

NATIONAL REGISTER BULLETIN

Technical information on the the National Register of Historic Places:
survey, evaluation, registration, and preservation of cultural resources



U.S. Department of the Interior
National Park Service
Cultural Resources
National Register, History and Education

How to Apply the National Register Criteria for Evaluation



II. THE NATIONAL REGISTER CRITERIA FOR EVALUATION

CRITERIA FOR EVALUATION:³

The quality of significance in American history, architecture, archeology, engineering, and culture is present in districts, sites, buildings, structures, and objects that possess integrity of location, design, setting, materials, workmanship, feeling, and association, and:

- A. That are associated with events that have made a significant contribution to the broad patterns of our history; or
- B. That are associated with the lives of persons significant in our past; or
- C. That embody the distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; or
- D. That have yielded, or may be likely to yield, information important in prehistory or history.

CRITERIA CONSIDERATIONS:

Ordinarily cemeteries, birthplaces, or graves of historical figures, properties owned by religious institutions or used for religious purposes, structures that have been moved from their original locations, reconstructed historic buildings, properties primarily commemorative in nature, and properties that have achieved significance within the past 50 years shall not be considered eligible for the National Register. However, such properties *will qualify* if they are integral parts of districts that do meet the criteria or if they fall within the following categories:

- a. A religious property deriving primary significance from architectural or artistic distinction or historical importance; or
- b. A building or structure removed from its original location but which is significant primarily for architectural value, or which is the surviving structure most importantly associated with a historic person or event; or

- c. A birthplace or grave of a historical figure of outstanding importance if there is no appropriate site or building directly associated with his or her productive life; or
- d. A cemetery which derives its primary significance from graves of persons of transcendent importance, from age, from distinctive design features, or from association with historic events; or
- e. A reconstructed building when accurately executed in a suitable environment and presented in a dignified manner as part of a restoration master plan, and when no other building or structure with the same association has survived; or
- f. A property primarily commemorative in intent if design, age, tradition, or symbolic value has invested it with its own exceptional significance; or
- g. A property achieving significance within the past 50 years if it is of exceptional importance.

³The Criteria for Evaluation are found in the *Code of Federal Regulations, Title 36, Part 60*, and are reprinted here in full.

IV. HOW TO DEFINE CATEGORIES OF HISTORIC PROPERTIES

The National Register of Historic Places includes significant properties, classified as buildings, sites, districts, structures, or objects. It is not used to list intangible values, except in so far as they are associated with or reflected by historic properties. The National Register does not list cultural events, or skilled or talented individuals, as is done in some countries. Rather, the National Register is oriented to recognizing physically concrete properties that are relatively fixed in location.

For purposes of National Register nominations, small groups of properties are listed under a single category, using the primary resource. For example, a city hall and fountain would be categorized by the city hall (building), a farmhouse with two outbuildings would be categorized by the farmhouse (building), and a city park with a gazebo would be categorized by the park (site). Properties with large acreage or a number of resources are usually considered districts. Common sense and reason should dictate the selection of categories.

BUILDING

A building, such as a house, barn, church, hotel, or similar construction, is created principally to shelter any form of human activity. "Building" may also be used to refer to a historically and functionally related unit, such as a courthouse and jail or a house and barn.

Buildings eligible for the National Register must include all of their basic structural elements. Parts of buildings, such as interiors, facades, or wings, are not eligible independent of the rest of the existing building. The

whole building must be considered, and its significant features must be identified.

If a building has lost any of its basic structural elements, it is usually considered a "ruin" and is categorized as a site.

Examples of buildings include:

*administration building
carriage house
church
city or town hall
courthouse
detached kitchen, barn, and privy
dormitory
fort
garage
hotel
house
library
mill building
office building
post office
school
social hall
shed
stable
store
theater
train station*

STRUCTURE

The term "structure" is used to distinguish from buildings those functional constructions made usually for purposes other than creating human shelter.

Structures nominated to the National Register must include all of the extant basic structural elements. Parts of structures can not be considered eligible if the whole structure remains. For example, a truss bridge is composed of the metal or wooden truss, the abutments, and supporting

piers, all of which, if extant, must be included when considering the property for eligibility.

If a structure has lost its historic configuration or pattern of organization through deterioration or demolition, it is usually considered a "ruin" and is categorized as a site.

