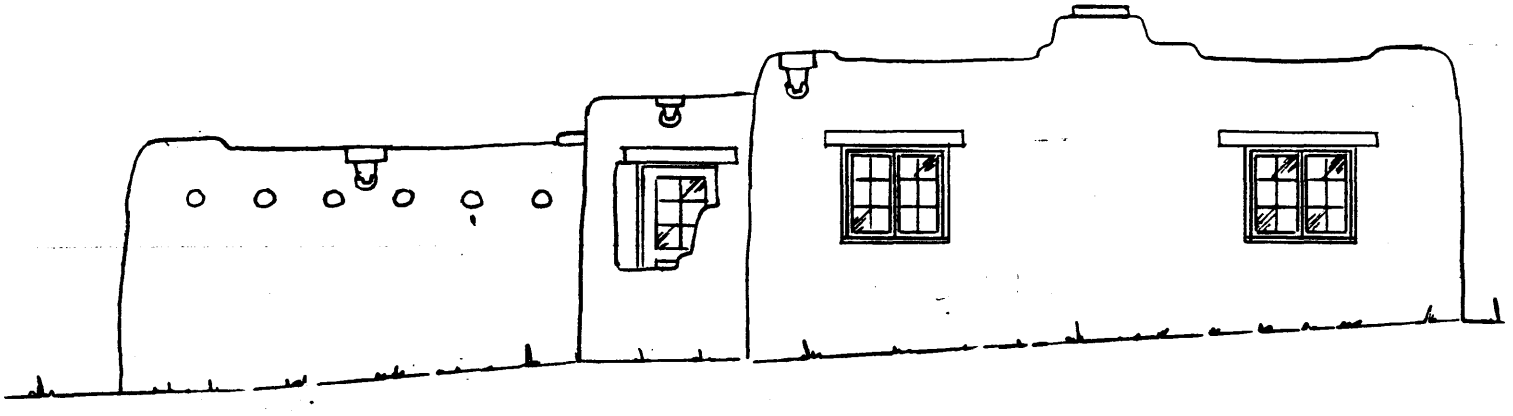
NORTHEAST ELEVATION

GARAGE : BLDG. 6

SCALE 1/8" = 1'-0"



FLOOR PLAN



SOUTHWEST ELEVATION

RESIDENCE BLDG 7

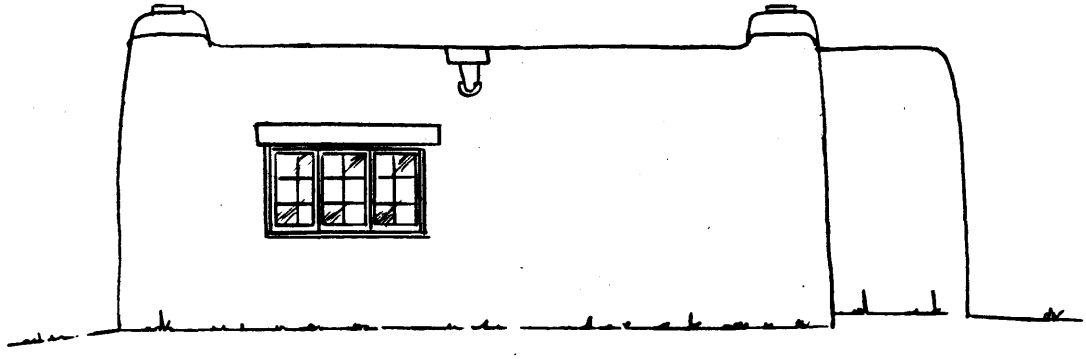
SCALE 1/8"=1'-0"



NORTHWEST ELEVATION



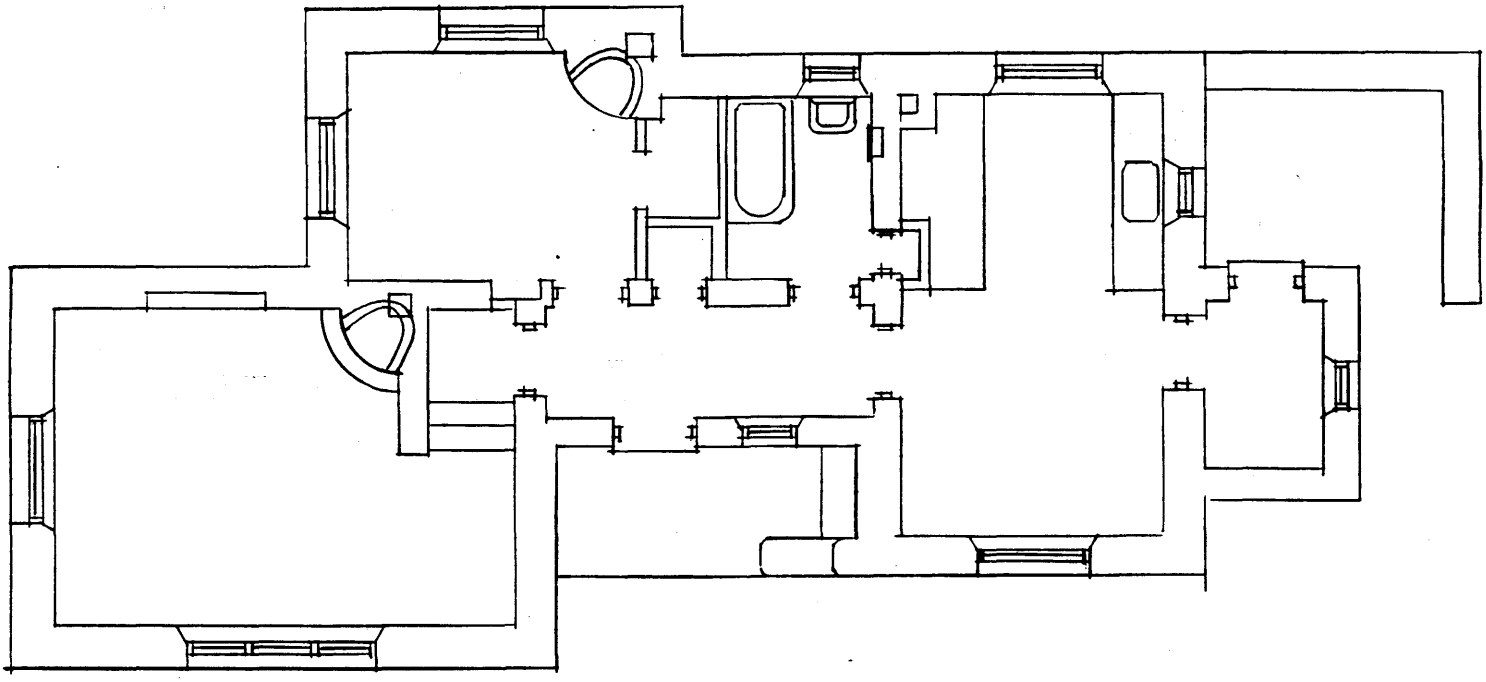
NORTHEAST ELEVATION



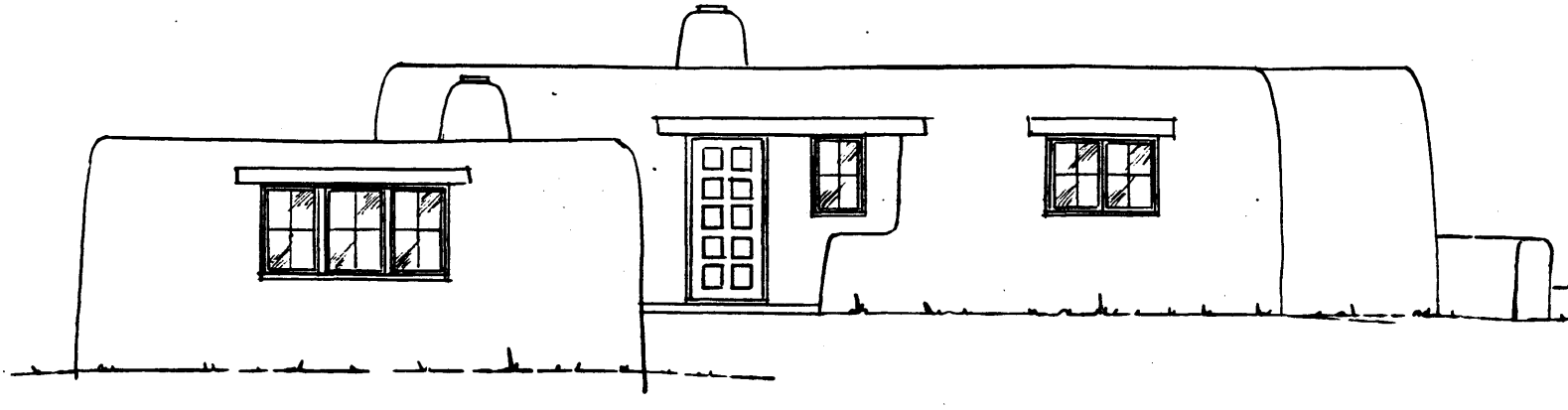
SOUTHEAST ELEVATION

RESIDENCE : BLDG. 7

SCALE 1/8" = 1'-0"



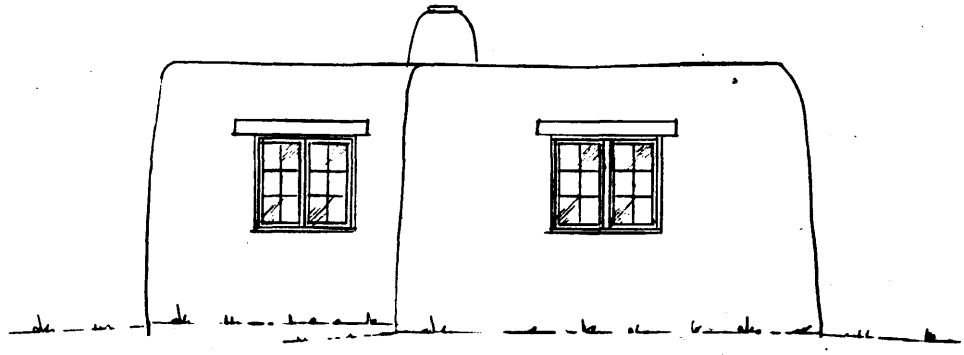
FLOOR PLAN



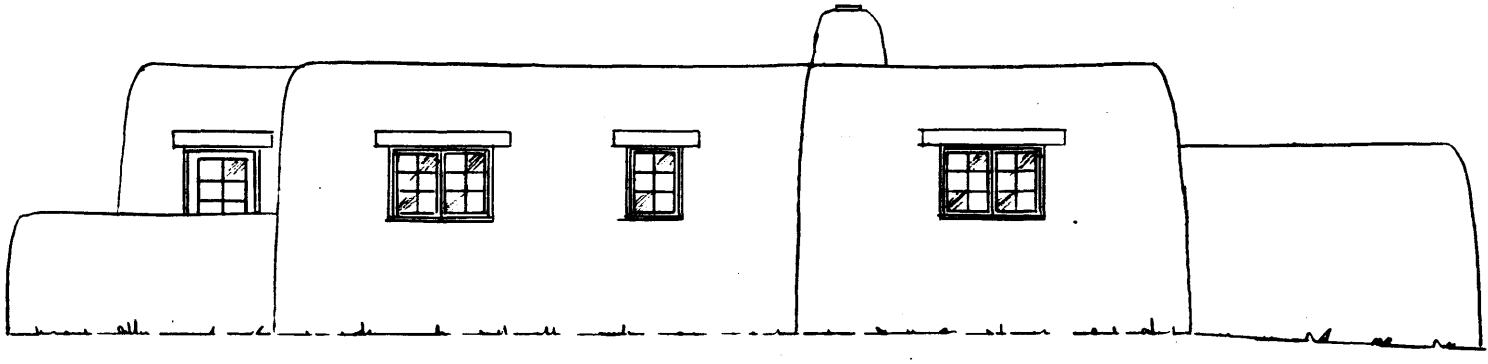
SOUTHWEST ELEVATION

RESIDENCE : BLDG. 8

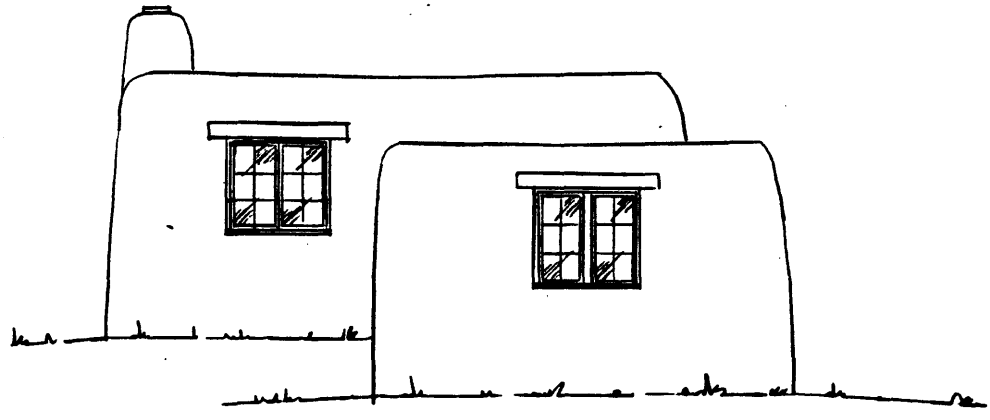
SCALE 1/8" = 1'-0"



NORTHWEST ELEVATION



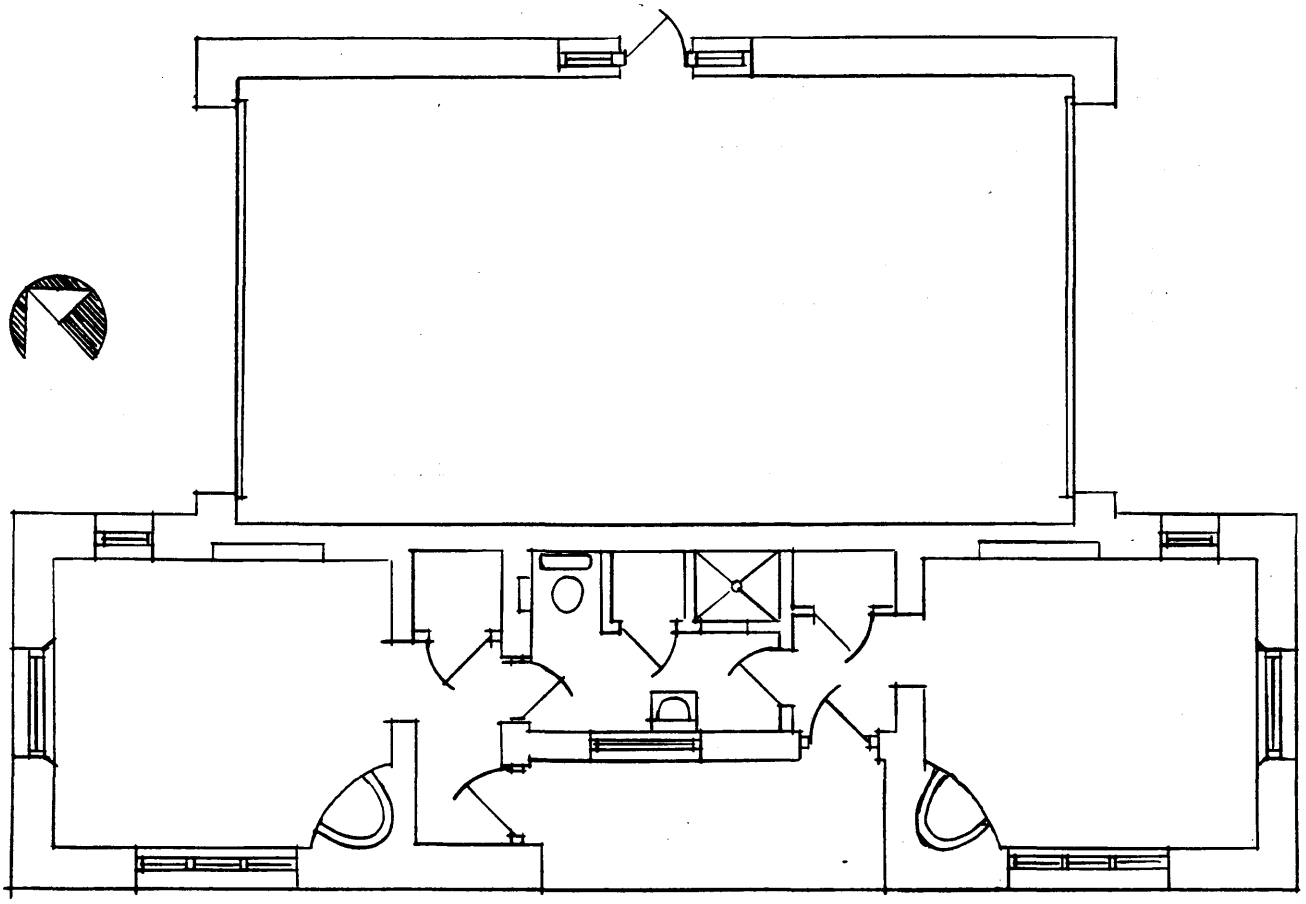
NORTHEAST ELEVATION



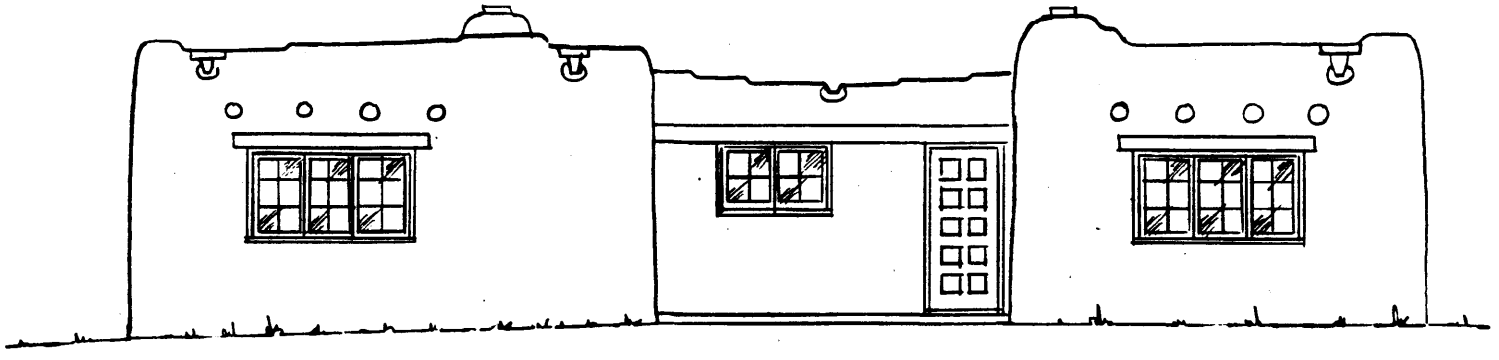
SOUTHEAST ELEVATION

RESIDENCE BLDG 8

SCALE 1/8" = 1'-0"



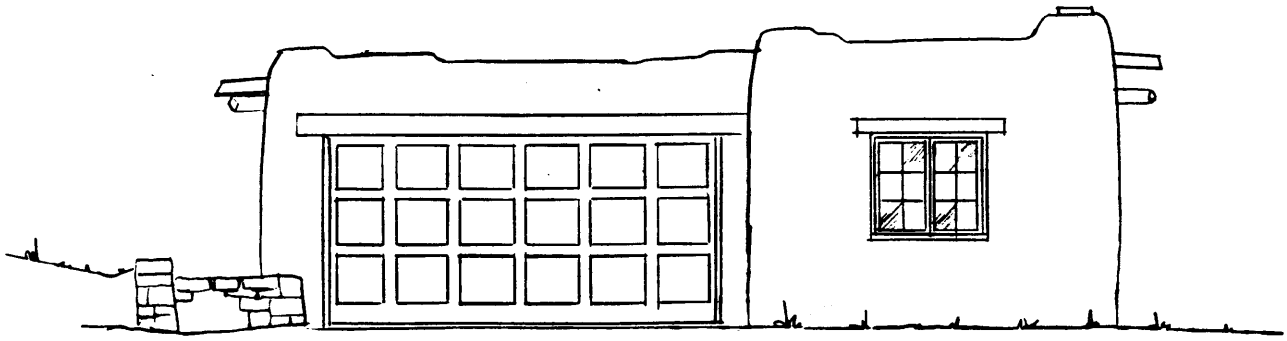
FLOOR PLAN



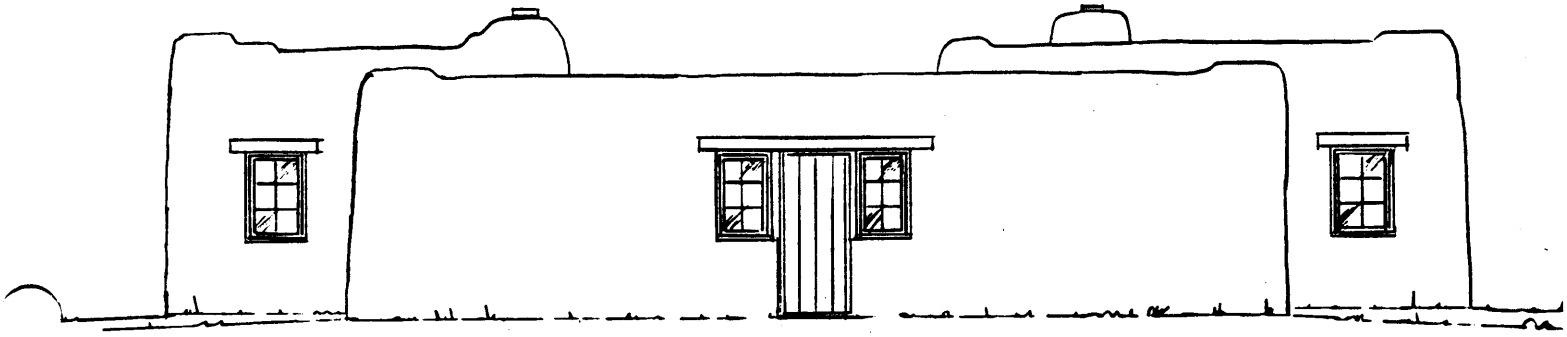
SOUTHWEST ELEVATION

RESIDENCE : BLDG. 10

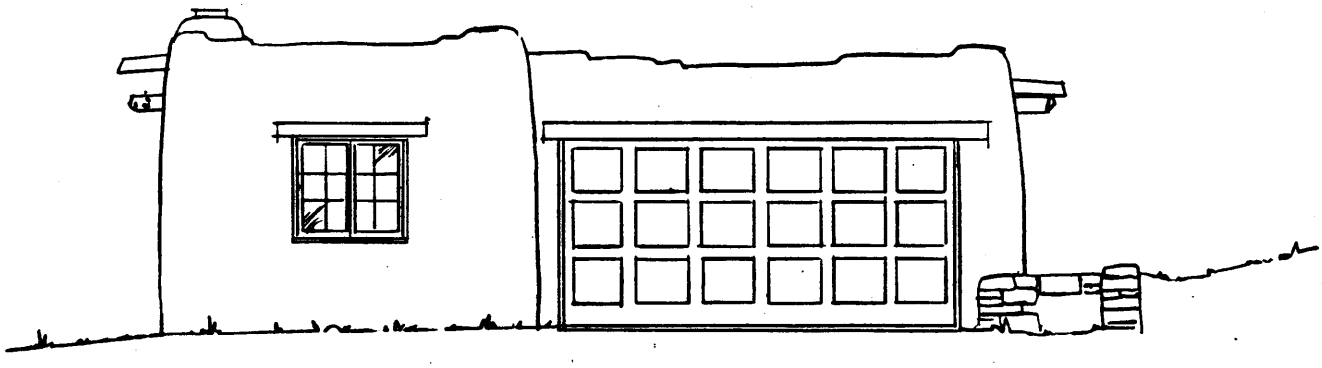
SCALE 1/8" = 1'-0"



NORTHWEST ELEVATION



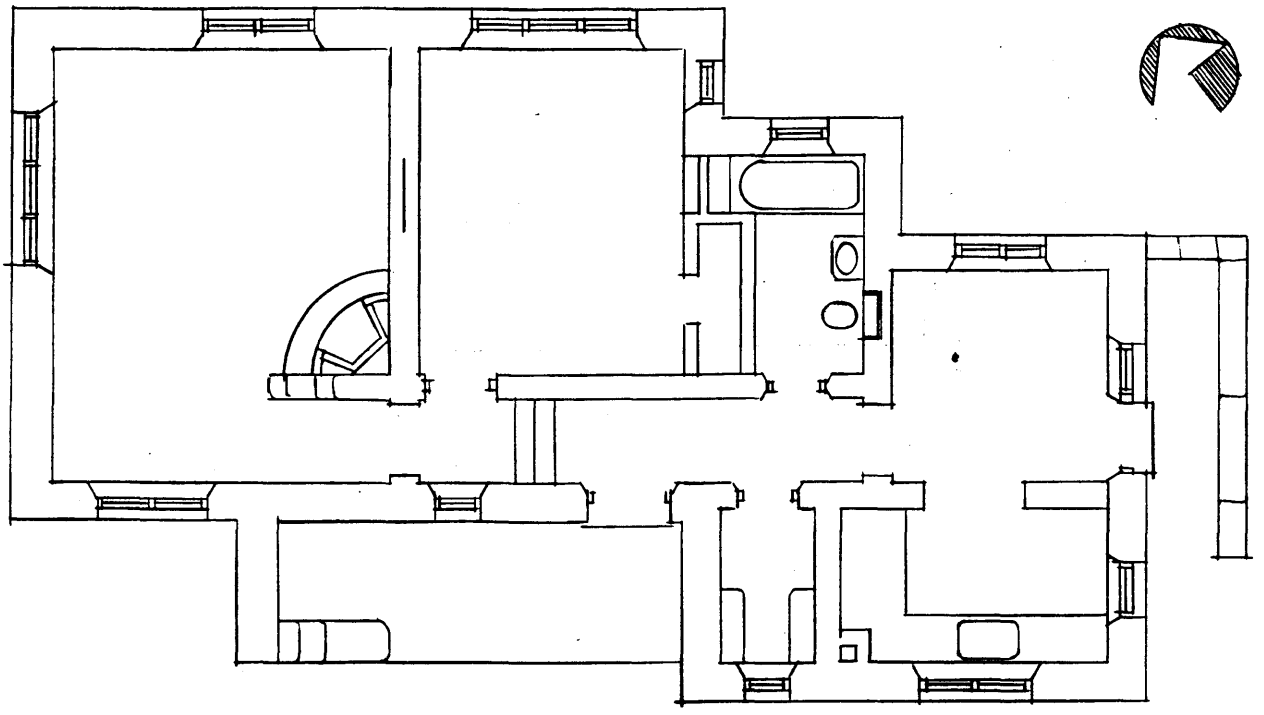
NORTHEAST ELEVATION



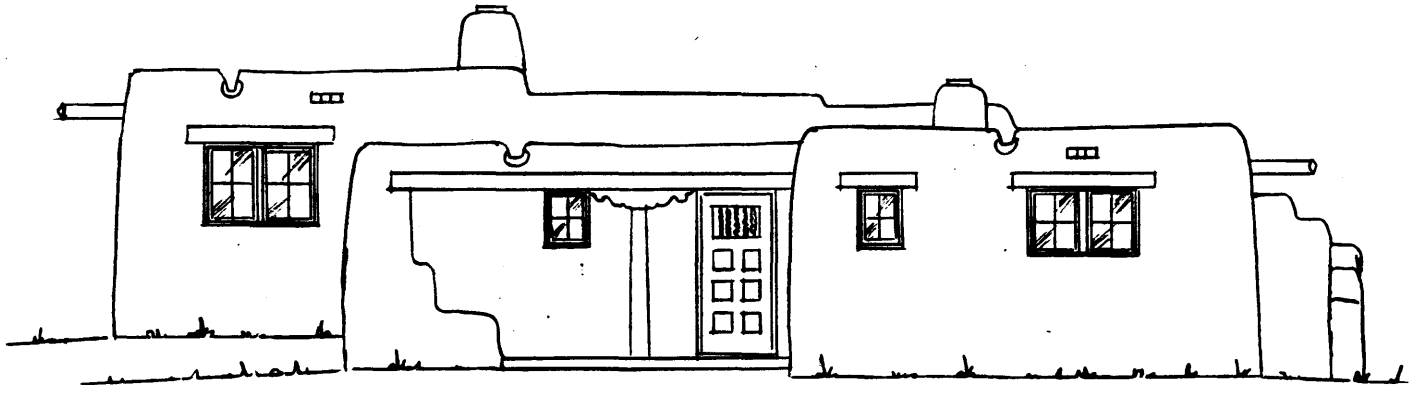
SOUTHEAST ELEVATION

RESIDENCE : BLDG. 10

SCALE 1/8" = 1'-0"



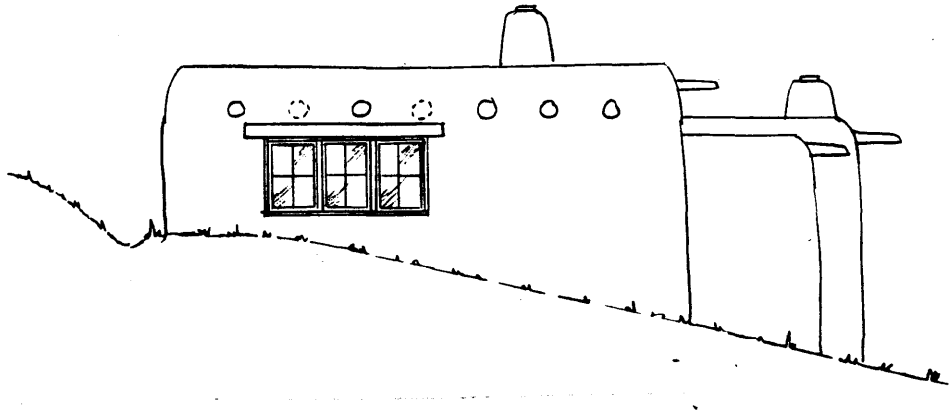
FLOOR PLAN



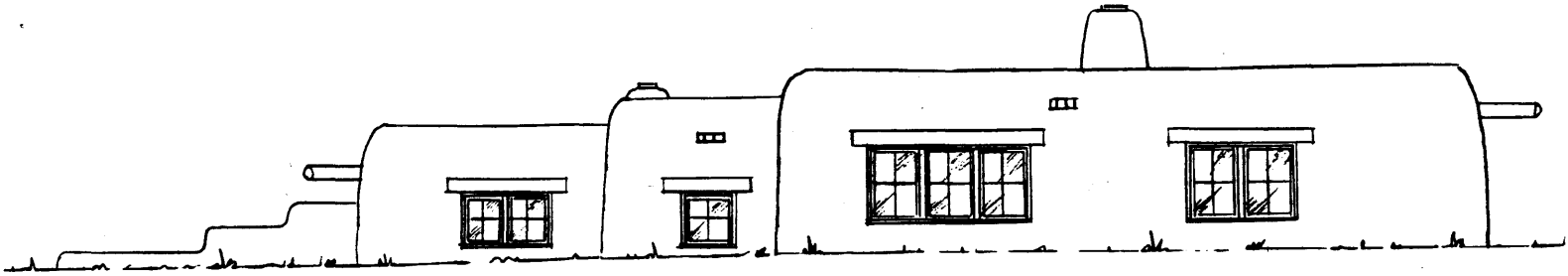
SOUTHWEST ELEVATION

RESIDENCE : BLDG. 11

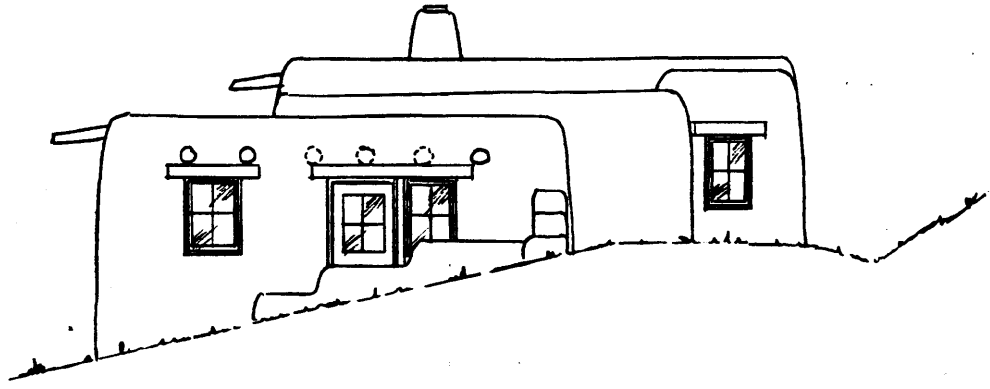
SCALE 1/8" = 1'-0"



NORTHWEST ELEVATION



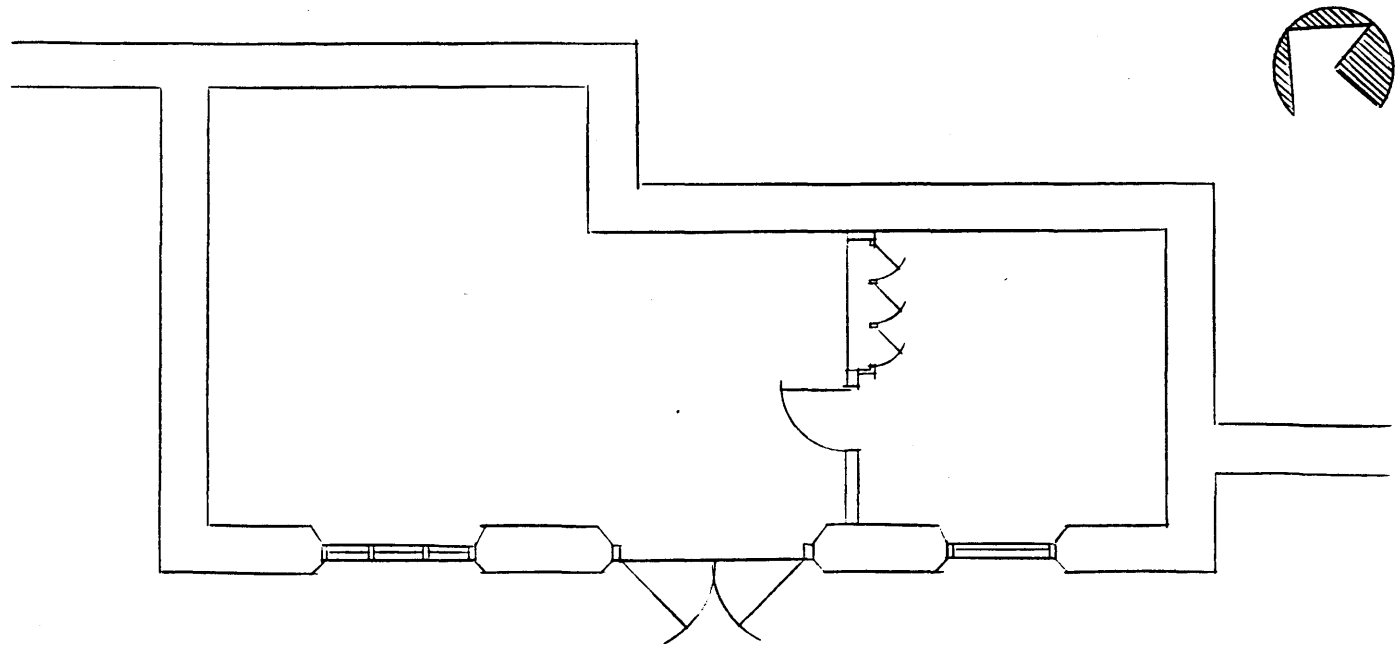
NORTHEAST ELEVATION



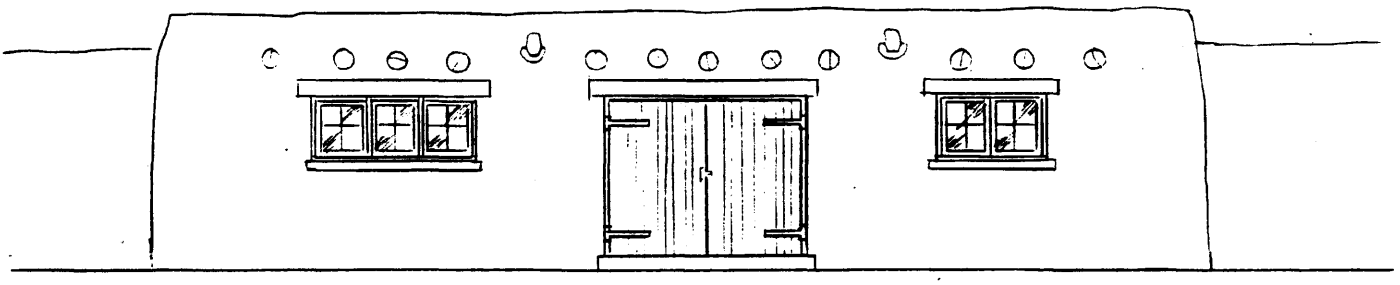
SOUTHEAST ELEVATION

RESIDENCE : BLDG. II

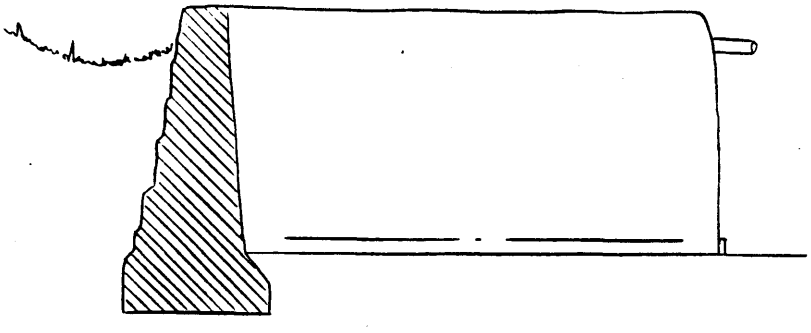
SCALE 1/8"=1'-0"



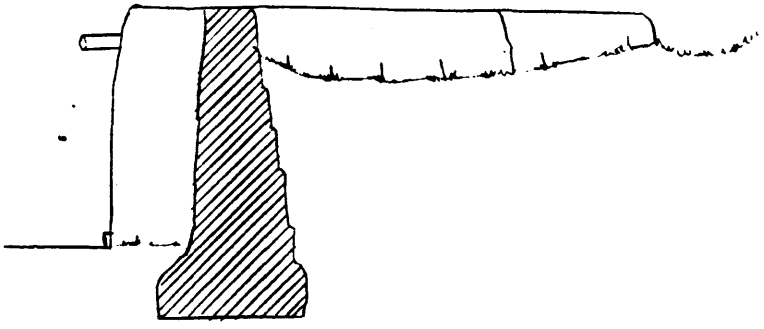
FLOOR PLAN



SOUTHWEST ELEVATION



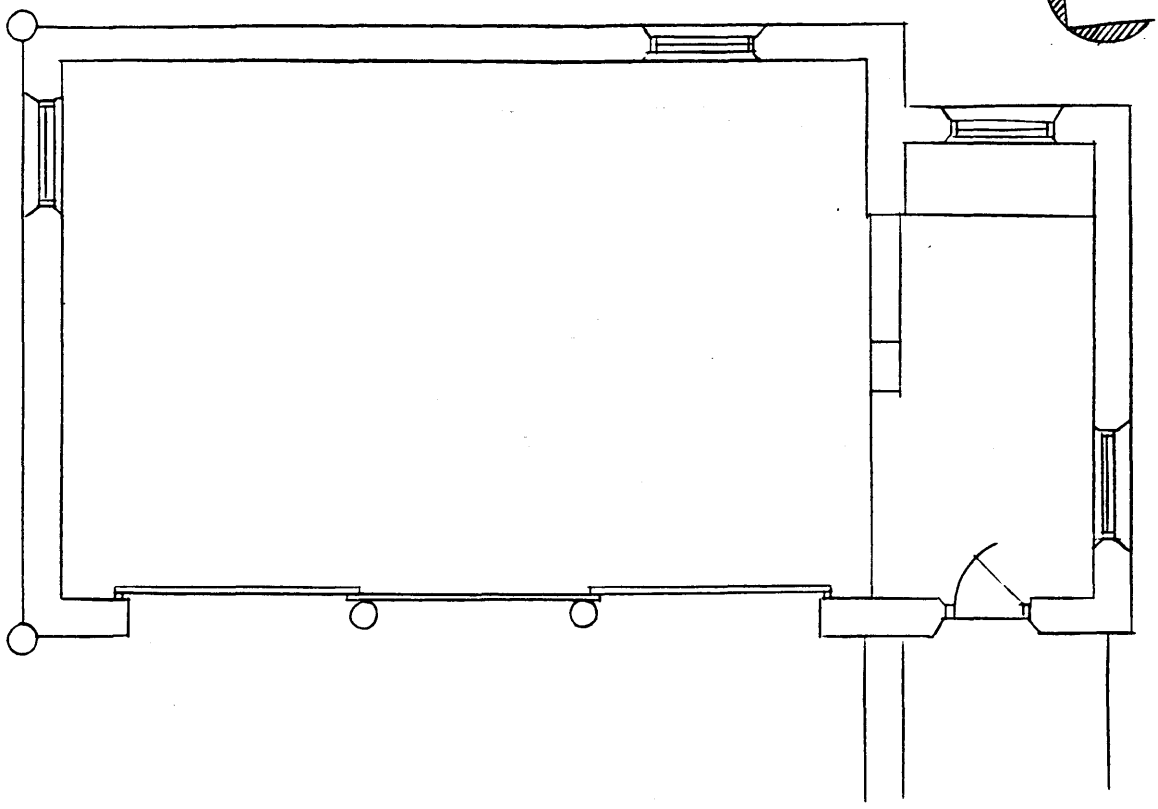
NORTHWEST ELEVATION



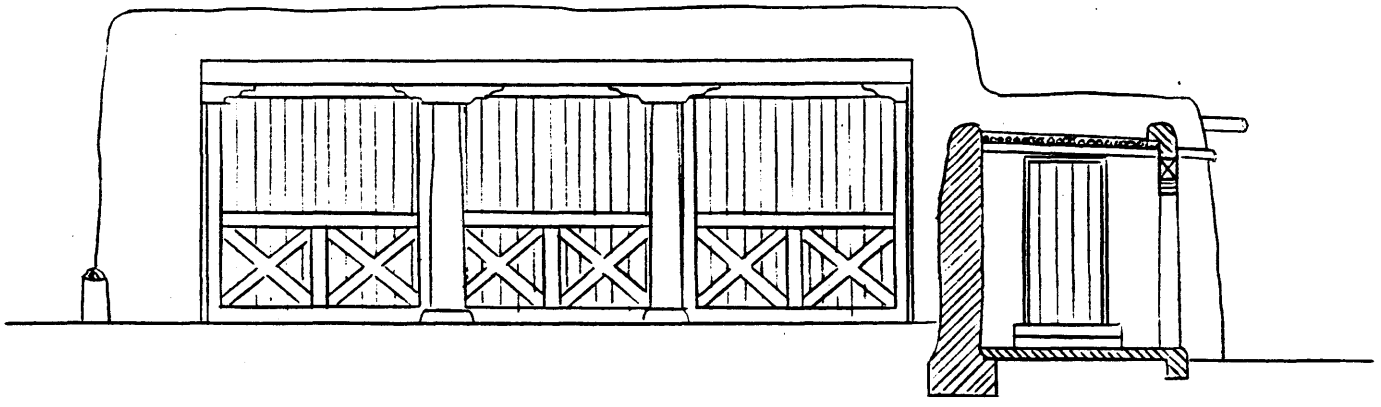
SOUTHEAST ELEVATION

STORAGE: BLDG. 12

SCALE 1/8" = 1'-0"



