



Section 3

Changes to the Building Exterior



3.1 Wood

Wood was the most commonly used building material in early Raleigh neighborhoods. The structural system of most homes is a wood framework referred to as balloon framing, a Victorian-era building innovation that set up all exterior bearing walls and partitions with single vertical studs and nailed the floor joists to those studs. Clapboard, flush siding, board and batten, or textured siding (consisting of patterned wooden shingles) was then applied to the exterior. Depending on the styles of the era and the taste and the financial resources of the owner, decorative details were added. For example, decorative wooden sawnwork, moldings, brackets, pediments, balustrades, and columns embellished early Raleigh buildings.

Even in commercial or residential buildings constructed or clad in masonry, wooden trim, sashes, and doors were typical. Porches, fences, and storefronts often were constructed of wood as well.

Things to Consider As You Plan

Wooden features and surfaces on a building should be maintained and repaired in a manner that enhances their inherent qualities and maintains as much as possible of their original character. A regular inspection and maintenance program involving caulking and sealing, carpentry, cleaning, and painting will help to keep problems with wooden features and surfaces manageable. Flexible sealants and caulking protect wooden joinery from moisture penetration as the wood shrinks and swells, and a sound paint film protects wooden surfaces from deterioration due to ultraviolet light and moisture. If a wooden feature or surface remains damp for extended periods of time, the possibility of mildew, fungal rot, or insect infestation increases dramatically.

Repair or replacement of deteriorated wooden elements or surfaces may involve selective replacement of portions in kind through splicing or piecing, or it may involve the application of an epoxy wood consolidant to stabilize the deteriorated portion in place. Specifying decay-resistant wood species for replacement of deteriorated wooden elements and surfaces may prevent future deterioration. The application of wood preservatives or the use of pressure-treated wood (wood chemically treated with preservatives during manufacture) can also extend the life of wooden elements and surfaces. However, some pressure-treated wood must be allowed to weather for six to twelve months before it is primed and painted.

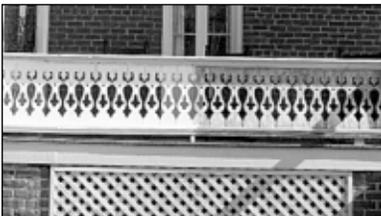
Resurfacing a wooden building with synthetic siding materials, such as aluminum, vinyl, asbestos, and asphalt, is usually a short-sighted solution to a maintenance problem. In fact, they may hide signs of damage or deterioration, preventing early detection and repair. At their best, synthetic sidings conceal the historic fabric of a building, and at their worst, they remove or destroy with nail holes the materials and the craftsmanship that reflect America's cultural heritage and allow for new rot to go undetected. Because the application of synthetic sidings does grave damage to the character of most historic buildings, it is not appropriate in the historic districts.



Turned spindles and columns, pierced brackets, and a radiating pattern of flush boards in the porch gable of this clapboard house illustrate the versatility of wood for detailing.



The bands of scallop-patterned wooden shingles that subdivide the clapboards of this exterior wall are highlighted by the multicolor paint scheme.



These decorative sawnwork balusters, in the process of being repainted, embellish an Oakwood front porch.



