

Chapel Hill Historic District Design Guideline Revisions PART 1

Background

The Design Guidelines were divided by Consultant Heather Slane into four (4) parts. Rough drafts, without illustrations, have been shared for:

- Part 1 (Changes to Building Materials and Elements, Accessibility, Sustainability, Disaster Preparedness)
- Part 2 (Site Features, Streetscape, Archaeology, Demolition, Relocation)
- Part 3 (New Construction and Additions)
- Part 4 (Introduction, District Descriptions, Appendixes).

These were circulated by email to the Historic District Commission (HDC) Design Guidelines Committee, with individual committee member review responses sent to the consultant and Planning Department staff. The following is a summary of substantive comments and discussion items raised by the consultant and by members. These items are scheduled to be discussed at the July 29, 2020 HDC Committee meeting.

The following pages reflect the input of the committee's individual comments on Part 1 and present a revised draft of Part 1 for the committee to review on July 29, 2020.

Summary of Feedback on Part 1: Changes to Building Materials and Elements, Accessibility, Sustainability, Disaster Preparedness

Additional Sections Required

In some cases, the committee members found that additional information was required to aid applicants, staff, and the HDC using the Design Guidelines. These areas may appear as definitions, side bars, appendices, or in other sections of the document, were they most appropriately fit.

- Define false historical appearance, character defining features, and character defining facades
- Identifying physical and documentary evidence to document building history
- Suggestions (not requirements) for those interested in repainting their house in traditional paint schemes
- Images illustrating terminology and providing examples

Areas Requiring Further Discussion

Based on the committee members' feedback on this section, the consultant and staff have identified the following topics as areas that require further discussion:

- Appropriateness of replacement materials
- Cleaning options for treating historic materials
- Tinted versus clear glazing on windows
- Determining when terms "historic feature" versus "original feature" should be used
- Geothermal heating, solar panels, and other sustainable features

Chapel Hill Historic District Design Guideline Revisions REVISED DRAFT: PART 1

III. Changes to Building Materials

- Masonry
- Wood
- Architectural Metals
- Paint

IV. Changes to Building Elements

- Roofs, Gutters, & Chimneys
- Foundations
- Exterior Walls, Trim, and Ornamentation
- Windows & Shutters
- Exterior Doors
- Porches, Entrances & Balconies
- Commercial Storefronts
- Accessibility & Life Safety Considerations
- Sustainability & Energy Efficiency
- Disaster Preparedness & Planning

Masonry

Masonry plays a prominent role in the Chapel Hill historic districts and is utilized throughout the districts for both building and landscape features. While red brick and stone are the most common, stucco, concrete, and slate are also present. Red brick is the most prominent building material for churches and commercial buildings in the districts, illustrate permanence and stability and reducing the possible spread of fire through the dense urban fabric. While some brick residences exist in the districts, for most residences, red brick was used only for foundations, chimneys, and porch piers. Red brick is also used for low walls and paths throughout the districts. Stone is less common as a building material in the districts, but was occasionally used for foundations, steps, or porch piers. However, stone is particularly notable as a landscape material with distinctive fieldstone walls located in all three districts. Though less common, several houses and churches have stuccoed exteriors and a number of buildings retain slate or tile roofs.

Masonry surfaces are generally quite durable and require relatively little maintenance. However, like all building materials, masonry requires a program of routine maintenance and repair to ensure the long-term preservation of the material as well as the structural integrity of the building or landscape feature.

Accepted preservation methods for maintaining and cleaning masonry:

- Ensure water does not collect on masonry surfaces and that water drains away from foundations, walls, and piers.
- Ensure masonry is free of vegetation.
- Clean both painted and unpainted masonry surfaces using the gentlest effective method to remove heavy soiling or slow deterioration.

Frequently, masonry surfaces can be adequately cleaned using low-pressure water, natural bristle brushes, and mild detergent; however, stubborn stains or soiling may require a chemical cleaner. Because chemical cleaners may discolor or damage the masonry surface, it is best to pretest any chemical cleaner on an inconspicuous sample area. Chemical cleaners must be neutralized and the surface thoroughly rinsed afterwards to prevent ongoing chemical reactions. Both water and chemical cleaners introduce moisture into the brick and, thus, should be avoided when there is the possibility of freezing temperatures. Because brick is naturally porous, abrasive cleaning techniques, including sandblasting, should be avoided as they may damage the fired “skin” of historic brick.

Accepted preservation methods for repairing masonry and mortar:

- Inspect masonry for signs of deterioration or damage due to settlement, structural movement, moisture, loose or missing masonry units, deteriorated mortar joints, and vegetation.
- Repair and repoint mortar as needed, matching the strength, content, color, texture, profile, and shape of the historic mortar joint.
- Inspect stucco for signs of deterioration or evidence that the stucco is separating from the underlying structure.

Over time, the mortar in masonry features will begin to deteriorate and eventually the mortar joints will need to be repointed with new mortar to prevent moisture from infiltrating the surface. First, loose or crumbling mortar must be removed with hand tools, taking care not to damage the masonry units. Matching the physical characteristics of the original mortar will preserve the structural integrity of the feature. Use softer, lime-based mortars instead of Portland cement-

Commented [HW1]: Staff: Should this say limit vegetation? Are vine covered walls significant features in the historic districts?

Commented [HW2]: I don't think you want to encourage/allow even limited vegetation. While people like the way it looks, it really is damaging to brick & mortar, especially historic brick/mortar that are much softer. Ivy is also called out as an invasive species in the landscaping section. This isn't regulated in the guidelines specifically, so you can't force people to remove vegetation, but you can/should encourage it.

based mortars, which may result in chipping or cracking of original brick as temperature changes cause the mortar joints to expand and contract. Take time to match the color and visual characteristics of the original mortar to ensure a consistent appearance between original and repaired areas. This can best be achieved by preparing a small test batch of mortar and applying it to test wall on site.

If individual bricks are missing or so deteriorated that their replacement is warranted, finding new stock, custom-made, or salvaged brick to match the size, color, and texture of the original is often possible. Where stone, slate, or terra cotta require replacement, substitute materials may be acceptable depending on the location of the feature.

Accepted preservation methods for painting masonry:

- Do not paint previously unpainted brick, stone, or other masonry.
- Repaint previously painted masonry surfaces to maintain a sound paint film.

