

South Carolina Historic Rehabilitation Incentives Act

Tips for Approval of Proposed Work

INTRODUCTION

A description of the proposed work must clearly describe all of the work on the residence, outbuildings, and site. Complete the boxes on the *Certified Rehabilitation Application S2 — Description of Rehabilitation*, section 6 by describing the existing conditions of each feature as well as the work that you propose for that feature. These Tips will make you more familiar with rehabilitation terminology, necessary documentation, and accepted rehabilitation treatments. All work must meet the Secretary of the Interior's *Standards for Rehabilitation*, as required by the legislation enacting this state income tax credit program. Allowable cost means that the cost for the work described can be included in the 'rehabilitation expenses' on which the taxpayer will base the 25% credit.

What this guidance means

These action words mean specific things in these Tips:

- ◆ **Avoid** — means that the taxpayer should not include this type of work in the project. In most cases, the work would not meet the *Standards* and therefore could not be approved as part of your project.
- ◆ **Not Acceptable** — means that the work does not meet the *Standards*, will not be accepted, and will cause the entire project to be denied.
- ◆ **Provide, describe, include** — means to include information in the application that is the subject of the topic.
- ◆ **Retain, reuse, preserve, and similar words** — means that the taxpayer should retain, reuse, or preserve the existing historic materials if they are in sound and usable condition. If they are not sound enough to retain, then document the condition in photographs.
- ◆ **Repair** — means that the taxpayer should retain the historic material and use techniques such as patching or refinishing to bring the feature to a sound and usable condition.
- ◆ **Rehabilitate** — means that the taxpayer should make repairs and/or alterations needed to provide for the proposed use in a way that does not damage or destroy historic building materials that define the historic character of the residence.
- ◆ **Restore** — means that the taxpayer should accurately portray the character of the residence at a particular period in time by removing later alterations and reconstructing missing features based on historic documentation.
- ◆ **Suggest, recommend, consider** — means that the South Carolina Department of Archives and History (Department) suggests or recommends that the taxpayer consider including these activities in the project (if the topic is applicable), and that such activities are preferred preservation treatments but they are not required for approval.

HISTORIC EXTERIOR ARCHITECTURAL FEATURES

Repair, rehabilitation, and restoration of documented historic exterior architectural features are allowable costs, provided that the work meets the *Standards for Rehabilitation*.

Documentation to include

- ◆ Clear photographs of feature to be repaired, rehabilitated, restored, or reconstructed.
- ◆ Description of the condition of feature, why it needs to be repaired, and methods and materials to be used in repair.
- ◆ For features to be replaced: description of why the feature cannot be repaired, photograph of the deteriorated or damaged feature, and how the new feature matches the old (in material, design, dimension, and finish).
- ◆ For features to be reconstructed: documentation (historical, pictorial and/or physical) of the feature that confirms the presence and design of the feature on this building in the historic period and a design for the new work.

Architectural features can refer to everything from wood cornice brackets to entire porches, chimneys, or dormers. While some features are an integral part of a particular architectural style, some simply are a part of the character and distinctiveness of the building.

Repair significant historic features using matching materials. Where the deterioration is so severe that replacement is necessary, match new architectural details to the original design, dimension and materials, based on physical and historical documentation.

Protect surrounding features; avoid treatments that damage adjacent features, materials, or finishes.

Retain architectural details, repair or reconstruct details using compatible materials; avoid adding details of a period or style not documented for this building.

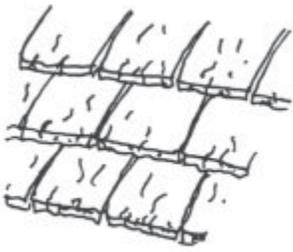
ROOF

Roof repair, rehabilitation, and restoration (including replacement) are allowable costs, provided that the work meets the *Standards for Rehabilitation*. This work may include roof material, flashing, roof deck, roof structure, dormers, vents and chimneys.

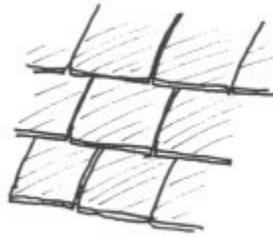
Documentation to include

- ◆ Clear photographs of existing roofing
- ◆ Manufacturer's literature or samples of proposed roofing material if other than original.

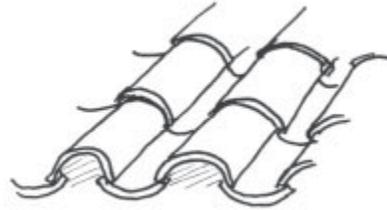
On many South Carolina residences, roofs are major design features; what happens to them and how they are treated can have a major impact on the historic character of a residence. Historic roof materials include wood shingles, slate shingles, clay tiles, decorative metal shingles, standing seam metal, V-crimp metal, or corrugated metal. Later or replacement roofing materials include asbestos shingles, asphalt shingles, and composition shingles.



Wood Shingles



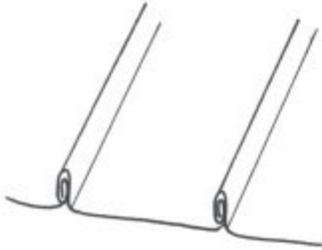
Slate



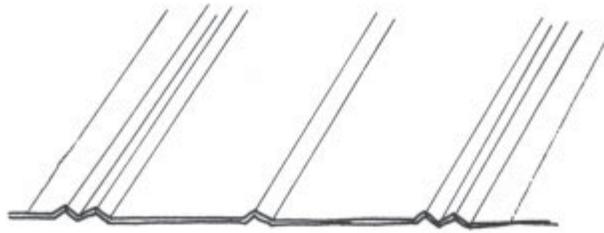
Clay Tile



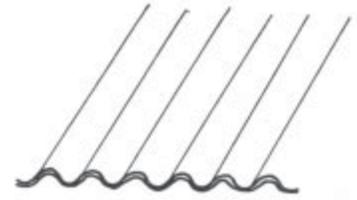
Metal Shingles



Standing Seam Metal



V-Crimp Metal



Corrugated Metal

The main jobs of a roof are to make water drain away as fast as possible, to direct that water in a specific way, and to provide a surface that will not admit any water while it is draining. The watertight surface relies on materials that overlap or are formed in specific ways to direct the flow of water. Watch for torn or loose materials and for any exposure of the underlying sheathing.

Flashing is a material that provides a watertight surface where the roof changes slope, direction, or material. Flashing also provides protection where the roof is interrupted by chimneys, dormers, vent pipes, and other protrusions. Many roof leaks occur at the flashing rather than through the roof material itself. Watch for open joints and areas where the flashing has pulled away or older flashing has rusted through or been damaged.