Examples of structures include:

*aircraft
apiary
automobile
bandstand
boats and ships
bridge
cairn
canal
carousel
corncrib
dam
earthwork
fence
gazebo
grain elevator
highway
irrigation system
kiln
lighthouse
railroad grade
silo
trolley car
tunnel
windmill*

OBJECT

The term “object” is used to distinguish from buildings and structures those constructions that are primarily artistic in nature or are relatively small in scale and simply constructed. Although it may be, by nature or design, movable, an object is associated with a specific setting or environment.

Small objects not designed for a specific location are normally not eligible. Such works include transportable sculpture, furniture, and other decorative arts that, unlike a fixed outdoor sculpture, do not possess association with a specific place.

Objects should be in a setting appropriate to their significant historic use, roles, or character. Objects relocated to a museum are inappropriate for listing in the National Register.

Examples of objects include:

*boundary marker
fountain
milepost
monument
sculpture
statuary*

SITE

A site is the location of a significant event, a prehistoric or historic occupation or activity, or a building or structure, whether standing, ruined, or vanished, where the location itself possesses historic, cultural, or archeological value regardless of the value of any existing structure.

A site can possess associative significance or information potential or both, and can be significant under any or all of the four criteria. A site need not be marked by physical remains if it is the location of a prehistoric or historic event or pattern of events and if no buildings, structures, or objects marked it at the time of the events. However, when the location of a prehistoric or historic event cannot be conclusively determined because no other cultural materials were present or survive, documentation must be carefully evaluated to determine whether the traditionally recognized or identified site is accurate.

A site may be a natural landmark strongly associated with significant prehistoric or historic events or patterns of events, if the significance of the natural feature is well documented through scholarly research. Generally, though, the National Register excludes from the definition of “site” natural waterways or bodies of water that served as determinants in the location of communities or were significant in the locality’s subsequent economic development. While they may have been “avenues of exploration,” the features most appropriate to document this significance are the properties built in association with the waterways.

Examples of sites include:

*battlefield
campsite
cemeteries significant for information potential or historic association
ceremonial site
designed landscape
habitation site
natural feature (such as a rock formation) having cultural significance
petroglyph
rock carving
rock shelter
ruins of a building or structure
shipwreck
trail
village site*

DISTRICT

A district possesses a significant concentration, linkage, or continuity of sites, buildings, structures, or objects united historically or aesthetically by plan or physical development.

CONCENTRATION, LINKAGE, & CONTINUITY OF FEATURES

A district derives its importance from being a unified entity, even though it is often composed of a wide variety of resources. The identity of a district results from the interrelationship of its resources, which can convey a visual sense of the overall historic environment or be an arrangement of historically or functionally related properties. For example, a district can reflect one principal activity, such as a mill or a ranch, or it can encompass several interrelated activities, such as an area that includes industrial, residential, or

commercial buildings, sites, structures, or objects. A district can also be a grouping of archeological sites related primarily by their common components; these types of districts often will not visually represent a specific historic environment.

SIGNIFICANCE

A district must be significant, as well as being an identifiable entity. It must be important for historical, architectural, archeological, engineering, or cultural values. Therefore, districts that are significant will usually meet the last portion of Criterion C plus Criterion A, Criterion B, other portions of Criterion C, or Criterion D.

TYPES OF FEATURES

A district can comprise both features that lack individual distinction and individually distinctive features that serve as focal points. It may even be considered eligible if all of the components lack individual distinction, provided that the grouping achieves significance as a whole within its historic context. In either case, the majority of the components that add to the district’s historic character, even if they are individually undistinguished, must possess integrity, as must the district as a whole.

A district can contain buildings, structures, sites, objects, or open spaces that do not contribute to the significance of the district. The number of noncontributing properties a district can contain yet still convey its sense of time and place and historical development depends on how these properties affect the district’s integrity. In archeological districts, the primary factor to be considered is the effect of any disturbances on the information potential of the district as a whole.

VIII. HOW TO EVALUATE THE INTEGRITY OF A PROPERTY

INTRODUCTION

Integrity is the ability of a property to convey its significance. To be listed in the National Register of Historic Places, a property must not only be shown to be significant under the National Register criteria, but it also must have integrity. The evaluation of integrity is sometimes a subjective judgment, but it must always be grounded in an understanding of a property's physical features and how they relate to its significance.