Painting or applying other coatings (including parging or stucco) to historically unpainted masonry surfaces has both visual and structural consequences. Painting diminishes the inherent color, pattern, and texture of masonry surfaces and features. More importantly, brick and mortar are porous materials and covering them with non-porous coatings can trap moisture within the wall, causing deterioration from the inside out. Finally, painting masonry triggers a cycle of repainting/recoating that is far more intensive than the long term care of unpainted brick or stone. Therefore, it is both historically appropriate and economically wise not to paint unpainted masonry. However, the expense and difficulty of removing paint or other coatings without damaging the underlying masonry makes repainting previously painted masonry the preferred treatment.

Standards: Masonry

1. Retain and preserve masonry features and surfaces that are important in defining the overall historic character of buildings or site features within the historic districts. These include, but are not limited to masonry walls (both building and landscape walls), foundations, chimneys, porch supports, sidewalks and steps, door and window surrounds, and commercial cornices and parapets.
2. Retain and preserve the details and finishes of historic masonry features and surfaces including bond patterns, tooling, coatings, and colors. Ensure proper drainage to prevent water from collecting on masonry features and surfaces.
3. Protect and maintain masonry features and surfaces through a program of regular maintenance and repair using accepted preservation methods.
4. Clean masonry features and surfaces only when necessary to remove heavy soiling or to halt deterioration. Utilized the gentlest method possible, starting with low-pressure water and detergent and a soft bristled brush. Well in advance of cleaning, test the proposed method on the masonry surface on an inconspicuous sample area. Destructive cleaning techniques, such as sandblasting and high-pressure waterblasting, are not appropriate for historic masonry surfaces.
5. Repair deteriorated mortar joints by repointing as necessary to prevent moisture infiltration and accelerated structural deterioration. Remove deteriorated mortar using hand tools; power tools may overcut the joint and damage the brick or stone. Repoint with mortar to match the original in composition, content, strength, color, texture, and appearance. Portland cements and other hard mortars may be damaging to historic brick and should be avoided. Match the profile, width, and finish of the original mortar joint.
6. Repair deteriorated stucco by removing loose material and patching with a new stucco that matches the strength, color, texture, and composition of the original. It is not appropriate to use commercial caulks or compounds to repair stucco.
7. Repair deteriorated or damaged masonry features and surfaces through accepted preservation methods for patching, splicing, consolidating or otherwise reinforcing the masonry. Repairs may include selective, in-kind replacement of missing or deteriorated masonry units.
8. Replace masonry features and surfaces that are too deteriorated to repair, taking care to replace only the deteriorated portion rather than the entire feature or surface. Replacement features and surfaces should match the original in material, design, bond pattern, dimension, detail, texture, color, and finish. Consider a compatible substitute material only if replacement in kind is not technically or economically feasible.
9. If a masonry feature is completely missing, replace it to match the original feature, based upon physical and documentary evidence only if the feature to be replaced coexisted with the features currently on the building. Otherwise, replace it with a new feature that is compatible in material, design, size, scale, and color with the building or site.
10. Repaint historically painted masonry and stuccoed surfaces following the standards for Paint.
11. It is not appropriate to apply paint or stucco to masonry surfaces that were historically

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Commented [HW5]: Staff: What are compatible replacement materials? Are any of the following allowed: GFRC, Precast Concrete, Fiberglass

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unpainted or uncoated.

12. It is not appropriate to apply water repellants or sealants to masonry surfaces, as they may trap moisture and accelerate deterioration.

13. It is not appropriate to conceal or replace a historic masonry feature or surface with a contemporary substitute material, such as synthetic stucco or artificial siding.

14. It is not appropriate to introduce new masonry features or details to a building that would create a false historical appearance.

Wood

Wood is by far the most prevalent building material in Chapel Hill's historic districts, used for a variety of features from exterior siding and trimwork to doors, windows, and porch elements including porch decking, ceiling, posts, railings, and skirtboards. The material was popular in the eighteenth and nineteenth centuries because it was easily shaped by sawing, planing, carving, and turning. By the late nineteenth century, technological advances allowed for most wood building elements to be mass-produced rather than formed on site, resulting in more standardized woodwork.

Decorative details vary by style, illustrating both the taste and financial resources of the original owner. Queen Anne- and Neoclassical-style houses are among the most embellished, while Colonial Revival-style, Craftsman-style, and vernacular housing styles tend to be more restrained in their detailing. Finally, modern and contemporary housing, especially that constructed in the 1980s and 1990s, varies from the earlier housing in the districts in that it is typically far less ornamental and may have stained wood in lieu of painted surfaces and details. (See the glossary of architectural styles in the Appendix for more information.)

Exterior wood surfaces and elements can last a century or more with proper maintenance and sound layers of paint or sealants to protect the wood from moisture and ultraviolet light. Because even small amounts of moisture can result in mold, mildew, rot, or other deterioration, surfaces and features should be inspected regularly to ensure they are dry.

Accepted preservation methods for maintaining and cleaning wood:

- Inspect wood surfaces and features regularly for signs of damage from moisture, termites and other insects, and fungi or mildew.
- Ensure surfaces, including porch floors, steps, thresholds, and windowsills are adequately drained to prevent water from collecting on horizontal features or decorative elements.
- Properly caulk or seal vertical wood joints to prevent moisture penetration but do not seal horizontal, lapped siding joints, as it traps moisture within the walls.
- Use the gentlest effective method for cleaning painted wood surfaces.

Wood is a relatively soft material that must be cleaned gently with low-pressure water, mild detergents, and natural bristle brushes. Power washing and sandblasting are not appropriate as they can raise the grain of the wood, alter the surface and appearance of the wood, and allow for water infiltration.

The installation of vinyl, aluminum, or other synthetic sidings over historic wood surfaces and features should be avoided as the installation often damages the features and its presence conceals signs of moisture infiltration and deterioration.

Accepted preservation methods for repairing wood:

- Repair damaged or deteriorated wood using selective in-kind replacement, splicing, patching, or consolidating.

Wood shingles and siding are commercially available in a variety of dimensions and details, making it easy to match historic profiles for small-scale replacements. However, fast-growth new wood is not as resistant to decay as the old-growth wood present on most historic buildings. Therefore, specifying decay-resistant wood and maintaining a protective paint film are two ways to extend the life of new wood features and surfaces. For the repair of decorative wood trim and

features that are not easily replicated, consolidation of the deteriorated feature with wood epoxy repair products that both stabilize deteriorated wood and prevent further decay may prove more cost effective than replacement in kind.

Where water damage is an ongoing concern, the selective replacement of wood trim and details with appropriate substitute materials (including cedar, fiber cement board, cellular PVC, or poly-as composite trim and siding) may be considered.