With any roof, especially a highly visible one, retain and repair existing historic roofing materials. Whether your residence has a wood shingle, slate, clay tile, or metal roof, new materials are generally available for repair work. Leave sound older materials in place, and choose repair and replacement materials to match the existing. Avoid removing existing materials that are not beyond repair.

If the residence requires a complete new roof we recommend the use of traditional roofing materials. This is true whether your residence still has the historic materials or a more recent replacement roof. Research and physical inspection can tell you what these materials might have been. Check for nail patterns and fragments of original materials in the attic. If historic roof materials have deteriorated to the point that complete replacement is required, match the new materials to the old in design, color, texture and other visual qualities.

For additional information on historic roofing materials and their repair, see *Preservation Briefs* #4 on roofing for historic buildings; #19 on wood shingle roofs; #29 on slate roofs; and #30 on clay tile roofs. See the inside back cover for a list of *Preservation Briefs* and the web site to access them. You may also order *Preservation Briefs* from the Department.

Repair deteriorated chimneys so they retain their historic appearance and character. If the fireplace will not be used, consider an

unobtrusive cap for the chimney. Avoid changes in height, detail, or materials of existing historic chimneys. Chimney height affects how a fireplace “draws,” and alterations to chimneys may affect fireplace function, as well as having an impact upon the architectural character of your residence. Avoid removal of visible chimneys. See the section on Heating, Ventilating, and Air-Conditioning Systems for additional information on chimney flue lining.

Retain and repair historic skylights and dormers. Avoid adding new skylights or removing historic skylights on highly visible roof areas.

EXTERIOR WALLS

Repair, rehabilitation, and restoration of exterior walls are allowable costs, provided that the work meets the *Standards for Rehabilitation*. This may include work on brick, stone, mortar, stucco, wood, and metal. Repointing masonry and painting are also allowable costs.

Documentation to include

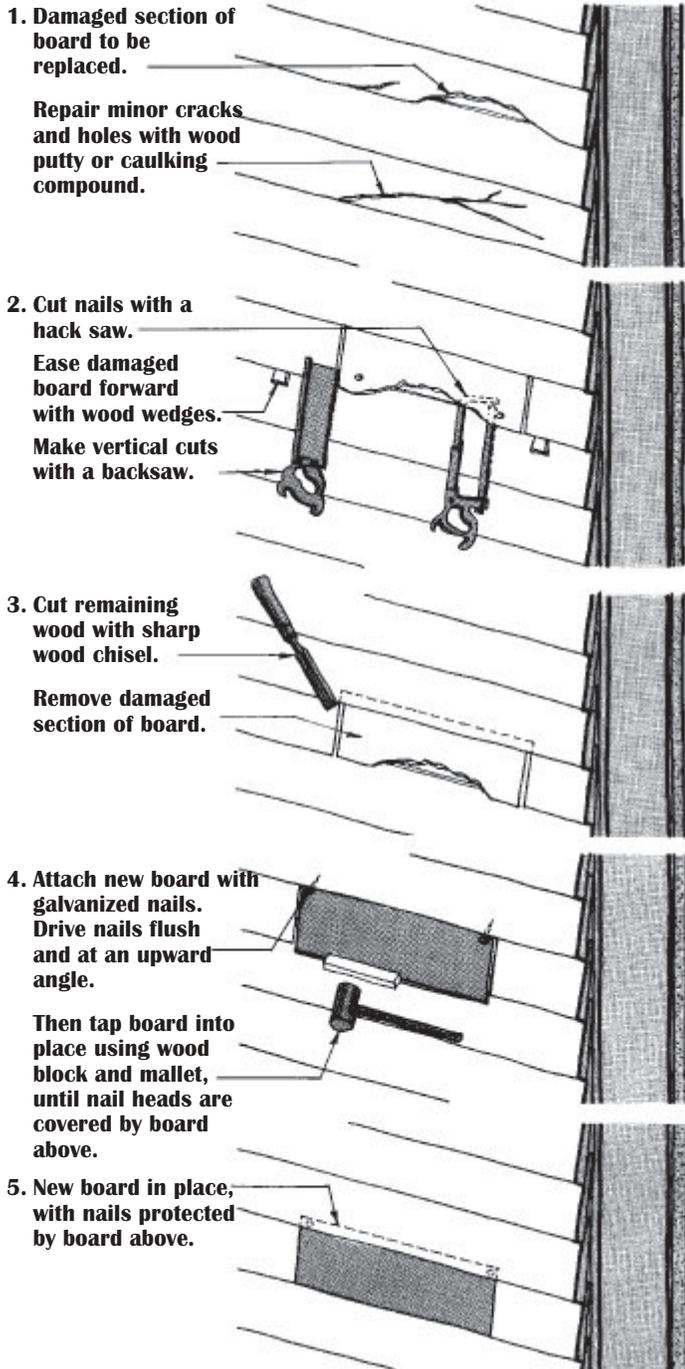
- ◆ Clear photographs of existing wall materials.
- ◆ Description of any work proposed for exterior walls; include repair or replacement of materials, cleaning, repointing, and painting.
- ◆ Drawings if major changes are proposed.
- ◆ For projects including repointing, a description of the method to be used in removing loose mortar and a specification for the replacement mortar mix.
- ◆ For exterior painting, a description of the method for paint removal and preparation for repainting. Include a description of proposed paint system (the type of paint and number of coats). We suggest that colors be chosen that are appropriate to the architectural character of the residence.

Historically, wood is the most common residential building material in South Carolina. Readily available and inexpensive, wood was used in residential construction throughout the history of the state. Often, the historic wood building components are essential to the character of a historic residence.

Wood deteriorates in the presence of water. Damp wood is food for numerous insects and fungi. Termites are notorious for causing serious

structural damage to historic wood features. The same fungi that rot fallen trees in a forest can cause serious structural damage to historic wood features. Both of these pests need water in addition to the wood. To avoid or limit the damage, control the water and keep the historic wood features dry.

Fortunately wood building features are relatively easy to repair. When clapboards are damaged, remove the damaged section and replace it with a matching board (see below).



Paint protects historic wood from the effects of exposure to the weather. It generally peels because the wood underneath has gotten damp. When wood gets damp, it expands at a rate that is greater than the paint, causing the paint to crack and peel. Remove paint gently; avoid techniques that damage historic wood (sandblasting, power grinding machines, etc.).

