

# 18 PRESERVATION BRIEFS



## Rehabilitating Interiors in Historic Buildings

### Identifying and Preserving Character-defining Elements

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National Park Service  
Cultural Resources  
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A floor plan, the arrangement of spaces, and features and applied finishes may be individually or collectively important in defining the historic character of the building and the purpose for which it was constructed. Thus, their identification, retention, protection, and repair should be given prime consideration in every preservation project. Caution should be exercised in developing plans that would radically change character-defining spaces or that would obscure, damage or destroy interior features or finishes.

While the exterior of a building may be its most prominent visible aspect, or its "public face," its interior can be even more important in conveying the building's history and development over time. Rehabilitation within the context of the Secretary of the Interior's Standards for Rehabilitation calls for the preservation of exterior *and* interior portions or features of the building that are significant to its historic, architectural and cultural values.

Interior components worthy of preservation may include the building's **plan** (sequence of spaces and circulation patterns), the building's **spaces** (rooms and volumes), individual architectural **features**, and the various **finishes** and **materials** that make up the walls, floors, and ceilings. A theater auditorium or sequences of rooms such as double parlors or a lobby leading to a stairway that ascends to a mezzanine may comprise a building's most important spaces. Individual rooms may contain notable features such as plaster cornices, millwork, parquet wood floors, and hardware. Paints, wall coverings, and finishing techniques such as graining, may provide color, texture, and patterns which add to a building's unique character.

Virtually all rehabilitations of historic buildings involve some degree of interior alteration, even if the buildings are to be used for their original purpose. Interior rehabilitation proposals may range from preservation of existing features and spaces to total reconfigurations. In some cases, depending on the building, restoration may be warranted to preserve historic character adequately; in other cases, extensive alterations may be perfectly acceptable.

This Preservation Brief has been developed to assist building owners and architects in identifying and evaluating those elements of a building's interior that

contribute to its historic character and in planning for the preservation of those elements in the process of *rehabilitation*. The guidance applies to all building types and styles, from 18th century churches to 20th century office buildings. The Brief does not attempt to provide specific advice on preservation techniques and treatments, given the vast range of buildings, but rather suggests general preservation approaches to guide construction work.

### Identifying and Evaluating the Importance of Interior Elements Prior to Rehabilitation

Before determining what uses might be appropriate and before drawing up plans, a thorough professional assessment should be undertaken to identify those tangible architectural components that, prior to rehabilitation, convey the building's sense of time and place—that is, its "historic character." Such an assessment, accomplished by walking through and taking account of each element that makes up the interior, can help ensure that a truly compatible use for the building, one that requires minimal alteration to the building, is selected.

### Researching The Building's History

A review of the building's history will reveal why and when the building achieved significance or how it contributes to the significance of the district. This information helps to evaluate whether a particular rehabilitation treatment will be appropriate to the building and whether it will preserve those tangible components of the building that convey its significance for association with specific events or persons along with its architectural importance. In this regard, National Register files may prove useful in explaining why and for what period of time the

building is significant. In some cases research may show that later alterations are significant to the building; in other cases, the alterations may be without historical or architectural merit, and may be removed in the rehabilitation.

### Identifying Interior Elements

Interiors of buildings can be seen as a series of primary and secondary spaces. The goal of the assessment is to identify which elements contribute to the building's character and which do not. Sometimes it will be the sequence and flow of spaces, and not just the individual rooms themselves, that contribute to the building's character. This is particularly evident in buildings that have strong central axes or those that are consciously asymmetrical in design. In other cases, it may be the size or shape of the space that is distinctive. The importance of some interiors may not be readily apparent based on a visual inspection; sometimes rooms that do not appear to be architecturally distinguished are associated with important persons and events that occurred within the building.

**Primary spaces**, are found in all buildings, both monumental and modest. Examples may include foyers, corridors, elevator lobbies, assembly rooms, stairhalls, and parlors. Often they are the places in the building that the public uses and sees; sometimes they are the most architecturally detailed spaces in the building, carefully proportioned and finished with costly materials. They may be functionally and architecturally related to the building's external appearance. In a simpler building, a primary space may be distinguishable only by its location, size, proportions, or use. Primary spaces are always important to the character of the building and should be preserved.

**Secondary spaces** are generally more utilitarian in appearance and size than primary spaces. They may include areas and rooms that service the building, such as bathrooms, and kitchens. Examples of secondary spaces in a commercial or office structure may include storerooms, service corridors, and in some cases, the offices themselves. Secondary spaces tend to be of less importance to the building and may accept greater change in the course of work without compromising the building's historic character.