Accepted preservation methods for painting wood:

- Maintain protective paint films on exterior wood surfaces to prevent damage due to ultraviolet light and moisture.
- Repaint previously painted wood surfaces as necessary to maintain a sound paint film.
- Treat historically unpainted wood features with an environmentally safe chemical preservative to slow decay.

Typically, hand scraping and sanding are necessary prior to repainting. More aggressive techniques, such as the selective use of hot air guns or heat plates, may be necessary if multiple layers of paint are failing. However, because harsh alkaline paint strippers, gas-fired torches, sandblasting, and power washing will permanently damage the wood surface and leave a raised grain surface, these techniques are not appropriate for historic wood features. Consider the use of chemical strippers only if less aggressive methods such as low-pressure washing with are ineffective.

Standards: Wood

1. Retain and preserve wood features and surfaces that are important in defining the overall historic character of buildings or site features within the historic districts. These include, but are not limited to exterior wood siding, board-and-batten, decorative shingles and sawn work, turned posts and balusters, porch floors and steps, door and window surrounds, cornices and soffits, and rafter tails and brackets.
2. Retain and preserve the details and finishes of historic wood features and surfaces including paints and coatings. Ensure proper drainage to prevent water from collecting on wood features and surfaces.
3. Protect and maintain wood features and surfaces through a program of regular maintenance and repair using accepted preservation methods.
4. Clean wood features and surfaces only when necessary to remove heavy soiling or in preparation for repainting. If the paint film is still intact, low-pressure washing with a mild household detergent and an anti-mildew additive is usually sufficient. It is not appropriate to clean or strip wood surfaces with destructive methods such as power washing, sandblasting, and using butane or propane torches. Consider the use of chemical strippers only if less aggressive methods such as low-pressure washing with detergents and natural bristle brushes are ineffective.
5. Repair deteriorated or damaged wood features and surfaces through accepted preservation methods, such as patching, splicing, consolidating or otherwise reinforcing the wood. Repairs may include selective in-kind replacement of missing or deteriorated portions of a historic wood feature or surface.
6. Replace in kind wood features and surfaces that are too deteriorated to repair, taking care to replace only the deteriorated portion rather than the entire feature or surface. Replacement features and surfaces should match the original in material, design, dimension, detail, and finish. Consider a compatible substitute material only if replacement in kind is not technically feasible. It is not appropriate to replace a deteriorated wood feature or surface on a primary or other highly visible elevation with a substitute material unless there is an ongoing water infiltration problem.
7. If a wood feature is completely missing, replace it to match the original feature, based upon physical and documentary evidence, only if the feature to be replaced coexisted with the features currently on the building. Otherwise, replace it with a new feature that is compatible in material, design, size, and scale with the building or site.
8. Repaint historically painted wood features and surfaces following the standards for Paint.
9. It is not appropriate to conceal or replace a historic wood feature or surface with a contemporary substitute material such as vinyl or aluminum.
10. It is not appropriate to introduce wood features or details to a building that would create a false historical appearance.

Architectural Metals

Architectural metals, including cast and wrought iron, copper, tin, aluminum, steel, and bronze are all located in Chapel Hill's historic districts. Standing-seam and pressed-metal roofs, cast iron fences, wrought iron porch posts and railings, pressed metal cornices, and copper flashing are all common. Metal is also used for light fixtures, hardware, and foundation grills and vents. Like masonry and wood, metals are inherently durable and, if well maintained, can last a century or more.

Accepted preservation methods for maintaining and cleaning architectural metals:

- Inspect metal surfaces and features routinely for signs of structural fatigue or failure, moisture damage, corrosion, galvanic action, and paint film failure.
- Ensure drainage of surfaces is adequate to prevent water from collecting on horizontal surfaces or decorative elements.
- Clear metal roofs, gutters, and downspouts as necessary to keep them free of debris and leaves.
- Clean metal surfaces and features using the gentlest effective method.

Air pollution, dust, pollen, and human or bird contact all degrade the visual appearance of architectural metals and can accelerate corrosion and decay. The appropriate method for cleaning architectural metals depends on how malleable, or soft, they are. Copper, aluminum, brass, zinc, tin, and lead are all soft metals that should be cleaned with non-abrasive cleaners to ensure that their surface texture and appearance is not deformed or destroyed. In contrast, the abrasive action of a wire brush or hand scraper is appropriate for hard metals such as steel, cast iron, and wrought iron. If these techniques are ineffective, low-pressure grit blasting may also be used to clean hard metals.

Accepted preservation methods for replacing and repainting architectural metals:

- Remove corrosion and prepare metal for repainting using the gentlest effective cleaning method.
- Maintain a protective paint film on ferrous metal surfaces to prevent corrosion.
- Identify the type of metal prior to any treatment or repair in order to minimize galvanic action.

Surface corrosion, or oxidation, of metal surfaces and features is a chemical reaction that typically occurs from exposure to air and the moisture it contains. Copper, bronze, and brass develop a protective green patina through exposure to the elements and copper is often used for flashing, gutters, and downspouts because it can withstand moisture without needing to be painted or coated. Aluminum and stainless steel are also valued for their resistance to atmospheric corrosion with aluminum a more economical alternative to copper for flashing and gutters. The inherent finish of all ferrous metals—such as wrought iron, cast iron, and steel—corrodes quickly when exposed to moisture in the atmosphere. Consequently, ferrous metals require a protective paint film to prevent rust from forming. If the paint film deteriorates, any corrosion must be removed and the ferrous metal surface must be promptly primed with a zinc-based or other rust-inhibiting metal primer to halt deterioration and prevent future corrosion.

Corrosion can also result from galvanic action between two dissimilar metals. For this reason, it is essential to identify the type of metal prior to any treatment or repair. If missing or deteriorated metal surfaces or features require replacement, care must be taken to ensure that compatible metals are used for nails and fasteners. Additionally, asphalt products, including roofing tar, corrode metals and should never be used on metal roofs.

If replacement is necessary, using new or salvaged materials is preferable. However, if

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Commented [HW10]: I'm still working on this. Initially I thought it was as simple as not combining ferrous and non-ferrous metals, but it's not that straightforward.

replacement in kind is not technically or financially feasible, compatible substitute materials, including fiberglass, wood, or aluminum, may be considered, especially when replacing metal with painted finishes, where the characteristics of the specific metal are not visible.