Prepare the surface of historic wood features using techniques that don't damage the surface. Try several techniques in different test panels until you find a technique that provides a paintable surface but doesn't damage the historic material. Use a good quality oil-based primer and two coats of high quality paint. See *Preservation Briefs #10* for more information about paint removal.

We recommend that you select paint colors for your residence based on the historic colors. Several paint manufacturers provide charts of the historic colors they have researched and developed. Choose paint colors that are compatible with the character of your residence; avoid paint colors that alter the character of the residence.

Artificial siding includes aluminum, vinyl, and composite materials. Retain historic siding materials; adding artificial siding in cases where the historic siding is sound is not acceptable. If artificial siding is an existing condition, then we recommend that you remove existing artificial siding and repair the historic material.

In cases where the historic siding is too deteriorated to save, use new siding material that matches the old in design, texture, and other visual qualities (Standard #6).

Masonry refers to building materials composed of stone, brick, concrete block, tile, terra cotta, or stucco that are generally used to construct building walls, ornamentation, and features such as chimneys, parapets, and steps. Though strong and durable, masonry can be brittle; this means that masonry features can crack if the ground or building wall supporting them shifts or sinks. If your residence has serious cracks, we recommend that you consult a qualified architect or engineer to assess the problem.

Clean gently; avoid cleaning techniques that damage the historic material. Sandblasting, for example, is not acceptable for masonry, because it removes part of the masonry along with the dirt or paint. This roughens the masonry surface, enabling it to collect dirt more quickly. Sandblasting also destroys finishes, small details, and edge definition. We recommend the gentlest technique that will clean the historic material, such as plain water in a soaker or spray hose. Take into account that this is an old residence and may never again look like a new residence. Use a qualified contractor who has the proper experience and equipment to clean historic masonry. See *Preservation Briefs #1* for more information about masonry cleaning.

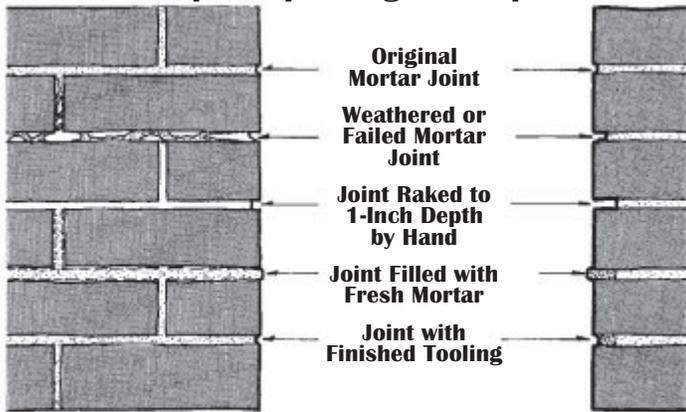
"Repointing" is the technique of removing deteriorated mortar between masonry units, and providing new mortar. The three most important issues in repointing historic masonry are: removing old mortar without damaging the masonry units; using a mortar with a compatible composition to the historic mortar; and matching the tooling of the mortar joint to the original work. Repoint masonry walls only where the existing mortar has truly failed. Minor cracks or some weathering away of the mortar usually are not major problems. Look instead for pieces of broken and loose mortar, and for areas where the mortar has fallen out completely, leaving open joints.

Outline of a repointing project:

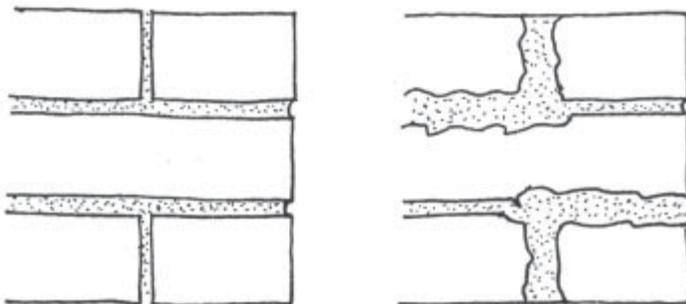
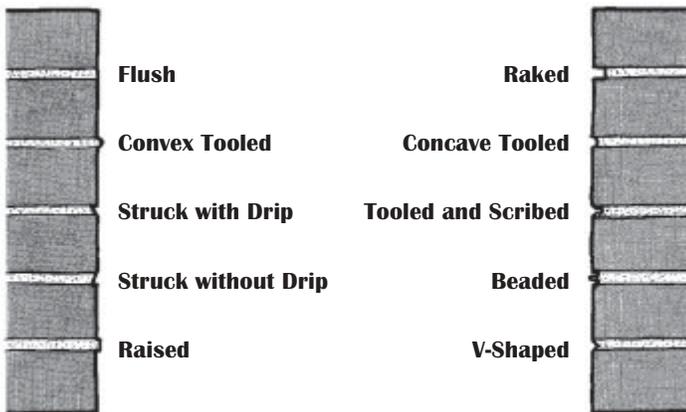
- ◆ Remove loose mortar taking care not to damage the historic masonry. Avoid circular saws that may cut into the adjacent bricks. We recommend preparation using hand tools.
- ◆ Moisten the joints prior to repointing so that the brick won't draw the moisture out of the mortar and prevent proper curing.

- ◆ Match the new mortar to the old in color and texture as well as composition. Most mortar prior to 1900 was lime-based. After that the original mortar may have included Portland Cement. See *Preservation Briefs #2* for more information about repointing.
- ◆ Match the joint “tooling” or finishing of the original mortar joint.

Proper Repointing Technique



Typical Mortar Joints



Match Mortar

Avoid

Stucco is a mixture of sand, water, and lime (or cement) that is applied over other materials, such as brick or wood. Stuccoed surfaces are common on South Carolina masonry residences. This material, which is applied wet, with a consistency like that of plaster, was used to smooth out exterior wall surfaces, to achieve stylistic effects such as simulating stone, and to cover rough building materials. Sometimes masonry or even frame walls were stuccoed some time after construction, to cover damage or alterations or to cover more porous materials.

Retain historic stucco; avoid removing any stucco without careful inspection — while stucco may have been added to a residence at a

later time, many historic residences had stucco as an original treatment. When stucco was applied to an existing brick residence, the walls were often chipped and chiseled to give the stucco a good bonding surface. A brick wall that had been altered in this way can be very unsightly without its stucco. In some cases, the stucco may be providing important weather protection to the historic masonry.

WINDOWS AND DOORS

Repair, rehabilitation, and restoration of windows, shutters, exterior doors, and associated hardware are allowable costs, provided that the work meets the *Standards for Rehabilitation*.