Spaces are often designed to interrelate both visually and functionally. The **sequence of spaces**, such as vestibule-hall-parlor or foyer-lobby-stair-auditorium or stairhall-corridor-classroom, can define and express the building's historic function and unique character. Important sequences of spaces should be identified and retained in the rehabilitation project.

Floor plans may also be distinctive and characteristic of a style of architecture or a region. Examples include Greek Revival and shotgun houses. Floor plans may also reflect social, educational, and medical theories of the period. Many 19th century psychiatric institutions, for example, had plans based on the ideas of Thomas Kirkbride, a Philadelphia doctor who authored a book on asylum design.

In addition to evaluating the relative importance of the various spaces, the assessment should identify architectural **features** and **finishes** that are part of the



Figure 1. This architect-designed interior reflects early 20th century American taste: the checkerboard tile floor, wood wainscot, coffered ceiling, and open staircase are richly detailed and crafted by hand. Not only are the individual architectural features worthy of preservation, but the planned sequence of spaces—entry hall, stairs, stair landings, and loggia—imparts a grandeur that is characteristic of high style residences of this period. This interior is of Greystone, Los Angeles, California. Photography for HABS by Jack E. Boucher



Figure 2. The interiors of mills and industrial buildings frequently are open, unadorned spaces with exposed structural elements. While the new uses to which this space could be put are many—retail, residential, or office—the generous floor-to-ceiling height and exposed truss system are important character-defining features and should be retained in the process of rehabilitation.

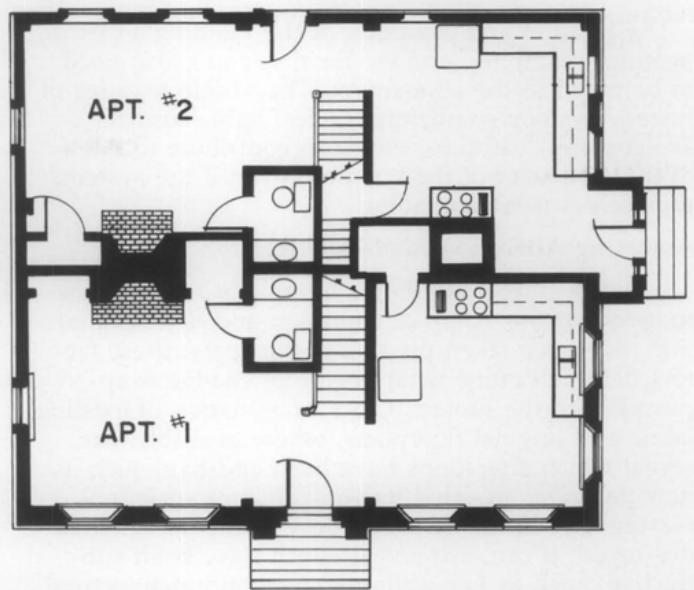
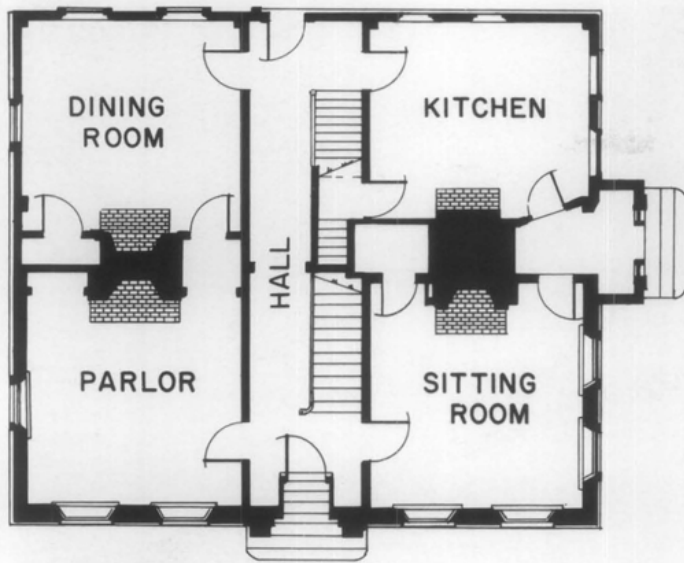