3.1 Wood: Guidelines

- .1 Retain and preserve wooden features that contribute to the overall historic character of a building and a site, including such functional and decorative elements as siding, shingles, cornices, architraves, brackets, pediments, columns, balustrades, and architectural trim.
- .2 Protect and maintain wooden surfaces and features through appropriate methods:
 - Inspect regularly for signs of moisture damage, mildew, and fungal or insect infestation.
 - Provide adequate drainage to prevent water from standing on flat, horizontal surfaces and collecting on decorative elements.
 - Keep wooden joints properly sealed or caulked to prevent moisture infiltration.
 - Treat traditionally unpainted, exposed wooden features with chemical preservatives to prevent or slow their decay and deterioration.
 - Retain protective surface coatings, such as paint, to prevent damage from ultraviolet light and moisture.
 - Clean painted surfaces regularly by the gentlest means possible, and repaint them only when the paint film is damaged or deteriorated.
- .3 Repair historic wooden features using recognized preservation methods for patching, consolidating, splicing, and reinforcing.
- .4 If replacement of a deteriorated detail or element of a wooden feature is necessary, replace only the deteriorated detail or element in kind rather than the entire feature. Match the original detail or element in design, dimension, texture, and material. Consider compatible substitute materials only if using the original material is not technically feasible.
- .5 If replacement of an entire wooden feature is necessary, replace it in kind, matching the original in design, dimension, detail, material, and texture. Consider compatible substitute materials only if using the original material is not technically feasible.
- .6 If a wooden feature is completely missing, replace it with a new feature based on accurate documentation of the original feature or a new design compatible in scale, size, material, texture, and color with the historic building and district.
- .7 Repaint wooden surfaces and features in colors that are appropriate to the historic structure and district. See Section 3.4 for further guidance.
- .8 It is not appropriate to clean wooden features and surfaces with destructive methods such as sandblasting, power washing, and using propane or butane torches. Clean using gentle methods such as low-pressure washing with detergents and natural bristle brushes. Chemical strippers can be used only if gentler methods are ineffective.
- .9 It is not appropriate to strip historically painted surfaces down to bare wood and apply clear stains or finishes to create a natural wood appearance.
- .10 It is not appropriate to replace painted wooden siding that is sound with new siding to achieve a uniformly smooth wooden surface.
- .11 It is not appropriate to replace or cover wooden siding, trim, or window sashes with contemporary substitute materials such as aluminum, masonite, or vinyl.
- .12 It is not appropriate to introduce wooden features or details to a historic building in an attempt to create a false historical appearance.



Regular maintenance of exterior wooden columns is critical to prevent the need for expensive repairs or replacement in the future.



3.2 Masonry

Site features as well as building elements, surfaces, and details executed in masonry materials contribute to the character of Raleigh Historic Districts. A variety of historic masonry materials, such as brick, terra-cotta, limestone, granite, stucco, slate, concrete, cement block, and clay tile, are employed for a range of district features, including sidewalks, driveways, steps, walls, roofs, foundations, parapets, and cornices.

A few clay tile roofs and a number of slate roofs, occasionally embellished by patterns created through variations in color and shape, distinguish some early Raleigh buildings. Brick foundations are quite common in the districts; stone foundations are far less typical. Brick or stone exterior walls clad most buildings in the commercial and institutional districts. Although clapboard siding is more typical in residential districts, some brick and stone are also found there. Original granite curbing and patterned brick sidewalks contribute to the character of some district streets as well.



A prominent feature of the Mission-style City Market is its distinctive clay tile roof.



The corbelled brick chimneys, patterned slate roof, and brick exterior walls with stone quoins at the corners are all significant masonry features of the Executive Mansion.



A granite foundation with beaded mortar joints adds distinction to this residential foundation.

Things to Consider As You Plan

Masonry surfaces require minimal maintenance and are known for their durability. They develop a patina over time and should be cleaned only when heavy soiling or stains occur. Usually, gentle cleaning using a low-pressure water wash with detergent and the scrubbing action of a natural bristle brush will accomplish the task. Occasionally, a chemical masonry cleaner may be necessary. In that case it is important to select a chemical cleaner that is appropriate for the specific masonry material, to test the solution on an inconspicuous sample area in advance, to follow recommended application procedures, and to neutralize and rinse the surface thoroughly to prevent any further chemical reaction. The use of abrasive methods such as sandblasting, waterblasting, and power washing is destructive to historic masonry surfaces and not appropriate.

The painting of unpainted masonry surfaces is not considered appropriate because it conceals the inherent color and texture and initiates a continuing cycle of paint maintenance. However, the repainting of previously painted masonry is encouraged over attempts to remove the paint films chemically or abrasively.