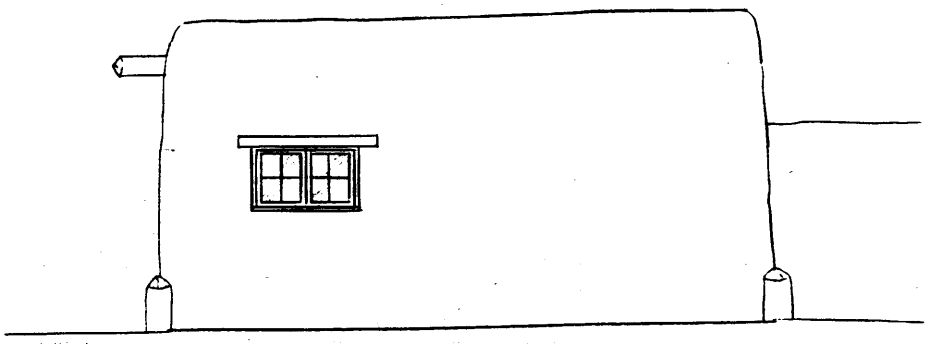
FLOOR PLAN



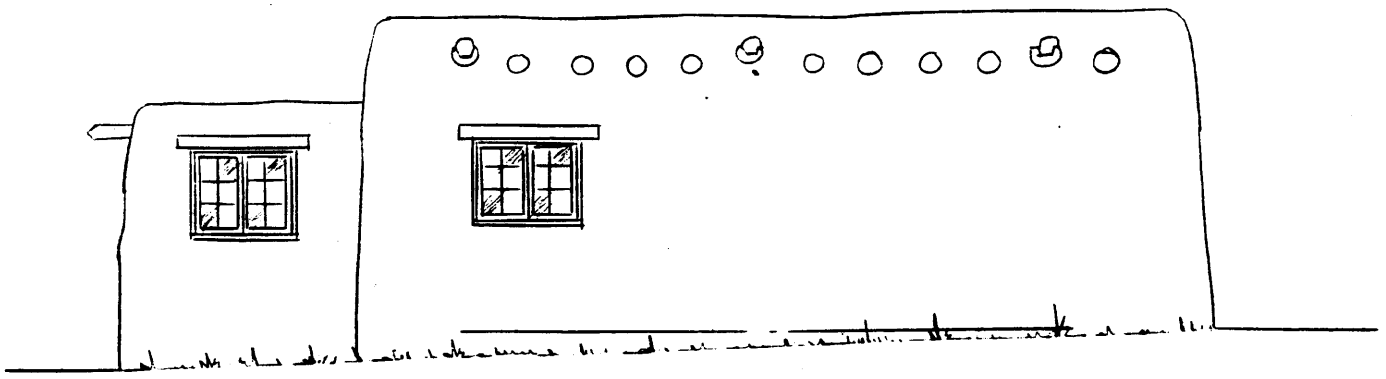
NORTHWEST ELEVATION

GARAGE: BLDG. 13

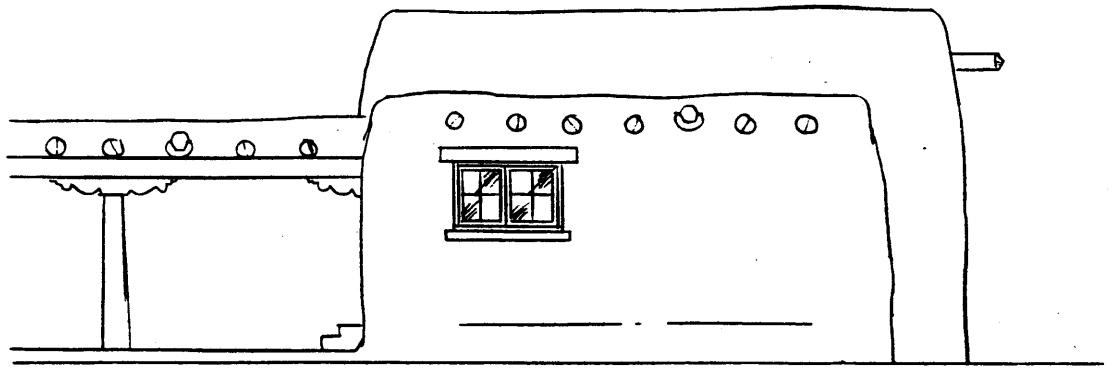
SCALE 1/8" = 1'-0"



NORTHEAST ELEVATION

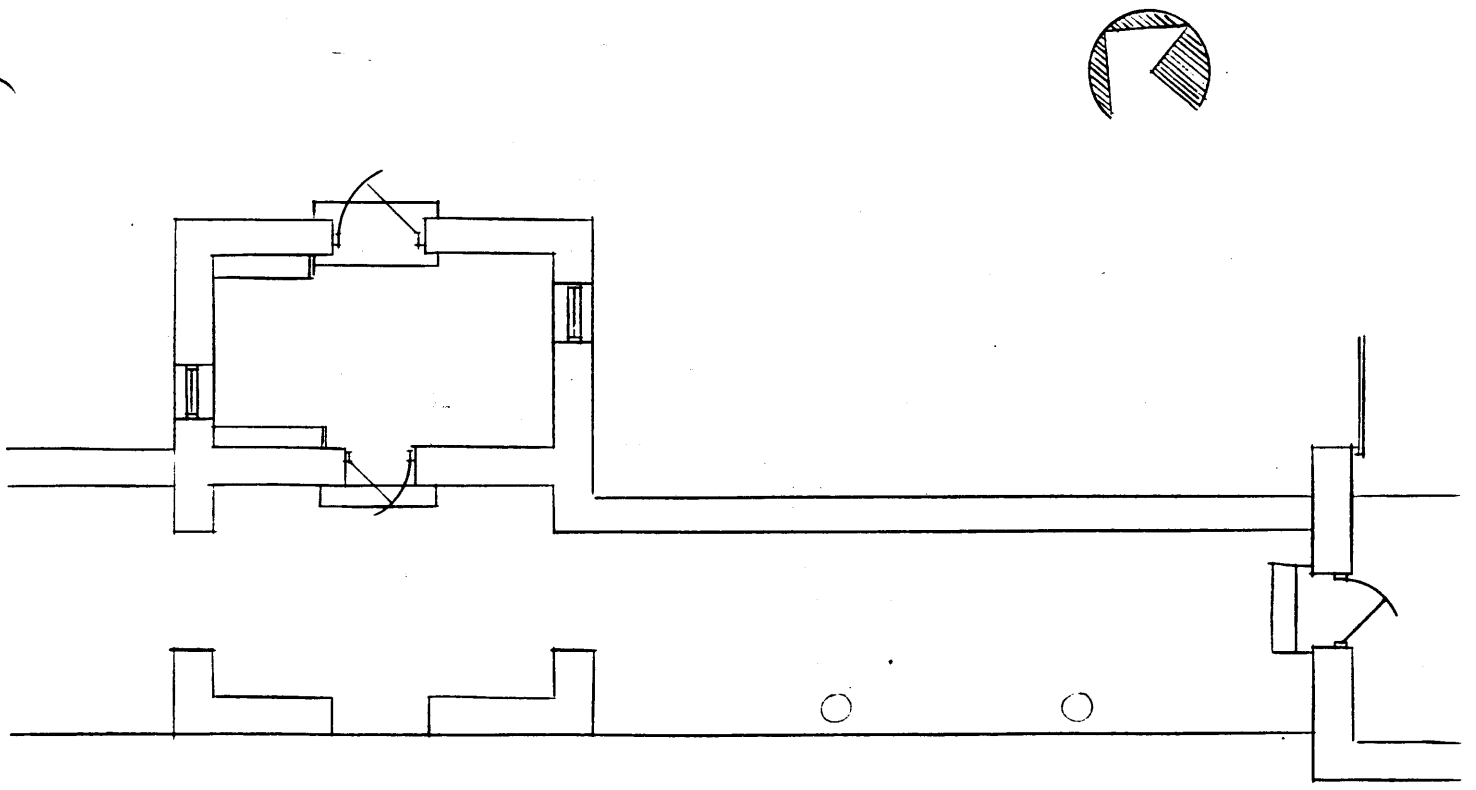


SOUTHEAST ELEVATION

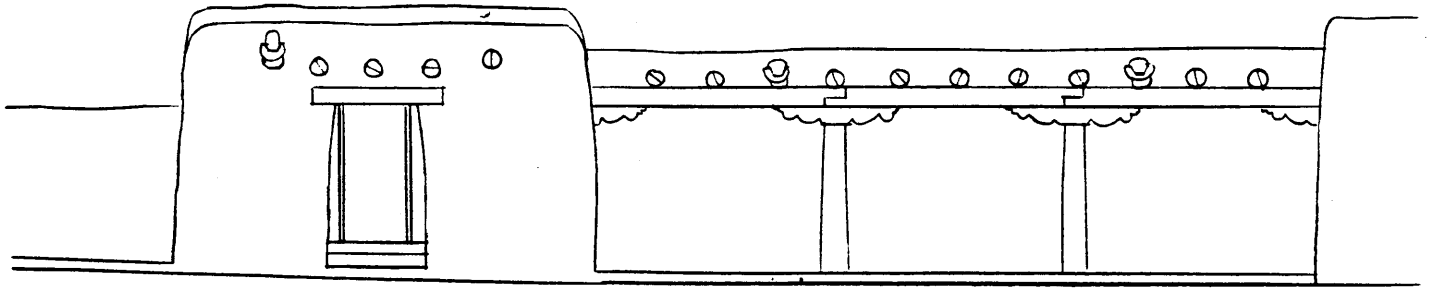


SOUTHWEST ELEVATION

GARAGE: BLDG. 13



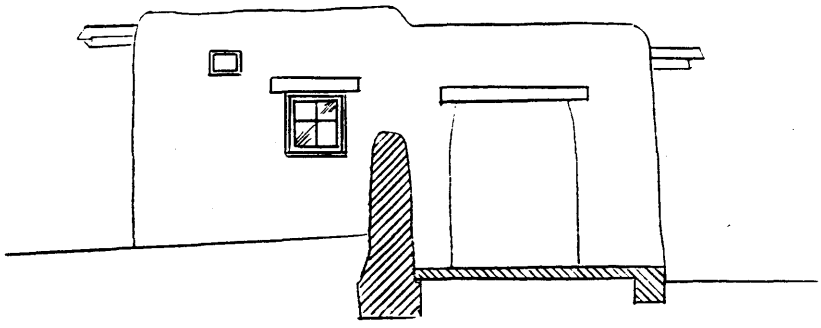
FLOOR PLAN



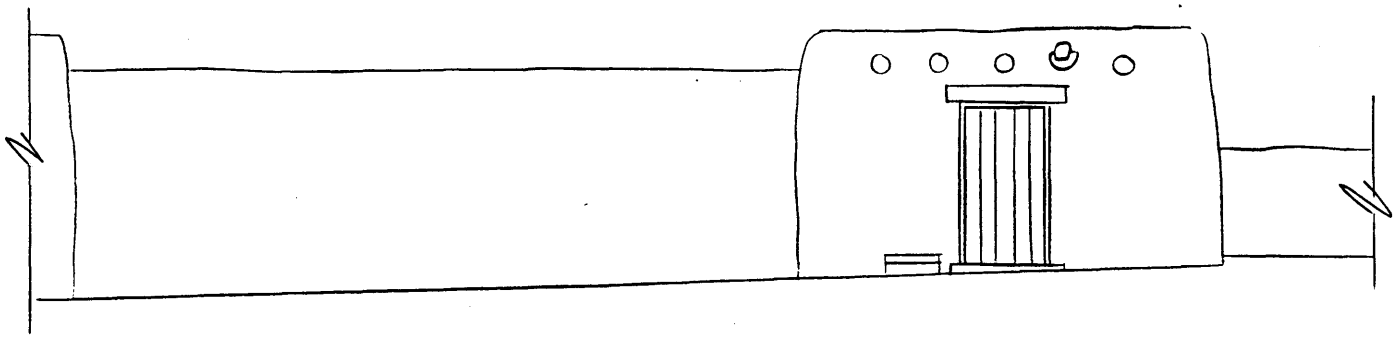
SOUTHWEST ELEVATION

OIL AND GAS HOUSE: BLDG. 14

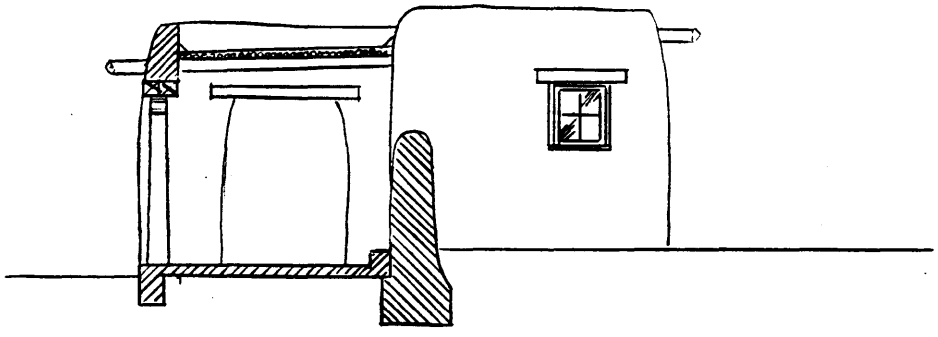
SCALE 1/8"=1'-0"



NORTHWEST ELEVATION



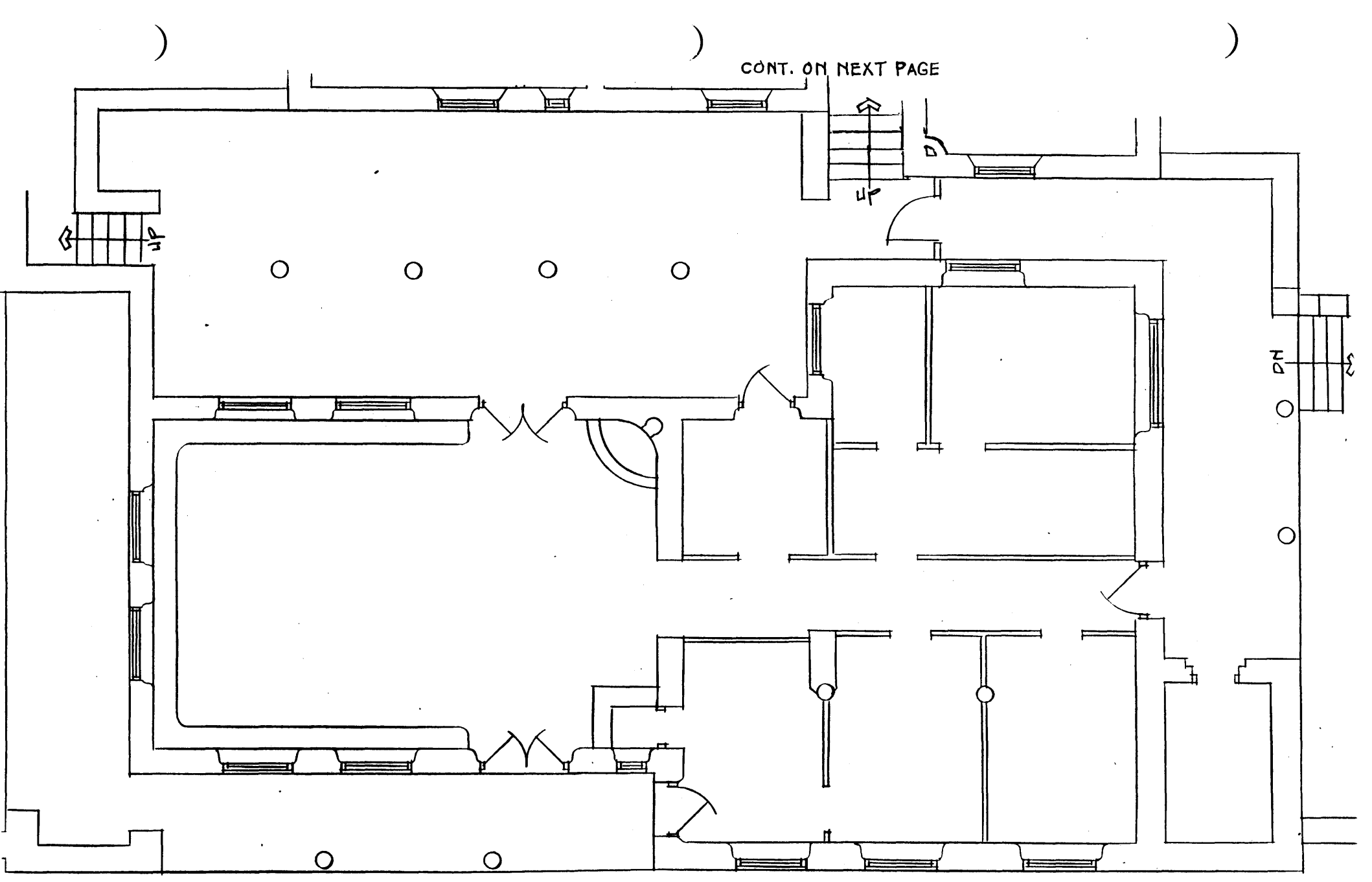
NORTHEAST ELEVATION



SOUTHEAST ELEVATION

OIL AND GAS HOUSE: BLDG. 14

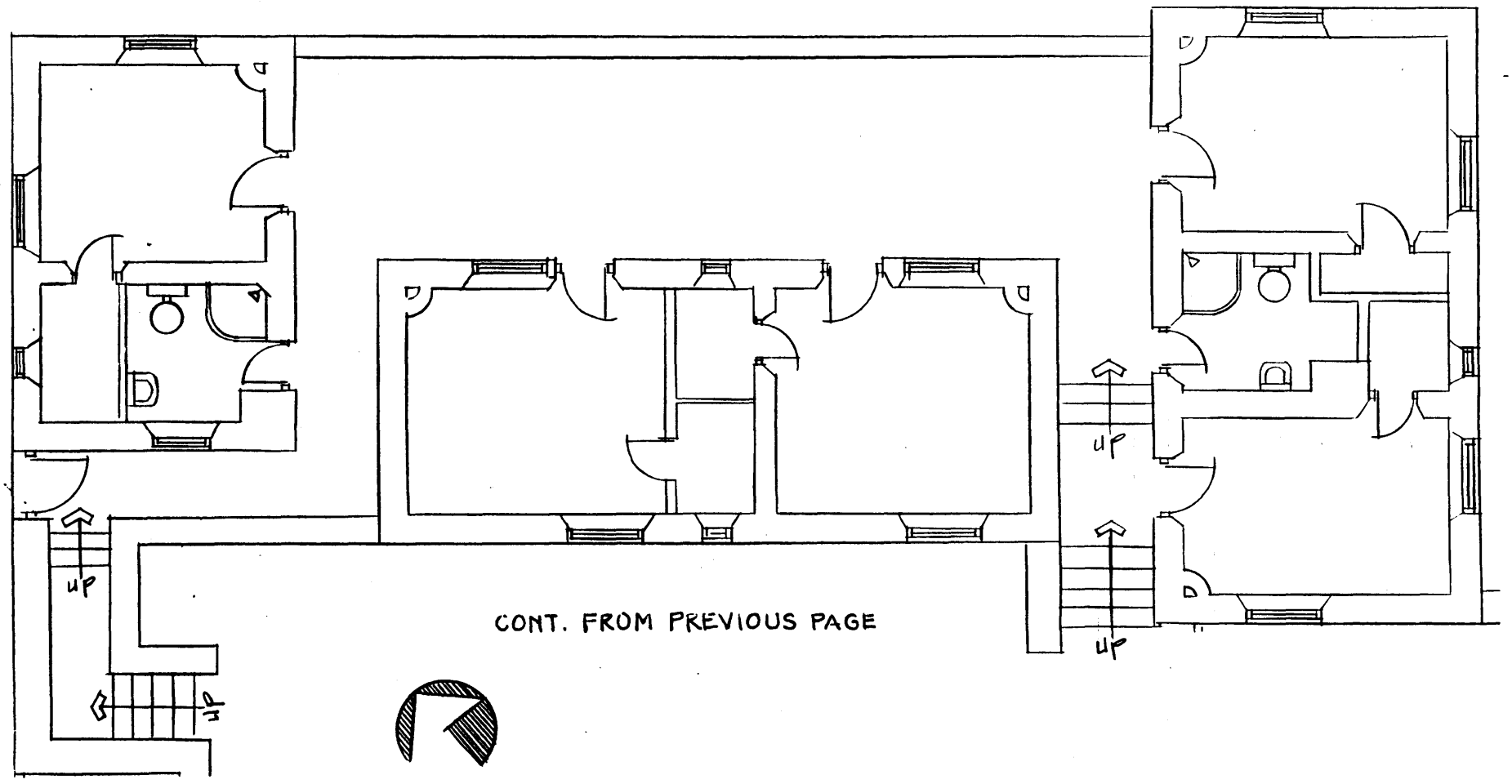
SCALE 1/8" = 1'-0"



FLOOR PLAN

ADMINISTRATION: BLDGS. 15 & 16

SCALE 1/8" = 1' - 0"



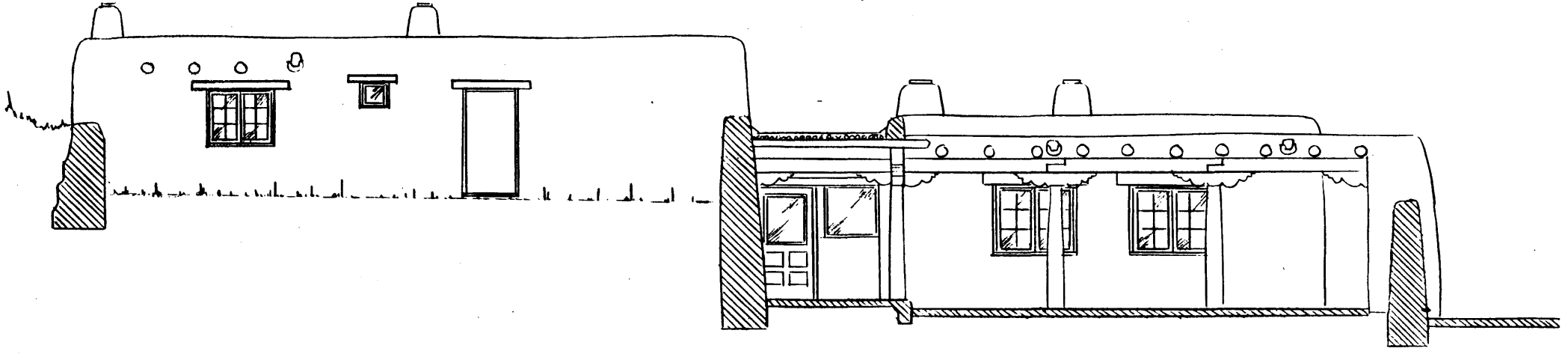
FLOOR PLAN

ADMINISTRATION: BLDGS. 15 & 16

SCALE 1/8" = 1'-0"



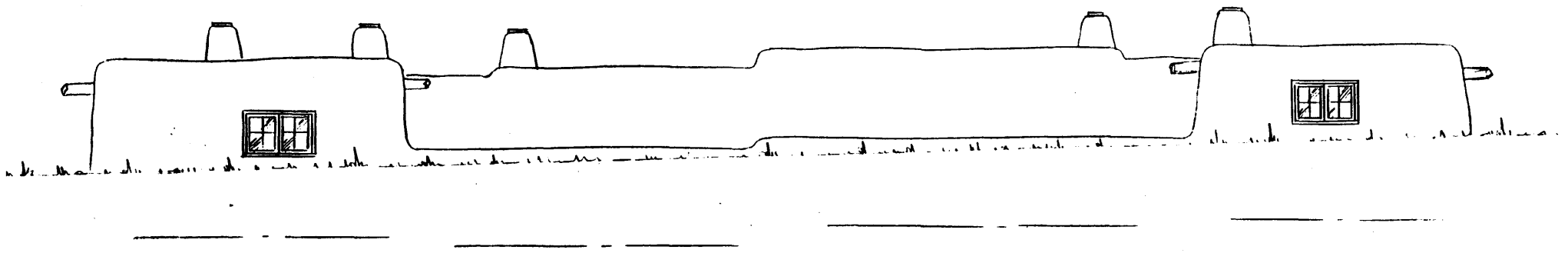
SOUTHWEST ELEVATION



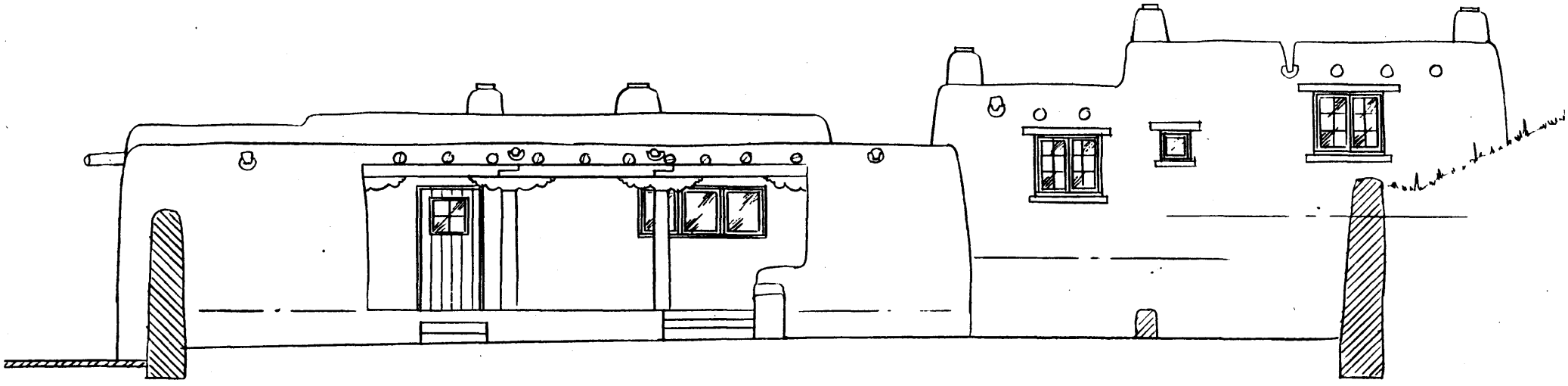
NORTHWEST ELEVATION

ADMINISTRATION : BLDGS. 15 & 16

SCALE 1/8" = 1'-0"



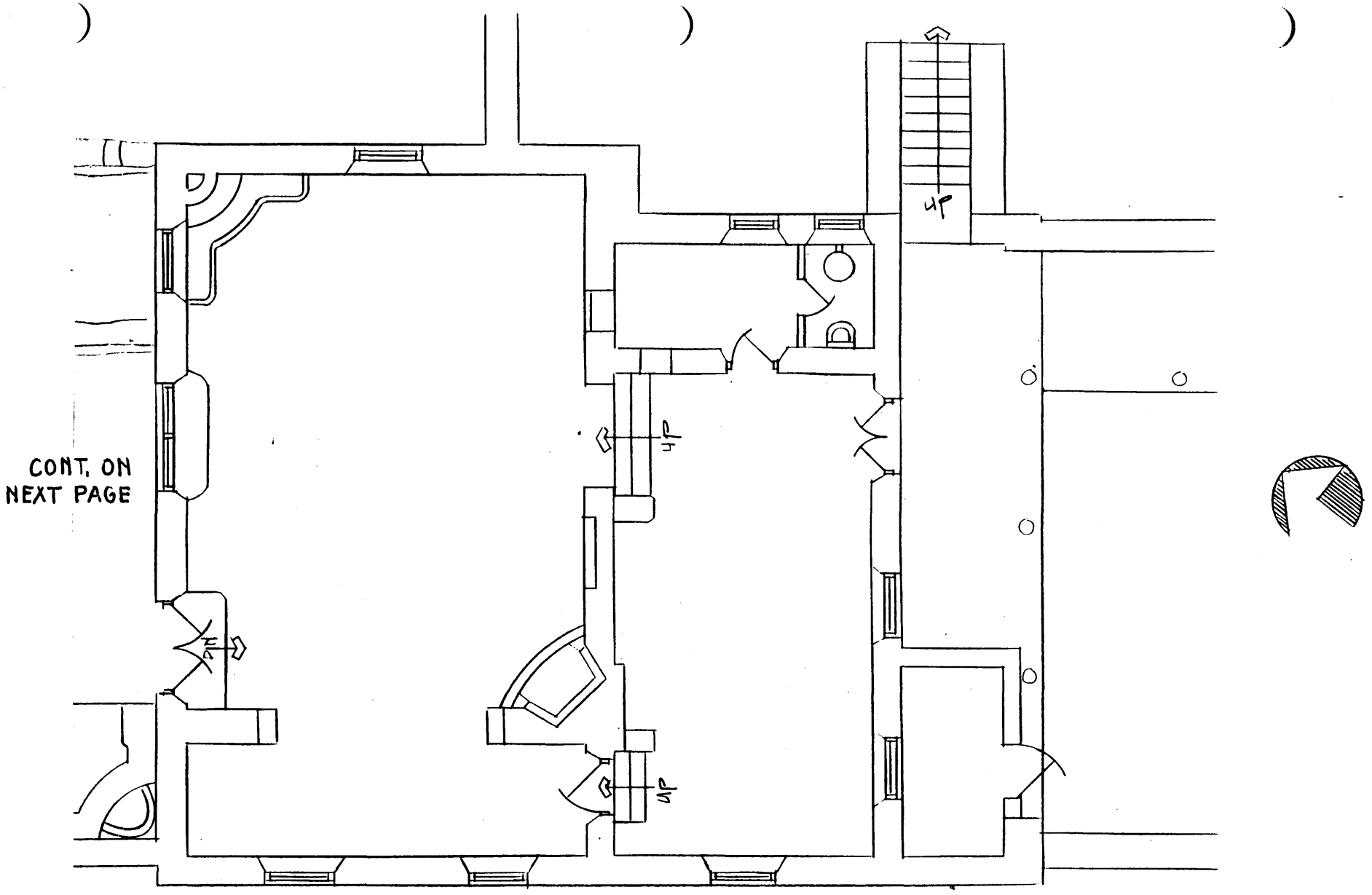
NORTHEAST ELEVATION



SOUTHEAST ELEVATION

ADMINISTRATION : BLDGS. 15 & 16

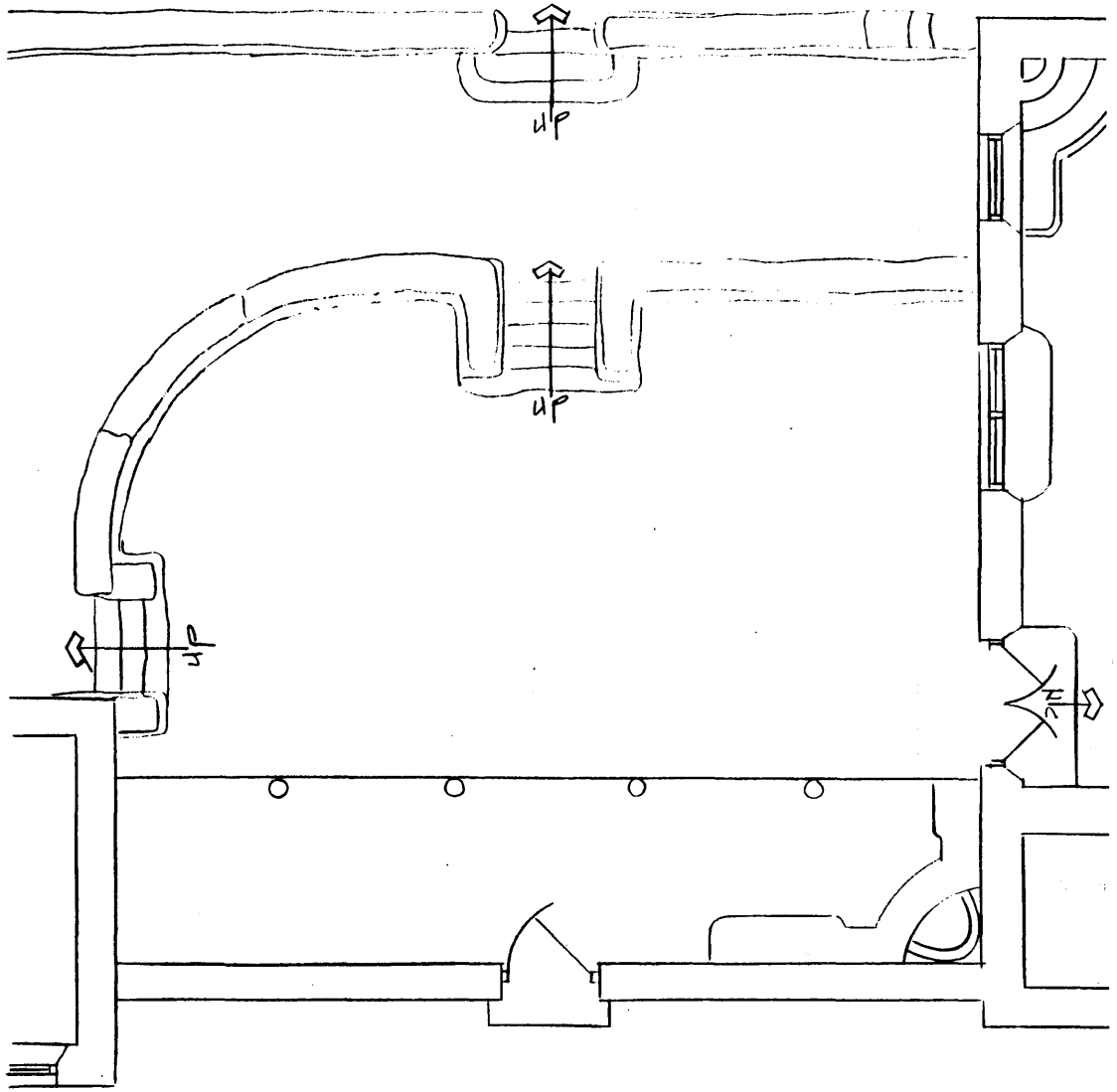
SCALE 1/8" = 1'-0"



FLOOR PLAN

GIFT SHOP & SNACK BAR: BLDG. 17

SCALE 1/8" = 1'-0"

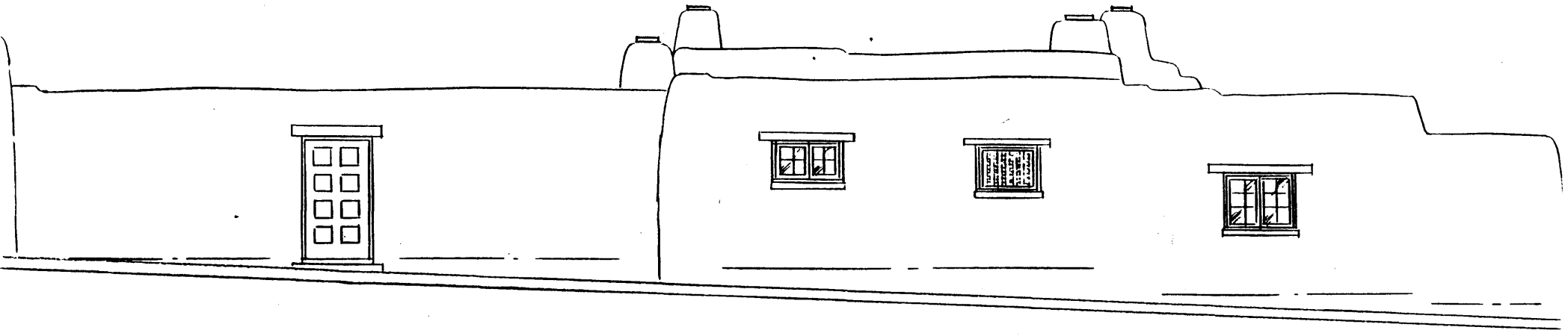


CONT. FROM
PREVIOUS PAGE

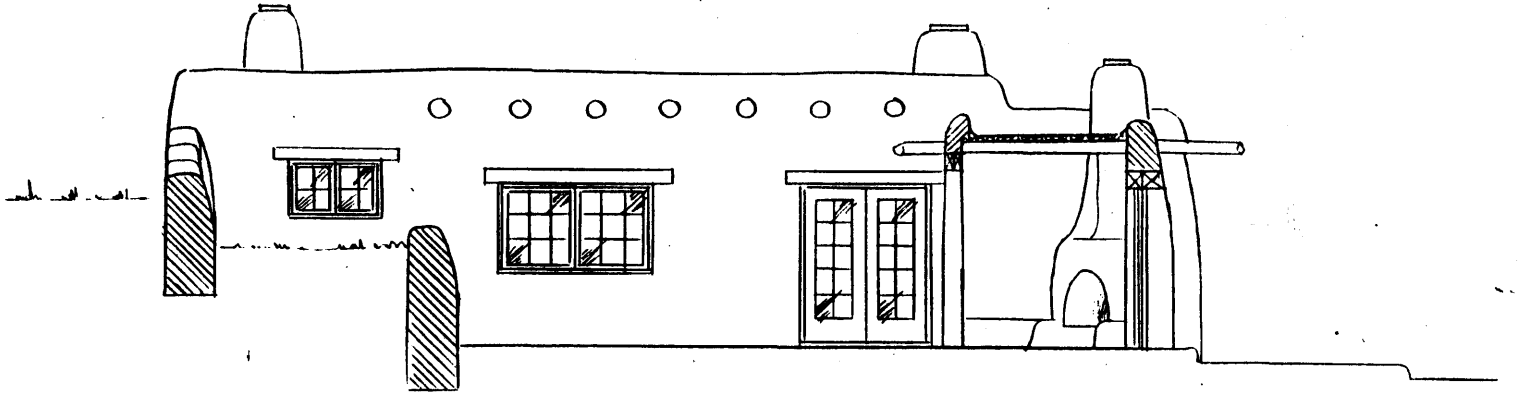
PLAN

GIFT SHOP PATIO

SCALE 1/8" = 1'-0"



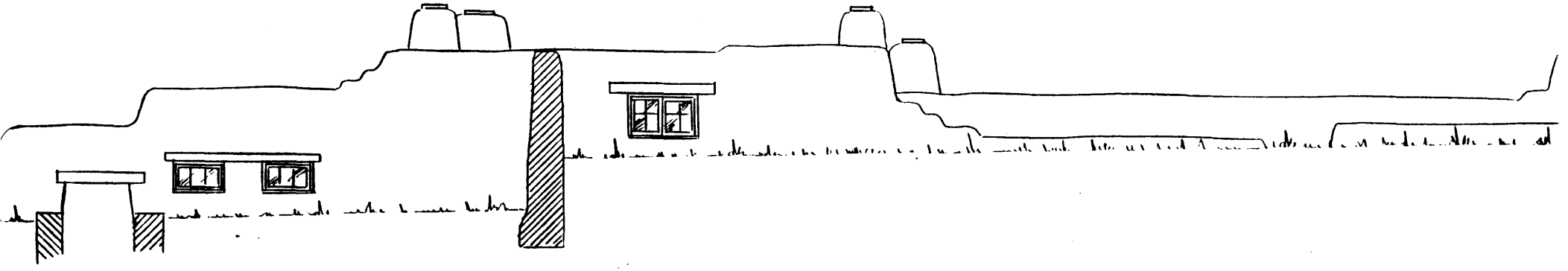
SOUTHWEST ELEVATION



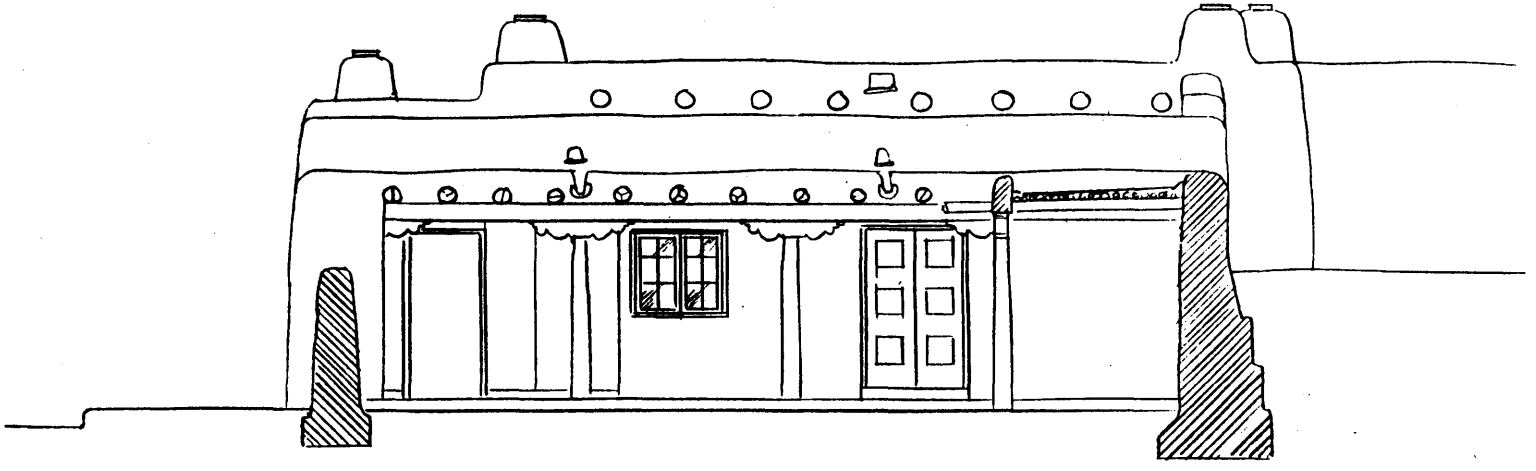
NORTHWEST ELEVATION

GIFT SHOP & SNACK BAR : BLDG. 17

SCALE 1/8" = 1'-0"