Documentation to include

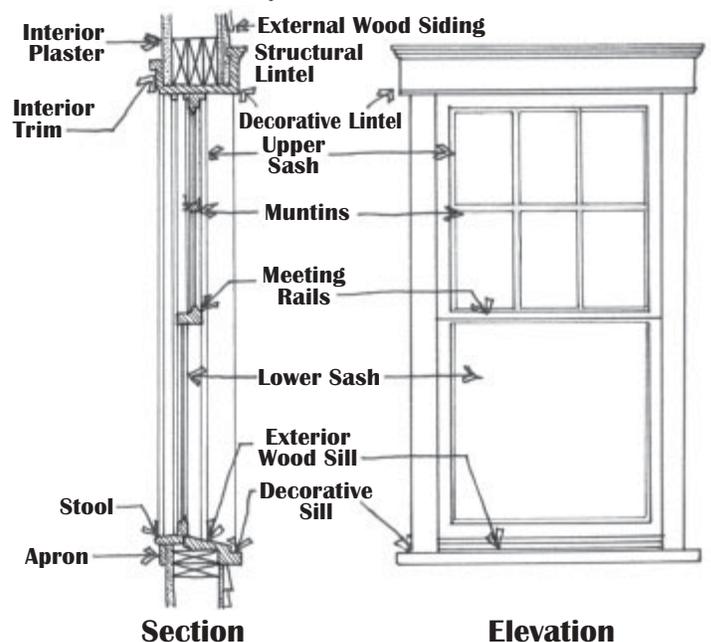
- ◆ Clear photographs of existing window and door features proposed to be repaired or replaced.
- ◆ Describe in detail the level of deterioration in the windows or doors as well as the proposed work.
- ◆ Manufacturer’s literature on proposed replacement door or window units.

Doors and windows are major design features of older buildings and how they are treated can have a major impact on the appearance and character of a historic residence. Building owners sometimes hurry to replace windows and doors — especially windows — that they perceive to be obsolete or beyond repair.

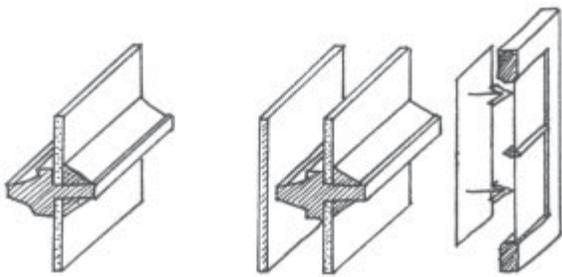
Retain existing historic window openings on highly visible walls. Avoid adding new window openings on highly visible walls. Repair existing windows including selective replacement as needed based on condition; avoid total replacement regardless of condition. Reuse historic glass or use new glass that matches the historic in visual qualities; avoid tinted glass or reflective glass. Install weather-stripping and storm windows to make existing historic windows more energy efficient. See *Preservation Briefs # 9* for more information about repair of historic wooden windows. See *Preservation Briefs # 13* for more information about repair of historic metal windows. See *Preservation Briefs # 33* on the repair of stained and leaded glass.

If existing windows are beyond repair, choose windows that match the old in materials, number of glass panes, and in thickness and profile

Anatomy of a Wood Window



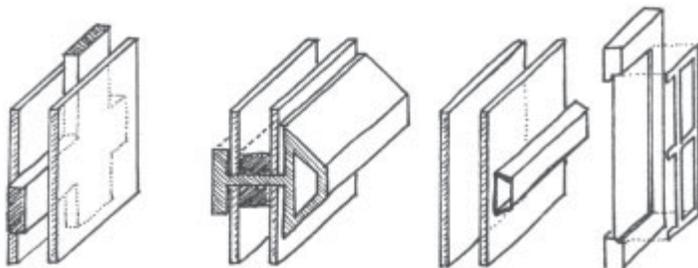
of framing and sash details (such as muntins, which are the wood pieces that support individual glass panes). Aluminum or vinyl replacement windows are not acceptable. Avoid applied (snap-in) muntins or ones that are sandwiched between two pieces of glass.



Original

Recommended

True divided light replacement with optional interior storm



“Sandwich Muntin”

Out of Scale Muntin

“Applied Muntin”

Avoid These

Retain existing historic door openings on highly visible walls. Avoid adding new door openings on highly visible walls. Repair original doors. Because doors are used often, they can appear to be more deteriorated than they actually are. Repair can include replacement of parts of a door, if the original door is unique or of elaborate design. If the historic door is beyond repair, match the design or replace it with a door style that is appropriate for your historic residence.

Repair existing shutters if feasible. Where complete replacement is necessary, match the design, dimension, location, and other visual characteristics of the historic units. Avoid adding shutters where they are not historic features of the residence.

Refer to the section on Energy Efficiency Measures for related information.

PORCH

Repair, rehabilitation, and restoration of the historic porches are allowable costs, provided that the work meets the *Standards for Rehabilitation*. This work may include: roof, flashing, deck, structure, columns, posts, railings, flooring, floor structure, and foundation.

Documentation to include

- ◆ Clear photographs of existing porch features to be repaired or replaced.
- ◆ Where restoration of missing features is part of the project, documentation of the missing features, such as historic photographs, physical evidence, or other historic sources of information.
- ◆ Drawings that show the entire porch design if the rehabilitation work is extensive.