Figure 3. The floor plan at left is characteristic of many 19th century Greek Revival houses, with large rooms flanking a central hall. In the process of rehabilitation, the plan (at right) was drastically altered to accommodate two duplex apartments. The open stair was replaced with one that is enclosed, two fireplaces were eliminated, and Greek Revival trim around windows and doors was removed. The symmetry of the rooms themselves was destroyed with the insertion of bathrooms and kitchens. Few vestiges of the 19th century interior survived the rehabilitation. Drawing by Neal A. Vogel

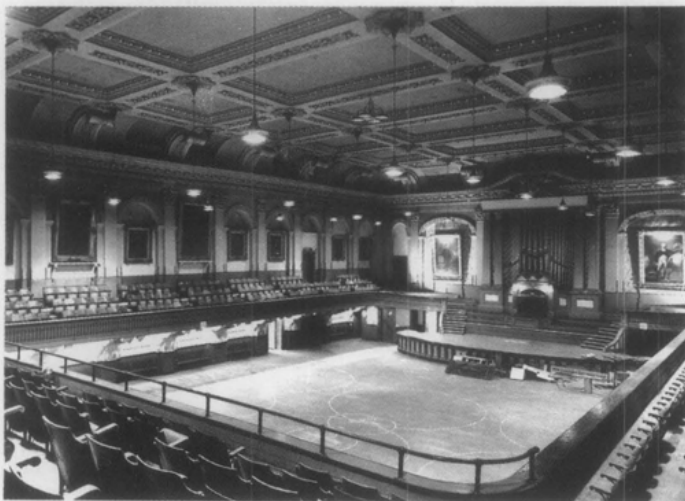


Figure 4. Many institutional buildings possess distinctive spaces or floor plans that are important in conveying the significance of the property. Finding new compatible uses for these buildings and preserving the buildings' historic character can be a difficult, if not impossible, task. One such case is Mechanics Hall in Worcester, Massachusetts, constructed between 1855 and 1857. This grand hall, which occupies the entire third floor of the building, could not be subdivided without destroying the integrity of the space.

interior's history and character. Marble or wood wainscoting in corridors, elevator cabs, crown molding, baseboards, mantels, ceiling medallions, window and door trim, tile and parquet floors, and staircases are among those features that can be found in historic buildings. Architectural finishes of note may include grained woodwork, marbled columns, and plastered walls. Those features that are characteristic of the building's style and period of construction should, again, be retained in the rehabilitation.



Figure 5. The interior of a simply detailed worker's house of the 19th century may be as important historically as the richly ornamented interior seen in figure 1. Although the interior of this house has not been properly maintained, the wide baseboards, flat window trim, and four-panel door are characteristic of workers' housing during this period and deserve retention during rehabilitation.

Features and finishes, even if machine-made and not exhibiting particularly fine craftsmanship, may be character-defining; these would include pressed metal ceilings and millwork around windows and doors. The interior of a plain, simple detailed worker's house of the 19th century may be as important historically as a richly ornamented, high-style townhouse of the same period. Both resources, if equally intact, convey important information about the early inhabitants and deserve the same careful attention to detail in the preservation process.

The location and condition of the building's existing heating, plumbing, and electrical systems also need to be noted in the assessment. The visible features of historic systems—radiators, grilles, light fixtures, switchplates, bathtubs, etc.—can contribute to the overall character of the building, even if the systems themselves need upgrading.

### Assessing Alterations and Deterioration

In assessing a building's interior, it is important to ascertain the extent of alteration and deterioration that may have taken place over the years; these factors help determine what degree of change is appropriate in the project. Close examination of existing fabric and original floorplans, where available, can reveal which alterations have been **additive**, such as new partitions inserted for functional or structural reasons and historic features covered up rather than destroyed. It can also reveal which have been **subtractive**, such as key walls removed and architectural features destroyed. If an interior has been modified by additive changes and if these changes have not acquired significance, it may be relatively easy to remove the alterations and return the interior to its historic appearance. If an interior has been greatly altered through subtractive changes, there may be more latitude in making further alterations in the process of rehabilitation because the integrity of the interior has been compromised. At the same time, if the interior had been exceptionally significant, and solid documentation on its historic condition is available, reconstruction of the missing features may be the preferred option.

It is always a recommended practice to photograph interior spaces and features thoroughly prior to rehabilitation. Measured floor plans showing the existing conditions are extremely useful. This documentation is invaluable in drawing up rehabilitation plans and specifications and in assessing the impact of changes to the property for historic preservation certification purposes.