Moisture penetration, with subsequent damage to a masonry wall, is often the result of open or deteriorated mortar joints. The wall can be repaired through skillful repointing of the joints with new mortar. Before repointing, any loose or deteriorated mortar must be removed with hand tools, taking care not to chip or damage the surrounding masonry. In a proper repointing, the new mortar will match the visual and physical properties of the original mortar, including its strength. Mortar high in portland cement content exceeds the strength of historic brickwork and will deteriorate it. The new mortar joint should match the original in width and profile. Moisture damage may also cause a stucco coating to separate from its masonry backing. To repair it, any loose or deteriorated stucco should be removed, and the area should then be patched with new stucco to match the original in composition, texture, color, and strength.

If masonry units themselves are damaged or missing, replacement units should match the original as closely as possible in design, material, dimension, color, texture, and detail. Beyond the individual units, any bond pattern or detailing of the original feature should be duplicated. Given the selection of brick and stone units available today, replacement in kind is generally not an issue. Consequently, substitutions of materials or masonry systems, such as concrete units for brick or exterior insulation systems for traditional stucco, are not appropriate.



3.2 Masonry: Guidelines

- .1 Retain and preserve masonry features that contribute to the overall historic character of a building and a site, including walls, foundations, roofing materials, chimneys, cornices, quoins, steps, buttresses, piers, columns, lintels, arches, and sills.
- .2 Protect and maintain historic masonry materials, such as brick, terra-cotta, limestone, granite, stucco, slate, concrete, cement block, and clay tile, and their distinctive construction features, including bond patterns, corbels, water tables, and unpainted surfaces.
- .3 Protect and maintain historic masonry surfaces and features through appropriate methods:
 - Inspect surfaces and features regularly for signs of moisture damage, vegetation, structural cracks or settlement, deteriorated mortar, and loose or missing masonry units.
 - Provide adequate drainage to prevent water from standing on flat, horizontal surfaces, collecting on decorative elements or along foundations and piers, and rising through capillary action.
 - Clean masonry only when necessary to remove heavy soiling or prevent deterioration. Use the gentlest means possible.
 - Repaint painted masonry surfaces when needed.
- .4 Repair historic masonry surfaces and features using recognized preservation methods for piecing-in, consolidating, or patching damaged or deteriorated masonry. It is not appropriate to apply a waterproof coating to exposed masonry rather than repair it.
- .5 Repoint masonry mortar joints if the mortar is cracked, crumbling, or missing or if damp walls or damaged plaster indicate moisture penetration. Before repointing, carefully remove deteriorated mortar using hand tools. Replace the mortar with new mortar that duplicates the original in strength, color, texture, and composition. Match the original mortar joints in width and profile.
- .6 If replacement of a deteriorated detail, module, or element of a masonry surface or feature is necessary, replace only the deteriorated portion in kind rather than the entire surface or feature. Consider compatible substitute materials only if using the original material is not technically feasible.
- .7 If replacement of a large masonry surface or entire feature is necessary, replace it in kind, matching the original in design, detail, dimension, color, pattern, texture, and material. Consider compatible substitute materials only if using the original material is not technically feasible.
- .8 If a masonry feature is completely missing, replace it with a new feature based on accurate documentation of the original feature or a new design compatible with the scale, size, material, and color of the historic building and district.
- .9 Test any cleaning technique, including chemical solutions, on an inconspicuous sample area well in advance of the proposed cleaning to evaluate its effects. It is not appropriate to clean masonry features and surfaces with destructive methods, including sandblasting, high-pressure waterblasting, and power washing.
- .10 Repaint previously painted masonry surfaces in colors that are appropriate to the historic material, building, and district. It is not appropriate to paint unpainted masonry surfaces that were not painted historically.



The Oakwood Cemetery gate.



3.3 Architectural Metals

In the historic districts a variety of architectural metals are employed in the detailing and the surfacing of buildings, street elements, and site features. Architectural metals are commonly used for numerous roofing and guttering applications, including standing-seam roofs, flashing, gutters, downspouts, finials, cornices, copings, and crestings. Beyond those building features, other architectural elements often crafted or detailed in metal include storm doors and windows, vents and grates, casement windows and industrial sash, railings, storefronts, hardware, and trimwork. Architectural metals also appear throughout the districts in the form of fences, gates, streetlights, signs, signposts, site lighting, statuary, fountains, and tree guards and grates.