Historic properties either retain integrity (this is, convey their significance) or they do not. Within the concept of integrity, the National Register criteria recognizes seven aspects or qualities that, in various combinations, define integrity.

To retain historic integrity a property will always possess several, and usually most, of the aspects. The retention of specific aspects of integrity is paramount for a property to convey its significance. Determining *which* of these aspects are most important to a particular property requires knowing why, where, and when the property is significant. The following sections define the seven aspects and explain how they combine to produce integrity.

SEVEN ASPECTS OF INTEGRITY

- Location
- Design
- Setting
- Materials
- Workmanship
- Feeling
- Association

UNDERSTANDING THE ASPECTS OF INTEGRITY

LOCATION

Location is the place where the historic property was constructed or the place where the historic event occurred. The relationship between the property and its location is often important to understanding why the property was created or why something happened. The actual location of a historic property, complemented by its setting, is particularly important in recapturing the sense of historic events and persons. Except in rare cases, the relationship between a property and its historic associations is destroyed if the property is moved. (See Criteria Consideration B in *Part VII: How to Apply the Criteria Considerations*, for the conditions under which a moved property can be eligible.)

DESIGN

Design is the combination of elements that create the form, plan, space, structure, and style of a property. It results from conscious decisions made during the original conception and planning of a property (or its significant alteration) and applies to activities as diverse as community planning, engineering, architecture, and landscape architecture. Design includes such elements as organization of space, proportion, scale, technology, ornamentation, and materials.

A property's design reflects historic functions and technologies as well as aesthetics. It includes such considerations as the structural system; massing; arrangement of spaces; pattern of fenestration; textures and colors of surface materials; type, amount, and style of ornamental detailing; and arrangement and type of plantings in a designed landscape.

Design can also apply to districts, whether they are important primarily for historic association, architectural value, information potential, or a combination thereof. For districts significant primarily for historic association or architectural value, design concerns more than just the individual buildings or structures located within the boundaries. It also applies to the way in which buildings, sites, or structures are related: for example, spatial relationships between major features; visual rhythms in a streetscape or landscape plantings; the layout and materials of walkways and roads; and the relationship of other features, such as statues, water fountains, and archeological sites.

SETTING

Setting is the physical environment of a historic property. Whereas location refers to the specific place where a property was built or an event occurred, setting refers to the *character* of the place in which the property played its historical role. It involves *how*, not just *where*, the property is situated and its relationship to surrounding features and open space.

Setting often reflects the basic physical conditions under which a property was built and the functions it was intended to serve. In addition, the way in which a property is positioned in its environment can reflect the designer's concept of nature and aesthetic preferences.

The physical features that constitute the setting of a historic property can be either natural or manmade, including such elements as:

- Topographic features (a gorge or the crest of a hill);
- Vegetation;
- Simple manmade features (paths or fences); and
- Relationships between buildings and other features or open space.

These features and their relationships should be examined not only within the exact boundaries of the property, but also between the property and its *surroundings*. This is particularly important for districts.

MATERIALS

Materials are the physical elements that were combined or deposited during a particular period of time and in a particular pattern or configuration to form a historic property. The choice and combination of materials reveal the preferences of those who created the property and indicate the availability of particular types of materials and technologies. Indigenous materials are often the focus of regional building traditions and thereby help define an area's sense of time and place.

A property must retain the key exterior materials dating from the period of its historic significance. If the property has been rehabilitated, the historic materials and significant features must have been preserved. The property must also be an actual historic resource, not a recreation; a

recent structure fabricated to look historic is not eligible. Likewise, a property whose historic features and materials have been lost and then reconstructed is usually not eligible. (See Criteria Consideration E in *Part VII: How to Apply the Criteria Considerations* for the conditions under which a reconstructed property can be eligible.)

WORKMANSHIP

Workmanship is the physical evidence of the crafts of a particular culture or people during any given period in history or prehistory. It is the evidence of artisans' labor and skill in constructing or altering a building, structure, object, or site. Workmanship can apply to the property as a whole or to its individual components. It can be expressed in vernacular methods of construction and plain finishes or in highly sophisticated configurations and ornamental detailing. It can be based on common traditions or innovative period techniques.