### Drawing Up Plans and Executing Work

If the historic building is to be rehabilitated, it is critical that the new use not require substantial alteration of distinctive spaces or removal of character-defining architectural features or finishes. If an interior loses the physical vestiges of its past as well as its historic function, the sense of time and place associated both with the building and the district in which it is located is lost.

The recommended approaches that follow address common problems associated with the rehabilitation of historic interiors and have been adapted from the Secretary of the Interior's Standards for Rehabilitation and Guidelines for Rehabilitating Historic Buildings. Adherence to these suggestions can help ensure that character-defining interior elements are preserved in the process of rehabilitation. The checklist covers a range of situations and is not intended to be all-inclusive. Readers are strongly encouraged to review the full set of guidelines before undertaking any rehabilitation project.



Figure 6. This corridor, located in the historic Monadnock Building in Chicago, has glazed walls, oak trim, and marble wainscoting, and is typical of those found in late 19th and early 20th century office buildings. Despite the simplicity of the features, a careful attention to detail can be noted in the patterned tile floor, bronze mail chute, and door hardware. The retention of corridors like this one should be a priority in rehabilitation projects involving commercial buildings.

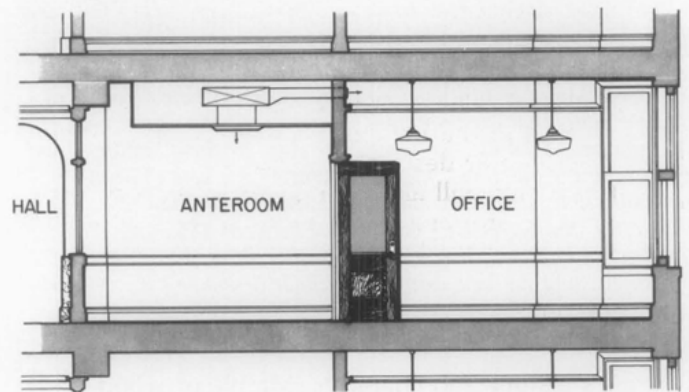


Figure 7. When the Monadnock Building was rehabilitated, architects retained the basic floor plan on the upper floors consisting of a double-loaded corridor with offices opening onto it. The original floor-to-ceiling height in the corridors and outside offices—the most important spaces—was maintained by installing needed air conditioning ductwork in the less important anterooms. In this way, the most significant interior spaces were preserved intact. Drawing by Neal A. Vogel

## Recommended Approaches for Rehabilitating Historic Interiors

1. Retain and preserve floor plans and interior spaces that are important in defining the overall historic character of the building. This includes the size, configuration, proportion, and relationship of rooms and corridors; the relationship of features to spaces; and the spaces themselves such as lobbies, reception halls, entrance halls, double parlors, theaters, auditoriums, and important industrial or commercial use spaces. Put service functions required by the building's new use, such as bathrooms, mechanical equipment, and office machines, in secondary spaces.
2. Avoid subdividing spaces that are characteristic of a building type or style or that are directly associated with specific persons or patterns of events. Space may be subdivided both vertically through the insertion of new partitions or horizontally through insertion of new floors or mezzanines. The insertion of new additional floors should be considered only when they will not damage or destroy the structural system or obscure, damage, or destroy character-defining spaces, features, or finishes. If rooms have already been subdivided through an earlier insensitive renovation, consider removing the partitions and restoring the room to its original proportions and size.
3. Avoid making new cuts in floors and ceilings where such cuts would change character-defining spaces and the historic configuration of such spaces. Inserting of a new atrium or a lightwell is appropriate only in very limited situations where the existing interiors are not historically or architecturally distinguished.
4. Avoid installing dropped ceilings below ornamental ceilings or in rooms where high ceilings are part of the building's character. In addition to obscuring or destroying significant details, such treatments will also change the space's proportions. If dropped ceilings are installed in buildings that lack character-defining spaces, such as mills and factories, they should be well set back from the windows so they are not visible from the exterior.
5. Retain and preserve interior features and finishes that are important in defining the overall historic character of the building. This might include columns, doors, cornices, baseboards, fireplaces and mantels, paneling, light fixtures, elevator cabs, hardware, and flooring; and wallpaper, plaster, paint, and finishes such as stenciling, marbleizing, and graining; and other decorative materials that accent interior features and provide color, texture, and patterning to walls, floors, and ceilings.
6. Retain stairs in their historic configuration and location. If a second means of egress is required, consider constructing new stairs in secondary spaces. (For guidance on designing compatible new additions, see Preservation Brief 14, "New Exterior Additions to Historic Buildings.") The application of fire-retardant coatings, such as intumescent paints; the installation of fire suppression systems, such as sprinklers; and the construction of glass enclosures can in many cases permit retention of stairs and other character-defining features.
7. Retain and preserve visible features of early mechanical systems that are important in defining the overall historic character of the building, such as radiators, vents, fans, grilles, plumbing fixtures, switchplates, and lights. If new heating, air conditioning, lighting and plumbing systems are installed, they should be done in a way that does not destroy character-defining spaces, features and finishes. Ducts, pipes, and wiring should be installed as inconspicuously as possible: in secondary spaces, in the attic or basement if possible, or in closets.
8. Avoid "furring out" perimeter walls for insulation purposes. This requires unnecessary removal of window trim and can change a room's proportions. Consider alternative means of improving thermal performance, such as installing insulation in attics and basements and adding storm windows.
9. Avoid removing paint and plaster from traditionally finished surfaces, to expose masonry and wood. Conversely, avoid painting previously unpainted millwork. Repairing deteriorated plasterwork is encouraged. If the plaster is too deteriorated to save, and the walls and ceilings are not highly ornamented, gypsum board may be an acceptable replacement material. The use of paint colors appropriate to the period of the building's construction is encouraged.
10. Avoid using destructive methods—propane and butane torches or sandblasting—to remove paint or other coatings from historic features. Avoid harsh cleaning agents that can change the appearance of wood. (For more information regarding appropriate cleaning methods, consult Preservation Brief 6, "Dangers of Abrasive Cleaning to Historic Buildings.")