Standing-seam terneplate roofs are quite common in the residential districts.



The paint film on this cast-iron fence is failing because of corrosion. All rust must be removed before repainting.



The architectural significance of the decorative metal work on the front entrances to the Justice Building warranted automating this pair of steel doors rather than replacing them to meet accessibility requirements.

Traditional architectural metals, such as copper, tin, terneplate, cast iron, wrought iron, lead, and brass, and more contemporary metals, such as stainless steel and aluminum, are all found within the historic districts. The shapes, textures, and detailing of these metals reflect the nature of their manufacture, whether wrought, cast, pressed, rolled, or extruded.

Things to Consider As You Plan

The preservation of architectural metal surfaces, features, and details requires regular inspection and routine maintenance to prevent their deterioration due to corrosion, structural fatigue, or water damage. Corrosion, or oxidation, of metal surfaces is a chemical reaction usually resulting from exposure to air and the moisture it contains, but corrosion can also result from galvanic action between two dissimilar metals. With all ferrous metal surfaces, maintaining a sound paint film is critical in protecting the surfaces from corrosion. If a paint film fails, leaving a ferrous metal unprotected, corrosion begins. The subsequent removal of all rust and immediate priming with a zinc-based primer or other rust-inhibiting primer is critical to halt the deterioration and prevent future corrosion. Copper and bronze surfaces develop a distinctive patina and should not be painted.

The cleaning of architectural metals varies, depending on how soft, or malleable, the metals are. Soft metals, such as lead, tin, terneplate, and copper, are best cleaned with chemical cleaners that will not abrade their soft surface texture. However, any chemical cleaner should always be tested on an inconspicuous sample area in advance to determine if it will discolor or alter the metal itself. Abrasive cleaning techniques such as grit blasting are too harsh for soft metals and should never be used on them. Once cleaned, unpainted soft metal elements like brass or bronze hardware may be protected from corrosion with a clear lacquer.

Cleaning hard metals, such as cast or wrought iron and steel, is best accomplished by handscraping or wire brushing to remove any corrosion before repainting. In extreme cases a low-pressure (80–100 lbs. per square in.) glass bead abrasive cleaning may be necessary if wire brushing has proven ineffective.

Patching or replacing deteriorated metal in kind is always preferable to using substitute materials. Corrosion due to galvanic reaction between dissimilar metals limits the options of patching one metal with another. If a detail of a painted metal feature such as a decorative cornice is missing or deteriorated, replacement in kind may not be feasible, and the replication of the detail in fiberglass, wood, or aluminum may be appropriate. Asphalt products such as roofing tar corrode metals and should never be used to patch flashing or other metal surfaces.