Workmanship is important because it can furnish evidence of the technology of a craft, illustrate the aesthetic principles of a historic or prehistoric period, and reveal individual, local, regional, or national applications of both technological practices and aesthetic principles. Examples of workmanship in historic buildings include tooling, carving, painting, graining, turning, and joinery. Examples of workmanship in prehistoric contexts include Paleo-Indian clovis projectile points; Archaic period beveled adzes; Hopewellian birdstone pipes; copper earspools and worked bone pendants; and Iroquoian effigy pipes.

FEELING

Feeling is a property's expression of the aesthetic or historic sense of a particular period of time. It results from the presence of physical features that, taken together, convey the property's historic character. For example, a rural historic district retaining original design, materials, workmanship, and setting will relate the feeling of agricultural life in the 19th century. A grouping of prehistoric petroglyphs, unmarred by graffiti and intrusions and located on its original isolated bluff, can evoke a sense of tribal spiritual life.

ASSOCIATION

Association is the direct link between an important historic event or person and a historic property. A property retains association if it is the place where the event or activity occurred and is sufficiently intact to convey that relationship to an observer. Like feeling, association requires the presence of physical features that convey a property's historic character. For example, a Revolutionary War battlefield whose natural and manmade elements have remained intact since the 18th century will retain its quality of association with the battle.

Because feeling and association depend on individual perceptions, their retention *alone* is never sufficient to support eligibility of a property for the National Register.

ASSESSING INTEGRITY IN PROPERTIES

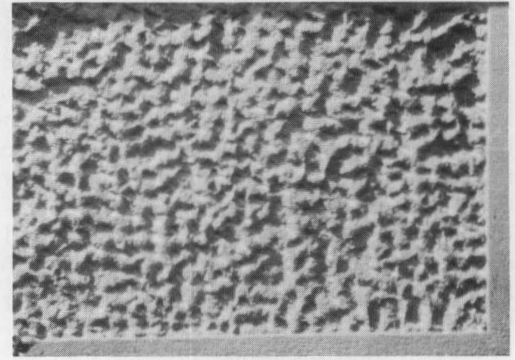
Integrity is based on significance: why, where, and when a property is important. Only after significance is fully established can you proceed to the issue of integrity.

The steps in assessing integrity are:

- Define the **essential physical features** that must be present for a property to represent its significance.
- Determine whether the **essential physical features are visible** enough to convey their significance.
- Determine whether the property needs to be **compared with similar properties**. And,
- Determine, based on the significance and essential physical features, **which aspects of integrity** are particularly vital to the property being nominated and if they are present.

Ultimately, the question of integrity is answered by whether or not the property retains the **identity** for which it is significant.

17 PRESERVATION BRIEFS



Architectural Character: Identifying the Visual Aspects of Historic Buildings as an Aid to Preserving Their Character

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Cultural Resources
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The Secretary of the Interior's "Standards for Historic Preservation Projects" embody two important goals: 1) the preservation of historic materials and, 2) the preservation of a building's distinguishing character. Every old building is unique, with its own identity and its own distinctive character. Character refers to all those visual aspects and physical features that comprise the appearance of every historic building. Character-defining elements include the overall shape of the building, its materials, craftsmanship, decorative details, interior spaces and features, as well as the various aspects of its site and environment.

The purpose of this Brief is to help the owner or the architect identify those features or elements that give the building its *visual character* and that should be taken into account in order to preserve them to the maximum extent possible.

There are different ways of understanding old buildings. They can be seen as examples of specific building types, which are usually related to a building's function, such as schools, courthouses or churches. Buildings can be studied as examples of using specific materials such as concrete, wood, steel, or limestone. They can also be considered as examples of an historical period, which is often related to a specific architectural style, such as Gothic Revival farmhouses, one-story bungalows, or Art Deco apartment buildings.

There are many other facets of an historic building besides its functional type, its materials or construction or style that contribute to its historic qualities or significance. Some of these qualities are feelings conveyed by the sense of time and place or in buildings associated with events or people. A complete understanding of any property may require documentary research about its style, construction, function, its furnishings or contents; knowledge about the original builder, owners, and later occupants; and knowledge about the evolutionary history of the building. Even though buildings may be of historic, rather than architectural significance, it is their tangible elements that embody its significance for association with specific events or persons and it is those *tangible elements* both on the exterior and interior that should be preserved.