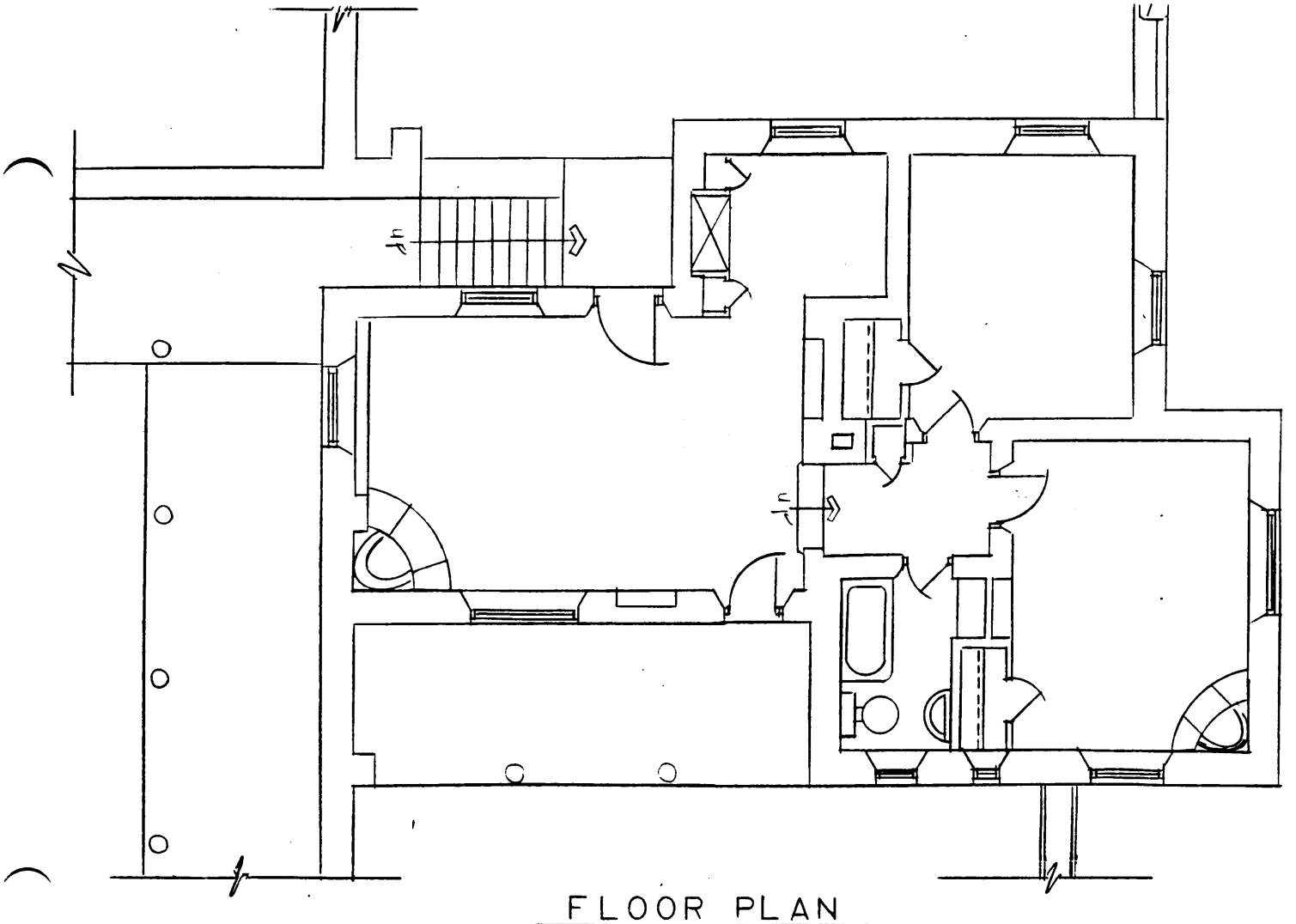
NORTHEAST ELEVATION



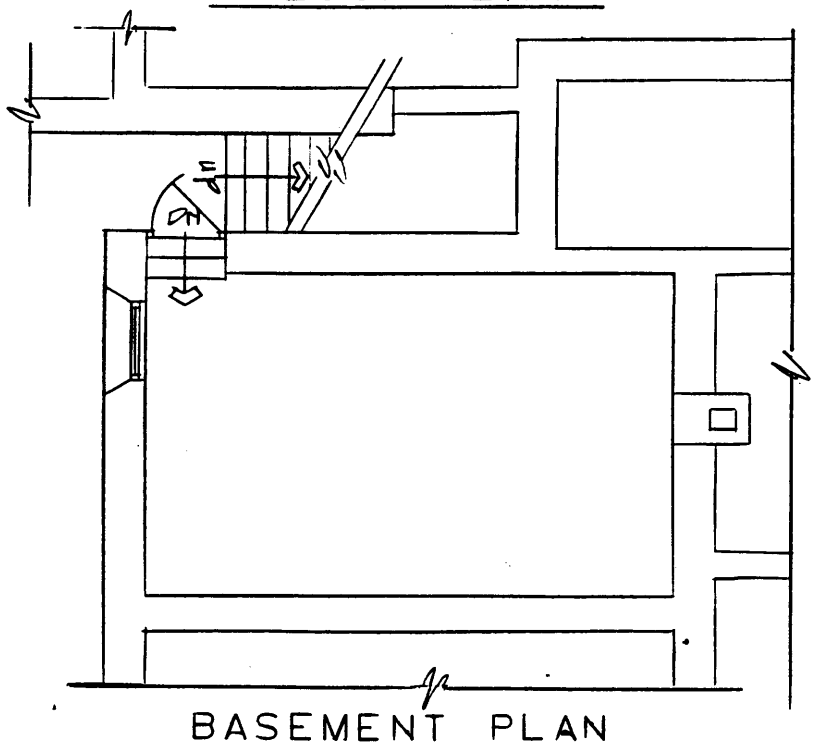
SOUTHEAST ELEVATION

GIFT SHOP SNACK BAR : BLDG. 17

SCALE 1/8" = 1'-0"



FLOOR PLAN



BASEMENT PLAN

OPERATOR'S BUILDING : BLDG. 18

SCALE 1/8" = 1'-0"



SOUTHWEST ELEVATION



NORTHWEST ELEVATION

OPERATOR'S BUILDING: BLDG. 18

SCALE 1/8" = 1'-0"



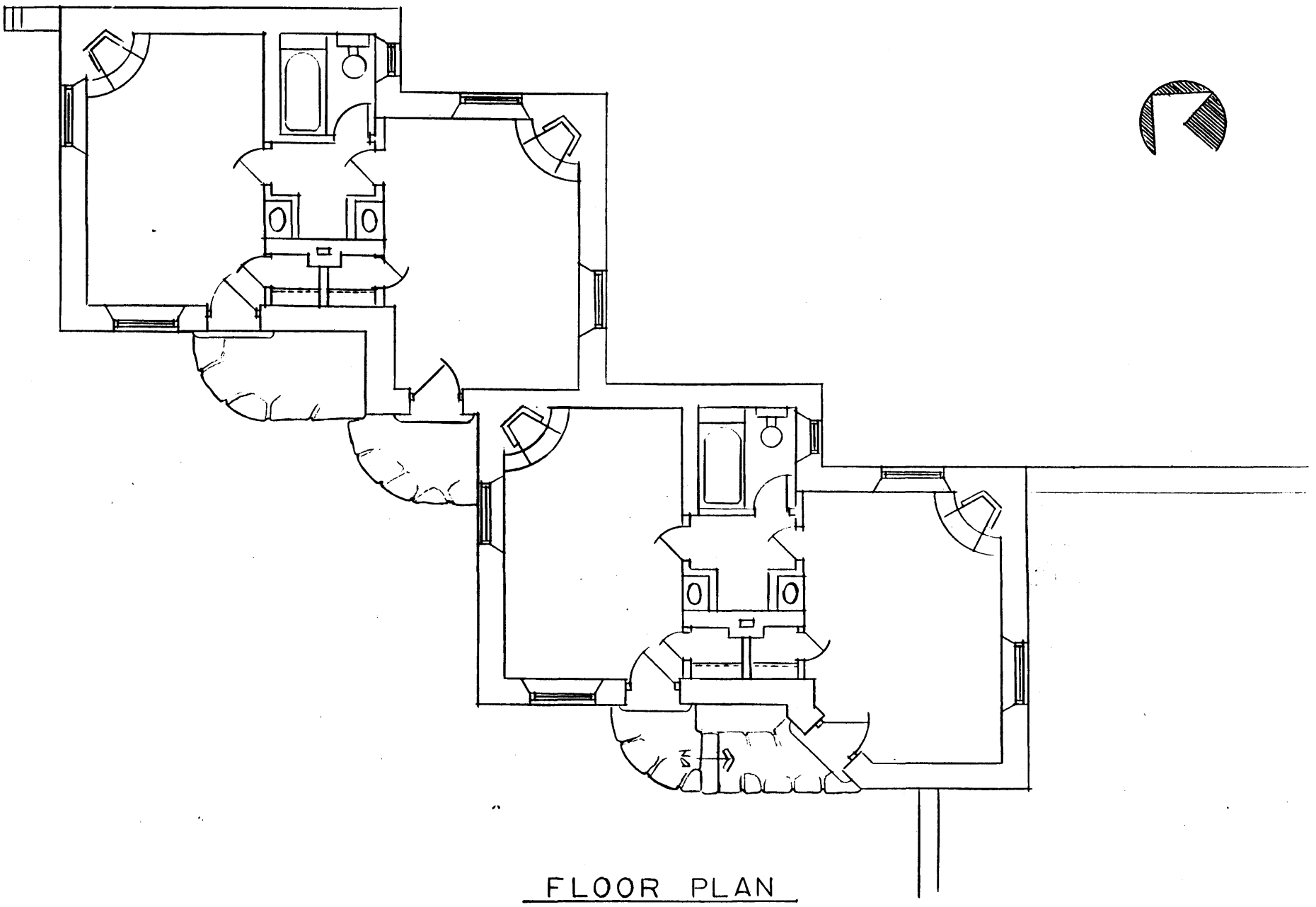
NORTHEAST ELEVATION



SOUTHEAST ELEVATION

OPERATOR'S BUILDING : BLDG. 18

SCALE 1/8" = 1'-0"



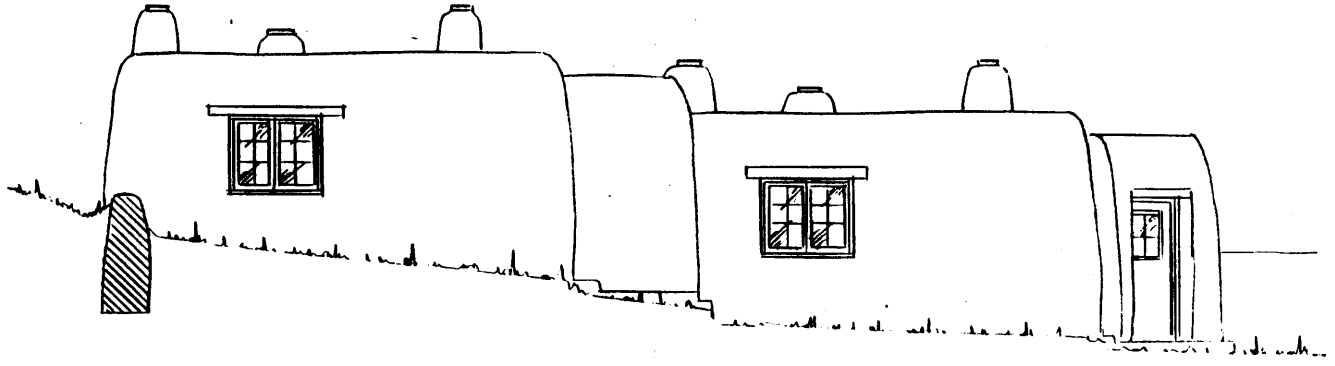
FLOOR PLAN

CABIN GROUP A : BLDG. 19

SCALE 1/8" = 1'-0"



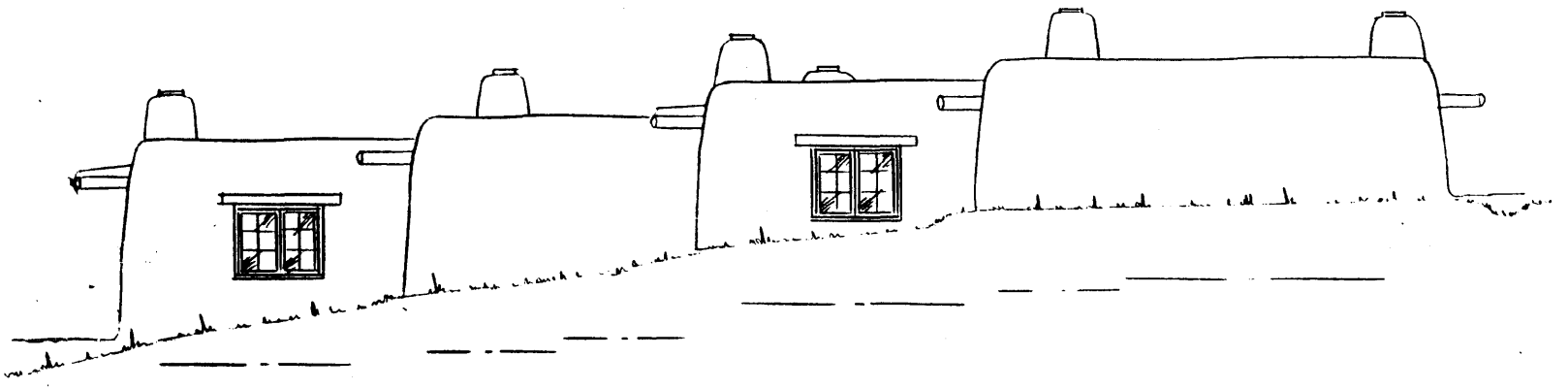
SOUTHWEST ELEVATION



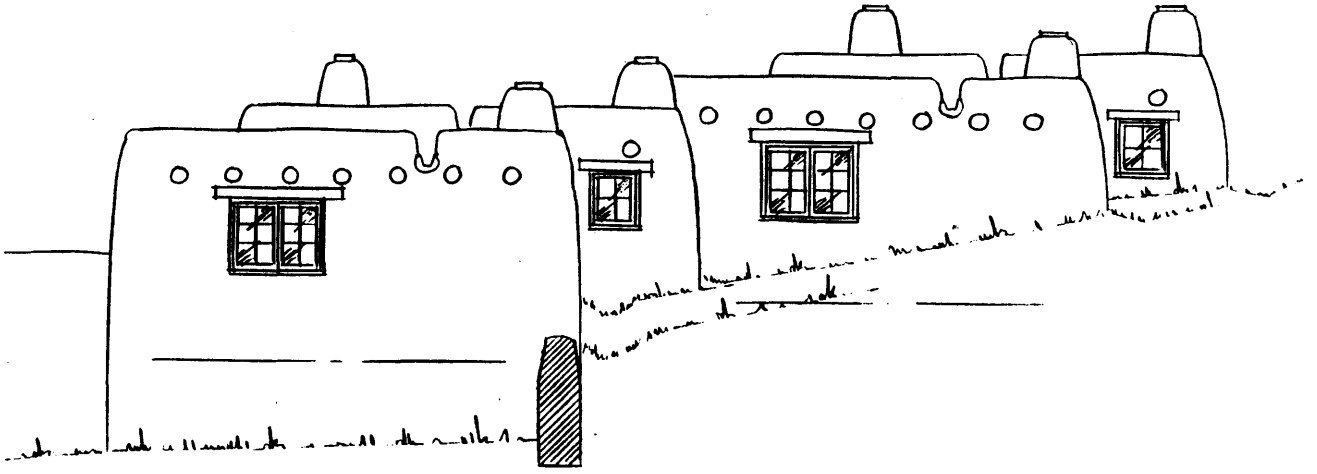
NORTHWEST ELEVATION

CABIN GROUP A: BLDG. 19

SCALE 1/8"=1'-0"



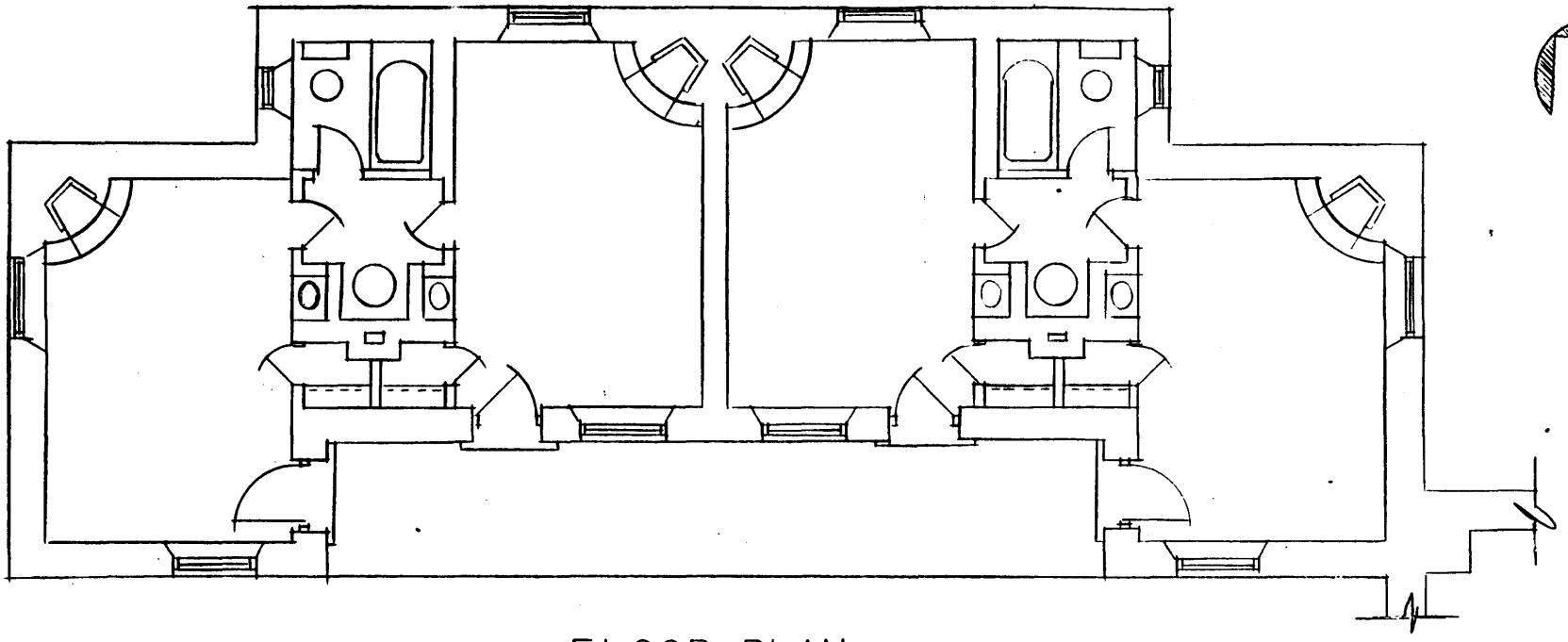
NORTHEAST ELEVATION



SOUTHEAST ELEVATION

CABIN GROUP A : BLDG. 19

SCALE 1/8" = 1'-0"



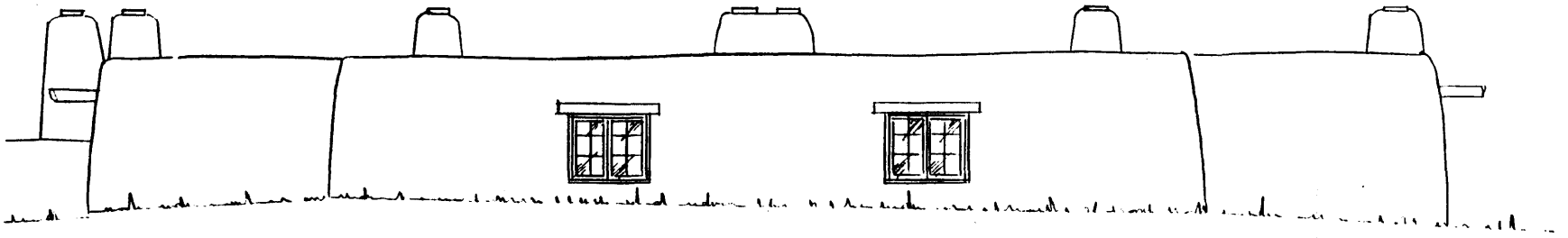
FLOOR PLAN



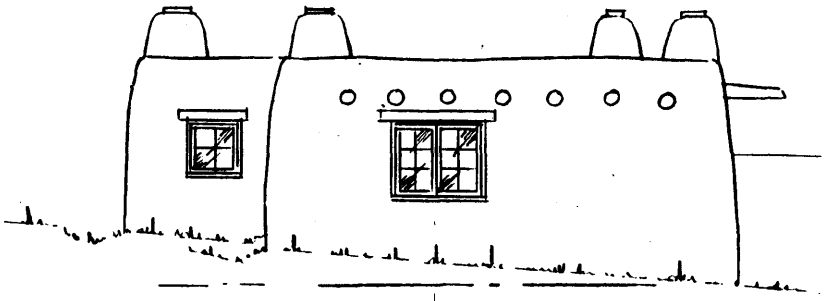
SOUTHWEST ELEVATION

CABIN GROUP B: BLDG. 20

SCALE 1/8" = 1'-0"



NORTHEAST ELEVATION



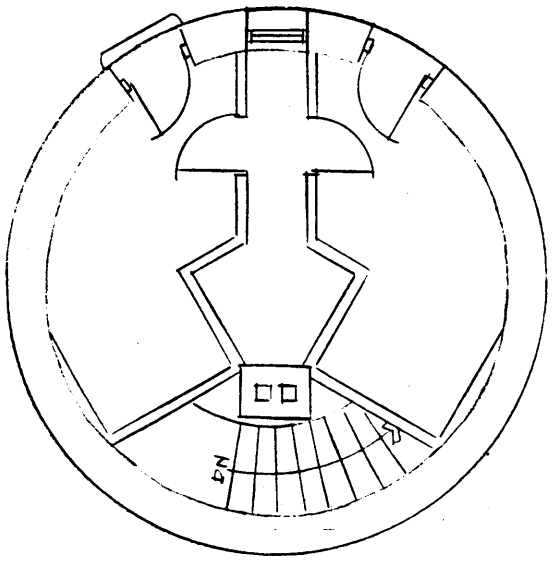
NORTHWEST ELEVATION



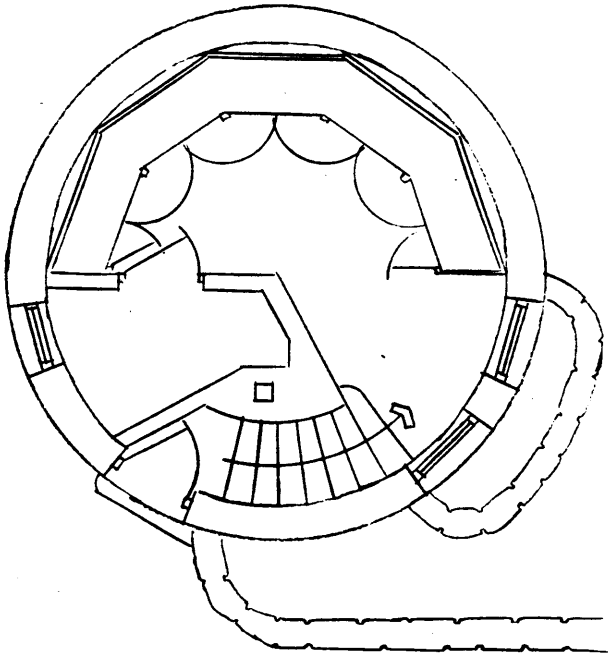
SOUTHEAST ELEVATION

CABIN GROUP B: BLDG. 20

SCALE 1/8" = 1'-0"



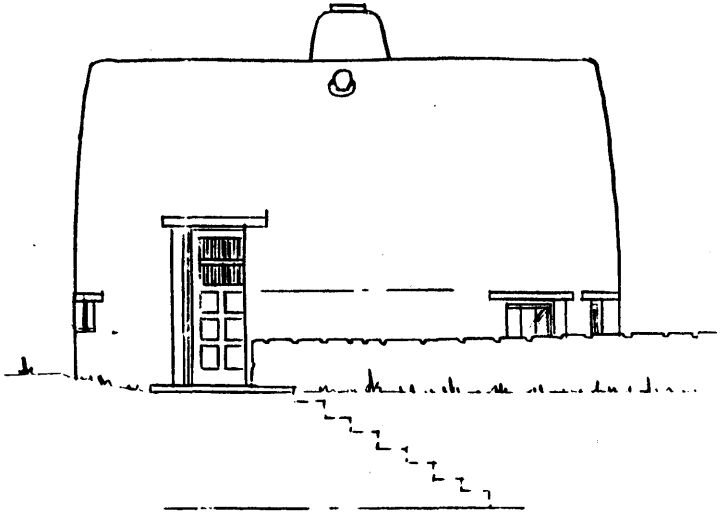
FIRST FLOOR PLAN



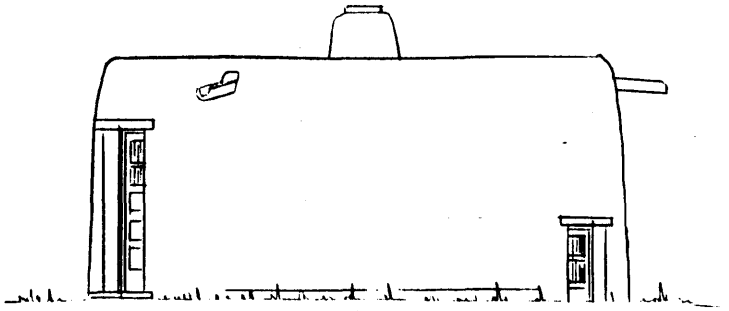
BASEMENT PLAN

KIVA: BLDG. 21

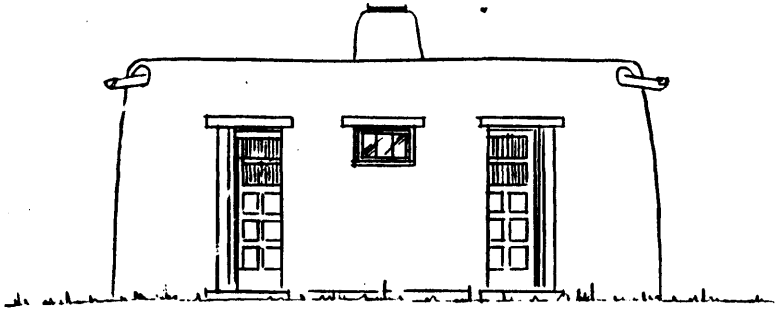
SCALE 1/8" = 1'-0"



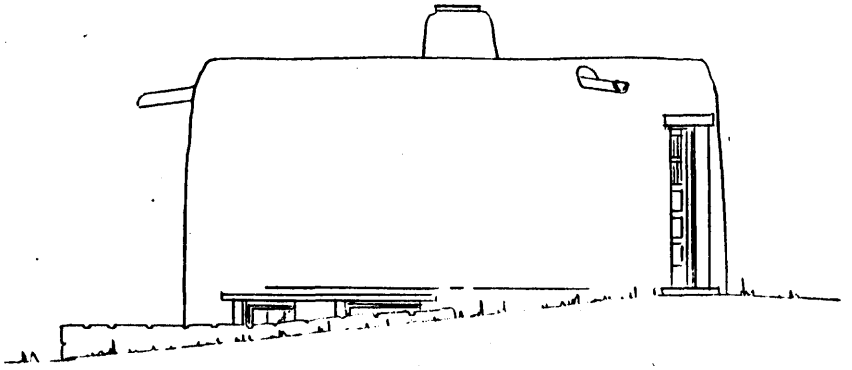
SOUTHWEST ELEVATION



NORTHWEST ELEVATION



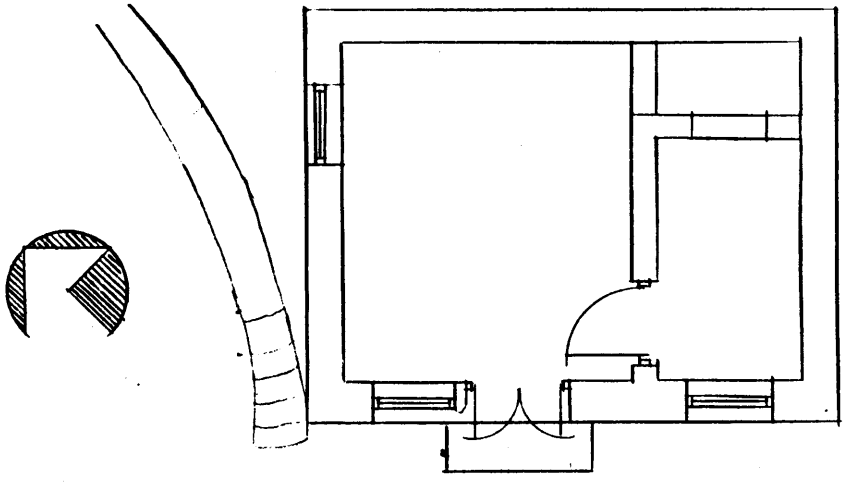
NORTHEAST ELEVATION



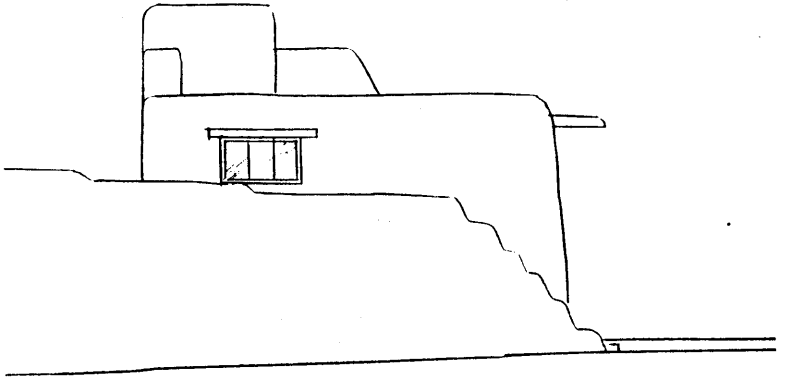
SOUTHEAST ELEVATION

KIVA : BLDG. 21

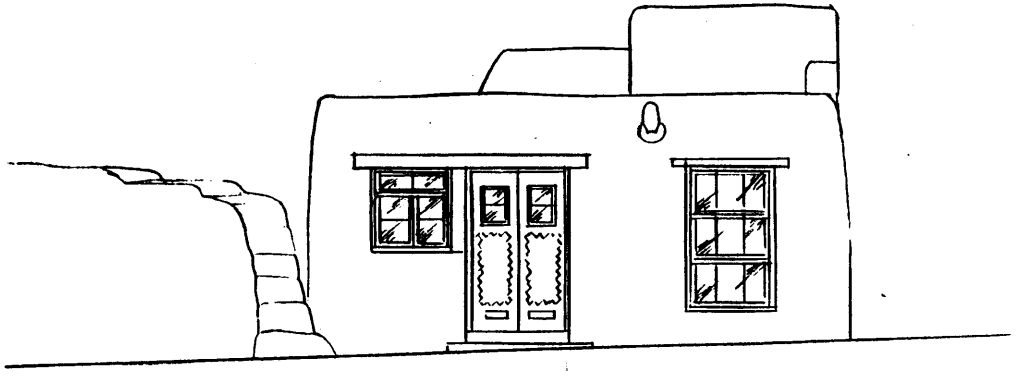
SCALE 1/8' = 1'-0'



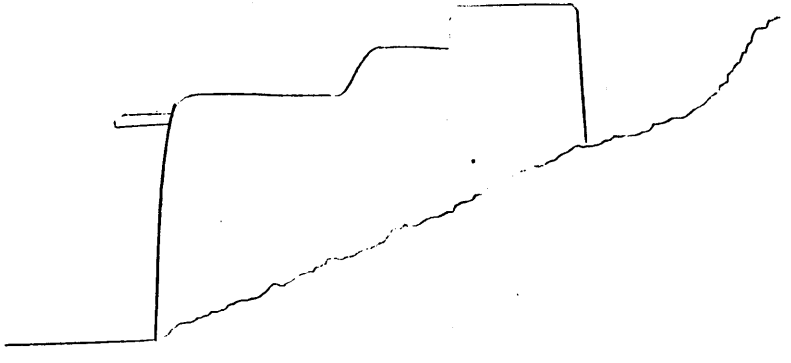
FLOOR PLAN



NORTHWEST ELEVATION



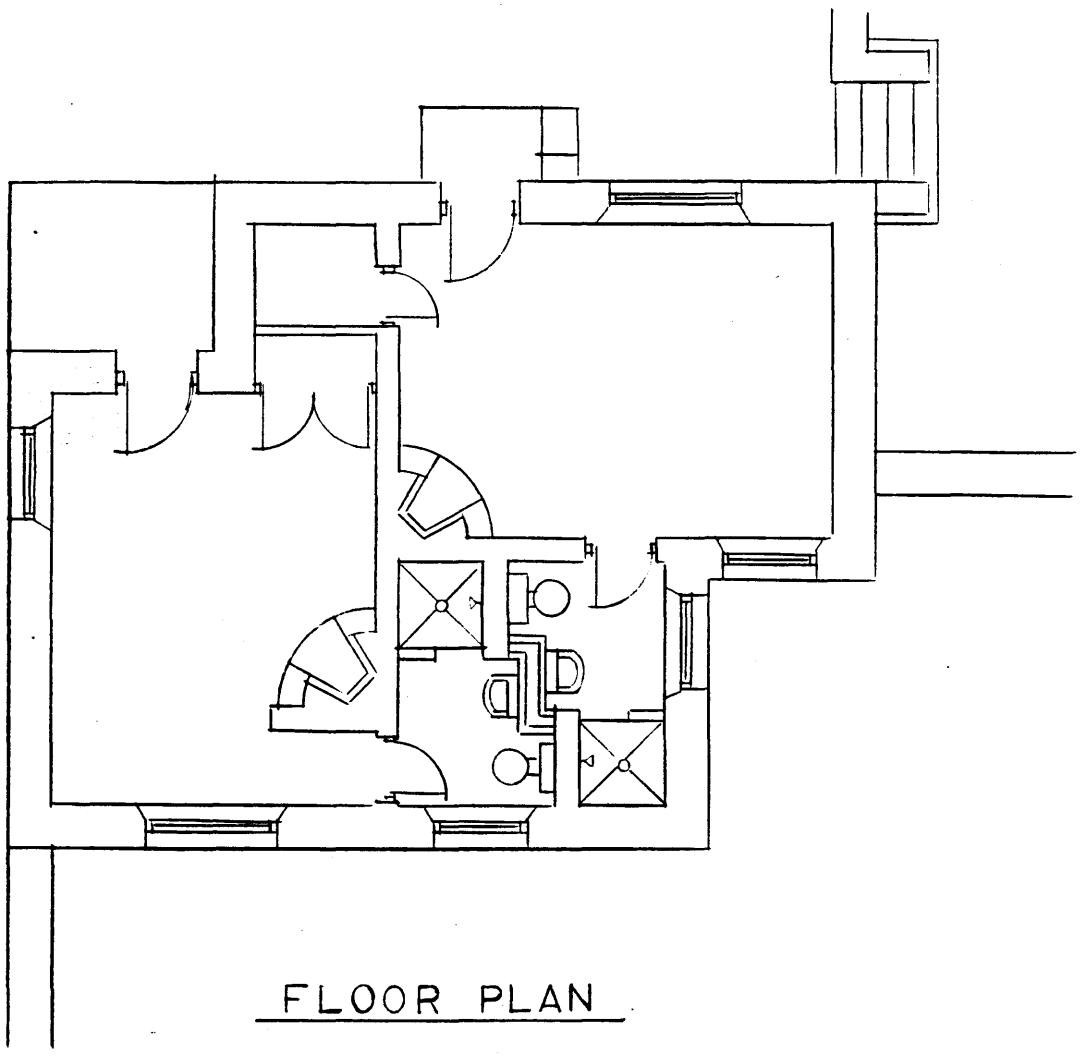
SOUTHWEST ELEVATION



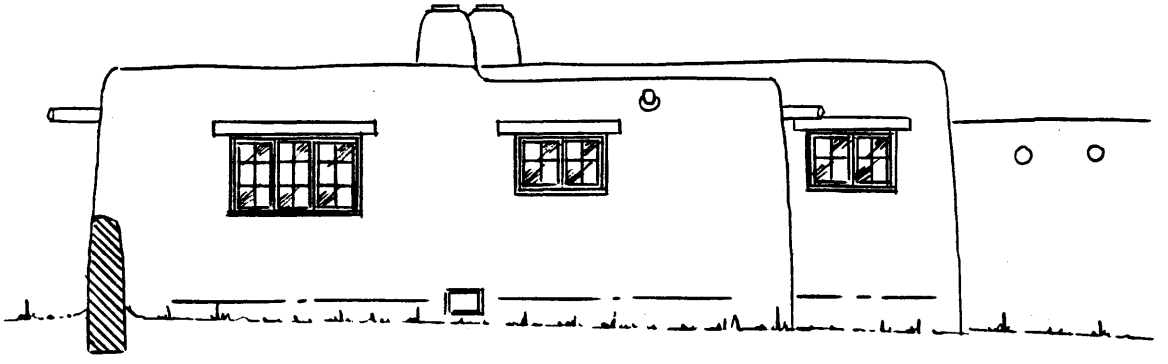
SOUTHEAST ELEVATION

POWERHOUSE: BLDG. 22

SCALE 1/8" = 1' - 0"



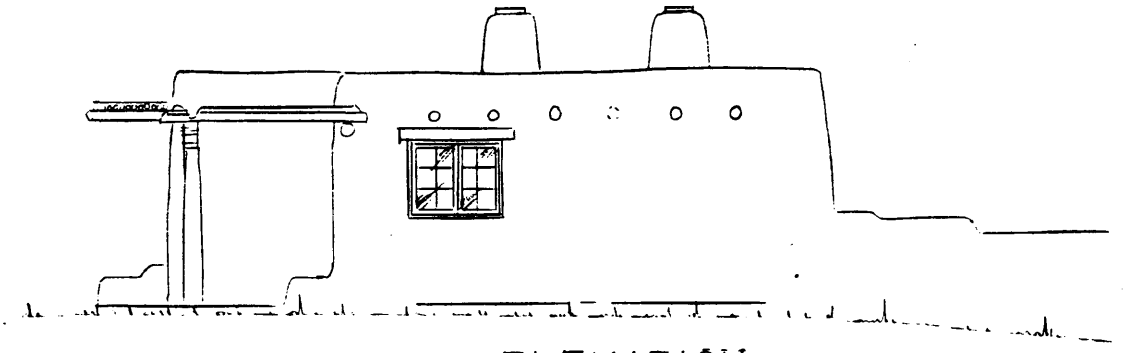
FLOOR PLAN



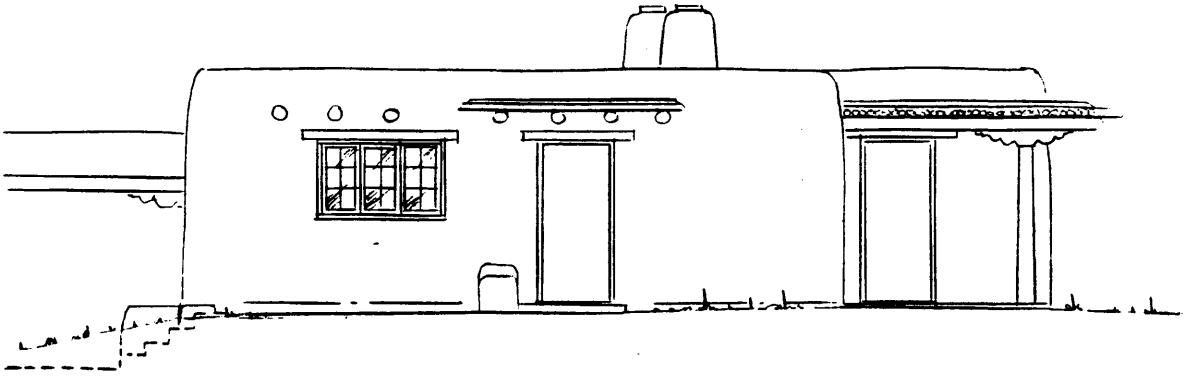
SOUTHWEST ELEVATION

CABIN GROUP D: BLDG. 23

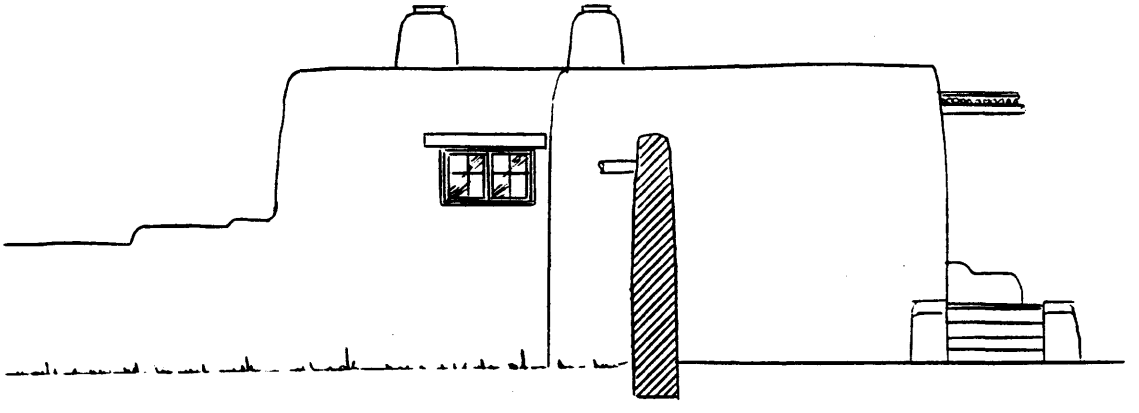
SCALE 1/8" = 1'-0"