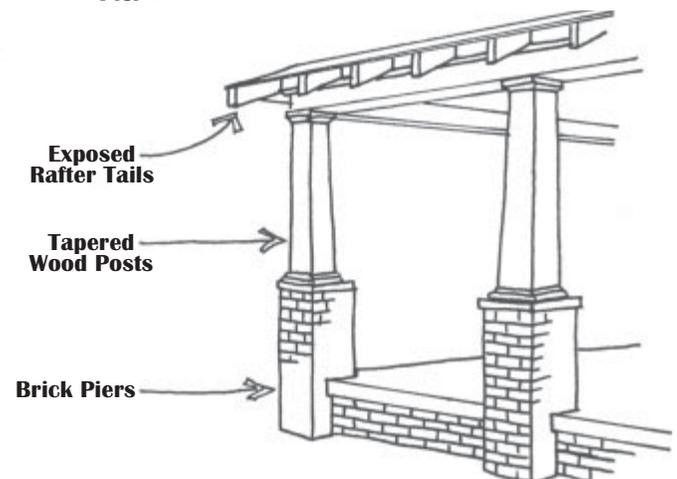
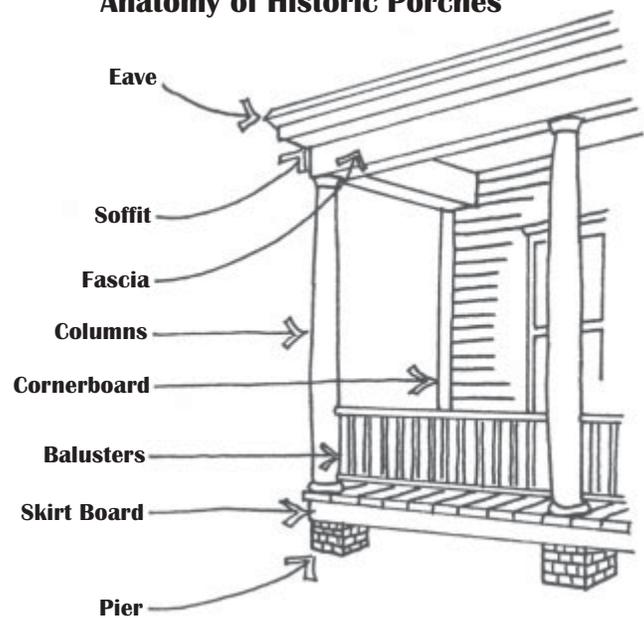
Often the focus of historic residences, porches are extremely important in defining the overall historic character of a residence. They may also have functional and/or decorative features that are important. When porches are not maintained, they can be one of the most problem-plagued areas of a historic residence because they are built of small pieces of wood that are exposed to weather on many different sides. Problems may include: buckling of flooring; rot in columns, flooring, and floor joists; and leaks in the roof or flashing.

Repair sections of the porch that can be repaired; avoid replacing the porch just because small portions are deteriorated. Replace materials that are too deteriorated to repair with matching materials. Avoid removing the porch entirely or replacing damaged features with incompatible materials.

If a porch is to be enclosed, then leave major porch design features intact and visible. The primary character of a historic porch is an open space with minimal structure. Design any enclosure to be compatible with that character. Avoid enclosing front porches. If you intend to screen a porch, we recommend screening a side porch rather than the front porch.

Replace missing porch features with ones that are in keeping with the style of the residence. See the illustrations below that identify appropriate porch details on different style residences.

Anatomy of Historic Porches



See the section on Foundations for related information.

FOUNDATIONS

Repair, rehabilitation, and restoration work on foundation features are allowable costs, provided that the work meets the *Standards for Rehabilitation*. This may include work on brick, stone, mortar, stucco, wood and metal. Installation of a foundation drain (French drain) is also an allowable cost.

Documentation to include

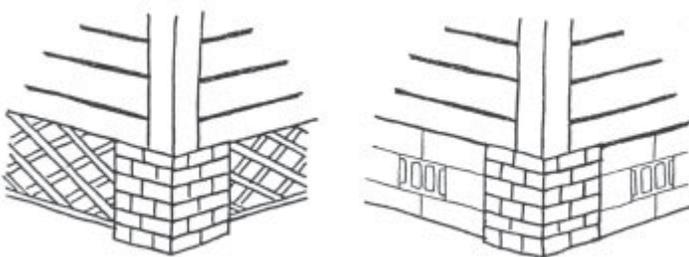
- ◆ Clear photographs of existing foundation condition.
- ◆ Brief description in application of proposed work to be performed on foundation features.

The foundation of a residence spreads out the weight of the building so the load on the supporting soil does not exceed the strength of the soil.

South Carolina residences have various kinds of foundations, ranging from a series of simple brick piers to solid poured concrete foundations that form full basements. Some foundations end just above ground level; others extend well above the ground to form raised basements.

Problems with foundations usually occur when they have been altered inappropriately or the soil has lost the ability to support the weight of the residence. "Rising damp" is a condition that can contribute to the deterioration of foundations. Rising damp is caused by water that moves up through a wall by capillary action from the ground. Signs of rising damp are usually above grade and can include darkened masonry, powdery mortar, soft brick, growth of moss or mildew, or the presence of whitish salts known as efflorescence. Powdery plaster on the interior of the building may also be a sign of rising damp. Installing a foundation drain may help to address rising damp by moving water away from the foundation. Be aware that once a water source is stopped, it can take up to one month per inch of wall thickness (12 months for 12 inch wall) for a completely soaked brick wall to dry out.

Make sure your residence site drains properly. Fix leaking gutters, downspouts and underground drain lines and keep foundation plantings pruned at least eighteen inches away from the historic residence. Add a foundation drain if the wall remains damp after addressing the basic solutions listed above.



Consider

Avoid

If solid infill is necessary, set brick or block back from the face of the pier. Include plenty of ventilation. Consider using wood lattice panels as infill if appropriate to the style of the residence. Avoid blocking in the gaps in pier-type foundations because it interferes with the air flow that keeps moisture from building up under the residence. Moisture trapped there can lead to dry rot or encourage insect infestation, and a blocked up foundation makes it hard to inspect for these conditions. Refer to the Exterior wall section on how to

properly repoint brick. Avoid adding stucco or painting brick piers if they were not stuccoed or painted historically.

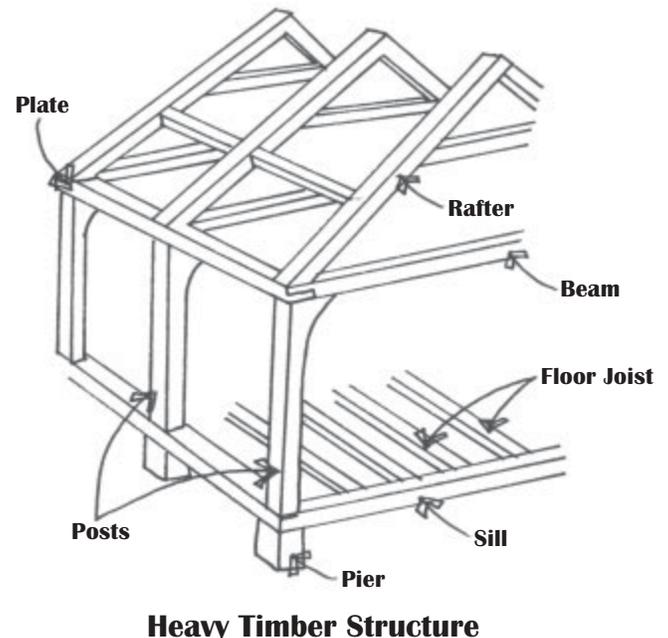
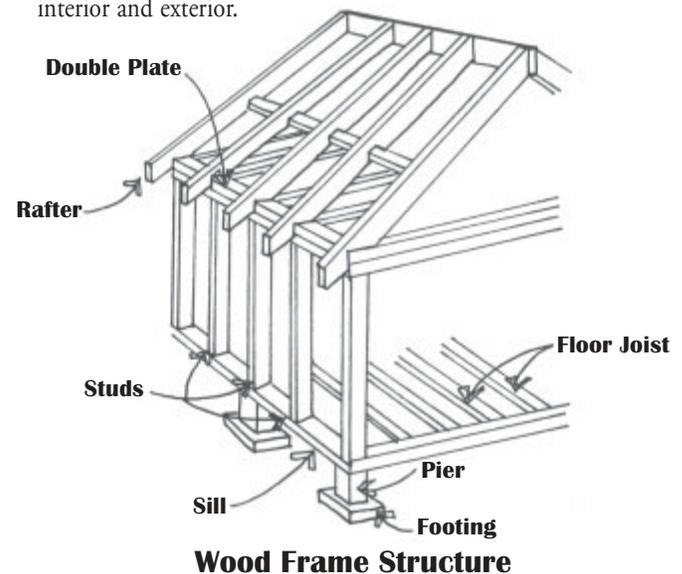
If you are concerned about serious foundation problems, we recommend that you consult with an architect or engineer to assess the problem and propose solutions.