Therefore, the approach taken in this Brief is limited to identifying those visual and tangible aspects of the historic building. While this may aid in the planning process for carrying out any ongoing or new use or restoration of the building, this approach is not a

substitute for developing an understanding about the significance of an historic building and the district in which it is located.

If the various materials, features and spaces that give a building its visual character are not recognized and preserved, then essential aspects of its character may be damaged in the process of change.

A building's character can be irreversibly damaged or changed in many ways, for example, by inappropriate repointing of the brickwork, by removal of a distinctive side porch, by changes to the window sash, by changes to the setting around the building, by changes to the major room arrangements, by the introduction of an atrium, by painting previously unpainted woodwork, etc.

A Three-Step Process to Identify A Building's Visual Character

This Brief outlines a three-step approach that can be used by anyone to identify those materials, features and spaces that contribute to the visual character of a building. This approach involves first examining the building from afar to understand its overall setting and architectural context; then moving up very close to appreciate its materials and the craftsmanship and surface finishes evident in these materials; and then going into and through the building to perceive those spaces, rooms and details that comprise its interior visual character.

Step 1: Identify the Overall Visual Aspects

Identifying the overall visual character of a building is nothing more than looking at its distinguishing physical aspects without focusing on its details. The major contributors to a building's overall character are embodied

in the general aspects of its *setting*; the *shape* of the building; its *roof* and roof features, such as chimneys or cupolas; the various *projections* on the building, such as porches or bay windows; the *recesses* or voids in a building, such as open galleries, arcades, or recessed balconies; the *openings* for windows and doorways; and finally the various exterior *materials* that contribute to the building's character. Step one involves looking at the building from a distance to understand the character of its site and setting, and it involves walking around the building where that is possible. Some buildings will have one or more sides that are more important than the others because they are more highly visible. This does not mean that the rear of the building is of no value whatever but it simply means that it is less important to the overall character. On the other hand, the rear may have an interesting back porch or offer a private garden space or some other aspect that may contribute to the visual character. Such a general approach to looking at the building and site will provide a better understanding of its overall character without having to resort to an infinitely long checklist of its possible features and details. Regardless of whether a building is complicated or relatively plain, it is these broad categories that contribute to an understanding of the overall character rather than the specifics of architectural features such as moldings and their profiles.

Step 2: Identify the Visual Character at Close Range

Step two involves looking at the building at close range or arm's length, where it is possible to see all the surface qualities of the materials, such as their *color* and *texture*, or surface evidence of craftsmanship or age. In some instances, the visual character is the result of the juxtaposition of materials that are contrastingly different in their color and texture. The surface qualities of the materials may be important because they impart the very sense of craftsmanship and age that distinguishes historic buildings from other buildings. Furthermore, many of these close up qualities can be easily damaged or obscured by work that affects those surfaces. Examples of this could include painting previously unpainted masonry, rotary disk sanding of smooth wood siding to remove paint, abrasive cleaning of tooled stonework, or repointing reddish mortar joints with gray portland cement.

There is an almost infinite variety of surface materials, textures and finishes that are part of a building's character which are fragile and easily lost.

Step 3: Identify the Visual Character of the Interior Spaces, Features and Finishes

Perceiving the character of interior spaces can be somewhat more difficult than dealing with the exterior.

In part, this is because so much of the exterior can be seen at one time and it is possible to grasp its essential character rather quickly. To understand the interior character, it is necessary to move through the spaces one at a time. While it is not difficult to perceive the character of one individual room, it becomes more difficult to deal with spaces that are interconnected and interrelated. Sometimes, as in office buildings, it is the vestibules or lobbies or corridors that are important to the interior character of the building. With other groups of buildings the visual qualities of the interior are related to the plan of the building, as in a church with its axial plan creating a narrow tunnel-like space which obviously has a different character than an open space like a sports pavilion. Thus the shape of the space may be an essential part of its character. With some buildings it is possible to perceive that there is a visual linkage in a sequence of spaces, as in a hotel, from the lobby to the grand staircase to the ballroom. Closing off the openings between those spaces would change the character from visually linked spaces to a series of closed spaces. For example, in a house that has a front and back parlor linked with an open archway, the two rooms are perceived together, and this visual relationship is part of the character of the building. To close off the open archway would change the character of such a residence.