NORTHWEST ELEVATION



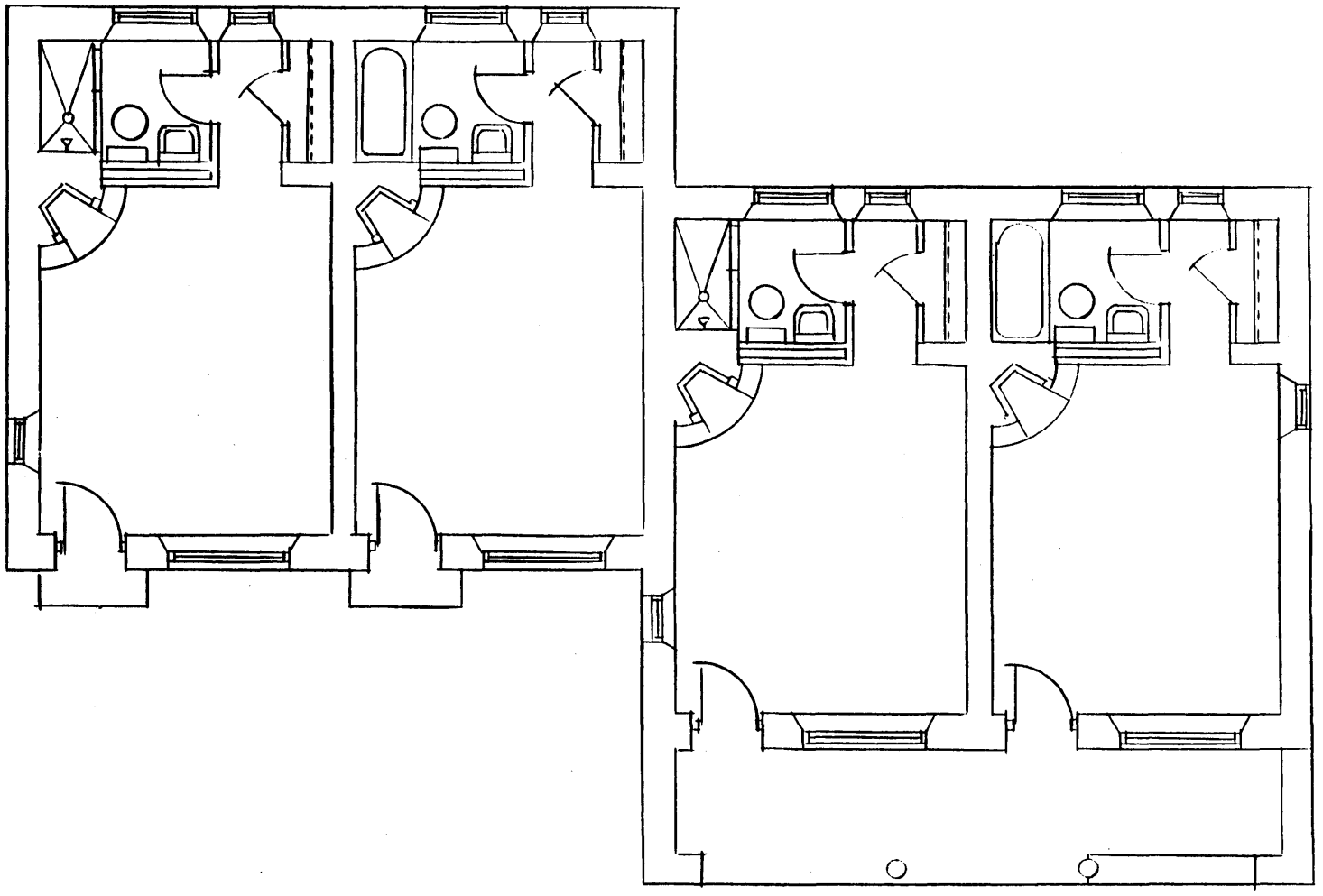
NORTHEAST ELEVATION



SOUTHEAST ELEVATION

CABIN GROUP D: BLDG. 23

SCALE 1/8" = 1' - 0"



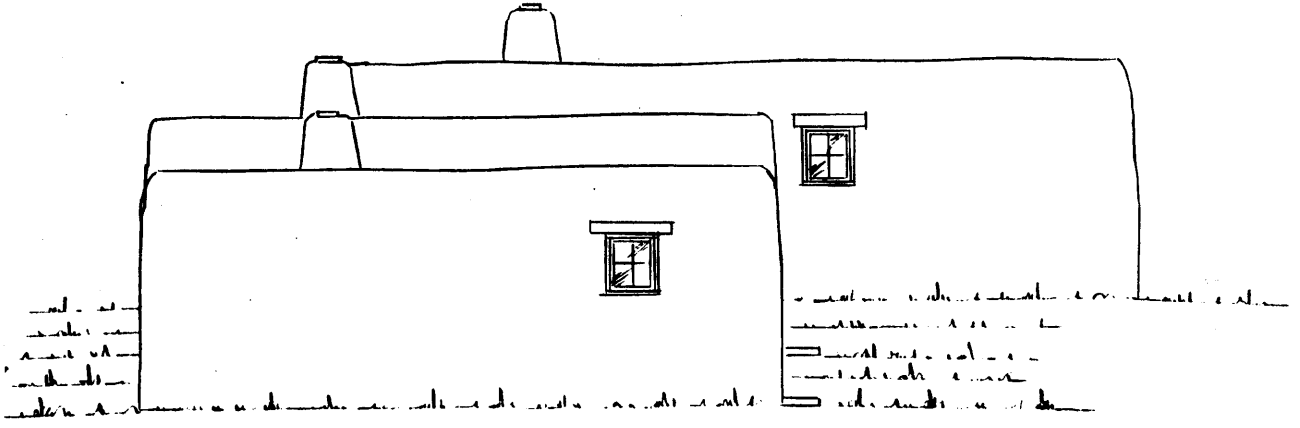
FLOOR PLAN

CABIN GROUP C : BLDG. 24

SCALE 1/8" = 1'-0"

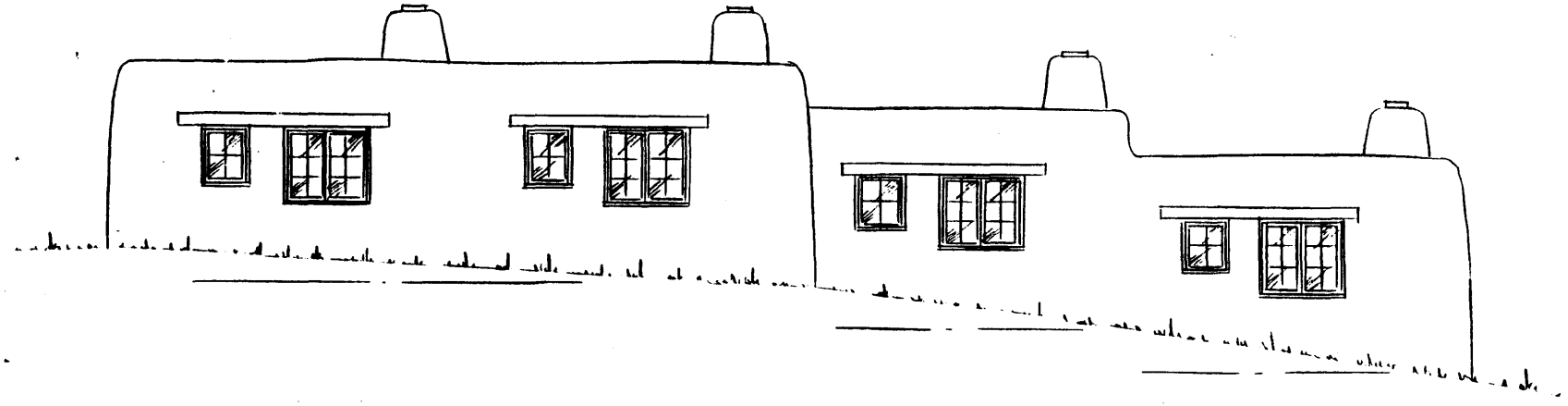


SOUTHEAST ELEVATION

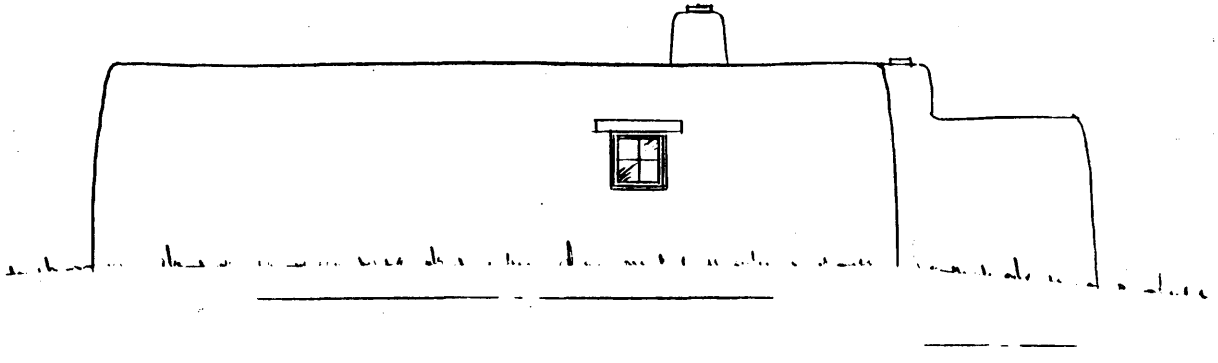


SOUTHWEST ELEVATION

CABIN GROUP C: BLDG. 24



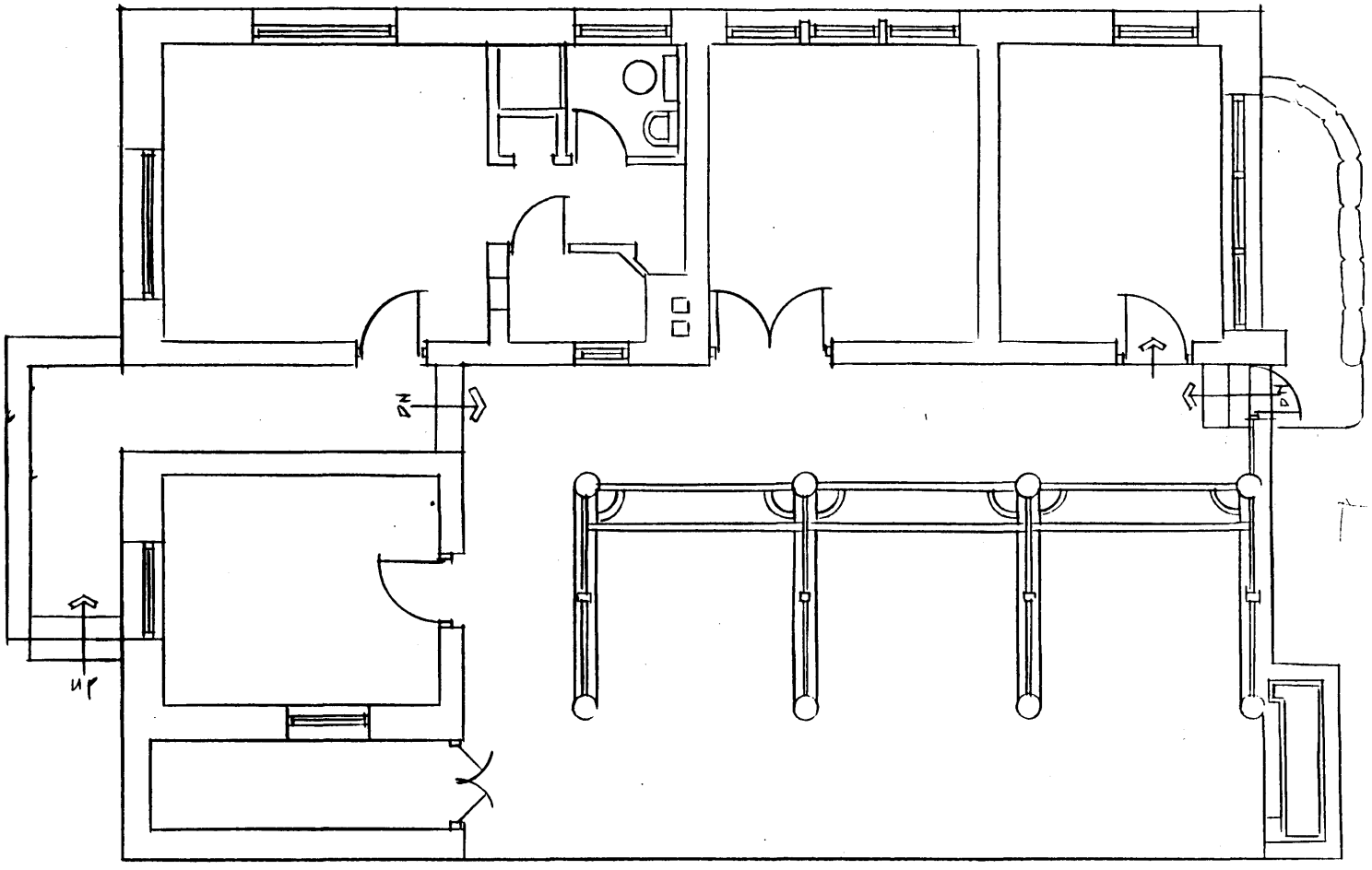
NORTHWEST ELEVATION



NORTHEAST ELEVATION

CABIN GROUP C: BLDG. 24

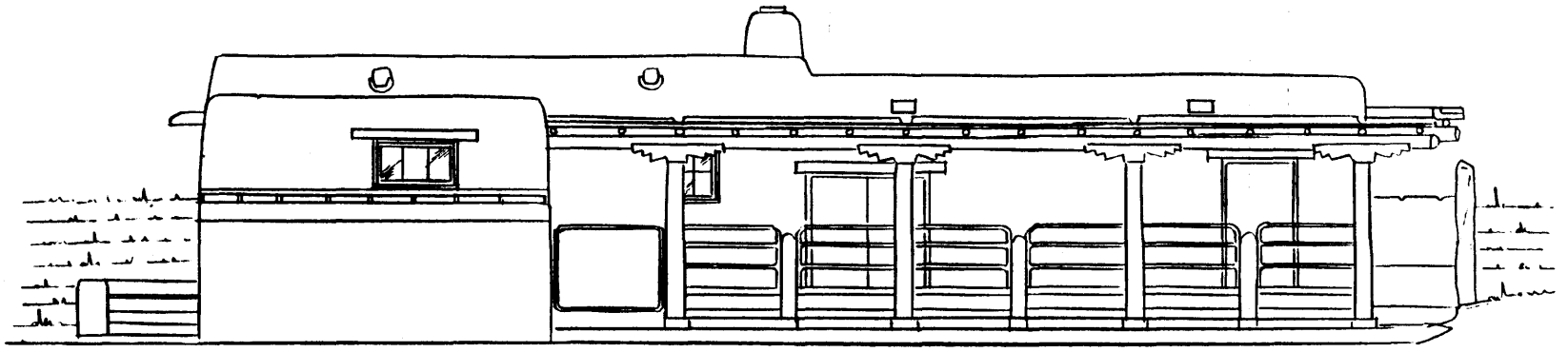
SCALE 1/8" = 1' - 0"



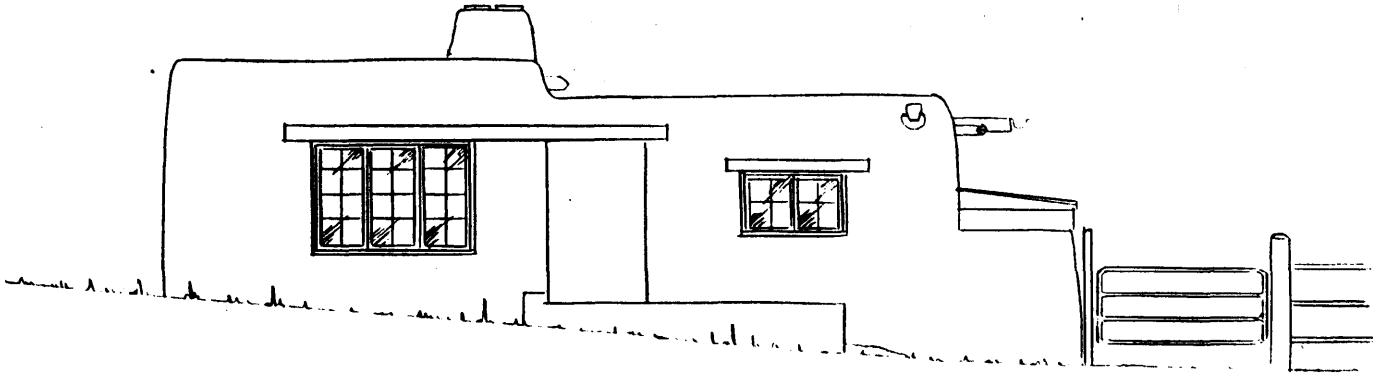
FLOOR PLAN

STABLES: BLDG. 25

SCALE 1/8" = 1'-0"



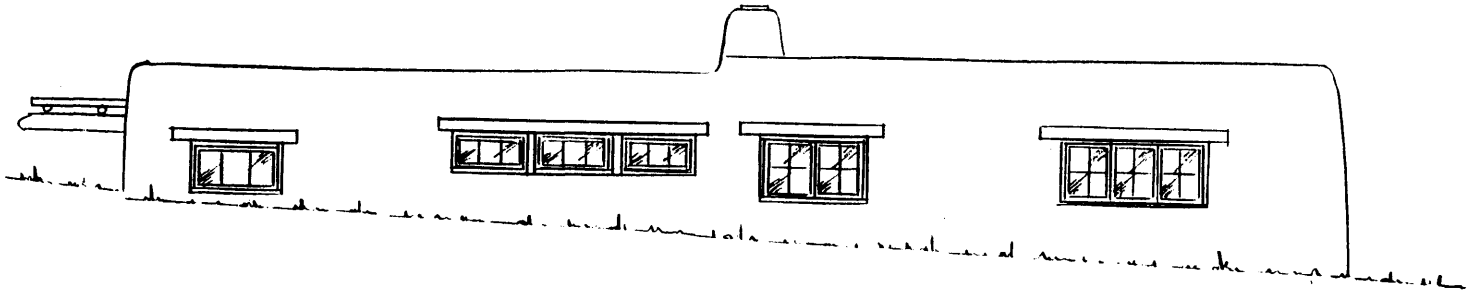
WEST ELEVATION



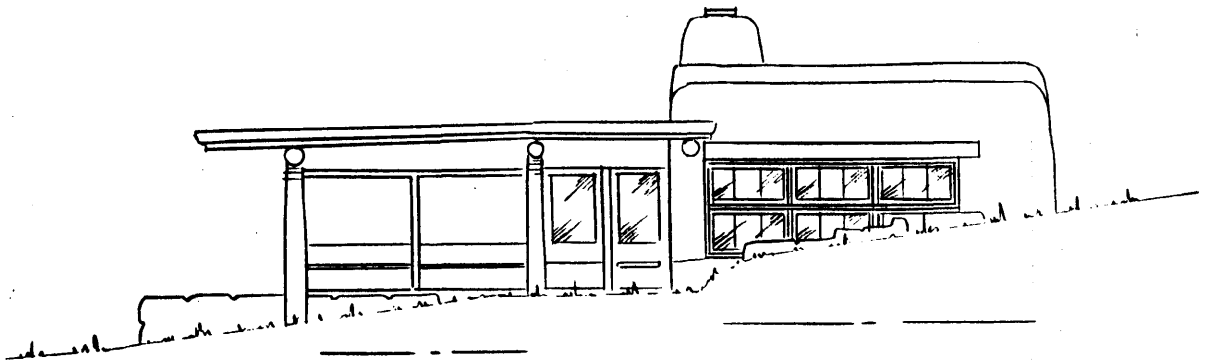
NORTH ELEVATION

STABLES : BLDG. 25

SCALE 1/8" = 1'-0"



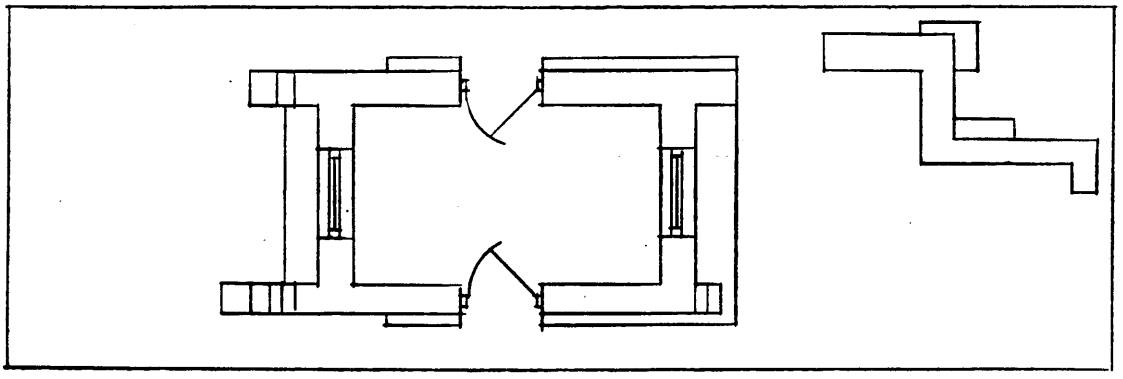
EAST ELEVATION



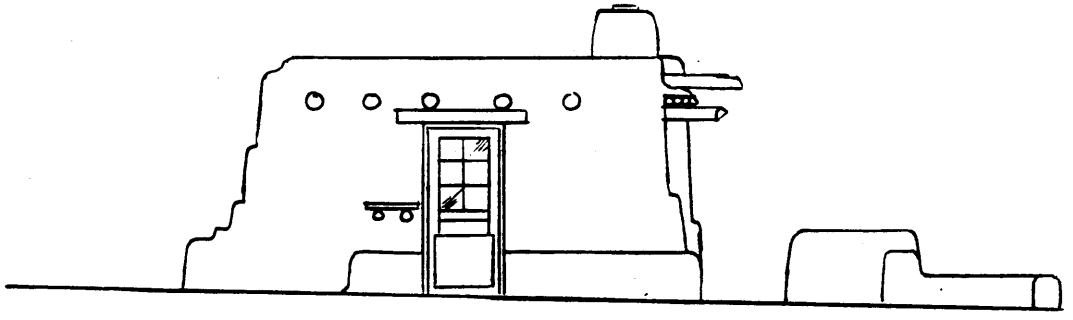
SOUTH ELEVATION

STABLES : BLDG. 25

SCALE 1/8" = 1' - 0"



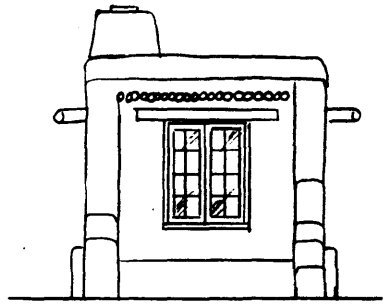
FLOOR PLAN



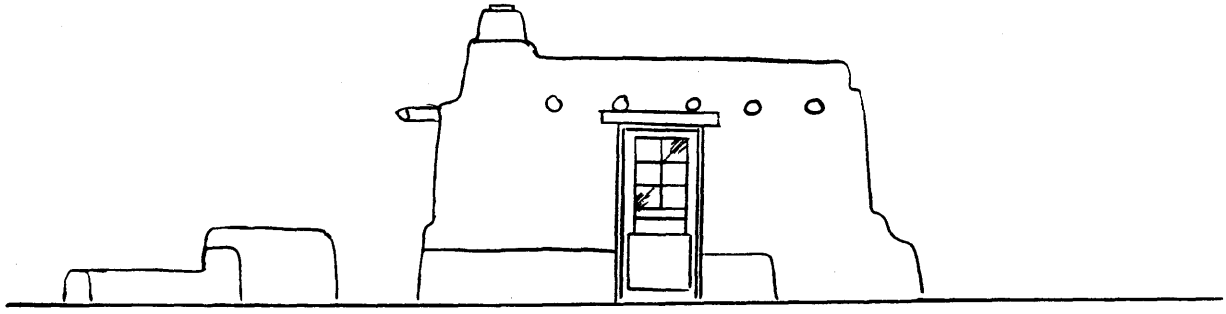
WEST ELEVATION

ENTRANCE STATION: BLDG. 26

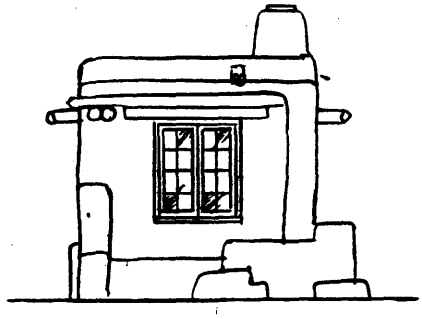
SCALE 1/8" = 1'-0"



NORTH ELEVATION



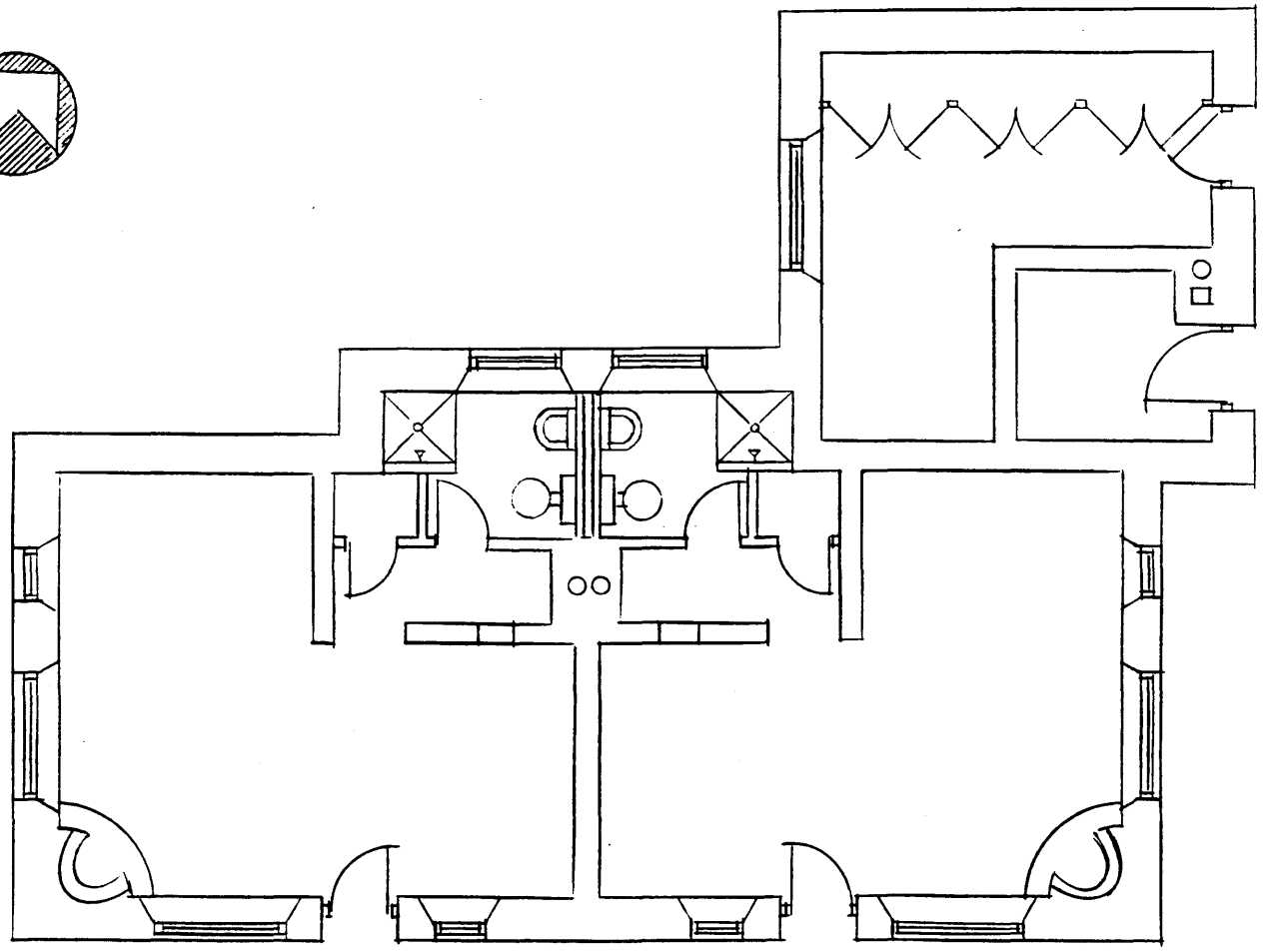
EAST ELEVATION



SOUTH ELEVATION

ENTRANCE STATION: BLDG. 26

SCALE 1/8" = 1'-0"



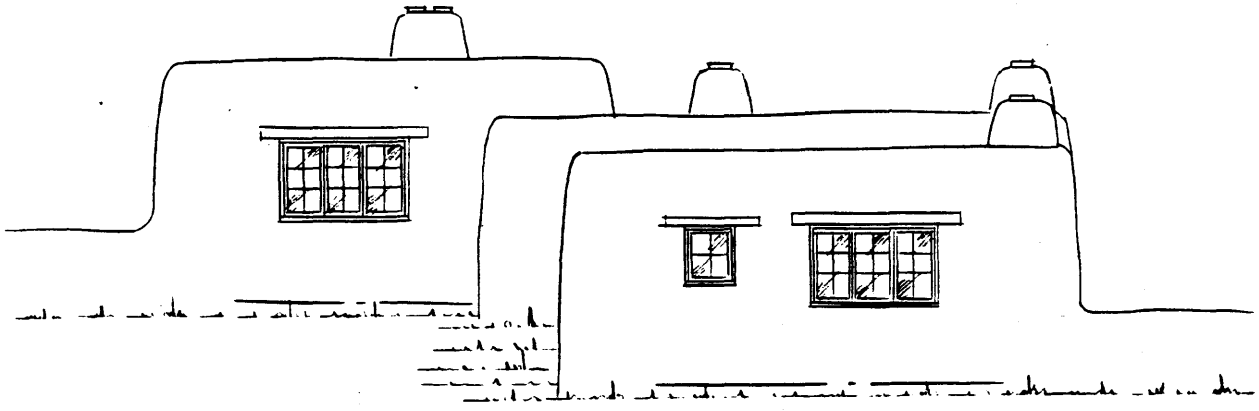
FLOOR PLAN



SOUTHEAST ELEVATION

CABIN GROUP E-1: BLDG. 27

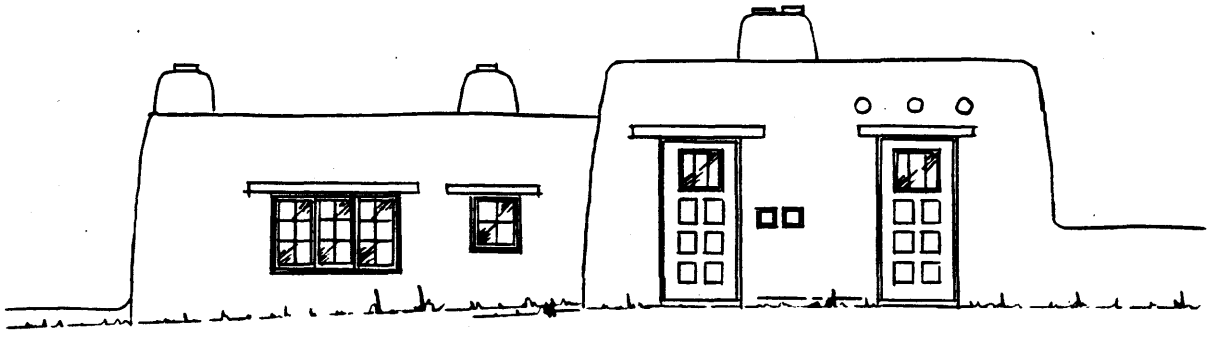
SCALE 1/8" = 1'-0"



SOUTHWEST ELEVATION



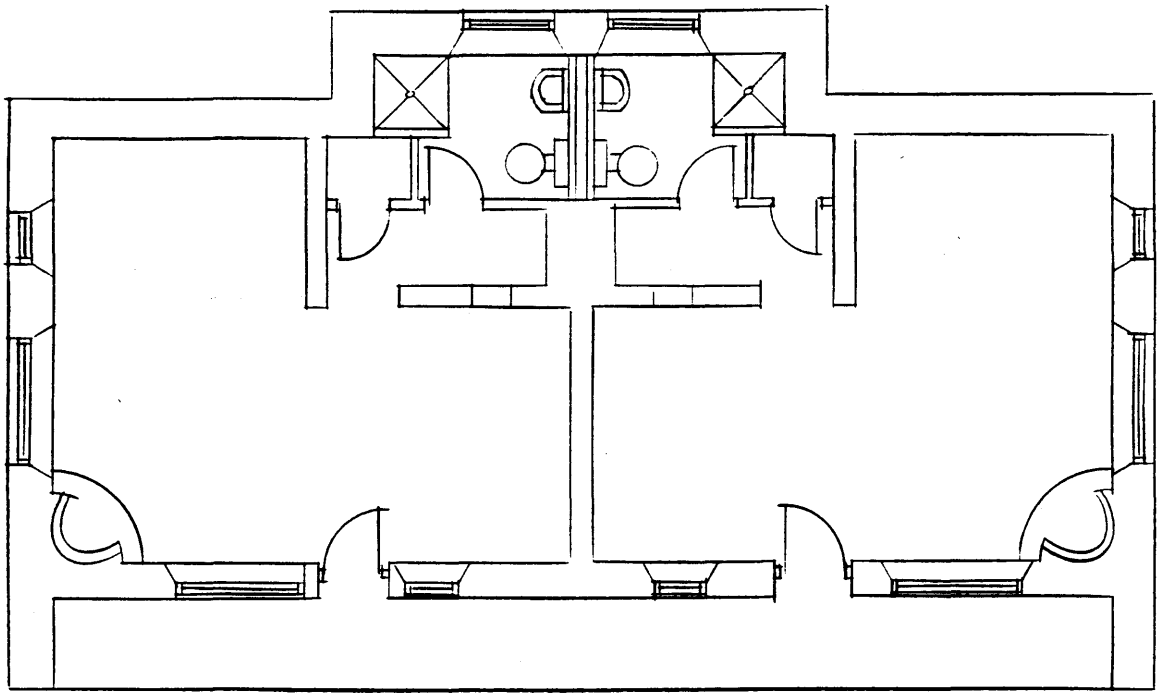
NORTHWEST ELEVATION



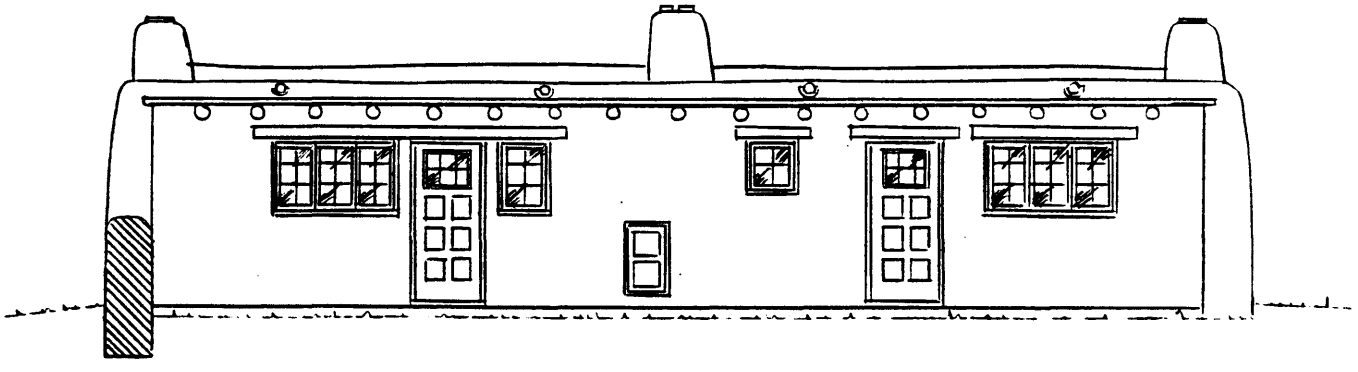
NORTHEAST ELEVATION

CABIN GROUP E-1: BLDG. 27

SCALE 1/8" = 1'-0"



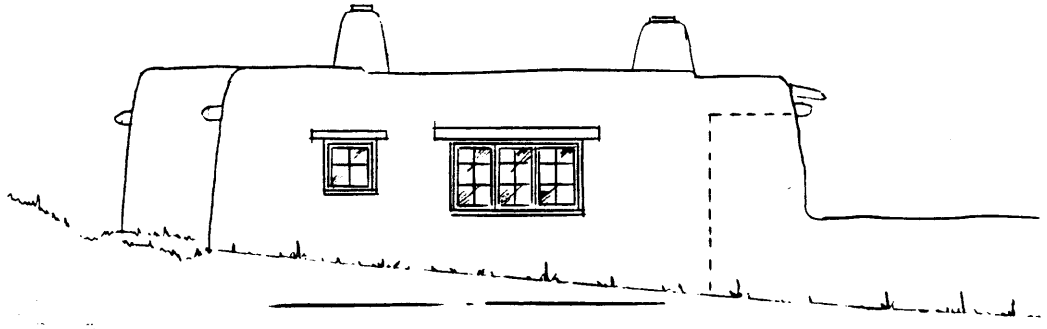
FLOOR PLAN



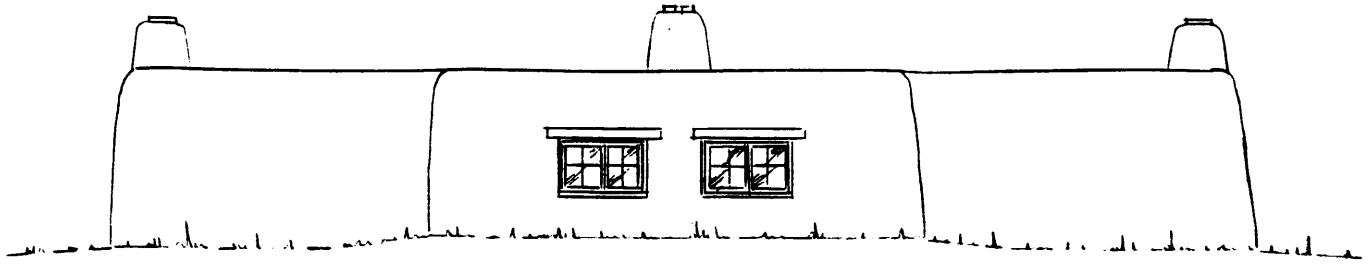
SOUTHWEST ELEVATION

CABIN GROUPS E-2 & E-3: BLDGS. 28 & 29

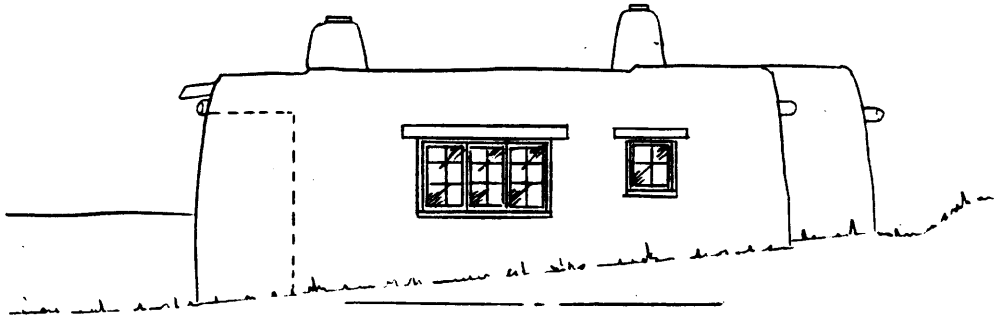
SCALE 1/8" = 1' -- 0"



NORTHWEST ELEVATION



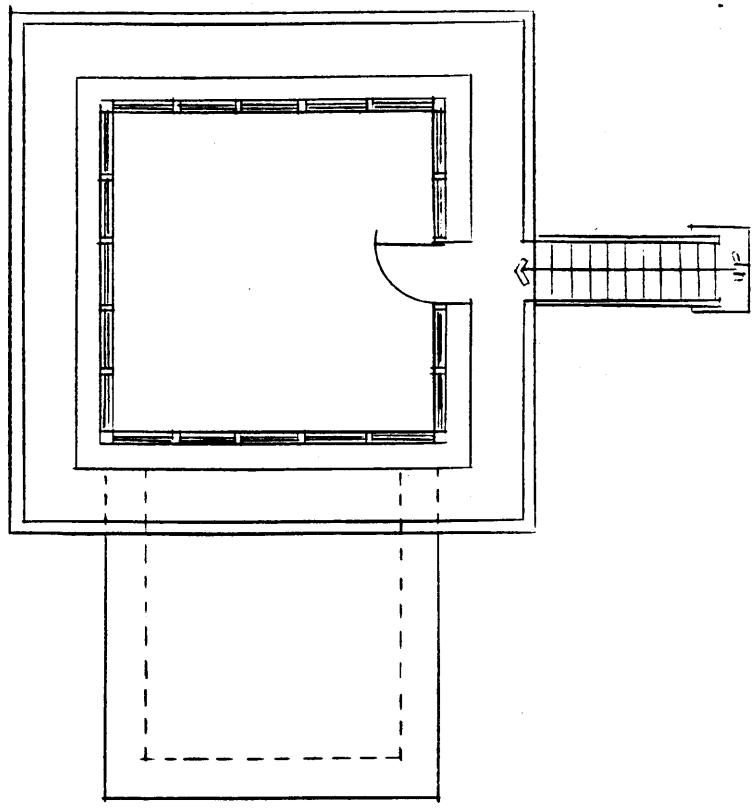
NORTHEAST ELEVATION



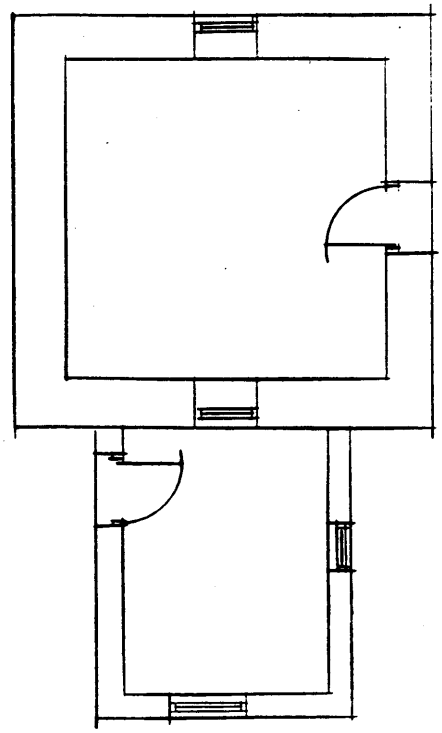
SOUTHEAST ELEVATION

CABIN GROUPS E-2 & E-3 : BLDGS. 28 & 29

SCALE 1/8" = 1' - 0"