HISTORIC STRUCTURAL SYSTEM

Repair, rehabilitation, and restoration of all historic structural features are allowable costs, provided that the work meets the *Standards for Rehabilitation*. General interior renovation is not an allowable cost (except repair of historic plaster), but structural stabilization of interior walls is an allowable cost.

Documentation to include

- ◆ Clear photographs of the exterior and/or interior spaces affected by proposed structural work.
- ◆ Describe the structural problems and how these issues will be addressed, including how proposed work will affect interior and exterior features and finishes.
- ◆ Describe any structural repair work on interior walls.
- ◆ Before and after drawings of proposed structural work, both interior and exterior.



Structural features of a historic residence can be visible or not visible, decorative or plain. These features often are part of the historic character. Examine the structural system of a historic residence and evaluate it early when planning major work. Identify the physical condition and its historic importance. Structural features include such things as footings, foundations, walls, piers, sills, joists, studs, posts, columns, beams, rafters, and trusses.

Identify, retain, and preserve those historic structural systems that are important in defining the overall historic character of the residence. This may include retaining structural features that are not visible.

See other sections related to structural work, especially Exterior Walls, Foundation, and Roof.

HISTORIC PLASTER

Repair, rehabilitation, and restoration of historic plaster are allowable costs, provided that the work meets the *Standards for Rehabilitation*. This work may include: repair of historic plaster; replacing plaster where it was a documented historic finish; use of wood or metal lath; and rehabilitation and/or restoration of documented decorative or flat plaster features. For plaster restoration to be an allowable cost, it must match the HISTORIC plaster system in THIS residence. Note that metal lath may be ADDED over wood lath to strengthen the overall plaster system.

Documentation to include

- ◆ Clear photographs of existing areas where plaster is existing or proposed to be repaired or replaced.
- ◆ Documentation of the historic plaster system for this building.
- ◆ Detailed description of historic plaster restoration.

Plaster is a versatile material and one that traditionally has been used to finish interior walls. It provides a durable surface that is easy to clean and that can be applied to flat or curved walls and ceilings. When plaster dries, it is a rather rigid material that has the ability to last a long time. However, structural problems, poor workmanship, improper curing and moisture can cause plaster to crack, separate, or detach from its supporting framework of lath (wood strips).

Preservation Briefs #21 on flat plaster and #23 on decorative plaster detail common plaster problems and how to repair and correct these issues.

Plaster was historically applied over brick, wood lath, metal lath, and gypsum lath. To be an allowable cost for the state tax credit, new work must match the historic plaster in THIS residence. We recommend that you avoid using skim-coated modern gypsum board. While this technique may meet the *Standards for Rehabilitation* and be approved as part of the overall project, it is not considered 'restoration of historic plaster' as required by the state law and the cost of this work could not be counted as 'rehabilitation expenses.'

Plastering is a skilled craft, requiring years of training and special tools. So while the homeowner could handle minor repairs, we recommend that a plasterer be hired to accomplish large-scale plaster jobs.

Repair plaster and replace non-historic material with plaster where it is a documented historic finish. Avoid removing plaster to expose brick or lath underneath. Avoid removing plaster and replacing with non-historic material.

Repair decorative plaster since it is often a component of the character of a historic interior. Based on physical and historic documentation, we recommend reconstructing decorative features such as ceiling medallions or cornices. Avoid removing ornamental plaster.

ELECTRICAL AND PLUMBING SYSTEMS

Repairs to existing or installation of new electrical service from the point of supply by the utility to the outlets or junction boxes for fixtures are allowable costs. Allowable costs also include repairs to existing or installation of new plumbing systems from the supply at the water meter (or at the supply side of the pump for a well) to the fixtures and on the sanitary sewer system from the fixture to the sewer or septic tank (excluding the tank and drainfield). Repairs to existing historic electrical and plumbing fixtures are allowable costs. New electrical appliances and fixtures and plumbing fixtures are not allowable costs. Work on electrical and plumbing systems must meet the *Standards for Rehabilitation*.

If plumbing or electrical work involves removal of historic plaster, we recommend replacement of the plaster. Repair and replacement of the damaged plaster is an allowable cost. Please see section on Historic Plaster for further guidance. Repair of historic plaster walls with other materials is not an allowable cost.

Documentation to include

- ◆ Clear photographs of existing situation to be repaired if these features are accessible. If work is to have an effect on interior features, send photographs of features that would be affected.
- ◆ Clear photographs of existing historic electrical and plumbing fixtures that are to be repaired.
- ◆ Brief description will suffice unless work will affect interior features. If interior features will be impacted, include photographs and drawings detailing areas to be affected.

The Department routinely approves work on electrical and plumbing systems, provided that the work meets the *Standards for Rehabilitation*. Avoid damage to historic features.

HEATING, VENTILATING, AND AIR-CONDITIONING SYSTEMS

Repair, rehabilitation, and restoration (including replacement) of heating, ventilating, or air-conditioning systems are allowable costs, provided that the work meets the *Standards for Rehabilitation*. This work may include relining historic chimney flues and repairing fireplace masonry.

Documentation to include

- ◆ Clear photographs of existing historic chimney, fireplace, boiler, furnace or other device to be repaired or replaced.
- ◆ Drawings showing proposed location of new unit and placement of new ductwork, if applicable.