The importance of interior features and finishes to the character of the building should not be overlooked. In relatively simple rooms, the primary visual aspects may be in features such as fireplace mantels, lighting fixtures or wooden floors. In some rooms, the absolute plainness is the character-defining aspect of the interior. So-called secondary spaces also may be important in their own way, from the standpoint of history or because of the family activities that occurred in those rooms. Such secondary spaces, while perhaps historically significant, are not usually perceived as important to the *visual* character of the building. Thus we do not take them into account in the visual understanding of the building.

Conclusion

Using this three-step approach, it is possible to conduct a walk through and identify all those elements and features that help define the visual character of the building. In most cases, there are a number of aspects about the exterior and interior that are important to the character of an historic building. The visual emphasis of this brief will make it possible to ascertain those things that should be preserved because their loss or alteration would diminish or destroy aspects of the historic character whether on the outside, or on the inside of the building.

Publications of the National Register of Historic Places

The National Register of Historic Places is the official list of the Nation's historic places worthy of preservation. Authorized by the National Historic Preservation Act of 1966, the National Park Service's National Register of Historic Places is part of a national program to coordinate and support public and private efforts to identify, evaluate, and protect America's historic and archeological resources.

National Register Brochures

- **National Register of Historic Places Brochure Poster**
- (Registro Nacional de Lugares Históricos) National Register of Historic Places Brochure Poster in Spanish - Please **e-mail us** for a copy.

National Register of Historic Places Bulletins

- **How to Apply the National Register Criteria for Evaluation (NRB 15)**
- **How to Complete the National Register Registration Form (NRB 16A) -- also see addendum below**
- **How to Complete the National Register Multiple Property Documentation Form (NRB 16B)**
- **How to Prepare National Historic Landmark Nominations**
- **Researching a Historic Property (NRB 39)**
- Historic Residential Suburbs: Guidelines for Evaluation and Documentation for the National Register of Historic Places - Please **e-mail us** for a copy.
- **Guidelines for Evaluating and Registering Archeological Properties (NRB 36)**
- **Guidelines for Evaluating and Documenting Historic Aviation Properties (NRB 43)**
- **Guidelines for Evaluating and Nominating Aids to Navigation (NRB 34)**
- **Guidelines for Identifying, Evaluating, and Registering America's Historic Battlefields (NRB 40)**
- **Guidelines for Evaluating and Registering Cemeteries and Burial Places (NRB 41) -- also see clarification of policy below**
- **How to Evaluate and Nominate Designed Historic Landscapes (NRB 18)**
- **Guidelines for Identifying, Evaluating and Registering Historic Mining Properties (NRB 42)**
- **Guidelines for Evaluating and Nominating Properties That Have Achieved Significance Within the Past Fifty Years (NRB 22)**
- **How to Apply National Register Criteria to Post Offices (NRB 13)**
- **Guidelines for Evaluating and Documenting Rural Historic Landscapes (NRB 30)**
- **Guidelines for Evaluating and Documenting Properties Associated with Significant Persons (NRB 32)**
- **Guidelines for Evaluating and Documenting Traditional Cultural Properties (NRB 38)**
- **Nominating Historic Vessels and Shipwrecks to the National Register of Historic Places (NRB 20)**
- **Defining Boundaries for National Register Properties (with Appendix, Definition of National Register Boundaries for Archeological Properties (NRB 21 & 12)**
- **How to Improve the Quality of Photographs for National Register Nominations (NRB 23) -- also see updated photo policy below**
- **Photograph Policy Update**
- Telling the Stories: Planning Effective Interpretive Programs for Places Listed in the National Register of Historic Places - Please **e-mail us** for a copy.
- Using the UTM Grid System to Record Historic Sites (NRB 28) - Please **e-mail us** for a copy.
- **GIS Map Guidance**
- **Guidelines for Local Surveys: A Basis for Preservation Planning Part 1 (NRB 24)**
- **Guidelines for Local Surveys: A Basis for Preservation Planning Part 2 (NRB 24)**

NRB refers to a numbering system that is no longer in use

National Park Service U.S. Department of the Interior

Preservation Briefs provide information on **preserving, rehabilitating, and restoring** historic buildings. These NPS Publications help historic building owners recognize and resolve common problems prior to work. The briefs are especially useful to **Historic Preservation Tax Incentives Program** applicants because they recommend methods and approaches for rehabilitating historic buildings that are consistent with their historic character.