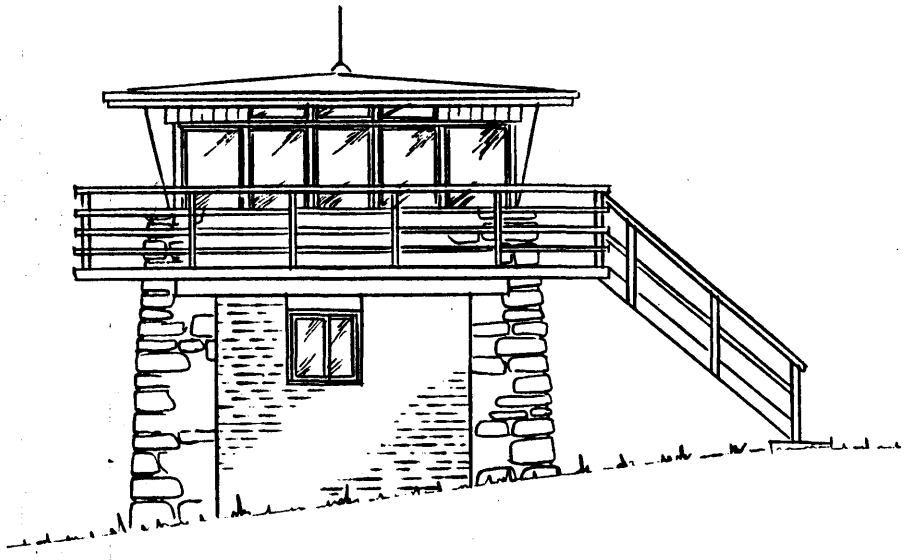
FLOOR PLAN



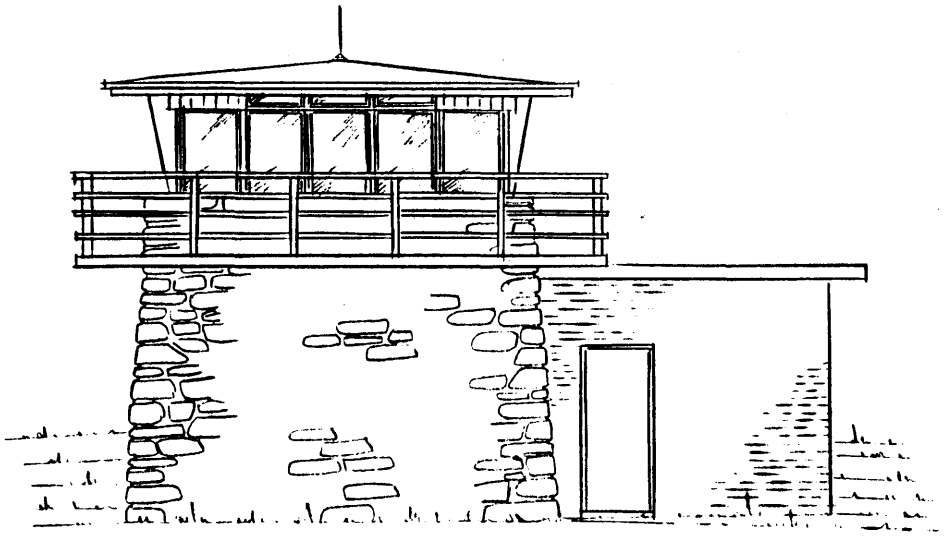
BASEMENT PLAN

FIRE LOOK-OUT: BLDG. 30

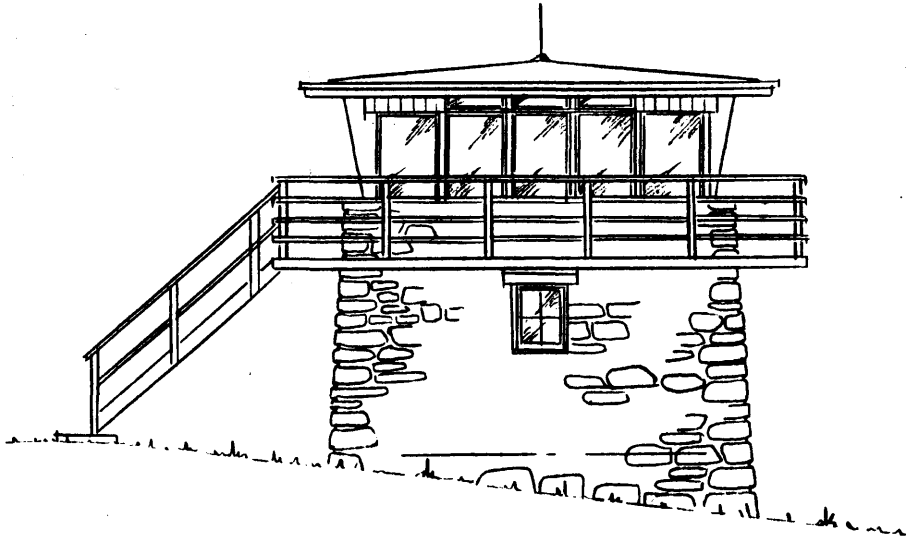
SCALE 1/8" = 1'-0"



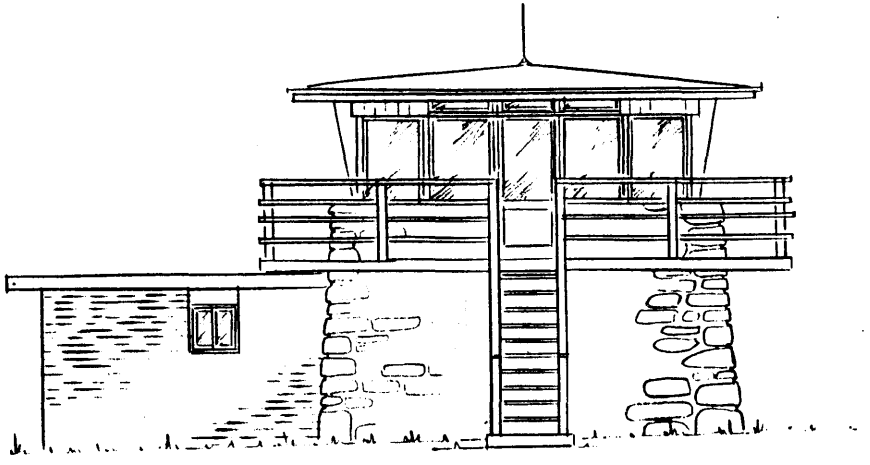
SOUTH ELEVATION



WEST ELEVATION



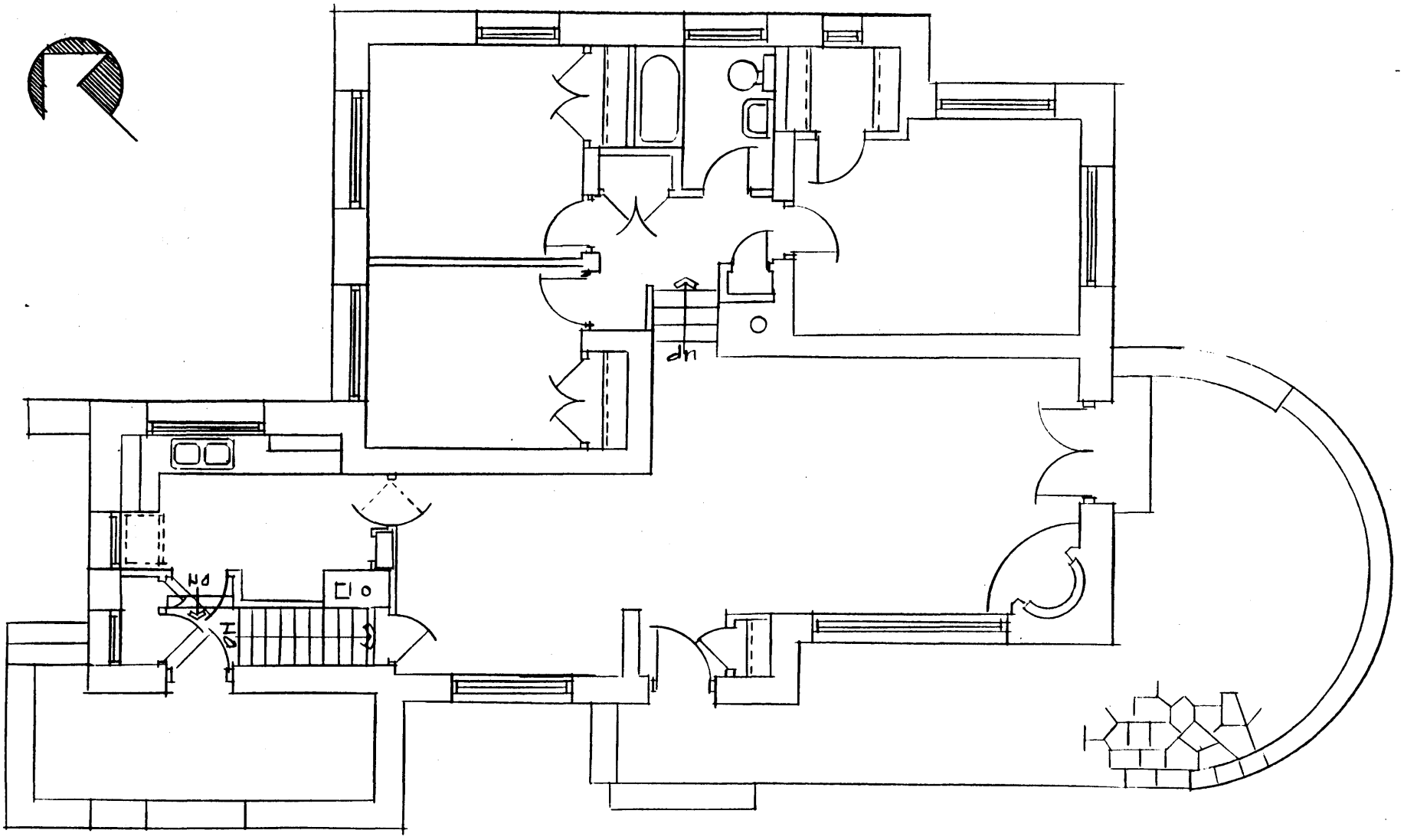
NORTH ELEVATION



EAST ELEVATION

FIRE LOOK-OUT: BLDG. 30

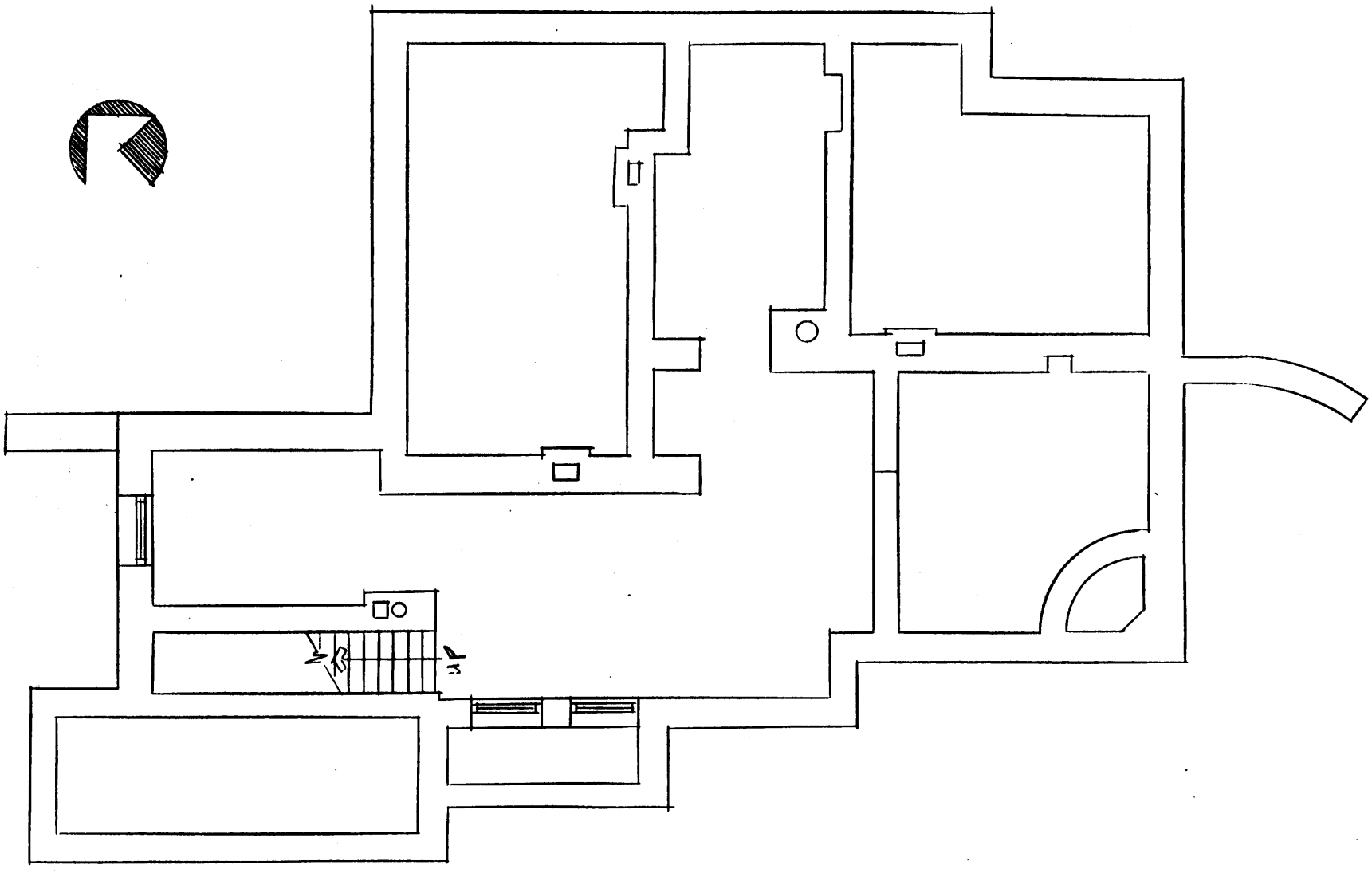
SCALE 1/8" = 1'-0"



FLOOR PLAN

RESIDENCE: BLDG. 32

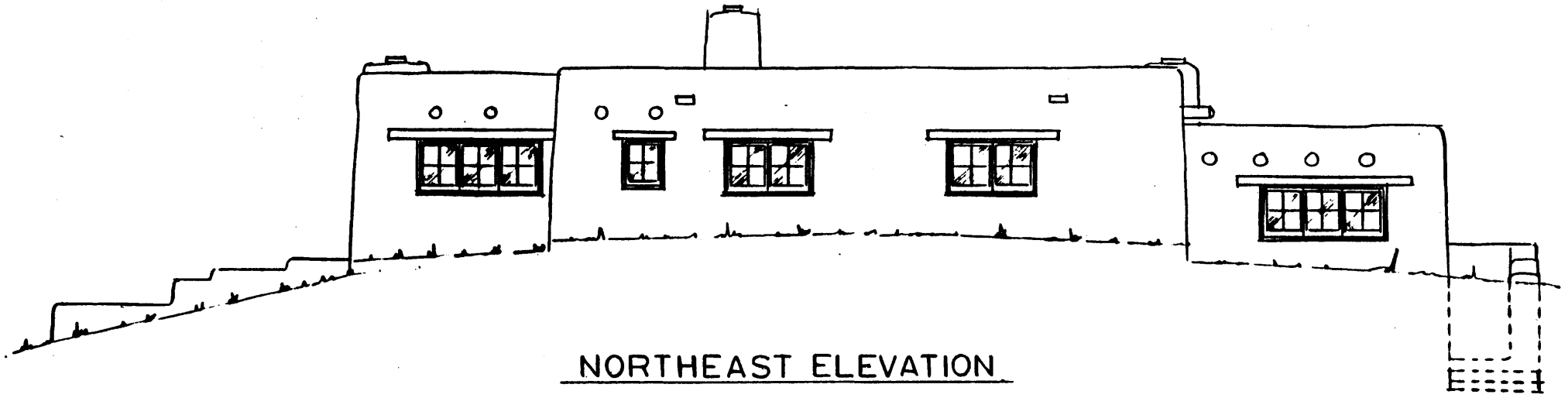
SCALE 1/8" = 1'-0"



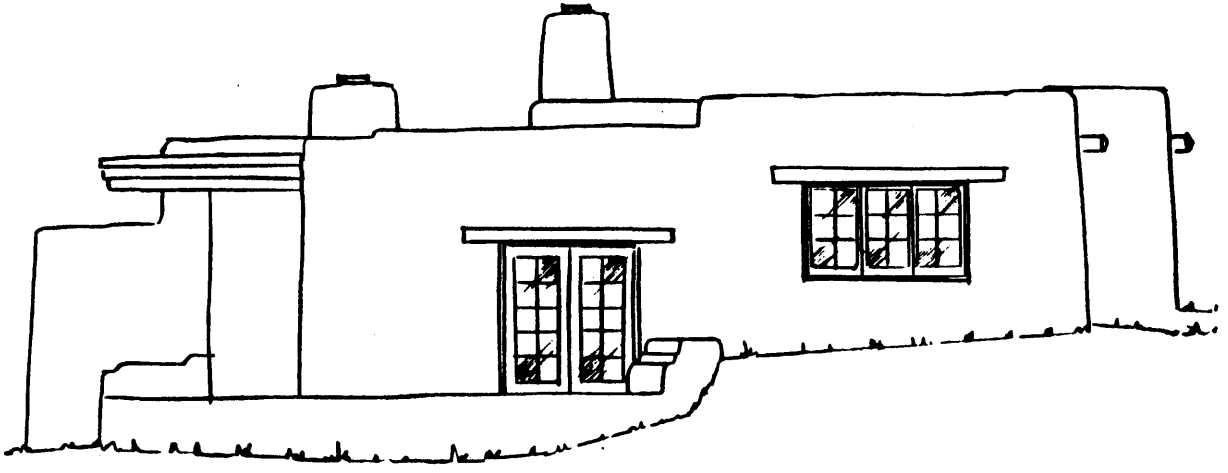
BASEMENT PLAN

RESIDENCE BLDG 32

SCALE 1/8" = 1'-0"



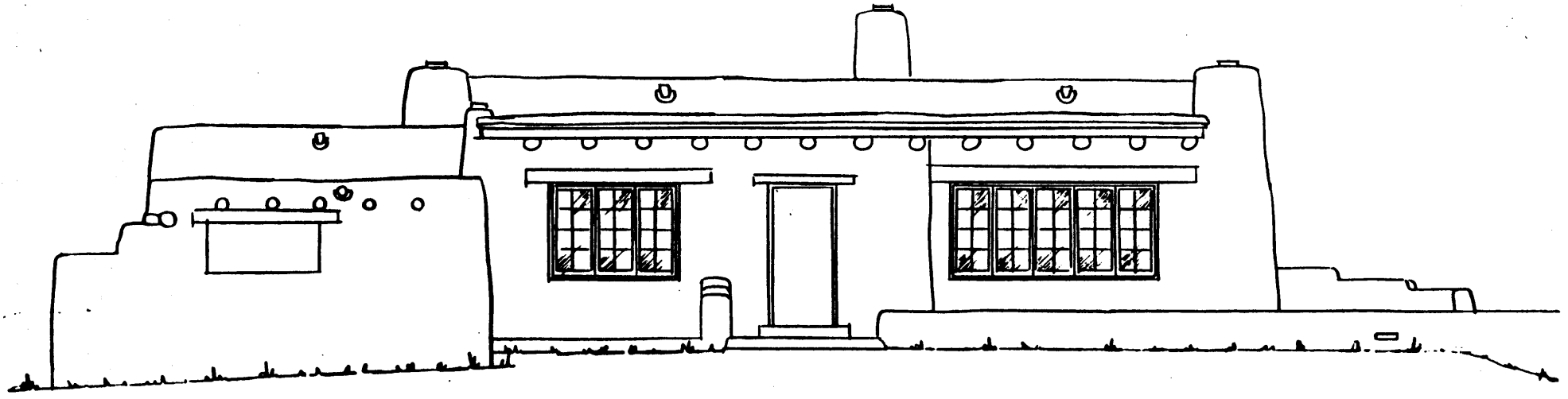
NORTHEAST ELEVATION



SOUTHEAST ELEVATION

RESIDENCE: BLDG. 32

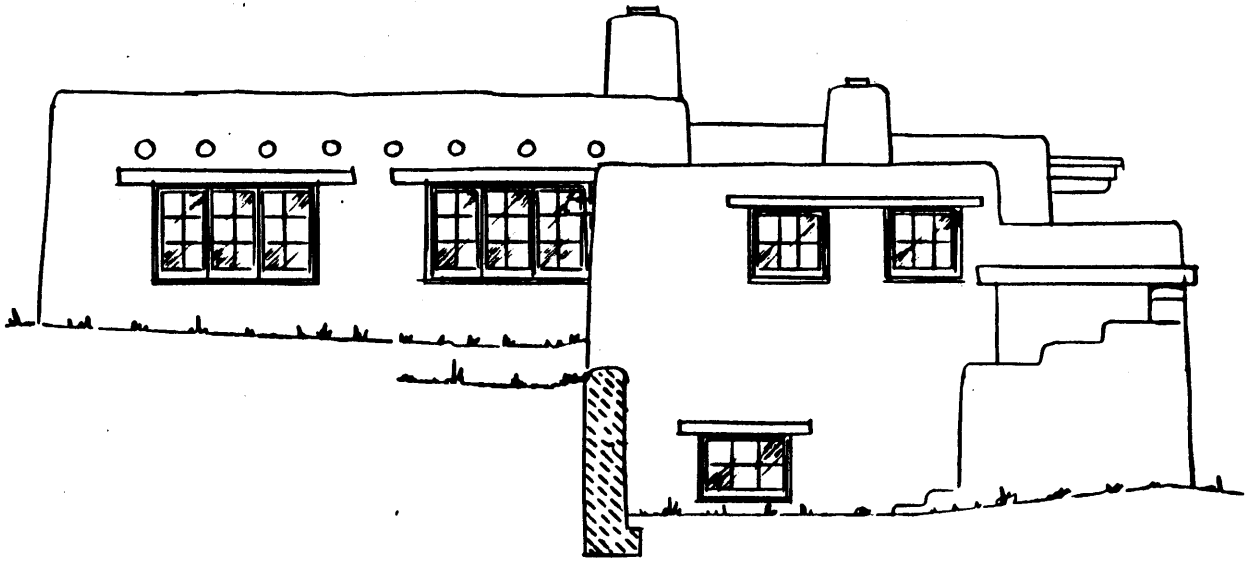
SCALE 1/8" = 1'-0"



SOUTHWEST ELEVATION

RESIDENCE: BLDG. 32

SCALE 1/8" = 1'-0"



SOUTHWEST ELEVATION

ROUTINE MAINTENANCE SCHEDULES INSTRUCTIONS

These schedules, worksheets, and forms concern preservation maintenance which is of a smaller scale than cyclic maintenance. The work addressed in this section is the result of the inspections of Section B which identify these nonscheduled repairs or replacements that need to be corrected immediately or in the near future.

The instructions in Divisions 2-16 of Volume 2 have attempted to list the activities likely to occur under routine maintenance. Due to the unpredictable nature of this type of maintenance, some tasks may not have been anticipated. For this reason, consultation with the regional historical architect and/or other technical experts may need to be employed. And also, because of the possible complexity, the assessment of effect (Form XXX) will be used to document and track this work. These forms should be filled out prior to the undertaking.

A routine maintenance schedule has been prepared in conjunction with the inspection checklist for scheduling repair or replacement of components on an unscheduled, emergency basis.

ROUTINE MAINTENANCE WORKSHEET INSTRUCTIONS

Use the worksheet to list and prioritize all the emergency deficiencies and proposed corrective action.

You may address some identified work elements more appropriately on other worksheets, or you may use a job order request (Form 10-577) to elaborate. For the work elements listed on the summary sheet, be as comprehensive as possible in the "description of work" column as this column, in effect, will function as a job order if you do not use Form 10-577. You should indicate the task objective and performance standards to be met. Insert the appropriate instruction section number from Divisions 2-15 in Volume 2. You should also quantify the work element in terms of workdays/salary and materials costs for scheduling and budgetary planning purposes.

ROUTINE MAINTENANCE SUMMARY REPORT INSTRUCTIONS

When satisfied with the completed routine maintenance summary report worksheets, present the document to the area manager for concurrence, and forward a copy to the regional historical architect.

The report now becomes the ongoing routine preservation maintenance tracking schedule. As work is accomplished, track progress by inserting the appropriate date in the final column "date

corrected." When all work elements have been corrected and by inspection approved, sign off on the cover sheet and insert the document in Volume 3. Work elements, for various reasons, may not be accomplished as intended within the time period covering the report. These tasks should be forwarded to other current or future summary report worksheets.

ROUTINE TASKS MASTER LIST INDEX

There are at least 85 routine maintenance tasks that are to be performed as the need arises (i.e., as determined by biannual inspections) on the historic structure or its modern systems. The scope of these activities will vary greatly, depending on the nature of the identified deficiency that arises and the elapsed time between its appearance and its abatement. A listing of the routine tasks follows with its instruction section number. (See Volume 2.) This listing is provided as a quick reference index for locating the instructions for correcting deficiencies of a routine nature.

ROUTINE TASKS SCHEDULE

Reference Numbers MMS	CSI	Task
3290	02210	Provide proper drainage away from walls
3290	02210	Prevent site erosion
3994	02252	Remove unwanted vegetation
3331	02510	Tighten drain covers
3331	02510	Clean drain grates and covers
3331	02510	Repair/replace drain covers
1341	02620	Repair/replace curbs and gutters
2991	02630	Patch cracks in areaway concrete walks and steps
2991	02630	Repair/replace concrete walks and steps
2992	02631	Repair mortar joints in brick walks and plazas
2992	02631	Replace deteriorated brick in walks and plazas
2993	02632	Repair mortar joints in stone walks, steps, and plazas
2993	02632	Replace deteriorated stone units in walks, steps, and plazas
2211	02722	Touch-up paint on signs
2211	02722	Repair/replace signs
2211	02722	Tighten sign connectors/fasteners
3410	02730	Oil/adjust gate hardware
3410	02730	Repair/replace gate hardware
3410	02730	Repair/replace gate/fence pieces
3421	02730	Touch-up paint on gates/fences
4241	03300	Apply sealer to interior concrete floors
4241	03300	Patch cracks and damaged areas in interior concrete floors
4199	04110	Repoint deteriorated mortar
4191	04210	Reset loose brick and replace broken or missing brick
4191	04210	Repoint deteriorated brick mortar
4191	04210	Touch-up paint on brick surfaces
4114	04215	Clean stucco walls
4114	04215	Repair stucco walls
4191	04220	Reset loose concrete masonry units
4191	04220	Replace broken concrete masonry units
4115	04400	Reset loose stone units
4115	04400	Repoint stone mortar joints
4115	04400	Replace damaged stone units
4114	04400	Touch-up paint on stone surfaces
4192	04510	Clean masonry walls
4275	05312	Clean and tighten steel floor plates
4194	06134	Repair/replace deteriorated log members
4194	06134	Touch-up finish on wood columns

4810	06220	Resecure loose millwork, trim, wainscot
4810	06220	Touch-up finish on millwork, trim, wainscot
4810	06220	Repair/replace damaged or deteriorated millwork and trim
4271	06431	Sand splinters from wood balustrades
4271	06431	Secure loose wood balustrade parts
4271	06431	Repair wood balustrade surfaces
4271	06431	Touch-up wood balustrade finish
4315	07520	Remove debris from roll roofing
4315	07520	Repair damaged roll roofing
4317	07540	Remove debris from urethane roofing
4317	07540	Repair damaged urethane roofing
4341	07620	Repair flashing
4341	07620	Paint repaired flashing
4341	07620	Touch-up paint on flashing
4351	07631	Repair leaks in gutters/downspouts
4351	07631	Secure gutter hangers
4351	07631	Replace damaged gutters/downspouts
4145	07810	Replace damaged skylight glass
4145	07810	Replace damaged caulking and flashing at skylights
4343	07951	Replace faulty sealants
4154	08120	Adjust aluminum storm doors
4154	08120	Repair/replace damaged aluminum storm doors
4151	08210	Correct sagging/sticking doors
4151	08210	Touch-up paint on doors
4151	08210	Replace damaged glass panes in doors
4151	08210	Repair damaged wood doors
4152	08390	Repair/replace damaged screen doors
4152	08390	Adjust screen doors
4143	08510	Touch up paint on steel windows
4143	08510	Repair/replace damaged steel windows
4141	08610	Correct binding or loose wood windows
4141	08610	Repair damaged wood windows
4141	98619	Touch up paint on wood windows
4151	08710	Resecure loose hardware
4151	08710	Repair/replace damaged hardware
4159	08730	Repair/replace loose or damaged weatherstripping
4148	08810	Replace damaged window glass
4148	08810	Replace damaged glass putty
4230	09160	Repair plaster surfaces
4230	09100	Touch up paint on plaster surfaces
4231	09250	Repair gypsum wallboard
4231	09250	Touch up paint on gypsum wallboard
4293	09310	Repoint ceramic tile grout
4293	09310	Reset ceramic tile
4293	09310	Replace damaged ceramic tile
4239	09512	Replace damaged acoustical tile
4239	09512	Repair/replace damaged tees or wires

4250	09560	Resecure loose wood floor boards
4250	09560	Refinish wood floors
4250	09560	Repair/replace damaged wood floor strips
4242	09665	Repair/replace damaged vinyl floor
4246	09682	Patch damaged carpet
4161	09910	Clean exterior painted surfaces
4161	09910	Touch-up exterior paint
4261	09920	Clean interior painted surfaces
4261	09920	Touch-up interior paint
4580	10160	Tighten toilet partition anchors
4580	10160	Oil toilet partition door hinges
4580	10160	Touch-up paint on toilet partitions
4655	10200	Tighten louvers, vents, and grilles
4655	10200	Repair/replace damaged louvers, vents, and grilles
3320	10350	Repair/replace damaged flagpole and components
4618	10800	Tighten toilet accessory anchors
4618	10800	Replace broken or damage toilet accessories
4591	12501	Replace worn-out blinds and shades
4594	12504	Repair/replace damaged drapes
4610	15400	Repair plumbing leaks
4610	15400	Replace nonfunctioning plumbing fixture parts
4616	15421	Clean out floor drains
4615	15424	Replace defective parts on water heater
4615	15455	Repair water cooler leaks
4615	15455	Replace nonfunctioning water cooler parts
4631	16510	Tighten loose electrical cover plates
4631	16510	Repair/replace inoperative or damaged electrical switches , outlets, or light fixtures
4632	16620	Tighten loose emergency lighting components
6432	16620	Repair/replace damaged emergency lighting components
4635	16721	Repair/replace damaged fire alarm components

ROUTINE MAINTENANCE WORKSHEET

PREPARED BY: _____ DATE: _____ TIME: _____ PAGE: _____ OF _____

LOCATION: _____

SECT. NO.	FEATURE	PROBLEM	CORRECTIVE ACTION	QUANTITIES			
				MAN HRS.	COSTS		
					LABOR	MAT'L	TOTAL
				EST. / ACT.	EST. / ACT.	EST. / ACT.	EST. / ACT.

ROUTINE MAINTENANCE SUMMAY REPORT

A. LOCATION: _____

B. ITEM: _____

C. PREPARED BY: _____ DATE: _____

D. RECOMMENDED BY: _____ (SUPT.) DATE: _____

E. COPY OF REPORT SENT TO REGIONAL OFFICE DATE: _____

F. COPY OF REPORT CHECKED BY
REG. HIST. ARCHITECT: _____ DATE: _____

RECORD OF ACTION:

G. DEFICIENCIES SCHEDULED FOR CORRECTIVE ACTION
INSTRUCTIONS BASED ON HSPG: DATE: _____

H. APPROVED BY: _____ DATE: _____

J. EXCEPTIONS: _____

K. DEFICIENCIES CORRECTED DATE: _____

L. APPROVED BY: _____ DATE: _____

M. RECORDS PLACED IN HSPG, VOLUME 3
BY: _____ DATE: _____

N. EXCEPTIONS/COMMENTS: _____

Form 10-577
(March 1970)

UNITED STATES DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE

JOB ORDER REQUEST

(See Instructions on Reverse)

JOB ORDER NO. FY

JOB DESCRIPTION	LOCATION	DISTRICT

PROPOSED START DATE	TARGET COMP. DATE	NO. OF UNITS	UNIT OF MEASURE	EST. COST PER UNIT	ACT. COST PER UNIT

STANDARD AND LEVEL PROPOSED

STATEMENT OF WORK PROPOSED

PERSONAL SERVICES

POSITION, TITLE, GRADE AND SURNAME	EST. M/DAYS	DAILY RATE	EST. COSTS	ACT. M/DAYS	ACTUAL COSTS

EQUIPMENT RENTAL

TYPE OF EQUIPMENT	EST. HRS./MIS	RATE	EST. COSTS	ACT. HRS/MIS.	ACTUAL COSTS

MATERIALS AND OTHER COSTS

ITEM	EST. COSTS	ACTUAL COSTS

COST ACCOUNT	PERSONAL SERVICES	EQUIPMENT RENTAL	SUPPLIES AND MATERIALS.	OTHER	TOTAL

REQUESTED BY *(Title & Signature)*	CONCURRED BY *(Title & Signature)*	APPROVED BY *(Title & Signature)*

COMPLETED BY	DATE COMP.	INSPECTED BY	DATE INSPECTED

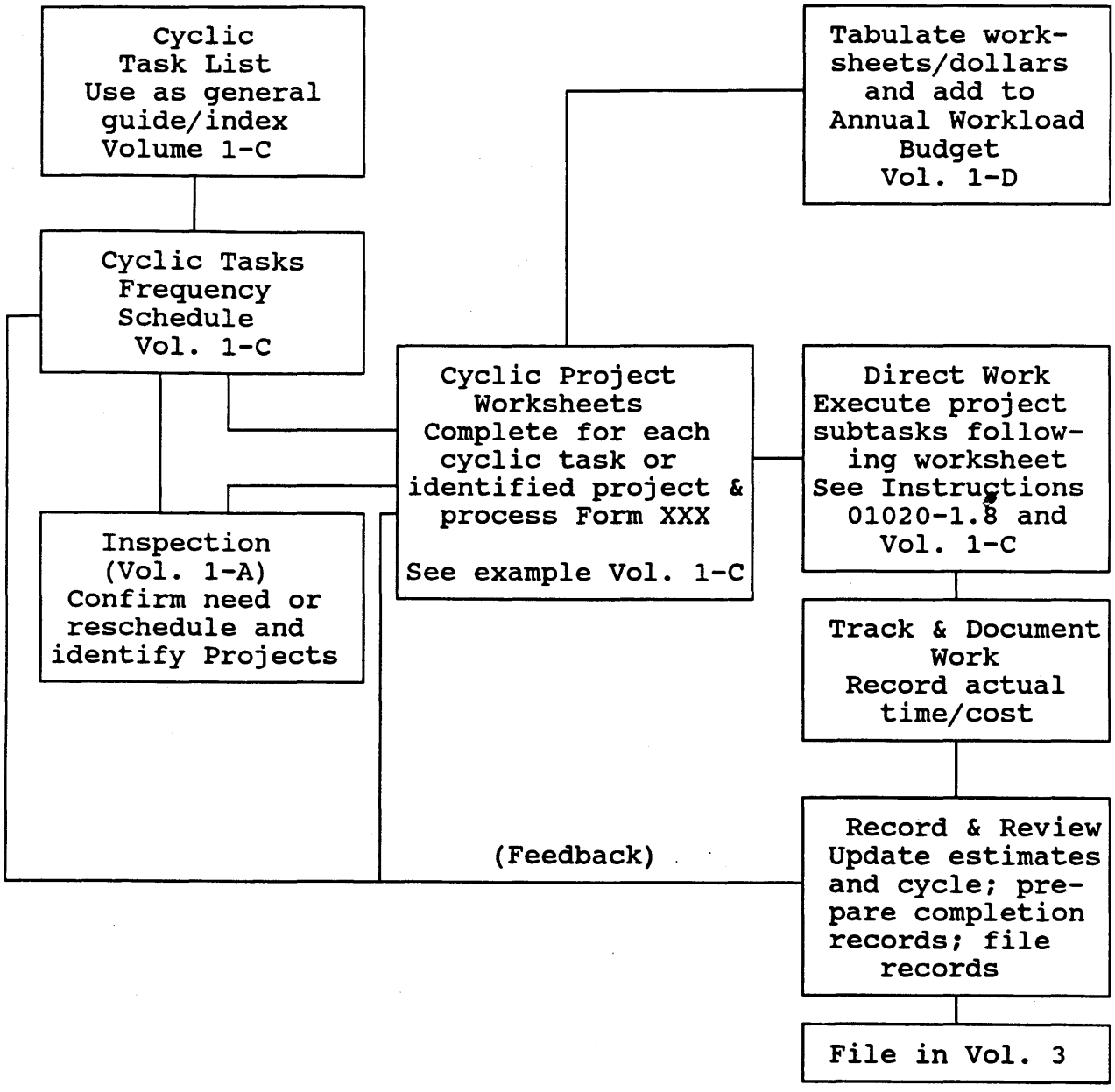
VOLUME 1

SECTION C

CYCLIC/PROJECT SCHEDULES

- CYCLIC/PROJECT ACTIVITY FLOW DIAGRAM
- CYCLIC/PROJECT SCHEDULES INSTRUCTIONS
  - GENERAL
  - CYCLIC MAINTENANCE SCHEDULES
  - PROJECT/CYCLIC WORKSHEETS
  - FORMS 10-577 AND XXX
  - CYCLIC TASKS--MASTER LIST INDEX
  - CYCLIC TASKS--FREQUENCY SCHEDULE
  - PROJECT/CYCLIC WORKSHEET
- JOB ORDER REQUEST, FORM 10-577
- FORM XXX

CYCLIC/PROJECT ACTIVITY FLOW DIAGRAM



CYCLIC/PROJECT SCHEDULES INSTRUCTIONS

GENERAL

These schedules, worksheets, and forms concern preservation maintenance undertakings which may occur with routine regularity, but less frequently than annually. The work addressed here is usually of a relatively large scale in terms of planning/organizing or in terms of crew size/cost.

There are two types of activities covered here: (1) cyclic undertakings listed and occurring on a somewhat predictable time schedule (renewing paint, replacing features/systems), and (2) other corrective or repair projects which in and of themselves may be routine, but occur irregularly through time and are more complex than the routine tasks addressed in the inspection/routine maintenance section.

The instructions in Divisions 2-16 of Volume 2 have attempted to cover these projects and cyclic work but, because of the technical complexity in some cases, some aspects of these undertakings may exceed the HSPG. For this reason, consultation with the regional historical architect and/or other technical experts may be the rule rather than the exception. Additionally, because of the scale of work and possible technical complexity, the region has chosen to employ the assessment of effect (Form XXX) to document and track this work. These forms should be filled out prior to the undertaking.

This cyclic/project work may sometimes require skill levels which exceed the basic staff capabilities. A tip-off to categorizing maintenance activities not already listed on the cyclic schedule as "cyclic/project" type rather than "routine" is the need to contract for services or augment the park staff on a temporary basis to accomplish the undertaking.

CYCLIC MAINTENANCE SCHEDULES

A cyclic maintenance schedule has been prepared for predicting replacement/renewal projects for various materials and systems over a 40-year period. As a reminder, this work schedule is primarily for programming purposes and should be verified through inspection. If the work is not necessary in the year scheduled, make a note to inspect at a later date to reschedule the cyclic project.

PROJECT/CYCLIC WORKSHEETS

Because the project-type preservation maintenance is more involved than housekeeping or most routine work, an open-ended worksheet has been developed to assist in organizing, planning, and directing this type of undertaking. The project worksheet is similar to the job order request (Form 10-577) in that it enables you to both calculate estimates of workload/material for budgeting/scheduling purposes and can function as a vehicle for directing the work as outlined and planned. The opportunity to track "actual" time/cost information is also provided on this form and upon completion should be inserted along with photographs and other material as a permanent record in Volume 3.

FORMS 10-577 AND XXX

Use of these forms is self-explanatory and has already been placed in the overall maintenance management process logic.

Your use of the 10-577 is optional while the use of the Form XXX is required for all work undertaken in this "cyclic/project" category.

CYCLIC TASKS--MASTER LIST INDEX

Few features and systems are identified in Divisions 2-16, Volume 2, for cyclic attention (i.e., replacement or renewal) on a predictable schedule. Replacement of mechanical and electrical equipment is expected, however, the HSPG does not schedule this cyclic activity--it should be replaced <u>as required</u>. Cyclic activity occurs over a multi-year schedule, as indicated on the following tables. By definition, each cyclic project is larger in scope than "routine" or "housekeeping" activities. It requires more advance planning, the processing of Form XXX, and extra funding which should be programmed for the year the project is anticipated. A listing of cyclic tasks identified in Volume 2 follows with its instruction section number.

CYCLIC TASKS--FREQUENCY SCHEDULE

Reference Numbers MMS	CSI	Task	Cycle in Yrs. (Next Due)
3331	02510	Repair/replace drain grate/pipe	
8331	02722	Refinish signs	
3410	02730	Refinish gates/fences	
3230	02830	Shape trees and shrubs	
4241	03300	Strip sealer from interior concrete floors	
4241	03300	Apply new sealer to interior concrete floors	
4194	06134	Refinish log members	
4810	06220	Refinish millwork, trim, wainscot	
4271	06432	Refinish exterior wood stairs	
4315	07520	Replace roll roofing	
4341	07620	Repaint flashing	
4341	07620	Replace flashing	
4351	07631	Repaint gutters/downspouts	
4151	08210	Refinish wood doors	
4143	08510	Repaint steel windows	
4141	08610	Refinish wood windows	
4151	08710	Replace hardware	
4230	09160	Repaint plaster walls/ceilings	
4231	09250	Repaint gypsum wallboard	
4246	09682	Replace carpet	
4161	09910	Repaint exterior surfaces	
4261	09920	Repaint interior surfaces	
4580	10160	Repaint toilet partitions	
4594	12504	Dryclean drapes	

PROJECT/CYCLIC WORKSHEET

WORK IDENTIFIED FOR F.Y.: _____
INSTRUCTION SECTION NO.: _____
PROJECT TITLE: _____
LOCATION: _____
DESCRIPTION: _____

PROJECT NO.: _____
SCHEDULED FOR: _____
ESTIMATED:
WORK DAYS: _____
LABOR COST/DAY: _____
TOTAL LABOR COST: _____
MATERIAL COST: _____
TOTAL COST: _____
ACTUAL:
COMPLETED DATE: _____
WORK DAYS: _____
LABOR COST: _____
MATERIAL COST: _____
TOTAL COST: _____

FROM CYCLIC SCHEDULE ☐ OTHER PROJECT ☐ _____

PROJECT SUBTASKS OR STEPS	WORK DAYS	SALARY	MATERIAL COST	NOTES/DESIGNATED PERSONNEL
1. PLAN/ORGANIZE WORK				
2.				
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10. DIRECT WORK				
11.				
12.				
13.				
14.				
15.				
16.				
17. UNEXPECTED CONTINGENCIES				
18. SUPERVISION/INSPECTION				
19. DOCUMENT REVIEW/UPDATE				
TOTAL EST. PROJECT COST				

Form 10-577
(March 1970)

UNITED STATES DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE

JOB ORDER REQUEST

(See Instructions on Reverse)

JOB ORDER NO. FY

JOB DESCRIPTION	LOCATION	DISTRICT

PROPOSED START DATE	TARGET COMP. DATE	NO. OF UNITS	UNIT OF MEASURE	EST. COST PER UNIT	ACT. COST PER UNIT

STANDARD AND LEVEL PROPOSED

STATEMENT OF WORK PROPOSED

PERSONAL SERVICES

POSITION, TITLE, GRADE AND SURNAME	EST. M/DAYS	DAILY RATE	EST. COSTS	ACT. M/DAYS	ACTUAL COSTS

EQUIPMENT RENTAL

TYPE OF EQUIPMENT	EST. HRS./MIS	RATE	EST. COSTS	ACT. HRS/MIS.	ACTUAL COSTS

MATERIALS AND OTHER COSTS

ITEM	EST. COSTS	ACTUAL COSTS

COST ACCOUNT	PERSONAL SERVICES	EQUIPMENT RENTAL	SUPPLIES AND MATERIALS.	OTHER	TOTAL

REQUESTED BY *(Title & Signature)*	CONCURRED BY *(Title & Signature)*	APPROVED BY *(Title & Signature)*

COMPLETED BY	DATE COMP.	INSPECTED BY	DATE INSPECTED

XXX FORM

ASSESSMENT OF ACTIONS HAVING AN EFFECT ON CULTURAL RESOURCES

(Attach continuation sheets as necessary)

This form is required for actions that have the potential to affect historic properties.