Standards: Architectural Metals

1. Retain and preserve architectural metal features and surfaces that are important in defining the overall historic character of buildings or site features within the historic districts. These include, but are not limited to metal roofing and flashing, gutters and downspouts, cornices, railings and porch posts, windows and hardware, light fixtures, and fences and gates.
2. Retain and preserve the details and finishes of architectural metal features and surfaces including paints and coatings. Ensure proper drainage to prevent water from collecting on metal features and surfaces.
3. Protect and maintain architectural metal features and surfaces through a program of regular maintenance and repair using accepted preservation methods. Maintain a sound paint film or coating on corrosive metals.
4. Clean architectural metals to remove corrosion or paint buildup prior to repainting or applying protective coatings. Clean using the gentlest effective method, typically hand scraping and wire brushing for hard metals. Consider low-pressure glass bead cleaning for hard metals only if gentler methods are ineffective. To clean soft metals, use non-corrosive chemical cleaners, only after pretesting. It is not appropriate to clean soft metals with harsh, abrasive techniques such as sandblasting.
5. Repair deteriorated or damaged architectural metal features and surfaces through accepted preservation methods, such as patching, soldering, consolidating, or otherwise reinforcing the metal. Repairs may include selective in-kind replacement of missing or deteriorated portions of a historic metal feature or surface.
6. Replace in kind architectural metal features and surfaces that are too deteriorated to repair, taking care to replace only the deteriorated portion rather than the entire feature or surface. Replacement features and surfaces should match the original in material, design, dimension, detail, and finish. Consider a compatible substitute material only if replacement in kind is not technically feasible.
7. If an architectural metal feature is completely missing, replace it to match the original feature, based upon physical and documentary evidence, only if the feature to be replaced coexisted with the features currently on the building. Otherwise, replace it with a new feature that is compatible in material, design, size, and scale with the building or site.
8. Repaint historically painted metal features and surfaces following the standards for Paint. It is not appropriate to paint non-ferrous metals such as copper or bronze that were not historically painted.
9. It is not appropriate to conceal or replace a historic metal feature or surface with a contemporary substitute material.

Commented [HW11]: AS: this seems to contradict the last paragraph in previous text about metal, where it states if metal-ness isn't so important (because painted, etc.), a substitute is okay.

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10. It is not appropriate to patch metal roofs or flashing with tar or asphalt products.

11. It is not appropriate to introduce architectural metal features or details to a building or site that would create a false historical appearance.

Paint

Color—whether applied or inherent to the exterior materials of a building—is an essential visual element of any historic building. The original color scheme generally reflected the tastes of the era and the preferences of the owner. Additionally, paint colors were used to highlight architectural features and enhance certain architectural styles. For example, Queen Anne style houses were known for their flamboyant polychromatic color schemes, whereas more subdued, austere palettes were popular for Colonial Revival buildings. **The austerity and monumentality of the Neoclassical Revival style is reinforced by the use of white exteriors with white trim and detailing while Craftsman- and Tudor Revival-style houses typically utilized neutral colors and deep earth tones, complimenting the brick and stonework that is often present.** Whatever the architectural style, applying appropriate colors can dramatically enhance the appearance of a building. (See the glossary of architectural styles in the Appendix for more information on appropriate paint colors.)

However, paint color is ephemeral with the colors of most buildings having changed over time. If property owners are interested in determining the color chronology of a specific building, examination of paint scrapings under a microscope by an architectural conservator can provide accurate information. Another approach is to select paint colors based upon an understanding of what color palettes are appropriate given the building's architectural style and age. Some contemporary references that provide information on historically appropriate paint schemes are included in the Appendix.

Accepted preservation methods for the maintenance of painted surfaces and features:

- Inspect painted surfaces regularly for evidence of discoloration, moisture damage, mildew, and dirt buildup.
- Keep painted surfaces free of moisture, vegetation, and fungal and insect infestation.
- Clean painted surfaces routinely to prevent unnecessary repainting, using the gentlest means possible. Ensure that surfaces are clean and dry prior to repainting so the new paint will bond.

Beyond the visual impact of a paint color, paint is primarily a protective film that allows the building to shed water and to slow the weathering process. Preservation of most historic wood and metal features and surfaces requires a sound paint film to protect from water infiltration and ultraviolet light. Water, wind, and ultraviolet light severely weaken wood fibers over time and can contribute to the corrosion of some metals.

Accepted preservation methods for the repainting of painted surfaces and features:

- Remove loose or peeling paint, using the gentlest means possible, down to the first sound layer.
- Prime exposed metal and wood surfaces prior to repainting.
- Maintain a sound paint film on previously painted surfaces by using compatible paint products.

Proper, thorough surface preparation and the quality of paint are essential to the success and longevity of any repainting job to ensure the new paint film bonds to the surface. Any loose or deteriorated paint layers must be removed first, any mildew eliminated, and the surface must be clean and dry for repainting. Follow the guidance for the specific building material (masonry, wood, or metal). Avoid painting in cold, damp, or extreme weather conditions and allow for adequate drying time between coats.

Standards: Paint

Note: Paint colors are not regulated in Chapel Hill's historic districts and paint color selection and changes do not require Historic District Commission approval.

1. Retain and preserve painted features and surfaces that are important in defining the overall historic character of buildings or site features within the historic districts.
2. Retain and preserve the details of intact exterior finishes including stains, paints, lacquers, and decorative finishes.
3. Protect and maintain historically painted exterior features and surfaces through by maintaining a sound paint film using compatible paint coating systems and following property surface preparation.
4. Clean painted surfaces using the gentlest effective method, starting with low pressure water and mild detergents. Use chemical cleaners, after pretesting, to clean soft metals. It is not appropriate to clean painted surfaces with techniques that are destructive to the underlying surface material, including power washing, sandblasting, or high-pressure water blasting.
5. In preparation for repainting, remove only deteriorated and peeling paint films down to the first sound paint layer. Use the gentlest effective method to prepare the substrate material, typically hand scraping or sanding. Hazardous heating devices such as propane or butane torches, heat plates, and orbital sanders should only be used when paint is so deteriorated that total removal is necessary. Use environmentally safe chemical strippers if necessary to supplement hand scraping, sanding, and thermal devices.
6. Reapply paints or stains to previously painted or stained exterior surfaces in colors that enhance and reinforce the architectural materials and features of a district building and site.
7. Apply opaque solid pigment exterior stains in lieu of paint to porch floors and decks that experience heavy foot traffic.
8. It is not appropriate to leave surfaces that were historically painted—including siding, doors, windows, trim, and porch details—unpainted.
9. It is not appropriate to paint or coat historically unpainted surfaces including brick, stone, concrete, copper, and bronze.