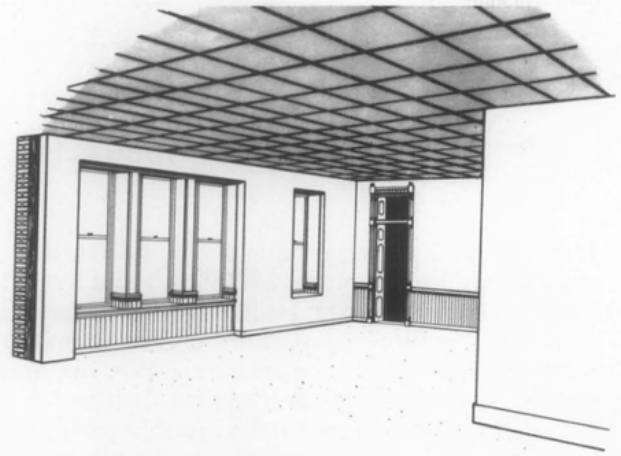
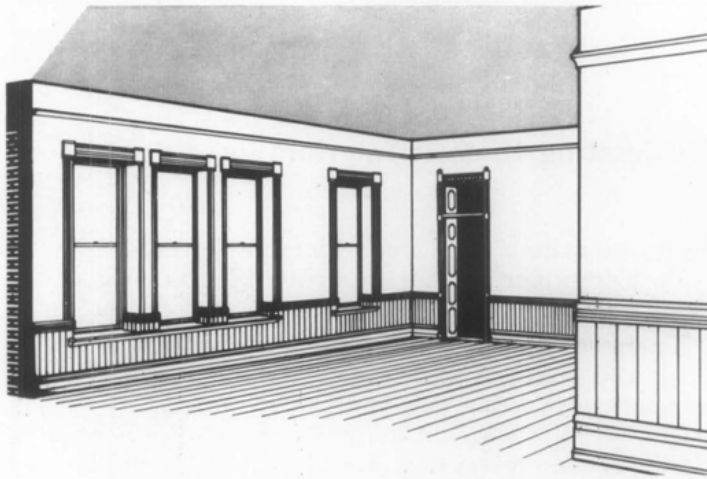


Figure 8. Furring out exterior walls to add insulation and suspending new ceilings to hide ductwork and wiring can change a room's proportions and can cause interior features to appear fragmented. In this case, a school was converted into apartments, and individual classrooms became living rooms, bedrooms, and kitchens. On the left is an illustration of a classroom prior to rehabilitation; note the generous floor-to-ceiling height, wood wainscoting, molded baseboard, picture molding, and Eastlake Style door and window trim. After rehabilitation, on the right, only fragments of the historic detailing survive: the ceiling has been dropped below the picture molding, the remaining wainscoting appears to be randomly placed, and some of the window trim has been obscured. Together with the subdivision of the classrooms, these rehabilitation treatments prevent a clear understanding of the original classroom's design and space. If thermal performance must be improved, alternatives to furring out walls and suspending new ceilings, such as installing insulation in attics and basements, should be considered. Drawings by Neal A. Vogel