A. Originating Office: Park _____

1. Park Dist. _____
   Park Pkg./Control # _____ SWR Pkg. # _____

2. Project Name: _____

   Affected Cultural Resources _____
   _____
   _____

3. Affected Resource(s) is (check where applies)

   [ ] On NR [ ] Eligible for NR
   [ ] Not eligible for NR [ ] Unknown

4. The proposed action will: (check as many as apply.)

   ___ Destroy, remove, or alter features/elements from a historic structure
   ___ Replace historic features/elements in kind
   ___ Add nonhistoric features/elements to a historic structure
   ___ Alter or remove features/elements of a historic setting or environment
   ___ Add nonhistoric features/elements (inc. visual, audible, or atmospheric) to a historic setting or cultural landscape .
   ___ Disturb, destroy, or make archeological resources inaccessible, or alter terrain
   ___ Potentially affect presently unidentified cultural resources
   ___ Begin or contribute to deterioration of historic fabric, terrain, setting, elements, or archeological or ethnographic resources
   ___ Involve a real property transaction (exchange, sale, or lease of land or structures)
   ___ Other (describe briefly):

5. Describe the indicated effects of the proposed action:

6. Measures to prevent or minimize loss or impairment of historic fabric, setting, integrity, or data:

8. Supporting Study Data (attach if feasible; if action is in a plan, give name and project or page number):

9. Attachments: [ ] Maps [ ] Archeological Clearance, if applicable [ ] Drawings
[ ] Specifications [ ] Photographs [ ] Scope of Work [ ] Site plan
[ ] List of Materials [ ] Samples [ ] Project Statement
[ ] Other _____

10. Prepared by:_____ Title:_____

11. Signature of Park Superintendent _____Date_____

B. Regional Cultural Resources Staff Review and Certification

1. The foregoing assessment is adequate: the proposed action is consistent with all applicable NPS management policies, standards, and guidelines reviewed and concurred in by the Advisory Council; and the proposal incorporates all feasible measures to minimize adverse effects to cultural resources.

2. The proposed action is authorized by a planning document or program reviewed and concurred in by the Advisory Council.

	Yes	No	N/A		
(Negative certifications must be justified on attachments.)	1 [ ] 2	[ ]	[ ]	_____ Regional Archeologist	_____ Date
[ ] Energy Consultation	1 2	[ ]	[ ]	_____ Regional Historian	_____ Date
_____ Regional Energy _____ Date	1 2	[ ]	[ ]	_____ Regional Historical Architect	_____ Date
[ ] American Indian Programs	1 [ ] 2 [ ]	[ ]	[ ]	_____ Regional Curator	_____ Date

_____ _____
Chief, DPA Date

Additional Requirements of the proposed action:

C. Regional Director Approval of Proposed Action including Additional Requirements.

[ ] The proposed action, including any additional requirements stated above, meets all conditions in B.1 and 2.

_____ _____
Date Regional Director

July, 1991

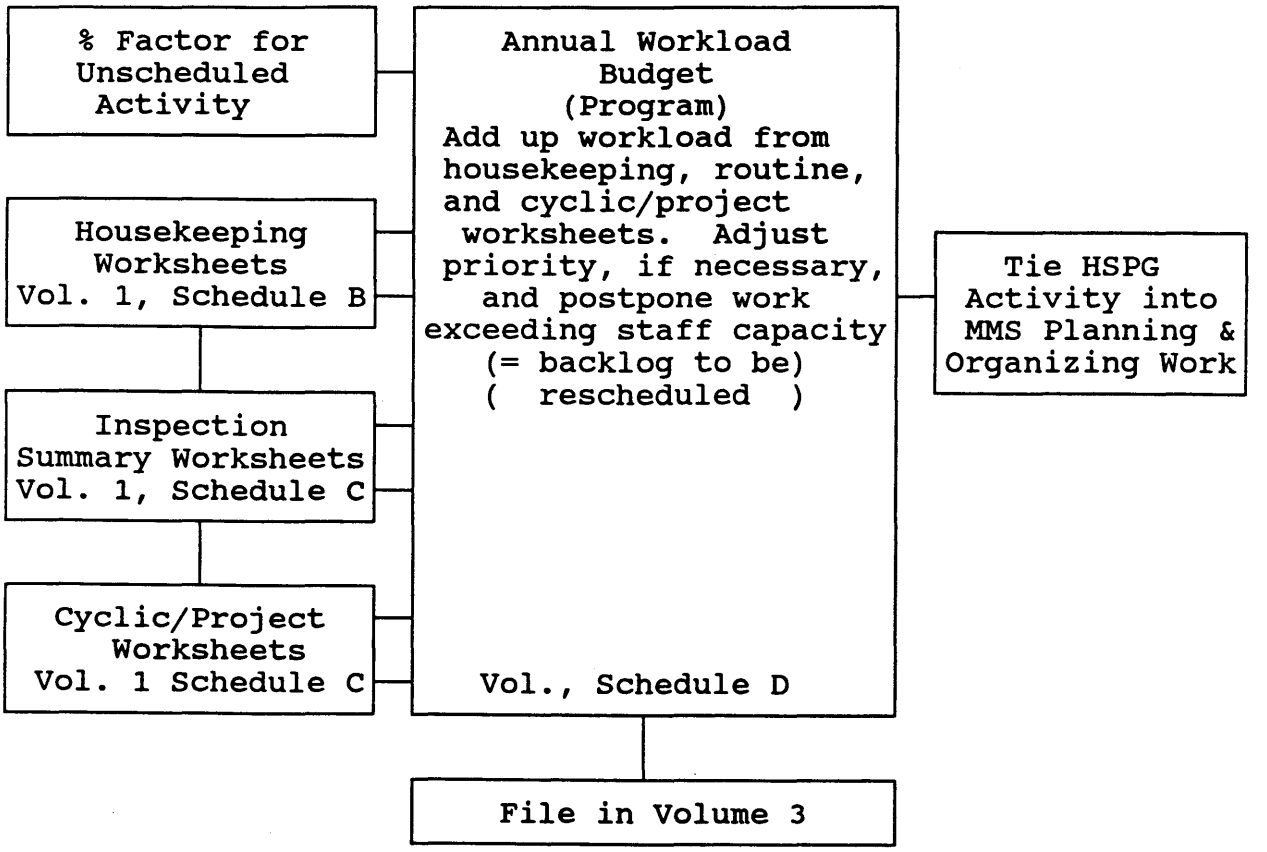
VOLUME 1

SECTION D

ANNUAL WORKLOAD BUDGET

- ANNUAL WORKLOAD BUDGET ACTIVITY FLOW DIAGRAM
- ANNUAL WORKLOAD BUDGET INSTRUCTIONS
  ANNUAL WORKLOAD BUDGET WORKSHEET
- QUANTITY INVENTORIES
- EQUIPMENT INVENTORIES (forms to be completed by BAND)

ANNUAL WORKLOAD BUDGET ACTIVITY FLOW DIAGRAM



ANNUAL WORKLOAD BUDGET INSTRUCTIONS

This brief worksheet is provided to help summarize the total annual preservation maintenance workload of the park. It will quickly demonstrate whether or not the maintenance staff size needs adjusting and whether or not the identified work for the year is a realistic quantity. It is possible that totals on this worksheet will require some work categories to be reprioritized or to be postponed for future implementation. This reconsideration should be discussed with the area manager and regional historical architect.

After adjustments have been made and the annual workload budget matches available funding/staffing, return to the finalized worksheets to prepare a maintenance calendar for the year and/or seasonal/monthly calendars.

Use this section of Volume 1 to integrate the HSPG with the park Maintenance Management System (MMS).

ANNUAL WORKLOAD BUDGET
FY ___

WORK ELEMENT	QUANTITIES							
	MAN HOURS		COSTS					
			LABOR		MATERIAL		TOTAL	
	EST.	ACT.	EST'D	ACTUAL	EST'D	ACTUAL	EST'D	ACTUAL
INSPECTIONS								
SPRING								
FALL								
SUB TOTAL								
HOUSEKEEPING								
DAILY								
WEEKLY								
MONTHLY								
QUARTERLY								
ANNUALY								
AS REQUIRED								
SUB TOTAL								
ROUTINE								
UNSCHEDULED								
SUB TOTAL								
CYCLIC								
FY ___								
FY ___								
FY ___								
FY ___								
FY ___								
SUB TOTAL								
PERSONNEL								
MANAGEMENT								
SUPERVISOR								
OTHER								
SUB TOTAL								
TOTAL								

COMMENTS: _____

_____

MATERIAL AND QUANTITY INVENTORY

SECT. NO.	ELEMENT	HISTORIC/ NON-HISTROIC FABRIC	MATERIAL	DESCRIPTION	SOURCE OF SUPPLY	QUANTITY

EQUIPMENT INVENTORY

Equipment _____
Includes _____
_____
_____

Location _____
Function _____
_____

DESCRIPTION

Manufacturer _____
Model _____ Serial # _____
Size, capacity, rate, etc. _____
_____
Power - energy requirements / consumption _____
_____
_____

PURCHASE CONTROLS

Purchased from _____
Address _____
_____
_____ Phone _____
Contact person _____
Date of purchase _____
Purchase cost _____ included _____
_____
Installed by _____
Date installed _____
Guarantee period _____
Owners manual, guarantee filed at _____
_____
Life expectancy _____
Estimated replacement date _____

SPECIFICATIONS

_____
_____
_____

SERVICE

For service contact: _____
_____
_____
Phone _____
Persons on staff familiar with equipment
_____
_____

EMERGENCY PROCEDURES

_____
_____
_____
_____
_____
_____

ADDITIONAL INFORMATION

CULTURAL RESOUCES MANAGEMENT BIBLIOGRAPHY (CRBIB)

BIBNUM: _____

AUTHOR: STAFF

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ALPHA: 1) BAND 2) ____ 3) ____

GRAPHIC: 1) __

2) __

3) __

4) __

STUDY: Please consult the User Manual for specific definitions on study type

1) 54

2) __

3) __

4) __

IDLCS: 1) _____ 2) _____ 3) _____ 4) _____ 5) _____

REPORT LOCAT: 1) WASO 2) ____ 3) ____ 4) ____

NTIS #: _____ DSC/TIC #: _____

GPO #: _____ L.C.CAT #: _____

SITE: N CSINUM: _____ OBJECT: N NAT.CAT: N

RESTRICTED: N CHAD-HEALEY: N

TEXT: _____

_____

DATE ENTERED/UPDATED: _____

(Please xerox as needed)

HISTORIC STRUCTURE PRESERVATION GUIDE

for the

CIVILIAN CONSERVATION CORPS BUILDINGS
BANDELIER NATIONAL MONUMENT

Sandoval County
New Mexico

Volume 2

Final Occtober, 1992

Prepared by
National Park Service, Denver Service Center

SECTION/MMS/PAGE

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FIRE ALARM AND DETECTION 16721/4635-1

PART 1: GENERAL

1-1 SCOPE: The scope of all sections in Volume 2 is:

A. Perform scheduled inspections.

B. Identify all problems observed beyond the normal maintenance tasks.

C. Propose the solutions and recommend time schedules for correcting the problems.

D. Conduct scheduled maintenance activities.

VOLUME 2

DIVISIONS 2-16

TECHNICAL (TASK) INSTRUCTIONS

PART 1: INSPECTION INSTRUCTIONS

1-1 Inspect grades around buildings for:

A. Slope away from building for proper drainage.

1. Grades should slope away from buildings and retaining walls.

1-2 Inspect soil around buildings, retaining walls, and in historic area for erosion.

PART 2: PRESERVATION INSTRUCTIONS

2-1 HOUSEKEEPING

A. Not used

2-2 ROUTINE MAINTENANCE

A. Regrade around building walls and retaining walls to provide proper drainage away from walls.

B. Take measures to check erosion at walls and in historic area.

1. Terrace steep slopes.

2. Plant ground cover, grass, and/or shrubs, on lesser slopes.

2-3 CYCLIC MAINTENANCE

A. Not used

PART 3: MATERIAL SPECIFICATIONS

3-1 MATERIALS

A. Refer to Section 02830 for plant specifications.

PART 1: INSPECTION INSTRUCTIONS

1-1 Inspect historic area for:

A. Weeds and other undesirable vegetation in:

1. Joints and cracks in brick, stone and concrete walks, steps, and patios.

2. In other areas where they would be unsightly or otherwise be a nuisance.

PART 2: PRESERVATION INSTRUCTIONS

2-1 HOUSEKEEPING

A. Not used

2-2 ROUTINE MAINTENANCE

A. Remove unwanted vegetation by pulling, cutting, or by mechanical means.

2-3 CYCLIC MAINTENANCE

A. Not used

PART 3: MATERIALS SPECIFICATIONS

3-1 MATERIALS

A. Not used

PART 1: INSPECTION INSTRUCTIONS

1-1 SITE DRAINS

A. Inspect drain grates for clogging, debris, or other obstructions that could prevent proper drainage.

B. Inspect drain covers for looseness, cracks, broken parts, and missing units.

PART 2: PRESERVATION INSTRUCTIONS

2-1 HOUSEKEEPING

A. Remove debris from drain grates to allow proper drainage.

2-2 ROUTINE MAINTENANCE

A. Remove debris from drain grates to allow proper draining.

B. Tighten drain cover fasteners.

C. Replace cracked, broken, or missing drain covers.

D. Remove drain covers and run a cleaning device through the drain to remove build-up of dirt, debris, etc.

2-3 CYCLIC MAINTENANCE

A. Repair/replace drain grate or drain pipe.

B. Contact professional drain cleaners to run auger through drain to remove roots, etc..

C. Replacement of drain pipe is not anticipated at this time.

PART 3: MATERIALS SPECIFICATIONS

3-1 REPLACEMENT MATERIALS

A. Replacement drain cover and trap shall match the existing in size, shape, profile, and material.

B. Replacement drain pipe shall match the existing in size, shape, profile, and material.

C. Replacement materials shall be free of all debris and other foreign substances.

D. Specifications of materials can be found in Volume 3, Project Manuals.

E. Contact the regional historical architect for assistance.

PART 1: INSPECTION INSTRUCTIONS

1-1 CURBS AND GUTTERS

A. Inspect gutters for build-up of debris, dirt, and leaves that could prevent the proper flow of water.

B. Inspect curbs and gutters for cracks, chips, breaks, or other deterioration.

PART 2: PRESERVATION INSTRUCTIONS

2-1 HOUSEKEEPING

A. Clean debris from the gutters.

2-2 ROUTINE MAINTENANCE:

A. Repair/replace damaged curbs and gutters.

2-3 CYCLIC MAINTENANCE

A. Replacement of curbs and gutters is not anticipated.

PART 3: MATERIALS SPECIFICATIONS

3-1 REPLACEMENT MATERIALS

A. Replacement materials shall match existing in shape, profile, and kind.

B. Materials shall be free of all debris and other foreign substances.

C. Contact the regional historical architect for assistance.

PART 1: INSPECTION INSTRUCTIONS

1-1 Inspect walks and steps for cracks, spalling and other deterioration.

PART 2: PRESERVATION INSTRUCTIONS

2-1 HOUSEKEEPING

A. Sweep regularly with a broom year-round.

B. In winter, clean off the snow and ice as soon as possible.

1. Sand icy spots if necessary, but do not use salt or other chemicals to melt ice or packed snow.

2-2 ROUTINE MAINTENANCE

A. Patch cracks.

1. Clean crack thoroughly of loose or foreign matter and dampen thoroughly to reduce water suction.

2. Tape edges of crack to reduce cleaning adjacent surfaces.

3. Match color and texture of surrounding concrete.

4. Maximun aggregate particle size shall be less than one half the crack width.

5. For hairline cracks (1/32 inch or less), use a portland cement grout.

B. Repair or replace damaged or deteriorated walks and steps.

1. Remove loose and friable concrete and clean the edges with hand tools.

2. Square the patch to a rectangular shape, but with rounded corners. Bevel the edges of the remaining concrete slab with a 5 degree taper form top to bottom, with the top slightly in front of the bottom.

3. Remove all concrete and subgrade material to a depth of 6 to 8 inches, and any soft or wet material to a depth of 12 inches. Fill the resulting hole with pea gravel to bottom of the slab.

4. Lay concrete, compact, screed, and finish to match the adjacent existing work.

2-3 CYCLIC MAINTENANCE

A. Replacement of concrete walks and steps is not anticipated.

PART 3: MATERIALS SPECIFICATIONS

3-1 REPLACEMENT MATERIALS

A. Patching materials shall be compatible with the surrounding existing materials.

B. Replacement materials shall match the existing concrete in ingredients, strength, mix ratio, etc.

PART 1: INSPECTION INSTRUCTIONS

1-1 Inspect brick surfaces at walks and plaza for:

A. Cracked, loose, or missing brick, and for deteriorated joints.

B. Signs of raised or recessed brick, or other hazardous situations.

C. Evidence of spalling or crumbling brick.

D. Inspect mortar joints for cracked, loose, or missing material, or other signs of deterioration.

PART 2: PRESERVATION INSTRUCTIONS

2-1 HOUSEKEEPING

A. In winter, clean snow and ice from walks as soon as possible so as not to pose a hazard to pedestrians. Sand icy or snow packed spots if necessary, but do not use salt, a salt mixture, or any other chemical to melt the ice.

B. Throughout the year, sweep regularly with a broom.

C. Wash down with a hose and tap water.

2-2 ROUTINE MAINTENANCE

A. Repair cracked, loose, missing, or deteriorated mortar joints.

1. Prior to any repair work, notify and consult with the regional historical architect for proper mortar consistency and installation procedures.

B. Replace broken, severely spalling, crumbling, or missing brick.

2-3 CYCLIC MAINTENANCE

A. Complete replacement of brick sidewalks and plazas is not anticipated at this time.

PART 3: MATERIALS SPECIFICATIONS

3-1 REPLACEMENT MATERIALS

A. Brick shall match the existing in size, color, hardness, and texture.

B. Mortar shall match the existing in mix, ingeredients and ratio,

PART 1: INSPECTION INSTRUCTIONS

1-1 STONE WALKS, STEPS, AND PLAZAS

A. Inspect stone for cracks, looseness, and other signs of deterioration.

B. Inspect mortar joints for looseness and signs of deterioration.

C. Inspect stone surfaces for stains.

PART 2: PRESERVATION INSTRUCTIONS

2-1 HOUSEKEEPING

A. Sweep the steps year-round on a regular schedule, or as needed.

B. Hose down with tap water in warm weather.

C. In winter, clean off the snow and ice as soon as possible.

1. Sand icy and snow packed spots if necessary, but do not use salt, a salt mixture, or any other chemical to melt ice or packed snow.

2-2 ROUTINE MAINTENANCE

A. Remove loose or deteriorated mortar.

B. Vacuum and clean all debris from the joints where mortar was removed or missing.

C. Replacement mortar shall match the existing.

D. Remove loose stone units and clean thoroughly.

E. Vacuum and clean all debris from the voids.

F. Reset units in mortar to match the existing.

G. Remove damaged stone units and vacuum and clean all debris from the voids.

H. Set new stone units to match the existing and new mortar to match the existing.

I. Clean up stains immediately (from soft drinks, etc.).

2-3 CYCLIC MAINTENANCE

A. Complete replacement of stone walks, steps, and plazas is not anticipated at this time.

PART 3: MATERIALS SPECIFICATIONS

3-1 MATERIALS

A. Replacement stone shall match the existing as closely as possible in color, texture, appearance, etc.

B. Replacement stone shall be permanently stamped or marked on the nonexposed face with the date of replacement.

C. Mortar shall match the existing as closely as possible.

D. Prior to resetting, mortar samples shall be analyzed for proper mix by the regional historical architect.

PART 1: INSPECTION INSTRUCTIONS

1-1 METAL SIGNS

A. Inspect signs for:

1. Positive connection of sign to support.

2. Stability of posts

3. Indications of deterioration

1-2 WOOD SIGNS

A. Inspect signs for:

1. Positive connection of sign to support.

2. Stability of posts.

3. Indications of deterioration.

4. Condition of stained wood or painted lettering.

PART 2 PRESERVATION INSTRUCTIONS

2-1 HOUSEKEEPING TASKS

A. Clean regularly with clean water and a mild detergent, and a clean sponge or soft cloth.

B. Rinse with clean water and dry with a clean absorbant cloth.

2-2 ROUTINE MAINTENANCE

A. Tighten connectors and fasteners.

B. Replace missing signs or signs damaged or deteriorated beyond repair.

C. Touch up paint after properally preparing the surface.

1. Remove chipped, peeled, or deteriorated paint.

2. Sand surface smooth.

3. Clean susrface to be repainted.

3. Repaint area.

2-3 CYCLIC MAINTENANCE

A. Refinish wood components. Properly prepare the surfaces for new finish.

1. Sand splinters and deteriorated surfaces down to a smooth surface.

2. Fill depressions in wood with wood putty. Mix stain in putty prior to application.

3. Apply new finish.

PART 3: MATERIALS SPECIFICATIONS

3-1 REPLACEMENT MATERIALS

A. See park signage standards.

PART 1 INSPECTION INSTRUCTIONS

1-1 WOOD FENCES, GATES, WINDOW GRILLES, EQUIPMENT SCREEN, AND GRAPE TRELLIS.

A. Inspect wood fences, grilles, screen, and trellis for:

1. Worn, faded, or otherwise deteriorated finish.

2. Broken or missing components.

3. Loose posts, boards, or rails.

B. Inspect wood gates for:

1. See A, 1 through 3 above.

2. Loose, broken, bent, or missing hardware.

3. Ease of operation.

PART 2 PRESERVATION INSTRUCTIONS

2-1 HOUSEKEEPING

A. Not used

2-2 ROUTINE MAINTENANCE

A. Oil and adjust gate hardware and maintain in proper operating order.

B. Repair or replace missing or broken fence, gate, grille, screen, and trellis components.

C. Restain areas that are worn, faded, or otherwise in need of refinishing. Properly prepare the surface for new stain.

1. Sand down to a smooth surface.

2. Apply new stain to match existing stain.

2-3 CYCLIC MAINTENANCE

A. Refinish wood components. Properly prepare the surfaces for new finish.

1. Sand splinters and deteriorated surfaces down to a smooth surface.

2. Fill depressions in wood with wood putty. Mix stain in putty prior to application.

3. Apply new finish.

PART 3 MATERIAL SPECIFICATIONS

3-1 REPLACEMENT MATERIALS

A. Gate hardware shall match the existing in style, shape, size and materials.

B. Wood shall match existing in species, dimension, and shape.

C. Stain shall match the existing in type and color.

D. Specifications of matererials can be found in Volume 3, Project Manuals.

E. Contact the regional historical architect for assistance.

PART 1: INSPECTION INSTRUCTIONS

1-1 TREES AND SHRUBS

A. Inspect for:

1. Uneven growth and unbalanced shape.

2. Old and decayed branches.

3. Infected branches.

4. Wind, ice, snow, and other weather related damage.

5. Suckers.

6. Build-up of scale.

7. Growth too close to buildings, walls, walkways, and plazas.

a. Damage to foundations, retaining walls, walks, and plazas from roots.

b. Damage to building walls from branches and limbs.

PART 2: PRESERVATION INSTRUCTIONS

2-1 HOUSEKEEPING TASKS

A. Not used.

2-2 ROUTINE MAINTENANCE

A. Remove infected branches.

B. Remove branches that have weather related damage.

C. Remove old and decayed branches.

D. Remove suckers.

E. Removw trees and shrubs that are causing, or have the potential to cause, damage to buildings, walls, walks, and plazas.

2-3 CYCLIC MAINTENANCE

A. Shape trees and shrubs.

1. Remove improperly placed branches.

PART 3: MATERIALS SPECIFICATIONS

3-1 WHEN TO PRUNE TREES

A. Ideally, pruning should be done in the spring.

1. Reduces callus development.

2. Lessens the spread of fungus and infection.

3. Permits the use of reasonably strong fungicides as dormant sprays.

3-2 HOW TO PRUNE TREES

A. Cut each branch as close to the crotch as possible.

B. Make the cut parallel to the trunk.

C. When removing large branches, avoid tearing or destroying the bark.

1. Make a temporary cut about 1 foot away from the final cut.

3-3 WHEN TO PRUNE SHRUBS

A. Do not prune early spring-blooming shrubs before they bloom, wait until afterward.

B. Moderately prune ornamental fruited sorts before and after blooming, but not vigorously, either in early spring or summer.

C. Avoid pruning in late fall.

3-4 HOW TO PRUNE SHRUBS

A. Remove old branches at the base.

B. Cut all shoots above an eye.

PART 1: INSPECTION INSTRUCTIONS

1-1 Inspect the concrete floors for cracks and spalling or any condition that would prove hazardous to visitors and employees.

PART 2: PRESERVATION INSTRUCTIONS

2-1 HOUSEKEEPING

A. Sweep the floors regularly.

B. Buff the floors.

2-2 ROUTINE MAINTENANCE

A. Patch cracks.

1. Clean crack thoroughly of loose or foreign matter and dampen thoroughly to reduce water suction.

2. Tape edges of crack to reduce cleaning adjacent surfaces.

3. Match color and texture of surrounding concrete.

4. Maximum aggregate particle size shall be less than one half the crack width.

5. For hairline cracks (1/32 inch or less), use a portland cement grout.

2-3 CYCLIC MAINTENANCE

A. Repair or replace damaged or deteriorated walks and steps.

1. Remove loose and friable concrete and clean the edges with hand tools.

2. Square the patch to a rectangular shape, but with rounded corners. Bevel the edges of the remaining concrete slab with a 5 degree taper from top to bottom, with the top slightly in front of the bottom.

3. Remove all concrete and subgrade material to a depth of 6 to 8 inches, and any soft or wet material to a depth of 12 inches. Fill the resulting hole with pea gravel to the bottom of the slab.

4. Lay concrete, compact, screed, and finish to match the adjacent existing work.

B. Strip old sealer from floors.

C. Apply new sealer to floors.

PART 3: MATERIALS SPECIFICATIONS

3-1 REPLACEMENT MATERIALS

A. Materials to be used in concrete repair shall match the existing materials, be of high quality, relatively fresh, and capable of meeting specification requirements as a result of tests supervised by the regional historical architect.

PART 1: INSPECTION INSTRUCTIONS

1-1 Inspect the brick stone, and concrete masonry unit mortar joints for cracked, loose, missing, or otherwise deteriorated mortar.

PART 2: PRESERVATION INSTRUCTIONS

2-1 HOUSEKEEPING TASKS

A. Not used.

2-2 ROUTINE MAINTENANCE

A. Repoint deteriorated mortar.

1. Remove cracked, loose, deteriorated mortar.

2. Rake out deteriorated joints to a depth of 3/4 inch and flush with clean water.

2-3 CYCLIC MAINTENANCE

A. Not used.

PART 3: MATERIALS MAINTENANCE

3-1 REPLACEMENT MATERIALS

A. Replacement mortar shall match the existing as closely as possible in color, mix ratio, etc.

B. Mortar shall be ASTM C270-84, Type S.

C. If required, a mortar analysis shall be performed for exterior masonry prior to any repointing or resetting.

PART 1: INSPECTION INSTRUCTIONS

1-1 BRICK WALLS

A. Unpainted Surfaces

1. Inspect brick for cracks, spalling, loose, broken, or missing units.

2. Inspect mortar joints for deterioration.

3. Inspect for evidence of moisture penetration.

4. Inspect for dirt build-up.

PART 2: PRESERVATION INSTRUCTIONS

2-1 HOUSEKEEPING

A. Not used.

2-2 ROUTINE MAINTENANCE

A. Reset loose brick.

B. Repoint deteriorated mortar.

C. Individual damaged brick can often be repaired by removing the brick and turning it over so that the undamaged face is exposed.

D. Replace broken or missing brick.

2-3 CYCLIC MAINTENANCE

A. Consult with the regional historical architect on all other deficiencies.

PART 3: MATERIALS SPECIFICATIONS

3-1 REPLACEMENT MATERIALS

A. Replacement brick shall match the existing as closely as possible in color, texture, size, appearance, etc.

B. Specifications of materials can be found in Volume 3, Project Manuals.

PART 1: INSPECTION INSTRUCTIONS

1-1 STUCCO

A. Inspect the wall surfaces for:

1. Surface cracks

2. Water damage.

3. Spalling.

4. Signs of advanced deterioration.

PART 2: PRESERVATION INSTRUCTIONS

2-1 HOUSEKEEPING

A. Clean stucco on a regular basis to remove airborne particals.

1. Dry treatment:

a. Thouroughly dust down stucco seasonally to remove dust, dirt, cobwebs, etc.

2. Wet treatment:

a. To wash, wet a limited area of surface at a time.

b. If stucco is unpainted, saturate with water first to avoid absorbing soap into the stucco.

c. Scrub immediately with a bristle brush.

d. Rinse with clear water. To prevent streaking, wash from the bottom up.

e. Remove streaks with a damp cloth and water.

f. This operation is more easily undertaken with two persons, one spraying the soap solution while the other scrubs.

2-2 ROUTINE MAINTENANCE

A. Stucco crack repair. Special attention must be paid when planning crack treatment to distinguish between structural cracks and cracks due to stucco being loose from the wall.

1. Hairline cracks (1/32 inch or less).

a. Clean crack thoroughly of loose or foreign matter.

b. Dampen thoroughly to reduce water suction and increase bond.

c. Fill cracks with stucco grout.

2. Loose or deteriorated srucco.

a. To determine the extent of repair, check for loose or delaminated areas by pushing against the stucco with the hand.

b. Outline, with rectangular shapes, the stucco to be removed.

c. Remove the deteriorated stucco to the surface of the stone substrate with a chisel or other masonry tool.

d. Pry off the old stucco. Cut back the coats of the old stucco in square layers.

e. Remove any deteriorated mortar.

f. Clean away dust, dirt, loose substrate masonry material, and all other foreign material with a wire brush.

g. To the dry masonry substrate, apply bonding agent according to manufacturer's specifications.

3. Application of new stucco

a. Cross-hatch the scratch (first) coat of mortar to provide a good key for the leveling (second) coat.

b. Trowel on the scratch coat of the new mortar to the same depth as the scratch coat of the old mortar. Use a screed to straighten the scratch, and then cross-hatch.

c. Keep the scratch coat damp, but not wet, by misting it, and trowel on the leveling coat until firm. Level it with a screed that rides on the old finish coat.

d. Finish and color to match the existing, surrounding stucco.

e. Don't mix more mortar than can be used in one hour. Do not try to apply partially set mortar, despose of it.

4. Slow cure is important for strength and reduction of cracks. Therefore, spray mist on new work or cover with visqueen.

B. Samples:

1. Prior to stucco repair, craftsperson shall produce a repair to a similar defect in an inconspicious place which will be observed by a supervisory employee to check for substrate preperation, neatness of application, and match of color and texture when dry. Sample to match adjacent stucco.

C. Mortar Analysis.

1. Make arrangements to have stucco components identifies and the stucco mix analyzed.

D. Weather Conditions

1. Proceed with the work only when forecasted weather conditions are favorable for stucco work.

a. It is not advisable , and it is seldom necessary, to do repair work in cold weather, If necessary, follow the environmental requrirements of the American Concrete Institute.

b. The surface temperature of the work (not ambient temperture) shall not be higher than 100 degrees F. Stucco mortar mixing and work shall be done only in the shade. Cover stucco in hot weather to reduce evaporation.

2-3 CYCLIC MAINTENANCE

A. Complete replacement of stucco surfaces is not anticipated at this time.

PART 3: MATERIALS SPECIFICATIONS

3-1 STUCCO

A. Cement shall be portland, to match existing, ASTM C 150, Type II or Type IV under high sulfate condition. FS SS-C-192g and SS-C-181e.

B. Lime shall be hydrated lime, ASTM C207, Type S, high plasticity.

C. Sand shall be local, natural sand, graded for masonry mortar and conforming to ASTM C-144. The color shall be the primary

factor used to make mortars which match existing adjacent fabrics. The source shall be determinte by the regional historical architect.

D. Water shall be free of suspended particles, low mineral content, free of iron, low chlorine and possess a near neutral ph.

E. Animal hair shall be cow hair, clean and free from extraneous materials.

3-2 Refer to Volume 3, Project Manuals, for specification information.

B. Samples:

1. Prior to stucco repair, craftsperson shall produce a repair to a similar defect in an inconspicious place which will be observed by a supervisory employee to check for substrate preperation, neatness of application, and match of color and texture when dry. Sample to match adjacent stucco.

C. Mortar Analysis.

1. Make arrangements to have stucco components identified and the stucco mix analyzed.

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A. Complete replacement of stucco surfaces is not anticipated at this time.

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3-1 STUCCO

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D. Water shall be free of suspended particles, low mineral content, free of iron, low chlorine and possess a near neutral ph.

E. Animal hair shall be cow hair, clean and free from extraneous materials.

3-2 Refer to Volume 3, Project Manuals, for specification information.

PART 1: INSPECTION INSTRUCTIONS

1-1 CONCRETE MASONRY UNIT WALLS

A. Inspect the concrete blocks for cracks, loose, or broken units.

B. Inspect for evidence of moisture penetration.

PART 2: PRESERVATION INSTRUCTIONS

2-1 HOUSEKEEPING TASKS

A. Not used.

2-2 ROUTINE MAINTENANCE

A. Reset loose concrete blocks.

B. Replace broken concrete blocks.

2-3 CYCLIC MAINTENANCE

A. None anticipated.

B. If severe cracking develops in concrete masonry units, consult the regional historical architect.

PART 3: MATERIALS SPECIFICATIONS

3-1 REPLACEMENT MATERIALS

A. Replacement concrete block shall match the existing as closely as possible in texture, size, appearance, etc.

B. Concrete block shall be hollow load-bearing units conforming to ASTM C90-75, Grande N, Type I.

PART 1: INSPECTION INSTRUCTIONS

1-1 STONE FLOORS, AND WALLS

A. Inspect stone for cracks, settlement, spalling, and loose, broken, or missing units.

B. Inspect joints for loose or missing mortar and other signs of deterioration.

C. Inspect the painted surfaces for loose, peeling, cracking, and otherwise deteriorating paint.

PART 2: PRESERVATION INSTRUCTIONS

2-1 HOUSEKEEPING

A. Sweep the floors regularly with a dust broom or dust mop.

B. Damp mop the floors regularly.

C. Buff the floors regularly with a mechanical buffer.

2-2 ROUTINE MAINTENANCE

A. Remove loose or deteriorated mortar from the joints.

B. Vacuum and clean all debris from the joints.

C. Repoint the joints with mortar that shall match the existing.

D. Remove loose stone units and clean thoroughly.

E. Vacuum and clean all debris from voids.

F. Reset units in mortar to match the existing.

G. Remove damaged stone units and vacuum and clean all debris from voids.

H. Set new stone units to match the existing units, and new mortar to match the existing mortar.

I. Remove flaking, peeling, and deteriorating paint.

J. Feather the edges of the paint and thoroughly clean the area to be touched-up.

K. Touch-up the paint with paint to match the existing. (See Section 09100, Exterior Painting.)

2-3 CYCLIC MAINTENANCE

A. Consult with the regional historical architect on all other deficiencies.

PART 3: MATERIALS SPECIFICATIONS

3-1 MATERIALS

A. Replacement stone shall match the existing as closely as possible in color, texture, appearance, etc.

B. Replacement stone shall be permanently stamped or marked on the nonexposed face with the date of replacement.

C. Mortar shall match the existing in mix ingredients and ratio.

D. Prior to repointing or resetting, mortar samples shall be analyzed for the proper mix by the regional historical architect.

PART 1: INSPECTION INSTRUCTIONS

1-1 Inspect masonry surfaces and joints for dirt build-up, stains, and deterioration.

PART 2: PRESERVATION INSTRUCTIONS

2-1 HOUSEKEEPING

Not used.

2-2 ROUTINE MAINTENANCE

A. Masonry should be cleaned annually to prevent build-up of deposits caused by air pollution.

B. Surfaces should be cleaned with a low pressure water spray containing a mild solution (no greater than 15 percent) of a nonionic detergent such as Tergitol (Union Carbide), Triton (Rohm and Hass), or Igenol (GAF). Use a medium bristle brush to clean stubborn areas. Pay particular attention to protected areas, such as portico ceilings, soffits, etc., for excessive build-up. Do not wash when temperature is below 40 degrees Fahrenheit.

C. Rinse with clean water and let dry.

D. Always work on the shady side of the building to prevent rapid drying.

E. Remove mildew with a solution of 1 part liquid bleach and 1 part water. Rinse thoroughly and let dry. First apply the solution to an inconspicuous test area to determine the effects of the procedure. The solution can then be strengthened, or diluted, to achieve the desired results.

2-3 CYCLIC MAINTENANCE

A. Consult with regional historical architect on all other deficiencies.

PART 3: MATERIALS SPECIFICATIONS

3-1 REPLACEMENT MATERIALS

A. Specifications of cleaning materials can be found in Volume 3, Project Manuals.

PART 1: INSPECTION INSTRUCTIONS

1-1 STEEL FLOOR PLATES

A. Inspect at points of connection for looseness of fasteners.

B. Inspect for rusting and other forms of deterioration.

PART 2: PRESERVATION INSTRUCTIONS

2-1 HOUSEKEEPING

A. Not used.

2-2 ROUTINE MAINTENANCE

A. Clean as needed.

B. Remove rust with steel brush and/or steel wool.

C. Tighten loose fasteners.

2-3 CYCLIC MAINTENANCE

A. Replacement not anticipated. If required, contact the regional historical architect for assistance.

PART 3: MATERIALS SPECIFICATIONS

3-1 STEEL PLATES

A. Match the existing material in gauge, pattern, and configuration.

PART 1: INSPECTION INSTRUCTIONS

1-1 VIGAS, LATIAS, CANALES, BEAMS, COLUMNS, CAPITALS, LINTELS, HEADERS.

A. Inspect log and heavy timber construction for:

1. Splits, checks, and cracks.

2. Rot and deteriorated ends of vigas, latias, and canales.

3. Weathered and deteriorated finish.

4. Loose connections and fasteners.

5. Separation at splices.

B. Inspect grout at viga penetration through walls for:

1. Cracks.

2. Loose, spalling, missing, and other signs of deteriorated grout.

C. Inspect lead coated copper linings in canales for:

1. Rips, tears, and other signs of deterioration.

2. Areas of rust.

3. Leaks that could allow moisture to enter the wood canale.

PART 2: PRESERVATION INSTRUCTIONS

2-1 HOUSEKEEPING

A. Not used.

2-2 ROUTINE MAINTENANCE

A. Fill large splits, checks, and cracks with epoxy, stained to match existing stain.

B. Remove rotted and deteriorated areas of wood mambers back to solid wood.

2C. Replace removed wood with new wood of the same species, size, shape, etc. to match existing.

1. Secure replacement piece with dowels placed in drilled holes in existing and new pieces, and epoxy in place.

2. Stain new, replacement wood to match existing.

D. Retighten loose connections and fasteners.

E. Remove cracked, loose, deteriorated grout.

F. Rake out to sound grout.

G. Flush with clean water.

H. Fill with new grout to match existing.

I. Repair deteriorated and damaged canale linings.

1. Remove ripped, torn, and otherwise damaged metal linings.

2. Cut new metal to match opening and solder into place.

2-3 CYCLIC MAINTENANCE

A. Restain all logs and heavy timbers.

B. Complete replacement of all logs and heavy timbers is not anticipated.

PART 3: MATERIALS SPECIFICATIONS

3-1 REPLACEMENT MATERIALS

A. All replacement materials shall match existing in all aspects.

B. Specifications of materials can be found in Volume 3, Project Manuals.

PART 1: INSPECTION INSTRUCTIONS

1-1 Inspect the wood millwork and trim for warping, loose or broken parts, and raised nails. Inspect, also, for excessive use damage or surface degradations.

PART 2: PRESERVATION INSTRUCTIONS

2-1 HOUSEKEEPING

A. Dust all surfaces that can be reached from the floor, especially horizontal surfaces, regularly.

B. Dust all surfaces regularly that require the use of a ladder.

C. Clean with a mild detergent and water using a rag and soft bristle brush, as necessary. Rinse thoroughly using a sponge and water, then wipe dry. Protect floors and surrounding surfaces from spills, drippings, and splashes.

2-2 ROUTINE MAINTENANCE

A. Resecure loose or warped parts, and drive raised nails back into position using a nail set to avoid hammer indentations and abrasions.

B. Repair use damage and surface indentations with wood putty, then sand, prime, and paint.

C. Touch-up the paint (see Section 09920, Interior Painting).

D. Replace broken or missing pieces with pieces that match the existing in species , material (or better quallity grade material) and profile. Primer and paint shall match the existing paint.

2-3 CYCLIC MAINTENANCE

A. Repaint: If paint layers are getting so thick as to obscure details, remove the paint to the bare wood, lightly sand, prime, and paint (see Section 09920, Interior Painting).

PART 3: MATERIALS SPECIFICATIONS

3-1 REPLACEMENT MATERIALS

A. Materials shall match the existing in size, shape, texture, surface, and species.

B. Exact reproductions of shaped pieces are required for replacement parts. All shapes should be recorded by samples located in the park archives. If replacement shapes cannot be found, contact the regional historical architect for assistance.

C. Cleaners used should be ionic detergents or mild soap such as Ivory Liquid.

D. Maintenance paint will be selected by the regional historical architect.

E. Specifications of materials can be found in Volume 3, Project Manuals.

PART 1: INSPECTION INSTRUCTIONS

1-1 Inspect the exterior wood stairs and railings for weathering, use wear, cracks, splinters, warps, chipped or peeling paint, broken parts, raised nails, loose nuts/bolts, and other deterioration or damage that could cause the stairs to be unsafe.

PART 2: PRESERVATION INSTRUCTIONS

2-1 HOUSEKEEPING TASKS

A. Remove debris from the stairs and landings regularly.

B. Sweep the stairs and landings regularly.

2-2 ROUTINE MAINTENANCE

A. Resecure loose parts and drive raised nails back into position using a nail set to avoid hammer indentations and abrasions.