Mechanical systems provide heating and cooling to make the residence more comfortable during seasons where the outdoor temperatures are extreme. Historic mechanical systems most often provided heating and include fireplaces, boilers, radiators, furnaces, and decorative grilles. Changes to historic mechanical systems or new mechanical systems may have an impact on the character of a residence.

Fireplaces were essential for heating and cooking in many residences and help to define the historic character of a residence. We recommend relining the chimney flue and repairing fireplace masonry to ensure that this historic heating system will work safely.

When installing or updating heating and air-conditioning systems (including furnace and boiler replacement) respect significant original interior features. Avoid cutting through trim and ornamental details and lowering ceilings. If space at the ceiling is needed for ductwork and other systems, lower only part of the ceiling instead of lowering the entire ceiling. Locate vertical ductwork in closets or secondary spaces.

Consider carefully the location of a condenser for a new mechanical cooling system or heat pump. Avoid placing condensers on visible areas on the rooftop or on the site where they are easily viewed from the street or other public areas. We recommend enclosing condensers on the site with shrubs or a small, compatible fence.

Place window air-conditioners at side or rear windows and make them as unobtrusive as possible.

If an entirely new system is being proposed, plan carefully to ensure appropriate design and installation of the new system.

Preservation Briefs #24 has information on repairing and installing heating, ventilating, and cooling systems in historic buildings.

ENERGY EFFICIENCY MEASURES

Energy efficiency measures are allowable costs, provided that the work meets the *Standards for Rehabilitation*. This work may include: attic and floor insulation, exterior or interior storm windows, storm doors, and weather-stripping. Insulation in frame walls is not an allowable cost.

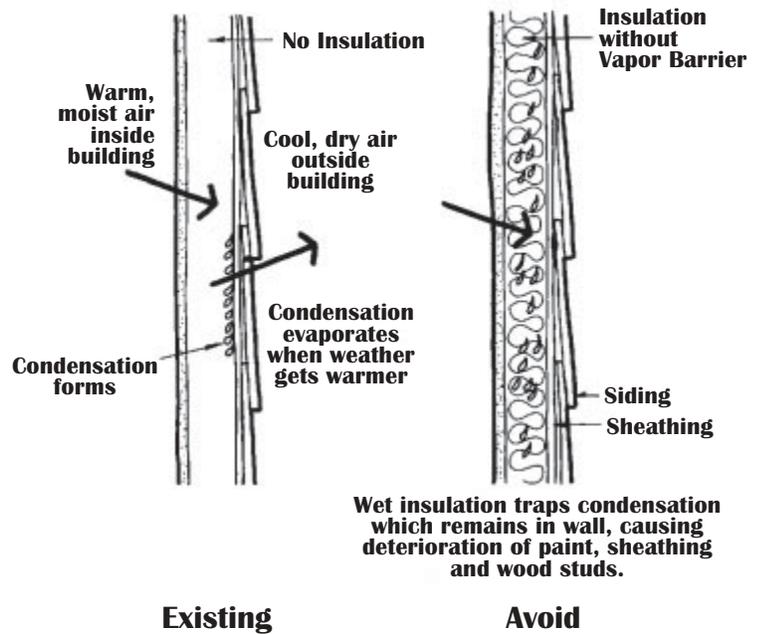
Documentation to include

- ◆ Clear photographs of affected interior spaces for insulation installation.
- ◆ Clear photographs of existing windows needing storm windows.
- ◆ Describe types of insulation to be installed, the kind of vapor barrier to be used, if any, and location and type of attic vents.
- ◆ For aluminum storm windows, indicate the final finish (baked enamel, paint, etc.).

An efficient mechanical system is the most important part of making a residence energy efficient. If the mechanical unit is more than twenty years old, we recommend that you consider replacing it with a new high-efficiency unit. Consider these other retrofitting measures that can improve energy efficiency:

- ▲ Weatherstripping doors and windows;
- ▲ Attic and crawlspace insulation;
- ▲ Pipe and duct insulation; and
- ▲ Storm windows.

We recommend attic insulation where proper vapor barriers can be installed. Avoid the use of wall insulation. Removing siding or plaster; adding rigid foam insulation or filling cavity walls with blown insulation; and reinstalling the siding or replastering without proper techniques for controlling water vapor has the potential for trapping moisture in the wall. Moisture in the wall can lead to deterioration of wood sheathing and/or wood structural framing. It is also likely to cause the exterior paint to fail prematurely.



Storm windows can be either interior or exterior types. We recommend using interior storm windows where the detail of the historic window jamb can accept them. Choose exterior storm windows with the same color as the window and have the same major structural subdivisions. For example, for a typical double-hung sash, the storm windows should have an upper and lower half and they should meet at the same point as the meeting rails of the window sash. We recommend a baked-on finish for storm windows, which most closely resembles paint. Avoid tinted or reflective storm window glass. Avoid adding tinted or reflective film to historic windows, new windows, or storm windows.

If your residence has its original screen door in place, retain that feature. If not, we recommend a storm door design that allows for the full visibility of the original door. Avoid new storm doors that obscure the majority of the original door or that are not appropriate for the architecture of the residence. For example, avoid the “crossbuck” style storm doors.



OUTBUILDINGS

Repair, rehabilitation, and restoration of a historic outbuilding are allowable costs, provided that the work meets the *Standards for Rehabilitation*. The categories of allowable work on an outbuilding are the same as for an owner-occupied residence. Interior work is not allowable except in the following categories: structural; plumbing; electrical; mechanical systems; and historic plaster. See those categories for more detail. We review all work on the interior of

outbuildings, even though some of that work may not be allowable for the tax credit. Demolition of a historic outbuilding is not an allowable cost.

Documentation to include

- ◆ Clear photographs of the existing conditions of the outbuilding. Include interior views as well as exterior views.
- ◆ Floor plans that show the existing conditions and any proposed changes. Make a distinction between the existing and the proposed work if you include them on the same floor plan.
- ◆ Elevation drawings that show any changes to the exterior walls and/or roof.

Outbuildings can help create the historic setting for the main residence. Prior to the mid-19th century, rural outbuildings were typically agricultural service buildings such as barns, stables, corn cribs, or smoke houses. Kitchens and slave quarters were often built in separate buildings. These outbuildings were often simply designed and not highly decorated. By the late 19th and early 20th century, outbuildings were often related to transportation and builders sometimes used the same architectural detailing on outbuildings as on the main residence.