Roofs, Gutters, & Chimneys

Roof forms, materials, and features vary widely in Chapel Hill's historic districts, based largely on the age and style of the building. The roof form and pitch, as well as features—such as dormers, gables, vents, turrets, and chimneys—contribute significantly to the architectural character of any building. The most common roof forms in the district are gabled and hipped roofs. Complicated rooflines with intersecting gables and wings were common in Queen Anne-style houses. A small number of Dutch Colonial Revival-style houses have gambrel roofs and Modernist-style houses typically have shed or flat roofs. Roof pitches vary by style with Greek Revival- and Ranch-style houses typically having a lower pitch than other styles, including Queen Anne-style, Colonial Revival-style, and vernacular housing. Dormers are common on all building styles except Ranch- and Modernist-style houses. Commercial buildings most often have shed or flat roofs concealed behind brick parapets, which are themselves significant features.

The pattern, scale, color, and texture of roofing materials further define the character of the roof. The most common roofing materials in the historic districts are asphalt or fiberglass shingles. In some cases, these composition shingles replaced earlier roofing materials such as pressed metal tile and slate roofs. Also present in the districts are slate, tile, and metal roofs, which when well-maintained, can last for a century or more. These materials add distinctive pattern and texture to a roof, making their repair and preservation well worth the effort.

The care and maintenance of the roof is critical to the preservation of any building as the roof is the first line of defense against sun, wind, and rain. Roof failures can contribute to water infiltration and the accelerated deterioration of masonry, wood, plaster, paint, and other interior and exterior building materials and can ultimately lead to structural failure.

Accepted preservation methods for the maintenance of roofs:

- Inspect roofs and roof features regularly for signs of moisture damage, corrosion, structural damage, and paint failure.
- Inspect flashing to ensure watertight joints where roof planes change or are interrupted by features such as chimneys or dormers.
- Inspect roof materials—especially asphalt shingles, slate, and tile—for signs of wear and for damaged or missing units.
- Clean debris from gutters, downspouts, flashing, and roof valleys regularly to ensure adequate drainage of the roof surface, using special care to inspect built-in gutters, which if they are blocked or failing, can result in substantial damage to the roof or trimwork that encases them.
- Clean metal roofs using the gentlest effective method and repaint as necessary to maintain a sound paint film.
- Maintain adequate ventilation of roof sheathing to prevent moisture damage.

Slate and metal roofs are character-defining features and, with proper maintenance can last 70-100 years or more. Repair of metal roofs can typically be achieved with the use of sealants and specially designed paints that repel water (see Standards for Architectural Metals). However, roofing tar should never be used on metal roofs as it can accelerate the deterioration of the metal.

Accepted preservation methods for the repair or replacement of roofs:

- Replace deteriorated flashing with good quality flashing.
- Replace deteriorated roofing to maintain a watertight structure.
- Avoid the construction or installation of new roof features or elements on character-defining elevations.

With a lifespan of 20-30 years, asphalt shingles have typically been replaced multiple times and an exact match of color or style is not necessary. However, if full replacement of a slate or metal roof is necessary, the color and profile of the historic roof should be matched. Replacement slate may be cost prohibitive, in which case, synthetic slate, often made from recycled rubber, is a good alternative. Conversely, many commercially available metal roofs have a significantly different profile with distinctive ribs and patterns and are not an appropriate substitute for standing-seam metal, pressed-metal, or asphalt-shingled roofs in the historic districts. Finally, flat roofs concealed by brick parapets—most common on commercial buildings—were historically covered with metal or “built-up” tar and gravel roofs. For these roofs, not visible except by air, modern rubber or membrane roofs are an appropriate replacement.

It is important to maintain the pitches, planes, and features of roofs in the historic districts. New dormers should only be introduced on non-character-defining elevations and only if their scale and design are compatible with the building and their proposed location will not detract from the architectural integrity of the building. While roofs can provide convenient locations for new mechanical or communication equipment, their installation may compromise the architectural integrity of a historic building as can the introduction of skylights, solar panels, and other contemporary roof features. Roof locations for such elements should only be considered if they can be located on roof planes not visible from the street and if they will not damage or conceal significant roof features.

Standards: Roofs, Gutters, & Chimneys

1. Retain and preserve roof shapes, materials, and decorative and functional features that are important in defining the overall historic character of buildings within the historic districts. These include, but are not limited to roof form, shape, pitch, and overhang; roof materials and functional features including shingles, flashing, vents, and gutters; and decorative features including dormers, chimneys, turrets, spires, cupolas, and balustrades.

2. Protect and maintain the details, features, and surfaces of historic roofs through a program of regular maintenance and repair using accepted preservation methods. Ensure that drainage features are functioning properly to divert rainwater from wall surfaces. Copper, galvanized sheet metal, or aluminum with a baked enamel finish are appropriate flashing materials within the historic districts.

3. Repair deteriorated or damaged roof features and surfaces through accepted preservation methods for the specific feature or material. Repairs may include selective in-kind replacement of missing or deteriorated portions of historic roof features or materials. It is not appropriate to patch slate or metal roofs or flashing with tar or asphalt products.

4. Replace in kind roof features and surfaces that are too deteriorated to repair, taking care to replace only the deteriorated portion rather than the entire feature or surface. Replacement features and surfaces should match the original in material, design, dimension, pattern, detail, texture, and color. Consider a compatible substitute material only if replacement in kind is not technically feasible.

5. If deterioration necessitates the replacement of an entire roof surface, replacement surfaces should match the original in material, design, dimension, pattern, detail, texture, and color. Consider a compatible substitute material only if replacement in kind is not technically feasible. It is not appropriate to replace historic standing-seam or pressed metal roofs with multi-rib metal roofing.

6. If a roof feature is completely missing, replace it to match the original feature, based upon physical and documentary evidence, only if the feature to be replaced coexisted with the features currently on the building. Otherwise, replace it with a new feature that is compatible in material, design, size, and scale with the building.

7. Located new roof features such as dormers, chimneys, skylights, or vents in locations where they will not compromise this historic roof design, damage character-defining features or materials, or otherwise compromise the architectural integrity of the building.

8. Located plumbing stacks, air vents, solar collectors, satellite dishes, and other mechanical equipment on non-character-defining roofs or roof slopes where they are not visible from the street.

9. Introduce new gutters and downspouts, as needed, with care so that no architectural features are damaged or lost. Select gutters and downspouts that are painted or coated with a factory finish in a color that is appropriate to the building (unless they are copper). Replace half-round gutters and cylindrical downspouts in kind.