3.3 Architectural Metals: Guidelines

- .1 Retain and preserve architectural metal features that contribute to the overall historic character of a building and a site, including such functional and decorative elements as roofing, flashing, storefronts, cornices, railings, hardware, casement windows, and fences.
- .2 Retain and preserve architectural metals, such as copper, tin, brass, cast iron, wrought iron, lead, and terneplate, that contribute to the overall historic character of the district.
- .3 Protect and maintain architectural metal surfaces and features through appropriate methods:
 - Inspect regularly for signs of moisture damage, corrosion, structural failure or fatigue, galvanic action, and paint film failure.
 - Provide adequate drainage to prevent water from standing on flat, horizontal surfaces and collecting on decorative elements.
 - Clear metal roofs and gutters of leaves and debris.
 - Retain protective surface coatings, such as paint and lacquers, to prevent corrosion.
 - Clean when necessary to remove corrosion or to prepare for recoating. Use the gentlest effective method.
 - Repaint promptly when paint film deteriorates.
- .4 Repair deteriorated architectural metal features and surfaces using recognized preservation methods for splicing, patching, and reinforcing.
- .5 If replacement of a deteriorated detail or element of an architectural metal feature is necessary, replace only the deteriorated portion in kind rather than the entire feature. Match the original detail or element in design, dimension, texture, and material. Consider compatible substitute materials only if using the original material is not technically feasible.
- .6 If replacement of an entire architectural feature is necessary, replace it in kind, matching the original feature in design, dimension, detail, texture, and material. Consider compatible substitute materials only if using the original material is not technically feasible.
- .7 If an architectural metal feature is completely missing, replace it with a new feature based on accurate documentation of the original design or a new design compatible in scale, size, material, and color with the historic building and district.
- .8 Repaint architectural metal surfaces and features in colors that are appropriate to the historic building and district. See Section 3.4 for guidance.
- .9 Clean soft metals, including lead, tin, terneplate, and copper, with chemical solutions after pretesting them to ensure that they do not damage the color and the texture of the metal surface. It is not appropriate to clean soft metal surfaces with destructive methods like grit blasting.
- .10 Clean hard metals such as cast iron, wrought iron, and steel using the gentlest means possible. Consider low-pressure glass bead blasting only if hand-scraping and wire brushing have been ineffective.
- .11 It is not appropriate to introduce architectural metal features or details to a historic building in an attempt to create a false historical appearance.
- .12 It is not appropriate to patch metal roofs or flashing with tar or asphalt products.



Metal is a durable choice for decorative fences.



3.4 Paint and Paint Color

A well-executed exterior color combination can dramatically alter the appearance of a building. Likewise, the application of garish colors on a building can overpower its architectural character and compromise its integrity. Although an exterior paint job is not an irreversible change to a building, it is a highly visible and relatively expensive one, so a careful study of the style of the building, the surrounding streetscape, and the region's climatic conditions makes sense.

Historically, house colors were affected by technology, cultural attitudes, and social conditions. Individuals interested in reproducing a building's original color scheme can have paint scrapings analyzed to determine its color history. Architectural conservators and professional preservationists, such as those on the staff of the North Carolina State Historic Preservation Office, can assist in this process. If a building's original color scheme is unknown or not pleasing to its owner, then considering other color combinations is appropriate. Property owners should take advantage of the many excellent resources now available that describe historic color palettes and appropriate combinations. The commission has many of these in its library for reference.



When multiple layers of paint begin to check and alligator, as this column's surface has, they must be scraped and sanded down to the first sound paint film layer before repainting.



In selecting new paint colors for this residence, test areas of proposed colors were applied to the facade for viewing.



Layers of paint were successfully chemically stripped from the Labor Building's facades during a major rehabilitation.

Things to Consider As You Plan

Routine cleaning of painted surfaces is an important maintenance step. Often, washing of a previously painted exterior with a garden hose will reveal that the paint film is intact under the surface dirt or mildew. However, power washing can damage intact paint layers and force water into the wall itself.

The success and longevity of any paint job depend primarily on the quality of the surface preparation and the paint. Proper preparation includes removing all loose or peeling paint down to the first sound paint layer. Stripping intact layers of paint is unnecessary and undesirable from both a historical and a practical standpoint. Often, only handscraping and handsanding are necessary for removing loose paint. Destructive paint-removal methods, such as sandblasting, waterblasting, or using propane or butane torches, are not appropriate for historic buildings because they irreversibly damage historic woodwork, soft metals, and masonry, and they are potential fire hazards. However, if paint is severely deteriorated and gentler methods are not successful, thermal devices such as electric hot-air guns may be used with care on decorative wooden features, and electric heat plates may be used with care on flat wooden surfaces. Similarly, chemical paint strippers may be used to augment gentler methods, but the surface must then be neutralized to allow the new paint film to bond.

Mildew can ruin a new paint job. Eradicate it before repainting by using either a commercial preparation containing 5 percent calcium hypochlorite or a home-made solution consisting of 3 quarts of warm water, 1 quart of chlorine bleach, 2/3 cup of borax, and 1/2 cup of household detergent. Either solution should be applied with care using a soft scrub brush, and thoroughly rinsed off. Keep the solution off your skin.