B. Repair use damage, surface indentations, and small cracks with wood putty. Then sand smooth, prime, and stain (see Section 09910, Exterior Painting).

C. Retighten loose nuts on bolts.

D. Remove splinters, build-up with wood putty if needed, sand smooth, prime, and stain (see Section 09910, Exterior Painting).

E. Replace broken, badly warped, or missing components with pieces to match the existing in species, size, etc.

F. Touch-up paint (see Section 09910, Exterior Painting).

2-3 CYCLIC MAINTENANCE

A. Repaint the stairs, landings, and railings (see Section 09910, Exterior Painting).

PART 3: MATERIALS SPECIFICATIONS

3-1 REPLACEMENT MATERIALS

A. Materials shall match the existing in species, size, shape, surface, and moisture content.

INSTRUCTION

1-1 ROLL ROOFING

A. Inspect the roof for leaks, cracks, tears, open joints, blisters, etc.

B. Inspect for build-up of debris and vegetation such as moss or lichen.

C. For all roof inspections, avoid walking on the roof unless absolutely necessary. Whenever possible, make inspections from a ladder placed at the eaves, from second-floor windows, exterior walkways, or with binoculars.

PART 2: PRESERVATION INSTRUCTIONS

2-1 HOUSEKEEPING TASKS

A. Remove debris such as leaves, twigs, branches, etc., on a regular basis.

2-2 ROUTINE MAINTENANCE

A. If moss, lichen, fungus, or other vegetation are present, wipe or gently scrape off all surface growth. Be careful not to damage the roofing surface. If vegetation returns persistently, contact the regional historical architect.

B. Repairing Cracks in Flashing

1. Lay a bed of flashing cement over cracks.

2. Place a piece of roofing membrane or felt in the cement.

3. Cover the membrane with layers of flashing cement.

4. Lay a second piece of membrane in the cement.

5. Cover with more flashing cement.

6. Sprinkle mineral granules, fine gravel, or sand on the flashing cement.

C. Replacing Damaged Sections of Roofing

1. Cut out the damaged area with a knife, being careful not to slice any of the underlying roofing felts.

2. Force the flashing cement under all edges of the cut. Coat the entire cut-out area with flashing cement.

3. Cut the patch from 90-pound roll roofing that just fits into the cut-out, and press firmly into the cement.

4. Cut a covering patch from the 90-pound roll roofing that overlaps the cut-out 2 inches on all sides. Coat the bottom of the patch with flashing cement and press it into place.

5. For additional security, fasten the edges with roofing nails every inch. Cover the nailheads with a coating of flashing cement. Sprinkle the flashing cement with mineral granules, fine gravel, or sand.

D. Repairing Open Lapped Joints

1. Force some flashing cement under the seam and reseal it by stepping on it.

2. If the seam will not stay bedded, slit it and nail on both down sides of the slit.

3. Cut a patch of 90-pound roofing felt that overlaps the nailheads at least 2 inches. Coat the back of the patch with flashing cement and press it into position. Secure by nailing with roofing nails 1 inch apart. Cover the nailheads with flashing cement, and sprinkle mineral granules, fine gravel, or sand over the patch.

2-3 CYCLIC MAINTENANCE

A. Reroofing Entire Roof

1. Remove the existing roll roofing and roofing felt with care to prevent damage to vents, pipes, flashing, and sheathing. All faulty or damaged flashing shall be removed and replaced with new flashing (see Section 07620). Any broken or deteriorated rafters or sheathing shall be replaced with matching materials. Remove all nails from the sheathing.

2. Roof surfaces shall be smooth, even, firm, sound, dry, free from high spots and depressions, and broom clean before application of any roofing material. Flashing shall be weathertight.

3. Lay the roofing felt and roll roofing according to the instructions in Volume 3.

PART 3: MATERIALS SPECIFICATIONS

3-1 ROLL ROOFING: ASTM D249-81, 90-pound mineral surfaced.

3-2 ROOFING FELT: ASTM D226-82, 15-pound, unperforated.

3-3 CEMENTS: Bituminous plastic cement, FS SS-C-153C, Type 1, Class A (summer) and Class B (winter).

3-4 See Volume 3 for additional specifications.

PART 1: INSPECTION INSTRUCTIONS

1-1 URETHANE ROOFING

A. Inspect mechanical fasteners for looseness.

B. Inspect membrane seams for separation and leaks.

C. Inspect membrane roofing for wear.

PART 2: PRESERVATION INSTRUCTIONS

2-1 HOUSEKEEPING

A. Not used.

2-2 ROUTINE MAINTENANCE

A. Tighten loose fasteners.

B. Repair urethane separation and leaks with sealant.

C. Worn areas shall be removed and patched with a material matching the existing.

2-3 CYCLIC MAINTENANCE

A. If replacement of the entire roof seems necessary, contact the regional historical architect for assistance.

PART 3: MATERIALS SPECIFICATIONS

3-1 RUBBER ROOF MEMBRANE

A. Match the existing material.

PART 1: INSPECTION INSTRUCTIONS

1-1 FLASHING

A. Inspect for rusting, lifting, tears, and open seams.

B. Inspect chimney flashing from the roof and attic for secureness and leaks.

C. Inspect junctions between the walls and roofs to ensure flashings are functioning properly.

D. Where flashing is painted, inspect for peeling, chipping, blistering, or flaking of painted surfaces.

E. When conducting flashing inspections, keep walking on the roof to a minimum. Whenever possible, make inspections with the aid of binoculars.

PART 2: PRESERVATION INSTRUCTIONS

2-1 HOUSEKEEPING: Not used.

2-2 ROUTINE MAINTENANCE

A. Repair leaks with sealant which shall match the existing.

B. Flashing damaged beyond repair shall be carefully removed and replaced with material which shall match the existing.

C.. All repaired surfaces which have been previously painted shall be primed and repainted to match the surrounding color.

2-3 CYCLIC MAINTENANCE

A. Repaint: Make certain that the surface has been properly prepared to receive paint.

B. Flashing is generally replaced as part of the cyclic roof replacement.

C. If replacement of the flashing appears necessary, contact the regional historical architect for assistance.

D. Contact the regional historical architect if historic soldered joints fail.

PART 3: MATERIALS SPECIFICATIONS

3-1 FLASHING

A. Galvanized Steel

1. Sheet Metal: ASTM 526, commercial quality, or ASTM A527, lock forming quality. Coating designation, G90, ASTM A525, 26-gauge.

2. Fasteners: FS FF-N-105 material, ASTM, Type 304 stainless steel ring shank, 1-inch box nails.

B. Lead Coated Copper

1. Sheet Metal: ANSI/ASTM B101, Type 1, Class A soft or hard temper copper sheets, cold rolled, exclusive of lead coating, 92 ounces per square foot.

2. Fasteners

a. Nails: FS FF-N-105 material copper, flathead wire barbed, or slating type.

b. Screws: FS FF-S-107, self-tapping metal type.

c. Rivets: Material type and size as recommended by sheet metal manufacturer.

d. Sealants: Sec Section 07951.

PART 1: INSPECTION INSTRUCTIONS

1-1 GUTTERS AND DOWNSPOUTS

A. Inspect gutters and downspouts for debris that could restrict proper water flow.

B. Inspect to be certain that hangers are securely fastened and are providing an adequate slope to the downspouts.

C. Inspect for leaks during rain showers.

D. Inspect for excessive weathering, blistering, flaking, peeling, or chipping of paint.

PART 2: PRESERVATION INSTRUCTIONS

2-1 HOUSEKEEPING

A. Remove mildew by washing with mild soap and clean water and then brushing full-strength liquid bleach over the affected area after first testing on an inconspicuous test area. If this solution damages the paint or metal, dilute the bleach to a 1:1 ratio and retest. Keep diluting until no harm is detectable. Rinse area thoroughly with clean water.

B. Clean the gutters regularly and remove all dirt and debris, then rinse thoroughly with clean water.

C. Thoroughly flush downspouts regularly.

2-2 ROUTINE MAINTENANCE

A. Apply gutter sealant as soon as possible to any joints that leak. Make certain that the surfaces are dry when applying.

B. Secure the gutter hangers and adjust the slope of the gutters, as necessary.

C. Replace badly damaged areas of the gutters or downspouts with new sections which shall match the shape, gauge, material, and configuration of the existing gutters or downspouts.

2-3 CYCLIC MAINTENANCE

A. See Section 09910, Exterior Painting, for painting specifications.

B. Complete replacement of gutters and downspouts on a regular cyclic basis is not anticipated, but may be done in conjunction with roof replacement.

PART 3: MATERIALS SPECIFICATIONS

3-1 GUTTERS AND DOWNSPOUTS

A. Match the existing material, shape, gauge, and configuration of gutters and downspouts. See Volume 3, As-Built Drawings, for locations.

B. Gutter Sealant

1. Caulking and Sealant: FS TT-S-00230, Type II, Class A or manufacturer's standard, 1 part polysulfide, silicone, or polyurethane type.

C. Contact the regional historical architect if further information is required.

PART 1: INSPECTION INSTRUCTIONS

1-1 Inspect skylights for:

A. Weathertight seal and proper drainage.

B. Condition of glazing and glazing compound.

C. Cracked, broken, or loose glass.

D. Signs of deterioration of window construction.

E. Leaks during rain showers.

PART 2: PRESERVATION INSTRUCTIONS

2-1 HOUSEKEEPING

A. Regularly wash the exterior surfaces of glass with a mild detergent and clean water using a sponge or soft bristle brush. Rinse with clean water.

B. Regularly clean the interior surfaces of glass with window cleaner in spray bottle.

2-2 ROUTINE MAINTENANCE

A. Replace cracked or broken glass.

B. Replace loose, missing, and deteriorated putty/caulking/ sealant.

2-3 CYCLIC MAINTENANCE: Not anticipated.

PART 3: MATERIALS SPECIFICATIONS

3-1 SEALANTS: See Section 07951, Sealants and Caulking.

3-2 GLAZING: See Section 08810, Glass.

PART 1: INSPECTION INSTRUCTIONS

1-1 Inspect for sealants that:

A. Are brittle, cracked, loose, or missing.

B. Are not properly adhered to the materials.

C. Have oozed or run out of the sealed joint.

D. Are stained.

E. Have accumulations of dirt or mildew on the surfaces.

PART 2: PRESERVATION INSTRUCTIONS

2-1 HOUSEKEEPING: Not used.

2-2 ROUTINE MAINTENANCE

A. Remove all faulty sealant completely from the joint. Make sure that the adjacent surfaces are not damaged in the process.

B. Clean or vacuum the joint to be resealed to remove dust and other foreign substances.

C. Clean with a mild detergent and clean water to remove stubborn dirt, grime, etc., and allow to dry completely.

D. If joints are 1/4 inch or wider, fill the joint with backing rod to receive the recommended depth of sealant.

E. Make sure all materials are compatible. Refer to the manufacturer's instructions.

F. Match the existing sealant already in place.

2-3 CYCLIC MAINTENANCE: Not used.

PART 3: MATERIALS SPECIFICATIONS

3-1 SEALANTS

A. Type 1 Sealant: Use for joints in exterior vertical surfaces, for joints in interior vertical surfaces where movement is anticipated, or where Type 4 sealant is not appropriate, and for joints in horizontal surfaces in nontraffic areas. ANSI/ASTM C920-79, Type S, Grade NS, Class 25, Uses M, A, and O, as applicable.

Limit sealants to a neutral cure of 1 part silicone and 1 part urethane. Acceptable products include 790 by Dow Corning, Silpruf by GE, Dynatrol I by Pecora, Sikaflex-1a by Sika, Sonolastic NPI by Sonneborn, Dymonic by Tremca, and Chemchalk 900 by Woodmont, or acceptable alternate.

B. Type 2 Sealant: For interior or exterior use on joints in horizontal concrete slabs in traffic areas. ANSI/ASTM C920-79, Type S or M, Grade P, Class 25, Use T. Acceptable products include NR200 or NR201 by Pecora, 12 SL by Sika, Sonoplastic Paving Joint Sealant by Sonnehorn, or acceptable alternate.

C. Type 3 Sealant: Mildew-resistant for interior use on joints in high humidity or possible wet areas such as toilet rooms or shower stalls. Use on ceramic tile, on plastic laminate, and around plumbing fixtures and pipes. Do not use on surfaces in contact with food. ANSI/ASTM C920-79, Type S, Grade NS, Class 12-1/2, Use O. Single component acid-curing silicone incorporating a mildew resistant ingredient. Acceptable products include Silicone Rubber Bathtub Caulk by Dow Corning, Silicone Sanitary Sealant by GE, Silicone Rubber Bathroom Caulk by Woodmont, or acceptable alternate.

D. Type 4 Sealant: For interior use in dry areas only, on narrow joints where no movement is anticipated. May be painted. ASTM C834-76 single component water-based latex compound. Acceptable products include AC-20 by Pecora, Acrylic Latex Caulk by Tremco, Acrylic Latex Caulking Compound by Woodmont, or acceptable alternate.

3-2 Joint Fillers: ASTM C962-81 Type A, rod stock closed cell polyethylene foam, closed cell neoprene foam, or open cell urethane foam, as recommended by sealant manufacturer as being compatible both with the sealant used and the primer. Acceptable products include:

A. Polyethylene: Ethafoam SB by Dow Chemical, Chem-Calk Backer Rod by Woodmont, or acceptable alternate.

B. Neoprene: Neocord by Williams Products, or acceptable alternate.

C. Urethane: Denverfoam by Backer Rod Manufacturing and Supply, or acceptable alternate.

3-3. Gutter Sealant: Butyl rubber.

3-4. Flashing Sealant: Clear silicone rubber or clear silicone.

3-5. Bond Breaker Tape: Colored polyethylene pressure sensitive tape, minimum thickness 0.012 inches. Acceptable product is Bond Breaker Tape by Woodmont, or acceptable alternate.

3-6. Primer: Follow sealant manufacturer's recommendations regarding use or nonuse of a primer for the substrates in question and the environmental conditions anticipated. If a primer is required, use only the primer recommended by the sealant manufacturer.

PART 1: INSPECTION INSTRUCTIONS

1-1 Inspect doors for:

A. Smooth operation, particularly for binding, sticking, dragging, and warping.

B. Capability of being closed tightly and securely latched or locked without being forced.

C. Build-up of fingerprints and handprints, especially adjacent to the hardware.

PART 2: PRESERVATION INSTRUCTIONS

2-1 HOUSEKEEPING

A. Clean surfaces of all doors regularly to prevent build-up of dirt and grime. Spot clean grime and dirt from scuffs and handmarks as they occur.

B. Clean from the bottom up. Wipe first with a damp sponge or cloth and clean water. If necessary, repeat with mild soap (such as Ivory Liquid) in clean water using a sponge, cloth, or soft bristle brush. Rinse thoroughly with a sponge and clean water, or a garden hose at low pressure.

C. Remove mildew from surfaces with a spray-on solution of 1 part liquid bleach and 1 part water. Test a small patch first to determine if the finish color is damaged. Scrub the affected areas with a soft bristle brush. Rinse thoroughly.

2-2 ROUTINE MAINTENANCE

A. Adjust the doors as required for proper operation.

B. Repair/replace damaged storm doors.

2-3 CYCLIC MAINTENANCE

A. Replacement of door and/or frame.

1. Complete replacement should be done only after consulting with the regional historical architect. Replacement is not scheduled on a regular cycle.

PART 3: MATERIALS SPECIFICATIONS

3-1 REPLACEMENT DOORS AND FRAMES

A. Replacement materials shall match the existing in size, shape, thickness, style, and gauge.

B. See Volume 3, Project Manuals, for details.

PART 1: INSPECTION INSTRUCTIONS

1-1 Inspect wood doors for:

A. Smooth operation, particularly for binding, sticking, dragging, sagging, and warping.

B. Capability of being closed tightly and securely latched or locked without being forced.

C. Build-up of fingerprints and handprints, especially adjacent to hardware and at the door push heights.

D. Excessive weathering, chipping, cracking, peeling, blistering, and other signs of wear and deterioration on stained and painted surfaces.

E. Graffiti or other signs of vandalism.

1-2 Inspect door thresholds for:

A. Wear from traffic or door drag.

B. Cracks and splits.

C. Weathering, blistering, peeling, or flaking of paint.

D. Secure fastening to the floor.

PART 2: PRESERVATION INSTRUCTIONS

2-1 HOUSEKEEPING

A. Exterior Doors

1. Clean outside surfaces regularly to prevent build-up of dirt and grime. Clean from the bottom up with a mild soap (Ivory Liquid, for example) in clean water using a sponge, cloth, or soft bristle brush. Rinse thoroughly with a sponge and clean water, or a garden hose at low pressure.

2. Remove mildew from painted surfaces with a spray-on solution of 1 part liquid bleach and 1 part water. Test small patch first to determine if paint color is changed. Scrub the affected areas with a soft bristle brush. Rinse thoroughly with a sponge and clean water, or a garden hose at low pressure.

3. Clean the inside surfaces with the same method and at the same time as the interior doors.

B. Interior Doors

1. Dust doors, moldings, and tops of doors regularly with a clean cloth or feather duster.

2. Routinely clean with a mild soap, such as Ivory Liquid, in clean water using a sponge or soft cloth. Rinse thoroughly with a sponge and clean water. Wash the door from the bottom up. Immediately remove any streaks with a damp cloth.

3. Clean glass panes with a spray window cleaner. Wipe off with a clean, dry, lint-free cloth. Wipe off any overspray immediately.

D. Door Thresholds

1. Sponge wood thresholds with water. If necessary, repeat with mild soap and water, then rinse thoroughly with clean water and sponge.

2. Oil wood thresholds showing wear, at least annually, with soybean oil which will penetrate through paint. Oil wood thresholds not showing wear with soybean oil at 3-year intervals.

2-2 ROUTINE MAINTENANCE

A. Sagging Doors

1. Sagging can result from the upper hinges pulling away from the door frame. To correct, remove the screws from the hinge plates and insert wooden dowels into the screw holes. Refasten plates with the same screws, unless screws have been damaged and then they are to be replaced with the same size screw. After the door has been adjusted parallel to the frame, readjust the locking hardware, if necessary, by moving the location of either the lock or the keeper; when possible, confine the adjustment to the keeper itself. Make no adjustments that require removing wood from the door by planing or otherwise.

2. Doors can also sag because of deterioration. Correction may require breakdown and reassembly or replacement. Contact the regional historical architect for consultation.

B. Sticking Doors

1. Sticking normally occurs from swelling of the wood due to a high internal moisture content. With a hand plane, lightly plane only those edges prone to sticking. Paint the edges only after sufficient time has elapsed for internal moisture to evaporate. If a moisture meter is available, it can be used to determine the moisture content. Excessive moisture content (above 19%) should be reported to the regional historical architect.

C. Touch-Up Paint

1. Refer to Sections 09910, Exterior Painting and 09920, Interior Painting.

D. Glass Panes

1. Replace cracked or broken glass. Refer to Section 08810, Glazing.

E. Repairing Damaged or Rotted Wood

1. Depressions or holes in the wood surfaces can be patched with white wood putty. Chip away loose paint by hand and dry the wood. Sandpaper and wire brush the area to expose the bare wood and to feather the paint edge. Saturate the wood with boiled linseed oil. Let the wood dry for 24 hours and then saturate with boiled linseed oil again. Fill any depressions or holes with white putty. Carefully clean any putty from adjacent areas. Wait a minimum of 2 days before applying the prime coat. Then apply two coats of paint, in accordance to the manufacturer's instructions, which shall match the color of the existing paint.

2. To repair extensively damaged/deteriorated door or doorframe parts, replace only the damaged/deteriorated parts with new wood. Proceed with the repair only after notification to, and approval of, the regional historical architect.

Remove the affected part down to solid wood. Replacement parts are to be miter cut at all horizontal butt joints. Cuts are to be down and away from the interior surfaces to prevent moisture from collecting in the joints and to allow immediate runoff.

Replacement wood to be of the same species as the existing wood. Prime and paint with two coats of paint, in accordance with the manufacturer's specifications, which shall match the color of the existing paint.

2-3 CYCLIC MAINTENANCE

A. Door Replacement

1. The retention of the original or existing doors or door frames is always desirable and recommended, but the condition of a door or door frame may indicate the need for replacement. Before replacing any door or doorframe, notify the regional historical architect for approval. Any replacement door or door frame shall match the existing in size, style, profile, wood species, finish, etc.

B. Repaint or Restain Doors

1. Refer to Sections 09910, Exterior Painting and 09920, Interior Painting for preparation of surfaces for repainting and for painting and staining procedures.

PART 3: MATERIALS SPECIFICATIONS

3-1 REPLACEMENT DOORS

A. Wood replacement materials shall match the existing in size, shape, design, and species. Replacement doors shall meet the requirements of ANSI/NWMA LS. 1-80, Sound Grade. Exterior doors shall have Type I adhesive. Interior doors shall have Type II adhesive.

3-2 REPLACEMENT THRESHOLDS

A. Wood to match the existing in size, shape, and species.

PART 1: INSPECTION INSTRUCTIONS

1-1 Inspect wood screen doors for:

A. Smooth operation, particularly for binding, sticking, dragging, sagging, and warping.

B. Build-up of fingerprints or handprints, especially adjacent to hardware and at the door push heights.

C. Weathering, chipping, cracking, peeling, blistering, and other signs of wear and deterioration on painted surfaces.

D. Graffiti and other signs of vandalism.

E. Loose, stretched, or torn screening.

PART 2: PRESERVATION INSTRUCTIONS

2-1 HOUSEKEEPING TASKS

A. Clean painted wood surfaces regularly to prevent build-up of dirt and grime. Clean from the bottom up with a mild liquid soap, such as Ivory Liquid, in clean water using a sponge, cloth, or soft bristle brush. Rinse thoroughly with a sponge and clean water, or a garden hose at low pressure.

B. Clean screening with soft bristle brush or vacuum cleaner, being careful not to stretch or tear the fabric.

2-2 ROUTINE MAINTENANCE

A. Repair small tears in the screening with fiberglass or nylon string to match existing color.

B. If screening becomes stretched, remove the wood stops and try to pull the screening taut, and then renail the stops.

C. If screening cannot be repaired or made taut, the screening will need to be replaced. Replacement screening shall match the existing in material, finish, and mesh size.

D. Adjust the doors as required for proper operation.

2-3 CYCLIC MAINTENANCE

A. Door Replacement: The retention of the original or existing door is always desirable and recommended, but the condition of the door may indicate the need for replacement. Before replacing any door, notify the regional historical architect for approval.

PART 3: MATERIALS SPECIFICATIONS

3-1 REPLACEMENT DOORS: Wood replacement materials shall match the existing in size, shape, design, and species.

3-2 REPLACEMENT SCREENING: Screening shall be fiberglass screen cloth, black finish, 18x14 mesh size.

PART 1: INSPECTION INSTRUCTIONS

1-1 Inspect the interior surfaces of the sashes and frames for:

A. Build-up of dirt and dust.

B. Rust, especially where paint has deteriorated and bare steel is exposed.

C. Water leakage around the sashes, meeting stiles, and window panes, particularly after heavy rains.

D. Flaking, peeling, chipping, or other signs of deteriorating paint.

1-2 Inspect the exterior surfaces of sashes and frames for:

A. Excessive weathering, blistering, flaking, peeling, or chipping of paint.

PART 2: PRESERVATION INSTRUCTIONS

2-1 HOUSEKEEPING

A. Regularly dust the interior surfaces with a soft, dry cloth or feather duster.

B. Clean the exterior surfaces with a damp cloth or sponge and clean water. If the surfaces are still dirty, wipe with a damp cloth or sponge using a mild soap and clean water. Rinse thoroughly. Do not use abrasive cleaners or solutions containing corrosive solvents. To prevent streaking, wash from the bottom up. Remove any streaks with a clean, damp cloth.

C. Remove mildew from the surfaces with a spray-on solution of 1 part liquid bleach and 1 part water. Test a small patch first to determine if the paint color is changed. Gently scrub the affected areas with a soft bristle brush. Rinse thoroughly.

2-2 ROUTINE MAINTENANCE

A. Excessive weathering, blistering, flaking, peeling, chipping, or other signs of paint deterioration require attention. For painting instructions, see Section 09910, Exterior Painting. Clean up paint drips, splatters, overpainting, etc., immediately.

B. Repair/replace damaged windows.

2-3 CYCLIC MAINTENANCE

A. The retention of the original or existing sashes and frames is always preferred and recommended. However, if any parts exhibit extensive deterioration, contact the regional historical architect to consider the level of deterioration and the need for restoration or replacement. Any replacement element shall match the existing in size, style, profile, material, paint color, and characteristics.

B. For replacement of parts of sashes and frames replace only the damaged portions.

C. For replacement of the total element, i.e., sash or frame, take accurate field measurements prior to removing the existing element. The replacement unit shall match the existing in size, style, profile, and material.

E. For repainting, refer to Sections 09910, Exterior Painting and 09920, Interior Painting.

PART 3: MATERIALS SPECIFICATIONS

3-1 REPLACEMENT WINDOWS

A. Exact reproductions of the shaped parts are necessary for replacement rails, stiles, sills, trim, profiles, etc.

B. For replacement glass, see Section 08810, Glass.

3-2 Specifications of materials can be found in Volume 3, Project Manuals.

PART 1: INSPECTION INSTRUCTIONS

1-1 Inspect the interior surfaces of the sashes, frames, trim and sills for:

A. Build-up of dirt and dust.

B. Binding, sticking, or rattling.

C. Water leakage around the sashes, meeting rails, and window panes, particularly after heavy rains.

D. Build-up of frost or condensation on the windows which could lead to deterioration of the window sills.

1-2 Inspect the exterior surfaces of sashes, frames, trim, and sills for:

A. Joint separation and dry rot, particularly the bottom rail of the bottom sash.

B. Excessive weathering, blistering, flaking, peeling, or chipping of paint.

C. Checks and Cracks: If they remain stable, then make repairs. If cracks or checks continue to get larger, contact the regional historical architect for instructions.

D. Condition of the putty; brittle, loose, missing, or other signs of deterioration.

1-3 Inspect for wear and fraying of sash cords.

1-4 Inspect the condition and fit of the interior storm sashes.

PART 2: PRESERVATION INSTRUCTIONS

2-1 HOUSEKEEPING

A. Regularly dust interior surfaces with a soft, dry cloth or feather duster.

B. Clean the exterior surfaces with a damp cloth or sponge and clean water. If the surfaces are still dirty, wipe with a damp cloth or sponge using a mild soap and clean water. Rinse thoroughly. Do not use abrasive cleaners or solutions containing corrosive solvents. To prevent streaking, wash from the bottom up. Remove any streaks with a clean, damp cloth.

C. Remove mildew from the surfaces with a spray-on solution of 1 part liquid bleach and 1 part water. Test a small patch first to determine if the paint color is changed. Gently scrub the affected areas with a soft bristle brush. Rinse thoroughly with clean water.

2-2 ROUTINE MAINTENANCE

A. Correct binding windows by oiling and waxing. Brush on a solution of 1 part turpentine and 1 part linseed oil. Rub paraffin or beeswax along the track. Beeswax, which adheres better than paraffin, is preferable.

B. Window rattle occurs when the sash shrinks. Take the window sash out and brush the edges with a solution of 3 parts turpentine to 1 part boiled linseed oil. If the window continues to rattle, remove the sash and soak for 2 hours in a solution of 1 part turpentine and 1 part boiled linseed oil. Window rattle may also be corrected with spring-formed metal weatherstripping. Consult with the regional historical architect prior to making any corrections for rattles.

C. Window Repair

1. Where surfaces have checks or cracks through the finish, chip away the loose paint by hand. Dry the wood. Sandpaper to feather the paint edges. Saturate the wood twice with boiled linseed oil, letting the wood dry 24 hours between applications. Fill all holes and cracks with white paste putty (FS-TT-F-791). Carefully clean any putty from the surface adjacent to the crack or hole. Wait a minimum of 2 days for the putty to form a skin and then prime. Apply two coats of paint, according to the manufacturer's instructions, which shall match the existing paint.

2. Where wood has rotted, remove as much of the rotted wood as possible which can be chipped out by hand or with hand tools. Dry the wood and treat decayed areas with a fungicide. Waterproof with a minimum of two applications of boiled linseed oil, letting the wood dry 24 hours between applications. Fill the cracks and holes with putty and allow a skin to form a minimum of 2 days before priming. Then prime and apply two coats of paint, according to the manufacturer's directions, which shall match the existing paint color.

Care should be taken with the use of a toxic fungicide. Follow the manufacturer's directions and use only on areas that are to be painted. When using any method of building up or patching a

horizontal surface, the finished surface should be sloped slightly away from the window to provide proper drainage.

D. Excessive weathering, blistering, flaking, peeling, chipping, or other signs of paint deterioration require attention. For painting instructions, see Section 09910, Exterior Painting. When repainting, never paint the sash track and immediately remove any paint drips that may fall on the track.

E. Consult with the regional historical architect before making any window repairs.

2-3 CYCLIC MAINTENANCE

A. The retention of the original or existing sashes, frames, trim, and sills is always preferred and recommended. However, if any parts exhibit extensive deterioration, contact the regional historical architect to consider the level of deterioration and the need for restoration or replacement. Any replacement element shall match the existing in size, style, profile, wood species (or better), paint color, and characteristics.

B. For replacement of parts of sashes, frames, trim, or sills, replace only the damaged portions. Replacement parts to be scarf cut at joints of replacement parts. Joints shall match the originals. Cuts are to be made down and away from the interior surfaces to prevent moisture collection and to allow for immediate runoff. Repair members with well fitted pieces securely dowelled, glued, or nailed. Treat weathered, dry wood with a mixture of 1 part linseed oil and 1 part turpentine. Dry thoroughly between coats.

C. For replacement of the total element, i.e., sash, frame, trim, or sill, take accurate field measurements prior to removing the existing element. Replacement unit shall match the existing in size, style, profile, and wood species (or better).

D. To replace the sash cords, remove the sash from the frame and replace the sash cords with new ropes or chains. Gauge the length of the new cord to the old. With the sash up, the weight should be 3 inches above the sill.

E. For repainting, refer to Sections 09910, Exterior Painting and 09920, Interior Painting.

PART 3: MATERIALS SPECIFICATIONS

3-1 REPLACEMENT WINDOWS

A. Exact reproductions of the shaped parts are necessary for replacement rails, stiles, sills, trim, profiles, etc. Submit a sample of the replacement part to the regional historical architect for approval prior to fabricating and replacing defective parts.

B. Lubricants and Preservatives

1. Boiled linseed oil, FS TT-L-190. Supplier: General Services Administration (GSA).

2. Raw linseed oil. Obtain from local paint distributor. (May need to be special ordered.)

3. Turpentine, FS TT-T-801. Supplier: GSA.

4. Beeswax. Supplier: Open.

5. Paraffin. Supplier: Open.

C. For replacement glass, see Section 08810, Glazing.

PART 1: INSPECTION INSTRUCTIONS

1-1 DOOR HARDWARE

A. Inspect for build-up of fingerprints and handprints on knobs, escutcheons, pulls, push plates, and handles.

B. Inspect to insure that all hinges are securely fastened to the frames and doors. Inspect for free operation of the doors. Make sure the hinge pins are in place and securely seated.

C. Inspect the door closures to ensure full automatic closing. Make sure door closures are mounted securely.

D. Inspect to insure that door latches and bolts operate freely and latch securely.

E. Inspect panic hardware for proper operation. Make sure there are no loose or missing parts.

F. Inspect for hardware which is worn to the point that failure of the hardware, or its ability to function properly, is threatened.

G. Inspect for broken or missing hardware, screws, and fasteners.

H. Inspect for deterioration. Hardware deteriorates by abrasion of metal by dirt, dust, sand, or grit. Locks, latches, and bolts contain moving parts which wear by friction. Lack of lubrication increases friction and further adds to lock deterioration. Hinges support the whole weight of the doors and are often in constant use. The resulting friction of their parts and the strains to which they are subjected all tend to produce wear. The wear on the bearing surfaces of butts causes sagging of doors. The action of pulling a door shut countless times and turning of the knob enlarges the set screw holes of the knob. The larger the hole becomes, the faster it wears.

I. Inspect pushplates and kickplates for tightness and for excessive scratches and wear.

1-2 WINDOW HARDWARE

A. Inspect sash locks for proper operation and that they are securely fastened.

B. Inspect sash lifts for tightness.

C. Inspect counterbalancing system for proper operation.

PART 2: PRESERVATION INSTRUCTIONS

2-1 HOUSEKEEPING

A. Dust regularly with a soft, clean cloth.

B. Wash occasionally with a mild soap and clean water using a sponge or soft cloth.

C. Refrain from using metal polishes, harsh abrasive cleaners, or emery cloths on any hardware that has a protective finish.

D. Clean bare hardware surfaces by washing the outside casing with alcohol applied to a soft cloth. Keep the alcohol off of the adjacent painted or varnished surfaces.

E. For hardware in high use areas, or that is subjected to tarnishing or oxidation, apply a thin coat of paste wax and then buff. After tarnish or oxidation is removed, rub the metal with a cloth saturated with alcohol which will leave the surface dry due to its rapid evaporation. Apply a thin coat of paste wax and buff lightly immediately after the wax has set. Be sure to remove all dried wax which has accumulated in the crevices.

F. Clean hardware that has a painted or lacquered finish by wiping the exterior portions with a mild detergent applied to a soft cloth. Rinse clean and wipe dry.

G. Correct sticking hardware with the application of a graphite lubricant, following the manufacturer's instructions.

H. Apply graphite lubricant or common motor oil to the window pulley pins to keep the pulleys operating freely. Immediately remove any excess lubricant from the sash cord, pulley housing, or woodwork.

2-2 ROUTINE MAINTENANCE

A. Maintenance is a key factor in the preservation of hardware. Therefore, it is important that care be taken in keeping finishes clean.

B. For bronze or brass hardware, clean with mineral spirits, bronze wool, and a clean soft cloth.

C. To remove tarnish, apply vinegar with a soft cloth. Rinse clean.

D. To remove rust, apply naval jelly with a brush and remove it with a damp cloth.

E. Resecure loose hardware in the same manner it is attached. Redrive loose screws. If screws fail to hold tight, longer screws may be substituted, provided the body and head size remain the same and penetration does not expose the screw point to view on the opposite side.

F. To secure a screw when the threading is stripped in wood, remove the screw, insert a wood dowel cut to length, and redrive the screw into the hole.

G. Brass and brass hardware parts rarely need lubrication.

H. Hardware on exterior doors and windows in damp places needs more lubrication than that in dry places.

I. Butt hinges are not easy to lubricate. To prevent squeaking, or for other reasons, sewing machine oil, or acceptable alternate, is applied at the top of the pin and at the joints between the knuckles.

J. To ease a stiffly working lock, it is often enough to put a film of oil on all sides of the bolts after cleaning and, in addition, to put a little oil on the pin and nose of the key.

K. To clean the lock mechanism, disassemble the object as completely as possible. Screws, bolts, and pins should be removed so that dirt, solidified oils, and greases can be removed completely. A neutral detergent in warm water will usually remove any form of dirt. Oils and greases can be removed with solvents. To remove old lacquer, use lacquer remover.

L. Reassemble the lock, lubricate friction points, and wax the metal surfaces after the hardware is reassembled. Remount the hardware in its original location.

M. Doors need to be adjusted periodically by experienced, skilled mechanics to insure smooth operation. Any one of several factors can cause a door to not operate smoothly.

1. Doors which will not close because of strike plate wear can be adjusted by moving the strike plate. This may require old screw holes to be plugged and rebored.

2. Failure of a lock to strike can be caused by too strong a spring, or by the level of the bolt not being at the correct angle. Sometimes this can be solved by greasing the beveled face of the bolt and the lip of the strike plate, or by bending the lip of the strike plate. If the bolt of a lock refuses to spring out, check for a faulty spring, dirt, or rust. This calls for removal of the lock and a complete cleaning and overhaul.

3. If the bolt and strike plate are out of line, the hinge screws should be checked for tightness.

2-3 CYCLIC MAINTENANCE

A. Hardware that does not function properly should be repaired. If it cannot be repaired, then it should be replaced. However, hardware replacement on a regular cycle is not anticipated. When replacement is required, replacement pieces shall match the existing in all aspects.

B. When doors and windows are painted under the painting cyclic maintenance, remove the hardware prior to starting the painting task. Identify the hardware as it is removed from each window or door so that it can be remounted on the same unit. Before remounting the hardware, it should be cleaned and lubricated. Hardware should not be remounted until the paint is thoroughly dry.

PART 3: MATERIALS SPECIFICATIONS

3-1 DOOR AND WINDOW HARDWARE

A. If replacement is required and there are no replacement parts available, contact the regional historical architect for assistance. Refer to Volume 3, Project Manuals, for specification information and a completion report for product sources.

3-2 LUBRICANTS

A. Graphite. Supplier: Local.

3-3 RUST REMOVER

A. Naval jelly. Supplier: Local.

3-4 TARNISH REMOVER

A. Vinegar. Supplier: Local.

3-5 PRESERVATIVES

A. Simonize Paste Wax. Supplier: Local.

PART 1: INSPECTION INSTRUCTIONS

1-1 Inspect for weatherstripping that is:

A. Loose.

B. Brittle.

C. Cracked.

D. Missing.

PART 2: PRESERVATION INSTRUCTIONS

2-1 HOUSEKEEPING TASKS

A. Not used.

2-2 ROUTINE MAINTENANCE

A. Refasten loose weatherstripping.

B. Remove damaged or deteriorated weatherstripping.

C. Replace removed or damaged weatherstripping with new materials.

2-3 CYCLIC MAINTENANCE

A. Complete replacement of all weatherstripping is not scheduled at this time.

PART 3: MATERIALS SPECIFICATIONS

3-1 Replacement weatherstripping shall match the existing.

3-2 Specifications of materials can be found in Volume 3, Project Manuals.

PART 1: INSPECTION INSTRUCTIONS

1-1 GLASS

A. Inspect for dirt, smudges, and streaks.

B. Inspect for cracked, chipped, missing, or otherwise damaged glass.

1-2 GLAZING COMPOUND

A. Inspect glazing putty for cracked, loose, or missing sections which allow water to saturate wood, especially at joints.

B. Inspect the back putty on the interior side of the glass pane because it creates a seal which prevents condensation from running down into the joinery.

PART 2: PRESERVATION INSTRUCTIONS

2-1 HOUSEKEEPING

A. Window Washing

1. Window washing is partially for aesthetic affect, but more importantly for removal of abrasive dust, pollutants, and oil films which build-up on the surface of the glass.

2. Start washing glass from the top and wash down. Use a sponge and nonalkaline commercial window cleaner without ammonia. Use straight overlapping strokes and wash from side to side. Wet the window thoroughly and use a wooden scraper with an up and down stroke to remove stubborn spots. To dry, wet the blade of a squeegee and pull it across the window. After each pull, wipe the blade of the squeegee with a wiping cloth. Pick up excess water from the corners with a sponge.

For extra stubborn dirt, rub the area with a fine pumice or 0000 steel wool in combination with a commercial liquid window cleaner.

2-2 ROUTINE MAINTENANCE

A. Glass Repair

1. It is desirable that replacement glass be of the same vintage as the existing glass. However, if this is not possible, replacement glass may be modern, but it should be selected to duplicate the characteristics of the existing glass when possible.

2. A safe way to break out the remaining glass in a sash is to cut two pieces of paper the same size as the pane. Then coat the paper with rubber cement and glue a piece of paper to each side of the glass. Then tap around the edges of the glass with a hammer.

B. Cutting Replacement Glass

1. Place the sheet of glass to be cut on a piece of plywood that has been covered with a piece of carpet, or place the glass on a bed of sand. This will insure that the entire glass surface, with all its surface imperfections, is adequately supported.

2. In cutting glass, it is very important that the straightedge being used as a guide not move while you are scoring the glass. Slippage can be avoided by putting strips of friction tape on the underside.

3. Just prior to scoring the glass, draw a rag soaked in turpentine along the intended cut line to clean off surface film and oil. Also, run down the straightedge and glass cutter with turpentine.

4. Holding the straightedge securely against the glass, use the glass cutter to score only once along the cut line. As soon as possible after scoring, break the glass cleanly with glazier's pliers. Or, place the glass sheet on a flat surface with the score line parallel to the surface edge and force the overhanging glass down to break the glass along the score.

5. Glass should be cut approximately 1/8 inch less each way than the sash opening dimensions.

C. Glazing Compounds

1. Removing Deteriorated Putty

a. Remove cracked, loose, and other deteriorated putty using a glazier's chisel or a stiff putty knife.

b. Bevel, slope, or feather the edge of solid putty.

c. Very lightly sand the wood sash.

d. Remove all dust, loose putty, and other foreign matter from the area to be reputtied. Make sure the glass is clean and free from oil film and fingerprints.

e. Brush a sealant onto the exposed wood, or a solution of 1 part turpentine and 1 part linseed oil. This will prevent the dry wood from drawing the oil out of the fresh putty.

f. When the above treatment is dry, apply the putty. First knead some putty in one hand until it becomes soft and pliable, then press the putty into place making sure it overlaps the existing putty. Holding the putty knife at an angle, trim the excess putty from the glass and frame immediately after application.

g. New glazing compounds tend to dry slowly. They should not be painted until pressure from a finger does not leave an impression in the putty. This test indicates the putty has properly cured.

2. Installing New Glazing

a. Remove the existing glazing compound and glass. Although most putty comes out easily, some is difficult. If the existing putty cannot be removed with a glazier's chisel or a stiff putty knife, then it can usually be removed with the application of a paint stripper or heat. If the paint is to be removed from the sash with a paint stripper, the stripper usually softens the putty at the same time. Heat is also effective in loosening difficult putty whether it is applied with an electric putty softener or a propane torch with a small point. Because direct heat can cause glass to break, cover the adjacent panes with a piece of hardboard wrapped in aluminum foil. Very lightly sand the frame after the glazier's points have been removed and all of the old putty has been removed and dusted, brushed, or vacuumed out.

b. Seal areas of the sash to be puttied with a primer-sealer paint or clear preservative and allow it to dry thoroughly.

c. Knead putty into a soft pliable condition. Apply a small bed of fresh putty and fit the replacement glass into place so it is 100 percent seated in the back putty. Hold the glass in place with glazier's points pushed into the wood, four to a side or a minimum of every 8 inches.

d. Apply glazing compound to the glass edges and smooth with a putty knife. Angle so that the top edge of the glazing compound is even with the top edge of the stop. Clean and trim the excess putty from the glass and frame promptly after installation. Scrape or cut out the excess back putty flush with the interior stop and smooth.

e. Allow the glazing compound to dry thoroughly before painting. To check, apply pressure to the compound with a finger. If there

is no indentation to the surface, then the putty has cured and is ready to paint.

2-3 CYCLIC MAINTENANCE: Not used.