10. It is not appropriate to remove or conceal character-defining roof features such as chimneys,

Commented [HW13]: Staff: What about Built-Up and Rubber Roofing? Are these prohibited or allowed on flat roofs only?

Commented [HW14]: I added this to the narrative, but yes, these rubber/membrane roofs are only appropriate for roofs that aren't visible (typically because of a parapet).

Commented [HW15]: Staff: Should there be a brief explanation on what a character defining roof is?

Commented [HW16]: "Character defining" is defined in the introduction. That said, is this one of those instances where it's better to change it to say "not visible from the street."?

Commented [HW17]: AS: Were chimney pots ever a common feature here? Are there any? Should they be mentioned?

dormers, built-in gutters, and vents, especially on a primary or other highly visible elevation.

11. It is not appropriate to introduce roof features or details to a building or site that would create a false historical appearance.

Commented [HW18]: I can't picture any examples of chimney pots in the districts. They were most common on Tudor Revival-style houses and there are very few of those in the districts.

Commented [HW19]: AS: Are there examples of box gutters (built into roof structure) in the district? Are there any/many? If so discuss?

Commented [HW20]: Probably, but I don't know any off the top of my head...

Foundations

Foundations are essential to the structural integrity of buildings in the districts and their materials, features, and details contribute to the historic character of the districts. Stone piers were used on the earliest buildings, dating to the 1870s, and were typically unpainted, though some have a later coating of parging. Frame buildings from the late-nineteenth and early-twentieth centuries were most often construction on brick piers. The space between the piers was often infilled later with brick, which was sometimes recessed from the piers, to differentiate it visually. Infilled brick also included pierced-brick or decorative metal grates or vents to provide crawl space ventilation. Brick foundations were historically unpainted, though many have been painted or stuccoed over time. Early- to mid-twentieth century brick buildings were typically constructed with continuous brick foundations, delineated by a water table—a varying and sometime projecting, course of brick. Decorative metal vents were frequently incorporated into brick foundation walls to allow for air circulation beneath the house. By the 1940s, concrete and concrete block foundations were also common.

Accepted preservation methods for the maintenance of foundations:

- Inspect foundations regularly for signs of moisture, insect infestation, vegetation (including fungi or mildew), or structural damage.
- Ensure that mortar joints in masonry foundations are intact.
- Investigate any unusual settling, broken masonry units, or cracking along mortar joints.
- Maintain adequate drainage around foundations, ensuring that gutters and downspouts drain away from the building and that the ground itself slopes away from the foundation.
- Maintain adequate ventilation under foundations.
- Ensure that porches and chimneys are properly secured to foundations.

The care and maintenance of the foundation is critical to the preservation and structural integrity of any building. Foundations must be adequately vented in order to prevent moisture buildup underneath the house and moisture infiltration through the walls above. Ensuring that foundation vents and grates are free of debris, dirt, and vegetation will ensure that moisture does not get trapped under the house.

The standards for Masonry address maintenance concerns specific to stone, brick, and concrete.

Standards: Foundations

1. Retain and preserve foundation materials and decorative and functional features that are important in defining the overall historic character of buildings within the historic districts. These include, but are not limited to decorative vents, grills, lattice, water tables, and banding.
2. Protect and maintain the details, features, and surfaces of foundations through a program of regular maintenance and repair using accepted preservation methods. Ensure that site drainage channels water away from foundations.
3. Repair deteriorated or damaged foundation features and surfaces through accepted preservation methods for the specific feature or material. Repairs may include selective in-kind replacement of missing or deteriorated portions of foundation features or materials.
4. Replace in kind foundation features and surfaces that are too deteriorated to repair, taking care to replace only the deteriorated portion rather than the entire feature or surface. Replacement features and surfaces should match the original in material, design, dimension, pattern, detail, texture, and color. Consider a compatible substitute material only if replacement in kind is not technically feasible.
5. If deterioration necessitates the replacement of an entire foundation, replacement foundations should match the original in material, design, dimension, pattern, detail, texture, and color. This may be accomplished through the use of a veneer applied to a structural foundation wall, provided the veneer does not project beyond the historic location of the foundation wall. Consider a compatible substitute material only if replacement in kind is not technically feasible.
6. When infilling between brick, stone, or concrete piers, recess the curtain wall (infill) 2" to 4" to maintain the visual prominence of the piers.
7. Located new foundation features such as windows, vents, and access doors in locations where they will not compromise this historic foundation design, damage character-defining features or materials, or otherwise compromise the architectural integrity of the building. Windows and access doors should be relegated to side or rear elevations. Vents should be centered between piers or located beneath first-floor windows.
8. It is not appropriate to apply paint or other coatings, including stucco, to historically unpainted brick and masonry foundations.
9. It is not appropriate to utilize damaging methods to remove paint or other coatings, including stucco, from foundations. See Standards for Masonry and for Paint.
10. It is not appropriate to remove, conceal, or infill character-defining foundation features such as windows and vents, especially on a primary or other highly visible elevation.
11. It is not appropriate to introduce foundation features or details to a building or site that would create a false historical appearance.

Commented [HW21]: AS: Combine these two, or explain when it is appropriate to infill in between piers.

Commented [HW22]: #5 is for fully replacing a foundation. I do think that, even with a full foundation wall, installing it in a way that mimics a curtain wall that has been infilled is better, but I don't know if it's something you want to go so far as to require in the standards. Maybe a questions for the committee?

#6 is infilling between existing/historic piers. Maybe we should add discussion in the narrative about how to appropriately infill between piers and why the curtain walls should be inset.

Exterior Walls, Trim, and Ornamentation

The overall form and massing of buildings are defined by the exterior walls and are indicative of the age and style of the building. Most buildings in Chapel Hill's historic districts are composed of box-like forms with additive and subtractive wings and bays. Together with the form, the exterior wall surfaces and materials also reflect the buildings architectural style and serve as a backdrop against which doors, windows, and architectural ornamentation are introduced. While wood siding is the most prominent exterior material in the districts, red brick, stucco, wood shingles, and stone are all also present and add texture, pattern, scale, and detail to the buildings. Brick and stone buildings feature masonry embellishments include corbelling at chimneys, cornices and parapets; sill and lintel articulation at door and window openings; horizontal banding; and inset panels with contrasting bond. In some instances wood trim, cornices, pediments, columns, and balustrades are added to masonry walls and buildings.