Once wooden surfaces have been cleaned, scraped, and sanded, any exposed surfaces should be primed with a high-quality exterior primer, and all open joints should be recaulked (but not the horizontal lap seam of clapboard siding) before repainting with a compatible paint. Although the color is more uniform and less translucent than the early, less homogeneous oil paints, today's high-quality latex and acrylic semigloss paints provide a similar appearance.

Preparation for painting stucco and previously painted brick or stone is similar to that for painting wooden surfaces. The guidelines for architectural metals address the painting of metals.



3.4 Paint and Paint Color: Guidelines

- .1 Preserve and protect original exterior building surfaces and site features that were painted, by maintaining a sound paint film on them.
- .2 Protect and maintain previously painted exterior surfaces in appropriate ways:
 - Inspect painted surfaces regularly for signs of discoloration, moisture damage, mildew, and dirt buildup.
 - Clean painted surfaces regularly to avoid unnecessary repainting. Use the gentlest means possible.
 - Remove deteriorated and peeling paint films down to the first sound paint layer before repainting. Use the gentlest means possible, such as handscraping and handsanding. Use electric heat guns and plates with caution and only if gentler methods are ineffective.
 - Ensure that surfaces to be repainted are clean and dry, and that any exposed wood or metal surface has been primed so that new paint will bond properly.
 - Repaint previously painted surfaces with compatible paint.
- .3 When repainting, select paint colors appropriate to the historic building and district. Enhance the features of a building through appropriate selection and placement of paint color consistent with its architectural style. In particular, the foundation color is usually darker than the body of the building in order to visually anchor it to the ground.
- .4 It is not appropriate to paint brick, stone, copper, bronze, concrete, or cement block surfaces that were historically unpainted.
- .5 It is not appropriate to strip wooden surfaces that were historically painted down to bare wood and apply clear stains or sealers to create a natural wood appearance.
- .6 It is not appropriate to replace painted wooden siding that is sound with new siding to achieve a uniformly smooth wooden surface.
- .7 It is not appropriate to remove paint films before repainting through destructive methods such as sandblasting, waterblasting, power washing, or the use of propane or butane torches.



More elaborate paint schemes can be appropriate for highly ornamented architectural styles like this Queen Anne-style dwelling.



3.5 Roofs

The roof form and pitch are among the major distinguishing characteristics of historic buildings. Roofs can be flat, pitched, hipped, curved, or arranged in various combinations of these forms. Certain architectural styles are clearly distinguished by roof types: Second Empire-style buildings always display some form of a mansard or curved roof; classical buildings usually feature simple hipped or pitched roofs; and many Gothic Revival and picturesque adaptations display steep-pitched, complex arrangements of roofs and gables. Commercial buildings often exhibit decorative copings along the facade parapet. Roofing materials as well contribute to the character of historic buildings. Depending on the age and the style of the building, the original roofing may have been any of a variety of materials, including wood or metal shingles, slates, clay tiles, and standing-seam metal. Asphalt and asbestos shingles became popular roofing materials in the twentieth century both for new construction and for reroofing of earlier buildings. Historic roofing materials were usually dark in color.

Things to Consider As You Plan

It is particularly important to retain and preserve historic roofs that create distinctive effects through shapes or color, because to alter or remove them would result in the loss of a significant architectural feature. If a roofing material must be replaced and is not readily available, a property owner should identify a compatible substitute material that closely resembles the original. When a roofing material is clearly distinctive to a building's architectural style, retaining or replacing it in kind is important. For example, a Mission-style building that features a clay tile roof should not be reroofed with fiberglass shingles. This principle applies to shingle patterns as well; if a mansard roof is decorated with polychromatic slates, their removal would compromise the building's architectural character.