Figure 9. The tangible reminders of early mechanical systems can be worth saving. In this example, in the Old Post Office in Washington, D.C., radiators encircle Corinthian columns in a decorative manner. Note, too, the period light fixtures. These features were retained when the building was rehabilitated as retail and office space. Photo: Historic American Buildings Survey



Figure 10. In this case plaster has been removed from perimeter walls, leaving brick exposed. In removing finishes from historic masonry walls, not only is there a loss of historic finish, but raw, unfinished walls are exposed, giving the interior an appearance it never had. Here, the exposed brick is of poor quality and the mortar joints are wide and badly struck. Plaster should have been retained and repaired, as necessary.



Figure 11. These dramatic "before" and "after" photographs show a severely deteriorated space restored to its original elegance: plaster has been repaired and painted, the scagliola columns have been restored to match marble using traditional craft techniques, and missing decorative metalwork has been re-installed in front of the windows. Although some reorganization of the space took place, notably the relocation of the front desk, the overall historic character of the space has been preserved. These views are of the lobby in the Willard Hotel, Washington, D.C. Credit: Commercial Photographers (left); Carol M. Highsmith (right)

## Meeting Building, Life Safety and Fire Codes

Buildings undergoing rehabilitation must comply with existing building, life safety and fire codes. The application of codes to specific projects varies from building to building, and town to town. Code requirements may make some reuse proposals impractical; in other cases, only minor changes may be needed to bring the project into compliance. In some situations, it may be possible to obtain a code variance to preserve distinctive interior features. (It should be noted that the Secretary's Standards for Rehabilitation take precedence over other regulations and codes in determining whether a rehabilitation project qualifies for Federal tax benefits.) A thorough understanding of the applicable regulations and close coordination with code officials, building inspectors, and fire marshals can prevent the alteration of significant historic interiors.

### Sources of Assistance

Rehabilitation and restoration work should be undertaken by professionals who have an established reputation in the field.

Given the wide range of interior work items, from ornamental plaster repair to marble cleaning and the application of graining, it is possible that a number of specialists and subcontractors will need to be brought in to bring the project to completion. State Historic Preservation Officers and local preservation organizations may be a useful source of information in this regard. Good sources of information on appropriate preservation techniques for specific interior features and finishes include the *Bulletin of the Association for Preservation Technology* and *The Old-House Journal*; other useful publications are listed in the bibliography.

## Protecting Interior Elements During Rehabilitation

Architectural features and finishes to be preserved in the process of rehabilitation should be clearly marked on plans *and at the site*. This step, along with careful supervision of the interior demolition work and protection against arson and vandalism, can prevent the unintended destruction of architectural elements that contribute to the building's historic character.

Protective coverings should be installed around architectural features and finishes to avoid damage in the course of construction work and to protect workers. Staircases and floors, in particular, are subjected to dirt and heavy wear, and the risk exists of incurring costly or irreparable damage. In most cases, the best, and least costly, preservation approach is to design and construct a protective system that enables stairs and floors to be used yet protects them from damage. Other architectural features such as mantels, doors, wainscoting, and decorative finishes may be protected by using heavy canvas or plastic sheets.

### Summary

In many cases, the interior of a historic building is as important as its exterior. The careful identification and evaluation of interior architectural elements, after undertaking research on the building's history and use, is critically important *before* changes to the building are contemplated. Only *after* this evaluation should new uses be decided and plans be drawn up. The best rehabilitation is one that preserves and protects those rooms, sequences of spaces, features and finishes that define and shape the overall historic character of the building.

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### Selected Reading List

There are few books written exclusively on preserving historic interiors, and most of these tend to focus on residential interiors. Articles on the subject appear regularly in *The Old-House Journal*, the *Bulletin of the Association for Preservation Technology*, and *Historic Preservation Magazine*.

Ferro, Maximilian L., and Melissa L. Cook. *Electric Wiring and Lighting in Historic American Buildings*. New Bedford, Massachusetts: AFC/A Nortek Company, 1984.

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Cover: Detail of carving on interior shutter. Hammond-Harwood House, Annapolis, Maryland.