Exterior trim and ornamentation are illustrative of the many architectural styles in the districts. Trim includes ornamental details that terminate the edges of roof overhangs, door and window openings, and the corners and gables of walls, porches, and projecting bays and wings. Queen Anne-style houses are among the most ornate with combinations of wood siding and decorative shingles, turned porch posts with sawn brackets, and decorative bargeboards or rakeboards in the gables. Classical- and Colonial Revival-style houses may employ cornices with modillions or dentils and classical columns with turned balustrades. (See the glossary of architectural styles in the Appendix for more information on architectural styles and associated trim and ornamentation.)

Accepted preservation methods for the maintenance of exterior walls, trim, and ornamentation:

- Inspect walls, trim, and ornamentation regularly for signs of moisture damage, settlement, structural damage, corrosion, insect or fungal infestation, and vegetation.
- Ensure that gutters and downspouts are properly functioning so water does not collect along the foundation or on flat, horizontal surfaces and decorative elements.
- Slope wood surfaces, including porch floors, thresholds, and window sills away from the house to ensure proper drainage.
- Flash and caulk intersections and openings as necessary to avoid water infiltration.
- Retain protective paint or stain coatings that prevent deterioration, repainting as needed to maintain a sound, protective paint film.
- Use the gentlest effective method to clean exterior walls to remove heavy soiling prior to repainting.

Together with the roof, wall surfaces provide the main line of defense against sun, wind, and rain. Wall surfaces, trim, and ornamentation that are located near gutters and downspouts or at the intersection of roofs, porches, and projecting bays are especially vulnerable to water infiltration.

Replacing or covering over historic siding with a contemporary substitute-such as vinyl, aluminum, or fiber-reinforced cement board-is not appropriate within the historic districts because it significantly compromises the architectural integrity of the historic buildings. These contemporary materials do not truly replicate the qualities of the traditional materials they imitate and their installation often damages the original material and conceals or eliminates decorative trimwork. While, in the short term, substitute sidings may temporarily eliminate the need to repair or repaint the original cladding, they can also conceal ongoing moisture problems, structural deterioration, or insect infestation.

Wood is a very enduring exterior material if it is kept free of excessive moisture and protected from ultraviolet light and rain with a protective coat of paint. Likewise, masonry is an incredibly durable material when properly maintained. The standards for Wood and Masonry provide additional guidance for maintenance, repair, repainting, and replacement.

Standards: Exterior Walls, Trim, and Ornamentation

1. Retain and preserve exterior wood and masonry walls, trim, and ornamentation that are important in defining the overall historic character of buildings within the historic districts. These include, but are not limited to clapboards, siding, and board-and-batten; cornerboards and skirtboards; cornices, brackets, and eaves; shingles, sawnwork, and gable vents; columns and railings; doors and windows; floors and steps; and brick corbelling and banding.
2. Protect and maintain the details, features, and surfaces of historic exterior walls through a program of regular maintenance and repair using accepted preservation methods. Ensure that drainage features are functioning properly to divert rainwater from wall surfaces and that wood surfaces have sound paint films.
3. Repair deteriorated or damaged exterior wall features and surfaces through accepted preservation methods for the specific feature or material. Repairs may include selective in-kind replacement of missing or deteriorated portions of historic wall features or materials.
4. Replace in kind exterior wall features and surfaces that are too deteriorated to repair, taking care to replace only the deteriorated portion rather than the entire feature or surface. Replacement features and surfaces should match the original in material, design, dimension, pattern, detail, and texture. Consider a compatible substitute material only if replacement in kind is not technically feasible.
5. If deterioration necessitates the replacement of an entire wall surface, replacement surfaces should match the original in material, design, dimension, pattern, detail, texture, and color. Consider a compatible substitute material only if replacement in kind is not technically feasible. It is not appropriate to cover over or replace historic exterior wall materials—such as clapboards, shingles, bricks, or stucco with contemporary synthetic coatings or substitute sidings including aluminum, vinyl, and fiber-reinforced cement siding.
6. If an exterior wall feature is completely missing, replace it to match the original feature, based upon physical and documentary evidence, only if the feature to be replaced coexisted with the features currently on the building. Otherwise, replace it with a new feature that is compatible in material, design, size, and scale with the building.
7. Locate new exterior wall features such as windows, doors, chimneys, bays, and communication or mechanical equipment—on exterior walls that are not visible from the street or in locations that do not compromise the architectural integrity of the building.
8. It is not appropriate to remove or conceal historic features and details—such as windows, doors, chimneys, bays, corner boards, wood shingles, brackets and decorative trimwork—on character-defining exterior walls.
9. It is not appropriate to introduce exterior wall features, details, or surfaces to a building or site that would create a false historical appearance.

Note: See Wood and Masonry for additional standards related to those materials. See Paint for additional standards related to painting exterior walls, trim, and ornamentation.

Windows & Shutters

Functional as well as decorative, windows provide ventilation, daylight, and a visual connection between the building interior and exterior. The pattern, detail, and scale of windows contribute significantly to the architectural character of houses within Chapel Hill's historic districts. A variety of pane and sash configurations reflect the wide range of architectural styles in the districts and reflect changing technologies and style preferences. The most common type of windows found in the districts are double-hung wood-sash windows. Typically, earlier windows from the eighteenth through the mid-nineteenth century are smaller and have more numerous panes. However, by the late nineteenth century, windows were generally mass-produced and improved technologies in glass production allowed for larger panes of glass to be made.

The location, pattern, shape, size, proportion, and style also varies by architectural style. More formal styles like Colonial Revival and Neoclassical tended toward symmetrical facades with evenly spaced windows while the Queen Anne style in particular was more organic with varied window sizes and styles installed on a single elevation. The use of ornamental leaded, beveled, and stained glass windows is also common in the districts, especially on turn-of-the-twentieth century Queen Anne- and Neoclassical-style houses. (See the glossary of architectural styles in the Appendix for more information on windows patterns and styles associated with particular architectural styles.)

Accepted preservation methods for the maintenance and cleaning of windows and shutters:

- Inspect windows and shutters regularly for signs of deterioration due to moisture damage, air infiltration, insect or fungal infestation, corrosion and paint failure.
- Ensure that window sills are sloped away from the building to prevent water infiltration.
- Use the gentlest effective method to clean window surfaces.
- Weatherstrip windows and/or install storm windows to increase their energy efficiency.

Properly maintained and repaired historic windows are both energy efficient and contribute to the historic character of the building and district. As moving units, windows and shutters require regular maintenance to keep them both functional and airtight.

Accepted preservation methods for the repair and replacement of windows and shutters:

- Reglaze sash and recaulk joinery as necessary to prevent air or moisture penetration.
- Repaint windows as needed to maintain a sound protective paint film and prevent deterioration.