PART 3: MATERIALS SPECIFICATIONS

3-1 REPLACEMENT GLASS

A. Replacement glass shall match the existing in thickness, strength, and size.

3-2 GLAZING COMPOUND

A. DAP pure linseed oil (100%) window glazing compound.

3-3 REPLACEMENT SEALANTS

A. Preformed Glazing Tapes: Tremco SST-800, or acceptable alternate.

B. Primers for Sealers: Follow sealant manufacturer's recommendations.

C. Putty: FS TT-P-00791B.

PART 1: INSPECTION INSTRUCTIONS

A. Inspect plexi-glass in museum for:

1. Dirt, smudges, marks, streaks, etc.

2. Scratches, chips, cracks, or other signs of damage to plexi-glass surface.

3. Looseness of plexi-glass in mountings.

PART 2: PRESERVATION INSTRUCTIONS

2-1 HOUSEKEEPING

A. Washing

1. Washing is partially for aesthetic affect, but more importantly for removal of abrasive dust, pollutants, and oil films which build up on the surface of the plexi-glass.

2. Start washing the plexi-glass from the top and wash down. Use a sponge and nonalkaline commercial window cleaner without ammonia. Use straight overlapping strokes and wash from side to side. Wet the surface thoroughly and use a wooden scraper with an up and down stroke to remove stubborn spots. To dry, wet the blade of a squeege and pull it across the plexi-glass. After each pull, wipe the blade of the squeege with a wiping cloth. Pick up excess water from the corners with a sponge.

2-2 ROUTINE MAINTENANCE

A. Replace plexi-glass that is broken, severly damaged, or has otherwise become unsightly.

1. Remove damaged plexi-glass

2. Vacuum all dust, foreign matter, etc., from mounting channel.

3. Install new plexi-glass and seal tightly.

2-3 CYCLIC MAINTENANCE

A. Complete replacement of all plexi-glass panels is not anticapated at this time.

PART 3: MATERIALS SPECIFICATIONS

3-1 REPLACEMENT PLEXI-GLASS

PART 3: MATERIALS SPECIFICATIONS

3-1 REPLACEMENT PLEXI-GLASS

A. Shall match existing in thickness, strength, and size.

PART 1: INSPECTION INSTRUCTIONS

1-1 PLASTER

A. Inspect the wall and ceiling surfaces for:

1. Water damage or other types of discoloration.

2. Surface fractures.

3. Evidence of paint failure.

4. Cracks or bond failure.

5. Bows, sags, or other signs of plaster surfaces which are under stress.

6. Plaster/skim coat failure is evidence of separation from substrate.

7. Signs of advanced deterioration.

PART 2: PRESERVATION INSTRUCTIONS

2-1 HOUSEKEEPING

A. Remove dust from the walls and ceilings by wiping down with a clean, soft cloth.

B. For areas that do not come clean, wipe with a damp cloth.

C. Remove cobwebs with a feather duster.

D. Regularly wash the painted wall susrfaces with water and a small amnount of mild soap (e.g., Murphy's oil soap) and a clean cotton rag.

2-2 ROUTINE MAINTENANCE:

A. Hairline cracks should be cleaned of all loose materials before repairing. Repairs can be made using plaster of paris, spackle, or sheetrock joint compound. Before patching, apply a bonding agent to bond the new to the old; Plasterweld is one brand. This is a flexible material that forms a bridge over the crack.

1. Canned spackle is extremely handy to make a quick patch of a hairline crack or a small dent. It shrinks upon drying, so it should not be used on large cracks.

2. Spackle powder is more economical and can be mixed in various consistencies. For hairline cracks, a thinner mixture the consistency of heavy cream will work best. Powder does not shrink as much as canned, but it sets up rock hard and is difficult to sand. Be sure to smooth the surface as cleanly as possible with a putty knife while the spackle is still soft and workable.

3. Sheetrock joint cement is handy if there are a lot of hairline cracks to fill, or shallow depressions where paint has chipped out. Joint cement adheres well to painted surfaces, feathers easily to a thin edge, and sands easily after it has dried. However, it shrinks considerably on drying and should not be used alone on large cracks.

4. Use a wide-blade knife (3-inch) with a flexible blade to patch the cracks.

5. Before painting over the patchwork, the patched area should be lightly sanded, then primed with shellac or primer paint. This will prevent the final coats of paint from drying unevenly. Paint shall match the existing color.

B. Larger cracks should be undercut using a beer can opener, putty knife, or other like tool to make the underneath wider than the surface. This provides a solid anchor for the patch. Remove all loose materials before repairing. Before patching, apply a bonding agent to bond the new to the old. It should be flexible to allow movement without cracking the patch.

1. Sheetrock joint compound and cloth tape are an excellent mending system for patching larger cracks that need some "give." Premixed joint compound has better workability than the powder mix.

2. As soon as the tape is bedded, cover with a thin layer of compound and smooth as much as possible by working with the joint knife. When the first coat has dried (at least 24 hours), smooth out any ridges by wet sanding with a damp sponge or a heavy-nap cloth folded flat or wrapped around a suitable block. Apply a second coat of joint compound and feather the edges to at least 1 inch beyond the first coat. After the second coat has dried, wet sand lightly and apply a thin finishing coat, working it smooth with a joint knife.

C. Small holes (up to 4 inches in diameter) are not difficult to fix.

1. If the lath is still in place and solid, cut back the loose and deteriorated plaster to solid material. Wet the lath and the surrounding plaster thoroughly and apply new plaster. Leave the first coat rough so that the finish coat will bond well.

2. If the lath is not solid, cut it out with a utility knife or a saber saw without damaging the adjacent solid lath. Scrape the loose plaster from the edge of the hole. Cut a piece of metal lath larger than the hole and thread a piece of wire through the middle of the lath. Then, holding the ends of the wire, slide the lath into the hole. To hold the lath tightly against the back of the hole, twist the wire to a wood dowel spanning the hole. After wetting the lath and surrounding plaster, trowel a scratch coat of plaster into the hole and leave the plaster rough. When the coat has set, unwind the wire, remove the wood dowel, and push the ends of the wire into the wall cavity. Now, trowel on the finish coat.

D. Large repairs, consisting of missing plaster, holes over 4 inches in diameter, and crumbling or wet plaster are more difficult to repair and may require the services of a professional.

1. The easiest way to repair large holes is to insert a piece of sheetrock into the void. The sheetrock should be slightly thinner (around 3/16-inch) than the face of the existing plaster. Remove deteriorated plaster back to solid plaster. Cut the opening to a regular shape, i.e., straight sides, and preferably back to the nearest stud. Cut a sheetrock patch to fit neatly into the opening. Keep the gap between the sheetrock patch and the existing plaster minimal so that tape will span the joint.

2. Nail or screw the sheetrock to the studs, with the heads set slightly below the surface but without breaking the paper. If the hole is small and misses nearby studs, screw (don't nail) the sheetrock to the wood lath.

3. Before plastering the sheetrock, apply a layer of latex bonding agent (such as Aqua-Weld) on the sheetrock to increase the adhesion of the plaster to the sheetrock. Apply the finish coat of plaster to the sheetrock. Be sure to pack the plaster tightly into the joint between the sheetrock and plaster and then tape the joint. Prime and then paint using an appropriate paint which shall match the existing color.

E. Stains on the plaster surface indicate that plaster has been wet. Check to make sure that the leak has been stopped prior to taking care of the stain. Water damage is generally not serious if the water leak was stopped quickly. The surface can usually be sealed by coating the stained area with a good coating of pigmented

shellac. This will prevent the stain from bleeding through the new paint.

F. Large areas of loose plaster present a problem best addressed and repaired by a professional. However, should you decide to attempt this repair yourself, first contact the regional historical architect.

2-3 CYCLIC MAINTENANCE

A. Repaint plaster surfaces.

PART 3: MATERIALS SPECIFICATIONS

3-1 PLASTER

A. Cement for plaster shall be portland cement conforming to ASTM C150, Type I. No plastic cement will be permitted unless specifically approved in advance by the regional historical architect.

B. Lime used for plaster shall be dry hydrated lime conforming to ASTM C260. Lime putty, if used, shall weigh no more than 83 pounds per cubic foot.

C. Sand used for plaster shall be clean and well graded from course to fine, and shall conform to ASTM C35 and ASTM C144.

D. Water used for plaster shall be clean and free from deleterious amounts of acid alkali and organic materials.

3-2 PLASTER ACCESSORIES

A. Miscellaneous fasteners shall be as approved by the regional historical architect.

B. Wood Lath: Shall match the existing lath.

PART 1: INSPECTION INSTRUCTIONS

1-1 GYPSUM WALLBOARD

A. Inspect the wall and ceiling surfaces for:

1. Cracking (especially at joints), tape lifting, and nailheads poking through.

2. Dampness, water damage, dirt build-up, fading, stains, and other types of discoloration.

3. Cracking, peeling, chalking, and consistency of color of painted surfaces.

4. Signs of advanced deterioration.

PART 2: PRESERVATION INSTRUCTIONS

2-1 HOUSEKEEPING TASKS

A. Remove dust from the walls and ceilings by wiping down with a clean soft cloth or a feather duster.

B. Remove cobwebs with a feather duster.

C. Clean stains and stubborn dirt from the surfaces with a damp soft rag, taking care not to remove the paint. A mild soap, such as Ivory Liquid, may be used if required and then rinsed with water.

2-2 ROUTINE MAINTENANCE

A. To repair cracks in the drywall, cut back the edges of the crack slightly to remove any crumbling gypsum and to provide a good depression for a new filling of joint compound. Feather the edges of the compound; sand and prime them when dry.

B. To repair drywall that has lifted, pull gently until the piece rips free from the part that is still well stuck. Sand the area affected and apply a new bed of compound for a replacement piece of tape. Feather the edges; sand and prime them when dry.

C. Popped-up nails are fixed by either pulling them out and renailing, or by dimpling them with a hammer. Test the entire wall for springiness and add nails or screws where needed. Within 2 inches of a popped-up nail, drive in another nail and then fill the

dimple with spackling compound. Feather the edges; sand and prime them when dry.

D. To repair dents in drywall, sand the concavity and fill it with spackling compound. Feather the edges; sand and prime them when dry.

E. To repair holes in drywall, use a piece of backing. First cut the hole clean with a utility knife. The piece of backing should be slightly larger than the hole itself. Drill a small hole into the middle of the backing piece and thread a piece of wire into the hole. Spread mastic around the edges of the backing, fit the backing piece through the hole, and pull the side with the mastic against the back side of the hole. When the mastic is dry, push the wire back into the wall cavity and fill the hole with joint compound.

F. Before attempting to correct damage caused by water, correct the underlying cause, or causes, first. Water damage is generally not serious if the water leak was stopped quickly. The surface can usually be scaled by coating the stained area with a good coat of pigmented shellac. This will prevent the stain from bleeding through the new paint.

2-3 CYCLIC MAINTENANCE:

A. Repaint gypsum wallboard.

B. Replacement of drywall panels is not anticipated.

PART 3: MATERIALS SPECIFICATIONS

3-1 GYPSUM WALLBOARD

A. Match the existing in thickness.

B. Fire Rated Board: ANSI/ASTM C36-80, Type X.

C. Water Resistant Board: ASTM C630-82.

3-2 FASTENERS

A. Nails: 1-3/8 Parkerhead, manufactured by CF&I Steel Corporation, Pueblo, Colorado, or approved equal.

B. Screws: USG Hi-Lo, bugle head, Type W for attaching to wood, Type S for attaching to metal. Size as recommended by USG.

3-3 ADHESIVE: USG Durabond 200 or Durabond 300.

3-4 JOINT TREATMENT MATERIALS

A. Tape: USG Perf-a-Tape Reinforcement.

B. Joint Compound: USG Durabond 90.

C. Tape Bedding Compound: USG Durabond Joint Compound-Taping.

D. Topping Compound: USG Crater Free Ready-to-Use Joint Compound, All Purpose.

3-5 METAL ACCESSORIES: USG Durabead for all exterior corners and USG No. 200 and No. 701 Series for metal trim. Accessories shall be hot-dipped galvanized steel.

3-6 SEALANTS: Use W/R Sealant.

3-7 Refer to Volume 3, Project Manuals, for specification information.

PART 1: INSPECTION INSTRUCTIONS

1-1 CERAMIC TILE AND GROUT

A. Inspect for cracked, chipped, broken, loose, or damaged tiles.

B. Inspect for dirt and film build-up, stains, efflorescence, or surface residue on tile.

C. Inspect grout for stains, discoloration, mildew, dirt build-up, cracks, or missing sections.

PART 2: PRESERVATION INSTRUCTIONS

2-1 HOUSEKEEPING

A. Regularly wipe tiles and grout with a damp sponge and rub dry with a clean cloth.

B. Routinely clean tiles with a damp, soft cloth and an all purpose cleaner such as Mr. Clean, Top Job, Lestoil, etc. Rinse clean and wipe dry.

C. For hard water deposits, a commercial tile cleaner such as Tilex, or a mixture of 1 part white vinegar and 1 part water will remove deposits. Rinse clean and dry.

D. For heavy duty dry cleaning, use a nonabrasive household agent (Ajax Liquid, Liquid Comet, or Bon Ami) with a sponge, or an all purpose cleaner with a nylon scouring pad. Rinse clean and wipe dry.

E. To clean grout, mix bleach and hot water and apply to the grout with a stiff toothbrush. A good solution is 1 part Clorox to 3 parts hot water. For tougher build-up, use a stronger solution, maybe even a 1:1 mixture. A cup of trisodium phosphate and 1/2 cup of detergent added to 1 gallon water will also accelerate the action. Rinse clean.

2-2 ROUTINE MAINTENANCE

A. Repointing Tile

1. Dig out any loose or deteriorated grout with a dental pick, awl, or any similar tool.

2. Vacuum all the open joints left between the tiles.

3. Prior to repointing, make sure the adjacent tile are set firmly and are not broken, cracked, or chipped.

4. Portland cement and fine white sand are the primary ingredients in grout mixes. Admixtures such as Anti-Hydro may be helpful for obtaining maximum adhesion to the old grout.

5. Wipe off the excess grout diagonally and allow to set before cleaning the entire surface with a damp sponge.

B. Resetting Tile

1. Remove all loose and detached tiles. Clean tiles by soaking in water for 24 hours. Wire brush all residual bedding mortar off of the back surface until clean. Where the original setting bed is in sound condition, reattach the cleaned tiles with polyester resin adhesive. Apply resin in small dabs to the four corners and center of the tile only. Clean the setting bed with a hand chisel to remove high points. Gently tap tiles into place using a rubber mallet and affix with tape until adhesive sets. Grout with white cement grout. Where the original setting bed has deteriorated, remove the setting bed and scratch coat by hand chisel. Rebuild the setting bed with a portland cement. Mortar tiles to the same wall plane as before. Grout shall match the existing. Remove any laitence that might occur.

C. Replace Broken, Cracked, Chipped Tile

1. Tile identified for removal will be cut out by hand without causing damage to the surrounding tile work. Install the new tile matching the existing in size, color, and installation pattern using the procedure in B-1 above.

2-3 CYCLIC MAINTENANCE

A. Cyclic replacement of tile is not scheduled or anticipated.

PART 3: MATERIALS SPECIFICATIONS

3-1 CLEANING MATERIALS AND EQUIPMENT

A. Cleaners

1. Sure Clean "Heavy Duty Restoration Cleaner" by ProSoCo.

2. All purpose cleaners such as Mr. Clean, Top Job, Lestoil, etc.

3. Tilex

B. Detergent: Kodak "Triton X-100" nonionic detergent manufactured by Eastman Kodak Company, Rochester, New York.

C. Iron Stain Remover: Ferrous Rust Stain Remover manufactured by Diedrich Chemicals, Incorporated.

PART 1: INSPECTION INSTRUCTIONS

1-1 GRID: Inspect the main tees and cross tees for bending, twisting, sagging, and chipped paint.

1-2 TILE: Inspect for dirt build-up and cracked or broken tile.

PART 2: PRESERVATION INSTRUCTIONS

2-1 HOUSEKEEPING TASKS: Regularly dust the ceiling tiles with a clean rag, dust mop, or feather duster.

2-2 ROUTINE MAINTENANCE

A. Replace badly stained, cracked, or broken tiles.

B. Straighten bent or twisted main tees and cross tees.

C. Sagging tees may be caused by broken support wires. Replace as needed.

2-3 CYCLIC MAINTENANCE: Replacement of the entire suspended ceiling system is not anticipated.

PART 3: MATERIALS SPECIFICATIONS

3-1 GRID: To be by same manufacturer as the existing system. Match the existing.

A. ASTM C635-83, intermediate duty, direct hung, cold rolled steel, electrozinc coated.

3-2 TILE: To be by same manufacturer as the existing and shall match the existing.

PART 1: INSPECTION INSTRUCTIONS

1-1 Inspect wood floors for:

A. Deterioration of finish.

B. Warping, splinters, splits, cracks, loose members, excessively worn areas, etc.

C. Water damage and investigate to determine the cause.

D. Biological attack.

PART 2: PRESERVATION INSTRUCTIONS

2-1 HOUSEKEEPING

A. Regularly clean the floors with a dust broom, dust mop, or straw broom. Spray End Dust or a like product on the dust broom and dust mop to attract dust.

B. Damp mop periodically to help control dust and dirt. Rinse the mop frequently, keeping it damp but not wet.

2-2 ROUTINE MAINTENANCE

A. Resecure loose boards. Put a piece of old carpeting or several layers of newspaper down on the raised board, and then a wide block of wood over that. Strike the block with a heavy hammer to bang the loose board into place. Using a nail set, tap all popped nails back into place.

B. Remove wax with a commercial solvent-based wax remover, mineral spirits, or naphtha. Pour the solvent on the floor, rub with 00 steel wool, and scoop up the softened wax with paper towels and rags.

C. Fill minor holes, cracks, and gouges with wood putty, prestained to match the floor. Build-up layers of filler, allowing each to dry between applications. Sand the final application smooth and level with the surrounding surface.

D. Refinish.

E. Apply two coats of wax, buffing after each coat.

2-3 CYCLIC MAINTENANCE

A. Replacing Wood

1. Wood replacement should take place only after notification to, and approval of, the regional historical architect.

2. Boards that should be replaced are:

a. Severely warped and buckled boards.

b. Deeply nicked and splintered boards.

c. Boards with noticeable and irreversible stains.

3. To keep from damaging sound adjacent boards when removing the damaged board, the damaged board will have to be split or sawn down the middle to dislodge it. This can best by done with a mallet and chisel, or a small hand saw (keyhole saw).

4. After removing the damaged board, square up the remaining cut edge of the board.

5. Measure a new piece of board so that it can be dropped into place. Turn it over and chisel or plane off the bottom groove. Place shims under the new board if it is thinner than the existing board. Knock the new board into place, protected by a piece of carpet or several layers of newspaper and a wide wood block, then face nail into the subfloor. Counter sink the nail heads with a nail set and fill the holes with wood putty, prestained to match the floor.

6. The finish shall match the existing floor and wax.

PART 3: MATERIALS SPECIFICATIONS

3-1 Replacement flooring shall match the existing in size, shape, and wood species.

PART 1: INSPECTION INSTRUCTIONS

1-1 Inspect the vinyl floors for:

A. Dirt, stains, oil, grease, sole marks, scratches, and other signs of uncleanliness.

B. Signs of lifting at joints and edges.

C. Signs of bubbling and blistering.

PART 2: PRESERVATION INSTRUCTIONS

2-1 HOUSEKEEPING TASKS

A. Dust mop the floors daily.

B. Damp mop the floors as required to remove dirt and mud.

C. Clean the vinyl floors as needed with a good grade floor cleaner, using standard procedures and equipment. Rinse the floor thoroughly with clear water and a clean mop. After cleaning, apply one or two thin coats of a good grade floor finish.

D. Spot/stain removal should be performed when requird with solvents. (See the manufacturer's recommendations for removal procedures.)

E. Accumulated finish should be removed twice a year using a good grade commercial floor stripper. (Caution: Highly abrasive scrub pads or brushes should not be used.) After stripping and cleaning, again apply two thin coats of a good grade commercial finish.

F. Disinfect the floors regularly with a good grade disinfectant.

2-2 ROUTINE MAINTENANCE:

A. To repair a rip or gouge, get a replacement piece of the same pattern at least 3 inches wider and longer than the damaged spot. Carefully align the replacement piece over the pattern of the damaged area, then tape the edges down with masking tape.

Using a straight edge as a guide, cut through both layers of vinyl with a utility knife. Lift out both sections with the knife. If the vinyl has been glued down all over, first soften the adhesive with a hot iron. Protect the iron and the floor with a piece of aluminum foil as a buffer.

Slip some adhesive beneath the vinyl edges of the vinyl still in place. Apply adhesive to the back of the new patch, press it in place, weight it down, and let it stand for a day.

2-3 CYCLIC MAINTENANCE.

A. If replacement of a large area of vinyl floor covering is required, the replacement shall match the existing in color and texture. Consult with the regional historical archtect for approval.

PART 3: MATERIALS SPECIFICATIONS

3-1 SHEET VINYL FLOORING: 0.090-inch gauge in 6-foot wide rolls by the same manufacturer as the existing flooring.

3-2 ACCESSORIES: Refer to Volume 3, Project Manuals, for specification information.

PART 1: INSPECTION INSTRUCTIONS

1-1 Inspect carpets for the following:

A. Soil, dust, and lint build-up.

B. Stains, grease marks, and water damage.

C. Cuts, rips, loose threads, and raveling edges.

D. Separation and lifting away from the floor.

E. Wear, especially in high traffic and high use areas.

PART 2: PRESERVATION INSTRUCTIONS

2-1 HOUSEKEEPING

A. Regularly vacuum all carpet with an industrial quality vacuum.

B. Remove spots with a household spot remover, or cleaning solution recommended by the carpet manufacturer.

C. Shampoo all carpets annually with commercial quality equipment and chemicals approved by the carpet manufacturer.

2-2 ROUTINE MAINTENANCE

A. Patch small areas of damaged carpet by splicing in matching carpet scraps.

2-3 CYCLIC MAINTENANCE

A. When replacement of large areas of carpet is required, the new carpet shall match the original specifications as closely as possible as far as color and texture.

PART 3: MATERIALS SPECIFICATIONS

3-1 Replacement carpet shall match the existing.

PART 1: INSPECTION INSTRUCTIONS

1-1 Inspect painted surfaces for:

A. Dirt, stains, mildew, fungi, and animal and insect infestation.

B. Signs of leakage, particularly the roof drainage system.

C. Signs of rust on metal.

D. Excessive weathering, blistering, flaking, or chipping of paint. (Excessive is defined as 10 to 20 percent of the painted surface being consistently deteriorated.)

E. Signs of damage from vandalism.

PART 2: PRESERVATION INSTRUCTIONS

2-1 HOUSEKEEPING

A. Housekeeping instructions for painted building elements are covered in their respective sections of this guide.

2-2 ROUTINE MAINTENANCE

A. Cleaning

1. The building should be cleaned annually to prevent build-up of deposits caused by air pollution.

2. Surfaces should be cleaned with a low pressure water spray containing a mild solution (no greater than 15 percent) of a nonionic detergent such as Tergitol (Union Carbide), Triton (Rohm and Haas), or Igenol (GAF). Use a medium bristle brush to clean stubborn areas. Pay particular attention to protected areas, such as portico ceilings, soffits, etc., for excessive build-up. Do not wash when temperature is below 40 degrees Fahrenheit.

3. Rinse with clean water and let dry.

4. Always work on the shady side of the building to prevent rapid drying.

5. Remove mildew with a solution of 1 part liquid bleach and 1 part water. Rinse thoroughly and let dry. First apply the solution to an inconspicuous test area to determine the effects of the procedure. If any damage to paint is observed, dilute solution and

test again in the same manner, and keep testing until no damage is noted.

B. Touch-Up Painting

1. Masonry

a. Remove all flaking, peeling, and otherwise deteriorating paint down to sound paint or substrate.

b. Feather all edges to provide a smooth transition between the areas of the removed paint and the remaining paint.

c. Remove all dust, loose paint, and foreign matter from the areas to be repainted.

d. Make sure the surface is clean and dry, and then spot prime all the patches that go to bare masonry. Patches that do not go to bare masonry do not need to be primed.

e. Apply infill paint in thin coats and build-up level to the surrounding surfaces.

f. After the filler has dried completely, sand lightly and then apply the top coat which shall match the existing color.

2. Wood

a. Remove all flaking, peeling, cracking, and otherwise deteriorating paint to sound paint or substrate. Use sandpaper or steel wool to feather the high paint edges, corners, etc.

b. Scrape and clean exposed small, dry, seasoned knots and apply a thin coat of white shellac or other recommended knot sealer.

c. Clean the areas to be painted of all dirt, dust, and other foreign substances.

d. To a dry surface, apply two thin coats of wood primer to bare wood.

e. Apply infill paint in thin layers to build-up to match the surrounding areas. Sand lightly and apply the top coat which shall match the existing color.

2-3 CYCLIC MAINTENANCE

A. Cleaning: See 2-2, A, 1-5 for the cleaning procedure which is a necessary part of this section.

B. Painting

1. Masonry: See 2-2, B, 1, a-f for general masonry repainting instructions which are a necessary part of this section.

a. Repaint masonry surfaces with paint compatible to the existing paint.

2. Wood: See 2-2, B, 4, a-e for general repainting which is a necessary part of this section.

a. Repaint wood areas with paint compatible to the existing paint.

PART 3: MATERIALS SPECIFICATIONS

3-1 PAINT: Check rehabilitation specifications for the manufacturer, type, color, etc., of the paint and match the existing.

PART 1: INSPECTION INSTRUCTIONS

1-1 Inspect all painted and varnished surfaces for:

A. Dirt, stains, grime build-up, and scratches.

B. Signs of water damage.

C. Deterioration of finish. A finish will be considered deteriorated when from 5 to 10 percent of the finish has scratches, nicks, cracking, peeling, etc.

D. Indications of wear, especially in high use areas.

E. Signs of damage from vandalism.

PART 2: PRESERVATION INSTRUCTIONS

2-1 HOUSEKEEPING

A. Housekeeping instructions for painted and varnished surfaces are covered in their respective sections of the guide.

2-2 ROUTINE MAINTENANCE

A. Cleaning

1. Any loose paint or varnish should be scraped or sanded off to sound paint, varnish, or substrate. Feather all the high paint or varnish edges to provide a smooth transition between the areas.

2. Remove all dust, loose paint, and other foreign substances from areas to be repainted.

3. Clean any exposed wood with mineral spirits.

4. Prior to repainting, make sure all surfaces to be repainted are clean, dry, and free from all foreign substances.

B. Painting

1. All surfaces to be repainted should be painted according to the finish schedule located in Volume 3, As-Built Drawings. All paint to be brush applied.

2. Bare wood and plaster patches should be primed prior to painting.

3. New paint shall match the existing in color.

C. Varnishing

1. If bare wood is exposed, staining may be required to match the existing color. Otherwise, a light rubbing with 0000 steel wool may be all that is required prior to varnishing.

2. Varnish should be applied by brush with an even coat and a minimum of brush marks, bubbles, and dust. One coat of varnish should be sufficient to cover areas where there is existing varnish. Additional coats will be required over bare wood.

2-3 CYCLIC MAINTENANCE

A. A complete repainting will need to be undertaken at regularly scheduled intervals.

B. Cleaning: See 3-1, A, 1-4 for cleaning procedures which are a necessary part of this section.

C. Painting

1. See 3-2, B, 1-3 for general repainting instructions which are a necessary part of this section.

2. Repaint the surfaces with paint compatible to the existing paint.

PART 3: MATERIALS SPECIFICATIONS

3-1 PAINT: Check rehabilitation specifications for paint manufacturer, type, color, etc., which shall match the existing.

3-2 Refer to Volume 3, Project Manuals for specifications information.

PART 1: INSPECTION INSTRUCTIONS

1-1 TOILET PARTITIONS

A. Inspect for dust, dirt, grime, stains, and other signs of deterioration.

B. Inspect for damage to partitions and graffiti written on supports and panels.

C. Inspect hardware operation for proper function.

D. Inspect partitions for loose anchors.

E. Inspect for sagging or binding doors.

F. Inspect for peeled, cracked, chipped or otherwise deteriorated paint.

PART 2: PRESERVATION INSTRUCTIONS

2-1 HOUSEKEEPING

A. Dust and disinfect, as required by use, to keep areas looking presentable at all times. See Schedules in Volume 1-B.

B. Wash down all surfaces with a mild detergent in clean water using a sponge or soft cloth.

C. Rinse with clean water.

D. Remove graffiti with approved remover.

2-2 ROUTINE MAINTENANCE

A. Repair damaged partitions or doors as soon as possible.

B. Tighten anchoring bolts, door hinges, and latches.

C. Oil door hinges.

D. Touch-up paint.

1. Remove damaged and deteriorated paint down to solid paint or substrate.

2. Feather high paint edges.

3. Clean the dust and loose paint from area.

4. Prime any bare metal with rust inhibiting primer.

5. Paint areas with paint to match the existing.

6. Any graffiti that can't be removed shall be painted over after cleaning the area thoroughly.

2-3 CYCLIC MAINTENANCE

A. Clean and completely repaint all partitions.

B. If total replacement of toilet partitions appears necessary, contact the regional historical architect for assistance.

PART 3: MATERIALS SPECIFICATIONS

3-1 Replacement partitions shall match the existing in size, material, color, etc.

PART 1: INSPECTION INSTRUCTIONS

1-1 Inspect all louvers for:

A. Build-up of dirt, cobwebs, nests, or other deleterious materials which could impair the free flow of air.

B. Loose, broken, or missing components.

C. Unsecured, loose, broken, or missing fasteners.

PART 2: PRESERVATION INSTRUCTIONS

2-1 HOUSEKEEPING INSTRUCTIONS

A. Remove loose dirt, cobwebs, etc., with a stiff brush. Wipe clean with a dry cloth.

B. If dirt persists and is lodged in louvers, use compressed air to dislodge obstructions.

C. On screened vents, use low pressure vacuum or compressed air on the problem areas. Care should be taken to avoid damaging the screen or its frame.

D. Do not use free-flowing water to clean louvers.

2-2 ROUTINE MAINTENANCE

A. Tighten loose components and fasteners.

B. Repair or replace damaged, broken, or missing components.

2-3 CYCLIC MAINTENANCE

A. Replacement of entire louver(s) is not anticipated at this time.

B. If louver(s) does need to be replaced, consult with the regional historical architect for assistance.

PART 3: MATERIALS SPECIFICATIONS

3-1 Replacement louvers,vents, and grilles shall match existing in size, material, etc.

PART 1: INSPECTION INSTRUCTIONS

1-1 Inspect flagpole for stability, damage, etc.

1-2 Inspect lanyard for fraying and deterioration.

1-3 Inspect snaps for proper operation.

1-4 Inspect cleat for tightness and damage.

PART 2: PRESERVATION INSTRUCTIONS

2-1 HOUSEKEEPING TASKS

A. Not used.

2-2 ROUTINE MAINTENANCE

A. Replace frayed or otherwise deteriorated lanyard.

B. Replace nonfunctioning snaps.

2-3 CYCLIC MAINTENANCE

A. Replacement of flagpole is not scheduled at this time.

PART 3: MATERIALS SPECIFICATIONS

3-1 Refer to Volume 3, Project Manuals, for specification information.

PART 1: INSPECTION INSTRUCTIONS

1-1 TOILET PAPER DISPENSERS, TOWEL DISPENSERS, WASTE PAPER RECEPTACLES

A. Inspect for dust, dirt, and grime.

B. Inspect for damage.

C. Inspect for proper functioning.

D. Inspect for looseness.

1-2 GRAB BARS

A. Inspect for dust, dirt, and grime.

B. Inspect for damage.

C. Inspect for looseness.

1-3 MIRRORS

A. Inspect for dust, dirt, grime, and streaks.

B. Inspect for chipped, cracked, or broken glass.

C. Inspect for looseness.

PART 2: PRESERVATION INSTRUCTIONS

2-1 TOILET PAPER DISPENSERS, TOWEL DISPENSERS, WASTE PAPER RECEPTACLES

A. Housekeeping

1. Dust, clean, and polish, as required by use, to keep areas looking presentable at all times.

B. Routine Maintenance

1. Tighten loose accessories and repair damaged ones as soon as possible.

C. Cyclic Maintenance

1. If replacement of any accessory is necessary, contact the regional historical architect for assistance.

2-2 GRAB BARS

A. Housekeeping

1. Dust, clean, and polish, as required by use, to keep areas looking presentable at all times.

B. Routine Maintenance

1. Tighten loose grab bars and repair damaged units as soon as possible.

C. Cyclic Maintenance

1. If replacement of any grab bar is necessary, contact the regional historical architect for assistance.

2-3 MIRRORS

A. Housekeeping

1. Clean with a glass cleaner such as Windex, as required, to keep mirrors looking presentable at all times.

B. Routine Maintenance

1. Tighten loose mirrors as soon as possible.

C. Cyclic Maintenance

1. If replacement of cracked or broken mirrors is necessary, contact the regional historical architect for assistance.

PART 3: MATERIALS SPECIFICATIONS

3-1 Replacement units shall match the existing in size, texture, materials, etc.

PART 1: INSPECTION INSTRUCTIONS

A. Inspect for dust, dirt, and stains.

B. Inspect blinds for proper operation, bent slats, and frayed cords.

C. Inspect shades for proper operation, torn fabric, and holes.

PART 2: PRESERVATION INSTRUCTIONS

2-1 HOUSEKEEPING

A. Dust blinds weekly with a soft rag or feather duster. Slanting the blinds both opposing ways allows for both sides of the slats to be dusted.

2-2 ROUTINE MAINTENANCE

A. Replace any worn cords or bent slats in blinds. Color should match that of the existing blinds.

B. Replace worn out shades with new ones on a limited basis.

C. Care should be taken not to damage bracket hardware at the window head.

2-3 CYCLIC MAINTENANCE

A. If replacement of a major number of blinds and shades is contemplated, the regional historical architect should be consulted.

PART 3: MATERIALS SPECIFICATIONS

3-1 Replace blinds and shades shall match the existing in size, color, material, etc.

PART 1: INSPECTION INSTRUCTIONS

1-1 Inspect for dust, dirt, and stains.

1-2 Inspect for tears, holes, fading, and other signs of deterioration.

PART 2: PRESERVATION INSTRUCTIONS

2-1 HOUSEKEEPING

A. Drapes

1. Vacuum every 6 months.

2. Every 6 months, clean the valances.

2-2 ROUTINE MAINTENANCE

A. Drapes

1. Remove stains.

2. Repair tears, holes, etc.

B. Care should be taken not to damage bracket hardware at the window head.

2-3 CYCLIC MAINTENANCE

A. Drapes

1. Every 3 years, take down the drapes and have them professionally dry cleaned. Then reinstall in the same manner.

PART 3: MATERIALS SPECIFICATIONS

3-1 Replacement drapes and curtains shall match the existing in size, color, material, etc.

3-2 Specifications of materials can be found in Volume 3, Project Manuals.

PART 1: INSPECTION INSTRUCTIONS

1-1 Inspect the water supply and waste system for:

A. Signs of leaks anywhere in the system.

B. Changes in pressure from the norm.

C. Rust and deterioration and damage to jacket insulation or vapor barrier discontinuities on visible piping.

1-2 Inspect all plumbing fixtures for:

A. Proper operation.

B. Damage.

C. Slow leaks or dripping.

D. Unobstructed lines.

PART 2: MAINTENANCE INSTRUCTIONS

2-1 HOUSEKEEPING

A. Clean and sanitize the plumbing fixtures daily during times of heavy use.

2-2 ROUTINE MAINTENANCE

A. Repair any leaks immediately. There should be adequate shut-off valves for the majority of plumbing repairs without having to shut off the main.

B. Limited replacement of fixture parts should be performed when required.

C. Repair damaged piping insulation in kind or use 35-00 vapor barrier mastic to repair minor rips.

2-3 CYCLIC MAINTENANCE

A. If total or major replacement of plumbing pipes and/or fixtures is required, contact the regional historical architect for assistance. Such replacement is not anticipated.

PART 3: MATERIALS SPECIFICATIONS

3-1 Refer to Volume 3, Project Manuals, for material specification.

PART 1: INSPECTION INSTRUCTIONS

1-1 Inspect floor drains for:

A. Clogging, debris, or other obstructions that could prevent proper drainage.

B. Cracked or broken grates.

C. Loose grates.

PART 2: MAINTENANCE INSTRUCTIONS

2-1 HOUSEKEEPING

A. Remove visible debris from drain grates.

2-2 ROUTINE MAINTENANCE

A. Tighten loose drain grates.

B. Pour drain cleaner down drain to keep drains clean.

C. Run cleaning device through drain to remove built-up dirt, debris, etc.

2-3 CYCLIC MAINTENANCE

A. Repair/replace drain grates and drain pipes.

PART 3: MATERIAL SPECIFICATIONS

3-1 REPLACEMENT MATERIALS

A. Replacement drain pipe should match the existing in size, shape, profile, and material.

B. Replacement drain grates should match the existing in size.

C. Replacement material shall be free of all debris and other foreign substances.

D. Contact the regional historical architect for assistance.

E. Specifications of materials are in Volume 3, Project Manuals.

PART 1: INSPECTION INSTRUCTIONS

1-1 Inspect water heaters for:

A. Look for signs of water leaking, rusting, or dampness at the fittings and adjacent areas.

B. Inspect insulation covering for rips, damage, or incomplete coverage.

C. Confirm thermostat setting at 110 to 120 degrees Fahrenheit.

D. Check for general cleanliness, dust, dirt, spider webs, etc.

PART 2: MAINTENANCE INSTRUCTIONS

2-1 HOUSEKEEPING

A. Vacuum clean and use dust cloth to remove dirt, webs, etc., on and adjacent to the water heater as per housekeeping schedules in Volume 1, Section A.

2-2 ROUTINE MAINTENANCE

A. Perform repairs to insulation.

B. Perform service checks and replace defective parts as per the manufacturer's instructions. (See Volume 3.)

C. Flush each month.

2-3 CYCLIC MAINTENANCE

A. Cyclic replacement is not scheduled. When replacement of a unit is necessary, use the specification data in Volume 3 to size new unit or duplicate the existing.

PART 3: MATERIALS SPECIFICATIONS

3-1 REPLACEMENT MATERIALS

A. Replacement units shall match the existing water heaters in recovery rate, capicity, ect., unless otherwise specified.

B. Refer to Volume 3 for specification information.

P315ART 1: INSPECTION INSTRUCTIONS

1-1 Inspect the water coolers for:

A. Proper operation.

B. Leaks.

C. Sufficient water pressure.

D. Proper drainage.

E. Cleanliness.

F. Damage.

PART 2: MAINTENANCE INSTRUCTIONS

2-1 HOUSEKEEPING

A. Clean and sanitize daily during periods of heavy use, and on a regular basis at other times.

B. Polish the chrome parts regularly.

2-2 ROUTINE MAINTENANCE

A. Repair any leaks immediately.

B. Limited replacement of parts should be performed when required.

2-3 CYCLIC MAINTENANCE

A. If total replacement of pipes or fixtures is required, contact the regional historical architect for assistance. Such replacement is not anticipated.

PART 1: INSPECTION INSTRUCTIONS

1-1 LIGHT FIXTURES, LIGHT SWITCHES, AND OUTLETS

A. Inspect light fixtures for:

1. Dirt and dust build-up.

2. Proper operation.

3. Loose components.

4. Cracked, broken, or missing globes, shades, etc.

B. Inspect light switches for:

1. Proper operation.

2. Dirt and grime build-up.

3. Loose cover plates.

4. Cracked, broken, or missing cover plates.

C. Inspect electrical outlets for:

1. Proper operation.

2. Dirt and grime build-up.

3. Loose cover plates.

4. Cracked, broken, or missing cover plates.

PART 2: PRESERVATION INSTRUCTIONS

2-1 HOUSEKEEPING TASKS

A. Clean light fixtures, globes, shades, etc., with a damp soft rag.

1. Make sure that the light is switched off prior to cleaning.

B. Clean switches and switch plates with a damp cloth.

C. Clean outlet cover plates with a damp cloth.

1. If the dirt, grime, etc., cannot be removed easily, remove the cover plate and use a detergent and water.

2-2 ROUTINE TASKS

A. Replace any inoperative switches and outlets as soon as possible.

1. This task should be performed by qualified personnel only.

B. Replace cracked, broken, or missing globes, shades, etc., as soon as possible.

C. Replace cracked, broken, or missing cover plates as soon as possible.

D. Tighten loose cover plates as soon as possible.

2-3 CYCLIC TASKS

A. Not anticipated at this time.

1. Consult with the regional historical architect prior to any replacement of light fixtures or components.

PART 3: MATERIALS SPECIFICATIONS

3-1 REPLACEMENT MATERIALS

A. Replacement light fixtures or components shall match the existing.

1. Refer to the specifications in Volume 3.

PART 1: INSPECTION INSTRUCTIONS

1-1 LIGHTS AND BATTERIES

A. Inspect lights for:

1. Proper operation.

2. Dirt and dust build-up.

3. Loose components.

4. Cracked, broken, or missing housing units.

5. Secure mounting to walls.

B. Inspect batteries for:

1. Proper charging and functioning.

2. Acid leaks and damage to parts.

3. Deterioration.

4. Secure mounting to walls.

PART 2: PRESERVATION INSTRUCTIONS

2-1 HOUSEKEEPING TASKS

A. Clean exit and emergency lights and housings.

B. Clean batteries to remove dust, dirt, and corrosion.

C. Test systems.

2-2 ROUTINE TASKS

A. Replace cracked, broken, or missing housing units.

B. Tighten loose components.

C. Tighten mounting fasteners.

D. Replace leaking or deteriorated batteries.

2-3 CYCLIC TASKS

A. Replacement of the existing emergency lighting system is not anticipated at this time.

1. Consult with the regional historical architect prior to replacement.

PART 3: MATERIALS SPECIFICATIONS

3-1 REPLACEMENT MATERIALS

A. Replacement emergency lighting system shall match the existing.

1. Refer to specifications in Volume 3.

PART 1: INSPECTION INSTRUCTIONS

1-1 FIRE ALARM AND DETECTION SYSTEM

A. Inspect all exposed detectors for:

1. Signs of dust and dirt build-up.

2. Signs of damage.

B. Inspect control panel:

1. Daily for trouble lights.

2. Inside and out for dust and corrosion.

PART 2: PRESERVATION INSTRUCTIONS

2-1 HOUSEKEEPING

A. Certify the entire system by qualified maintenance personnel.

B. Clean the panel inside and out with compressed air.

2-2 ROUTINE INSPECTIONS

A. Repair or replace defective parts as soon as possible.

2-3 CYCLIC MAINTENANCE

A. Replacement of the entire system is not anticipated.

1. Consult with the regional historical architect prior to replacement of the system.

PART 3: MATERIALS SPECIFICATIONS

3-1 REPLACEMENT MATERIALS

A. Replacement materials shall match the existing.

1. Refer to specifications in Volume 3.