Some of the web versions of the Preservation Briefs differ somewhat from the printed versions. Many illustrations are new and in color rather than black and white; Captions are simplified and some complex charts are omitted. To order hard copies of the Briefs, see **Printed Publications**.

- 1 **Cleaning and Water-Repellent Treatments for Historic Masonry Buildings**
- 2 **Repointing Mortar Joints in Historic Masonry Buildings**
- 3 **Improving Energy Efficiency in Historic Buildings**
- 4 **Roofing for Historic Buildings**
- 5 **The Preservation of Historic Adobe Buildings**
- 6 **Dangers of Abrasive Cleaning to Historic Buildings**
- 7 **The Preservation of Historic Glazed Architectural Terra-Cotta**
- 8 **Aluminum and Vinyl Siding on Historic Buildings: The Appropriateness of Substitute Materials for Resurfacing Historic Wood Frame Buildings**
- 9 **The Repair of Historic Wooden Windows**
- 10 **Exterior Paint Problems on Historic Woodwork**
- 11 **Rehabilitating Historic Storefronts**
- 12 **The Preservation of Historic Pigmented Structural Glass (Vitrolite and Carrara Glass)**
- 13 **The Repair and Thermal Upgrading of Historic Steel Windows**
- 14 **New Exterior Additions to Historic Buildings: Preservation Concerns**
- 15 **Preservation of Historic Concrete**
- 16 **The Use of Substitute Materials on Historic Building Exteriors**
- 17 **Architectural Character—Identifying the Visual Aspects of Historic Buildings as an Aid to Preserving their Character**
- 18 **Rehabilitating Interiors in Historic Buildings—Identifying Character-Defining Elements**
- 19 **The Repair and Replacement of Historic Wooden Shingle Roofs**
- 20 **The Preservation of Historic Barns**
- 21 **Repairing Historic Flat Plaster—Walls and Ceilings**
- 22 **The Preservation and Repair of Historic Stucco**
- 23 **Preserving Historic Ornamental Plaster**
- 24 **Heating, Ventilating, and Cooling Historic Buildings: Problems and Recommended Approaches**
- 25 **The Preservation of Historic Signs**
- 26 **The Preservation and Repair of Historic Log Buildings**
- 27 **The Maintenance and Repair of Architectural Cast Iron**
- 28 **Painting Historic Interiors**
- 29 **The Repair, Replacement, and Maintenance of Historic Slate Roofs**
- 30 **The Preservation and Repair of Historic Clay Tile Roofs**
- 31 **Mothballing Historic Buildings**
- 32 **Making Historic Properties Accessible**
- 33 **The Preservation and Repair of Historic Stained and Leaded Glass**
- 34 **Applied Decoration for Historic Interiors: Preserving Historic Composition Ornament**
- 35 **Understanding Old Buildings: The Process of Architectural Investigation**
- 36 **Protecting Cultural Landscapes: Planning, Treatment and Management of Historic Landscapes**
- 37 **Appropriate Methods of Reducing Lead-Paint Hazards in Historic Housing**
- 38 **Removing Graffiti from Historic Masonry**
- 39 **Holding the Line: Controlling Unwanted Moisture in Historic Buildings**
- 40 **Preserving Historic Ceramic Tile Floors**
- 41 **The Seismic Rehabilitation of Historic Buildings**
- 42 **The Maintenance, Repair and Replacement of Historic Cast Stone**
- 43 **The Preparation and Use of Historic Structure Reports**
- 44 **The Use of Awnings on Historic Buildings: Repair, Replacement and New Design**
- 45 **Preserving Historic Wooden Porches**
- 46 **The Preservation and Reuse of Historic Gas Stations**
- 47 **Maintaining the Exterior of Small and Medium Size Historic Buildings**
- 48 **Preserving Grave Markers in Historic Cemeteries**
- 49 **Historic Decorative Metal Ceilings and Walls: Use, Repair, and Replacement**
- 50 **Lightning Protection for Historic Buildings**