Routine care and maintenance of a roof are critical. A leaky roof allows water damage to the structure and detail elements of a building. It is wise to keep a roof free of leaves and other debris and to inspect it regularly for leaks, checking for loose or damaged shingles, slates, or tiles and repairing them immediately. Slate and clay tiles are extremely durable but brittle. They can last more than a century, but their fasteners, flashing, and sheathing may not. However, if they are carefully reset, they may last another lifetime. Metal roofs, if kept painted, can last more than a century as well. By contrast, a good-quality fiberglass shingle roof will last twenty to thirty years. The metal flashing around chimneys and at the juncture of roof planes must be maintained and replaced as necessary. Using terne-coated metal (which requires paint), copper, or rolled aluminum with a factory-applied finish to construct valleys is far more authentic in appearance and longer lasting than weaving asphalt shingles. Coating valleys or roofing materials with roofing tar should never be done.

Gutters, scuppers, and downspouts must be cleaned out often and kept in good repair if they are successfully to carry water off the roof. Distinctive built-in gutters that are incorporated into the roof and concealed from view within a boxed cornice are important to retain. However, they must be kept properly functioning to avoid undetected damage to the structure. The distinctive shape of half-round gutters is typical for exposed gutters and preserves cornice crown molding.

Because contemporary roof features such as skylights and solar collectors often compromise the character of a building and damage historic roof features and materials, they are generally discouraged. If they are proposed, it is important to ensure that they will not damage or diminish the historic character of the building or the district.



This well-maintained slate roof includes valleys and crestings that have a sound paint film protecting them from corrosion.



Standing-seam metal roofs must be kept painted, or they will begin to corrode.



A missing downspout from the main gable and a large collection of fallen leaves will accelerate the deterioration of the shingles on the rear gable of this roof.



3.5 Roofs: Guidelines

- .1 Retain and preserve roofs and roof forms that contribute to the overall historic character of a building, including their functional and decorative features, such as roofing materials, cresting, dormers, chimneys, cupolas, and cornices.
- .2 Protect and maintain the metal, wooden, and masonry elements of historic roofs through appropriate methods:
 - Inspect regularly for signs of deterioration and moisture penetration.
 - Clean gutters and downspouts to ensure proper drainage.
 - Replace deteriorated flashing as necessary.
 - Reapply appropriate protective coatings to metal roofs as necessary.
 - Maintain adequate ventilation of roof sheathing to prevent moisture damage.
 - Ensure that roofing materials are adequately anchored to resist wind and water.
 - Re-fasten loose (or replace damaged) shingles, slates, or tiles.
- .3 Repair historic roofs and their distinctive features through recognized preservation methods for resetting or reinforcing.
- .4 If replacement of a partially deteriorated roof feature is necessary, replace only the deteriorated portion in kind to match the original feature in design, dimension, detail, color, and material. Consider compatible substitute materials only if using the original material is not technically feasible.
- .5 If full replacement of a deteriorated historic roofing material or feature is necessary, replace it in kind, matching the original in scale, detail, pattern, design, material, and color. Consider compatible substitute materials only if using the original material is not technically feasible.
- .6 If a roof feature is completely missing, replace it with a new feature based on accurate documentation of the original feature or a new design compatible in scale, size, material, and color with the historic building and district.
- .7 It is not appropriate to remove a roof feature that is important in defining the overall historic character of a building, rather than repair or replace it.
- .8 If new gutters and downspouts are needed, install them so that no architectural features are lost or damaged. Select new gutters and downspouts that match trim color, unless they are copper. Retain the shape of traditional half-round gutters and downspouts if replacing them.
- .9 It is not appropriate to replace concealed, built-in gutter systems with exposed gutters.
- .10 It is not appropriate to introduce new roof features such as skylights, dormers, or vents if they will compromise the historic roof design, or damage character-defining roof materials or the character of the historic district.
- .11 It is not appropriate to install ventilators, solar collectors, antennas, skylights, or mechanical equipment in locations that compromise character-defining roofs or on roof slopes prominently visible from the street.
- .12 It is not appropriate to install exposed tarpaper rolls as a finished roofing material or roofing tar as a replacement for valley flashing.
- .13 It is not appropriate to patch any roofing or flashing with tar or asphalt products.



A finial adds a distinctive accent to the top of this conical roof while protecting the peak from water penetration.