Retain significant features of outbuildings; avoid changes to the height, roof shape, openings, and doors and windows. Because outbuildings usually shelter secondary activities they are often allowed to deteriorate more than the main residence. Total replacement of existing materials is not acceptable. Reuse sound historic materials to the maximum extent possible. Provide an estimate of how much of the outbuilding will have to be new materials. If the outbuilding is too deteriorated to repair and must be substantially rebuilt, then we may determine that it no longer contributes to the historic character of the property and therefore work on the outbuilding would not be allowable for the credit.

Describe any demolition of historic outbuilding(s) as a separate work item. We recommend that owners retain, rehabilitate, and use historic outbuildings because they are important in defining the overall historic character of many historic properties (see above).

NEW ADDITIONS AND NEW CONSTRUCTION

New additions and new construction on the site are not allowable costs for the credit, but we review the design as part of the overall project.

Documentation to include

- ◆ Clear photographs of the area of the historic residence to which the addition will be connected. For projects that include new construction on the site, provide photographs of the site where the new building is proposed and views from the residence to that area as well as from that area to the residence.
- ◆ Detailed drawings that include a site plan, floor plan, and elevations.

New additions and new construction can be a challenge to design in a way that is compatible with yet different from the historic residence as stated in Standard #9. When the use of the residence requires space beyond the existing rooms, then any addition or new construction should follow these basic ideas:

- ▲ Make the connection as small as possible. A smaller connector to a historic residence allows more of the original residence to be seen and it makes the addition easier to remove in the future. Avoid damage to significant historic materials, finishes, details, and features;
- ▲ Place the addition on the least visible area of the residence and/or place the new building in a minimally visible area of the site. Please be aware that some residences are designed with all four sides as primary elevations and an addition on these residences might preclude a tax credit for the project.
- ▲ Design the addition as secondary to the main residence. The most successful additions are smaller than the original residence and don't copy the historic details exactly. Avoid additions on any highly visible roof area.

SITE WORK — GRADING AND EXCAVATION

Site work is not an allowable cost for the credit, but we review it as part of the overall project. The costs of excavation are allowable only if they are associated with other allowable work (structural repair, foundation drain, electrical supply line, water line, and/or sewer line).

Documentation to include

- ◆ Clear photographs of the area where the work is proposed.
- ◆ Site plan if the work is extensive or will impact known archaeological features.

Excavation is an allowable cost if it is associated with allowable work such as structural repair, foundation drain, underground power line, water line, or sewer line. Protect any known archaeological sites by creating a "green space"; avoid disturbing significant archaeological features when excavating (see Standard #8).

LANDSCAPING — PLANTINGS AND PAVING

Landscaping is not an allowable cost for the credit, but we review it as part of the overall project.

Documentation to include

- ◆ Clear photographs of the area where the work is proposed.
- ◆ Landscaping plan if the work is extensive or will impact significant landscape features.

The landscaping of a historic residence can support the architectural and historic character of the residence. Retain significant historic landscape features (avenues, allees, formal gardens, groves, driveways, pools, fences, gates, terraces, garden walls, pergolas, gazebos, etc.).

This review will not generally include landscape design unless there are significant and historic landscape features present on the site. We suggest that you consider the mature size of new plantings and plant them far enough away from the historic residence so that they will not present a constant pruning problem. We recommend that you keep shrubs pruned approximately 18" away from the historic residence.

INTERIOR ALTERATIONS

Interior work is generally not an allowable cost for the tax credit, except work on: historic plaster; historic structural systems; HVAC; and plumbing and electrical systems exclusive of new fixtures or appliances. We review all interior work as part of the overall project.

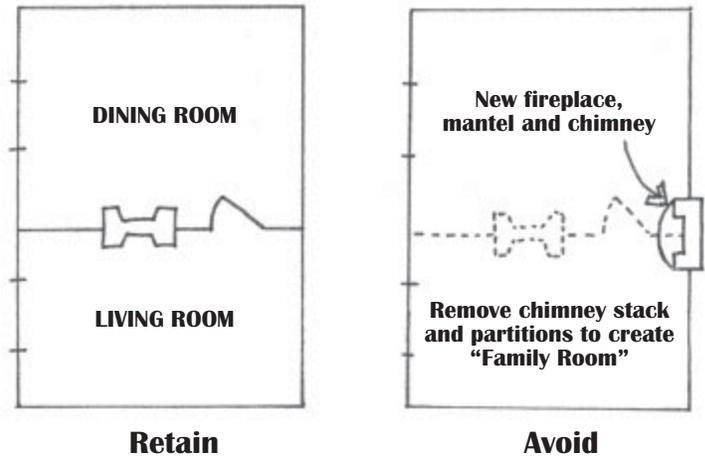
Documentation to include

- ◆ Clear photographs of the interior of the residence. Include overall views of the rooms where work will take place as well as close-up photographs of details such as historic mantels, doors, transoms, windows, trim, etc.
- ◆ Floor plan(s) showing the existing layout, and floor plan(s) showing the proposed work. Include changes to partitions as well as changes to historic doors, openings, stairs, and room arrangement.
- ◆ Description of the rehabilitation work on the interior.

The interior floor plan, the arrangement of spaces, and built-in features and applied finishes may be individually or collectively important in defining the character of a residence. Retain important historic spaces such as an entrance hall, parlor(s), stairways, and corridors. Retain significant finishes such as decorative plaster or decorative painting. Retain paint on historically painted features; avoid exposing wood where the historic treatment was not a natural finish. Retain ceilings in their historic height and material; avoid cutting holes in historic ceilings to create “cathedral” or “tray” ceilings and avoid changing the character of flat ceilings by exposing ceiling joists. Retain historic plaster (see separate section on plaster); avoid removing plaster to expose the brick or lath underneath.

INTERIOR PLAN CHANGES

The interior of a historic residence is usually arranged in a sequence of spaces; the front spaces generally include more architectural detail and more elaborate finishes. Rooms to the rear and on the upper floors of multiple floor residences generally are simpler in design and finish. Focus changes in these secondary spaces of the residence.



KITCHENS AND BATHROOMS

Kitchens and bathrooms change more often over time than any other portion of historic residences. Retain the basic location of these rooms as the planning progresses on your project. Remember that most of the work in these rooms is not allowable for the credit.

SIGNIFICANT INTERIOR FEATURES

Significant interior features include stairs, doors and trim, transoms, windows and trim, baseboards, wainscot, fireplaces, mantels, picture rail, crown molding, etc. Retain significant features; avoid removing existing historic features or adding new features that are not documented as historic for THIS residence.