Repair is both more appropriate and more cost-effective than replacement. Peeling paint, air infiltration, sticking sashes, and broken panes are all easily repairable measures and do not necessitate removal of historic windows. Where deterioration or damage is more significant, a wood epoxy product can be used to repair the unit and prevent replacement of the entire feature. In situations where severe deterioration is present, replacement may be necessary. However, it is important to replace only deteriorated elements (single sashes or portions of framing) instead of entire window units. Additionally, new sashes should fit the original opening so the frames and surrounds do not have to be replaced. Although stock wood windows and doors are readily available in a variety of sizes and configurations, it is sometimes necessary to have custom replacement units made by a millwork company. Vinyl or other synthetic windows are not appropriate in the historic district.

Considerations for the removal or addition of windows and shutters:

The rhythm and placement of window openings is usually quite consistent on a historic building.

Thus, the removal or introduction of new window openings should be undertaken with care and limited to side or rear elevations. New windows should be compatible with the overall design of the building, but need not replicate historic details and patterns exactly.

Commented [HW23]: Staff: What about replacement glass that is tinted? Should it be prohibited with only clear glass allowable?

Commented [HW24]: We don't address this in the standards, but maybe we should. I think this occurs most often with commercial storefronts and NPS guidance for tax credit projects requires "clear glazing." Something for the committee? It is an energy efficiency thing.

Standards: Windows & Shutters

1. Retain and preserve the materials and the decorative and functional features of windows and shutters that are important in defining the overall historic character of buildings within the historic districts. These include, but are not limited to frames and hardware; sashes, glass, and muntins; lintels, sills, and surrounds.

2. Protect and maintain the details, features, and finishes of **historic windows and shutters** through a program of regular maintenance and repair using accepted preservation methods. Ensure that drainage features, including sills, are functioning properly to divert rainwater from windows and shutters and that wood surfaces have sound paint films.

3. Repair deteriorated or damaged windows and shutters through accepted preservation methods of patching, splicing, consolidating, and reinforcing. Repairs may include selective in-kind replacement of missing or deteriorated portions of historic windows and shutters.

4. Replace in kind window details and features that are too deteriorated to repair, taking care to replace only the deteriorated portion rather than the entire feature. Replacement features should match the original in material, design, dimension, configuration, detail, and texture. Consider a compatible substitute material only if replacement in kind is not technically feasible.

5. If deterioration necessitates the replacement of an entire window or shutter, replacement windows and shutters should match the original in material, design, dimension, pattern, detail, texture, and color.

It is not appropriate to replace deteriorated windows with stock items that do not fill the original openings or shutters with smaller shutters that would not, if closed, cover the window opening.

It is not appropriate to replace true divided light windows with windows that have two-dimensional simulations of pane subdivisions, such as snap-in muntins. If not true divided light, glazing should have three-dimensional grills affixed to both the interior and exterior of the window with shadow bars between insulated glass panes.

Consider a compatible substitute material only if replacement in kind is not technically feasible. However, it is not appropriate to replace a deteriorated wood window on a character-defining elevation with a composite substitute material. **Vinyl and vinyl clad windows are not appropriate in the historic district.**

6. If a window or shutter is completely missing, replace it to match the original feature, based upon physical and documentary evidence, only if the feature to be replaced coexisted with the features currently on the building. Otherwise, replace it with a new feature that is compatible in material, design, size, and scale with the building.

It is not appropriate to install windows that do not fill the original openings.

It is not appropriate to install windows with two-dimensional simulations of pane subdivisions, such as snap-in muntins. If not true divided light, glazing should have three-dimensional grills affixed to both the interior and exterior of the window with shadow bars between insulated glass panes.

Vinyl and vinyl clad windows are not appropriate in the historic district.

7. If new windows are necessary, locate them on a rear or non-character-defining elevation, ensuring that they do not damage character-defining features or materials, or otherwise compromise the architectural integrity of the building.

Commented [HW25]: I'm hesitant to use the word "historic" as it implies that any replacements or anything that one could argue isn't historic (maybe it's not 50 years old) doesn't need to be retained. Is the word necessary here?

Commented [HW26R25]: Staff: Agree.

Commented [HW27]: Needs Committee Discussion

Commented [HW28]: The SHPO and NPS generally approve aluminum-clad wood windows for replacing windows that are too deteriorated to repair. Is this something we want to explicitly allow?

Commented [HW29R28]: Staff: Would these be more appropriate for commercial or institutional buildings only?

Staff: The HDC has allowed fiberglass windows when the profile and dimensions match the historic appearance. There are also examples of new vinyl windows that can be produced to match historic window profiles—they are no longer the bright white ugly vinyl windows of the 1980s.

It is not appropriate to install windows with two-dimensional simulations of pane subdivisions, such as snap-in muntins. If not true divided light, glazing should have three-dimensional grills affixed to both the interior and exterior of the window with shadow bars between insulated glass panes.

Vinyl and vinyl clad windows are not appropriate in the historic district.

8. Install shutters, whether operable or fixed, only where there is physical or documentary evidence of shutters having existed. Shutters should be proportional to the opening and all shutters, whether operable or fixed in place, should have operable hardware including hinges and holdbacks.

9. Install storm windows that do not obscure historic detailing or trim. Proportion storm window sashes to align with window sashes.

10. It is not appropriate to remove or conceal window openings on character-defining elevations.

11. It is not appropriate to remove or conceal materials or details of historic windows and shutters -such as beveled glass, art glass, transoms, and decorative trimwork.

12. It is not appropriate to introduce window features or details, including shutters, to a building in an attempt to create a false historical appearance.

Note: See Sustainability and Energy Efficiency for additional standards related to replacement windows and storm windows. See Commercial Storefronts for standards specific to those windows.

Commented [HW30]: It looks like I covered them in both “storefronts” and “energy efficiency” I can include a guideline here as well. Or we can do a sidebar that directs them to the energy efficiency standards.

Exterior Doors

Functional as well as decorative, doors provide access, ventilation, and daylight as well as contributing to the architectural character of the building. Door sizes and styles, as well as their panel and glazing configurations, vary based on the age and style of the building and collectively reflect the wide range of architectural styles represented throughout the district. Solid paneled doors and doors with fixed glass in the upper part are the most common. Nineteenth-century doors may be paired, or “double-leaf.” Many doors feature sidelights and transoms, though these are most common on Colonial Revival- and Neoclassical-style houses. Ornamental leaded, beveled, etched, and opaque glass is also found on doors, sidelights, and transoms and typically reflect the style of the building. Institutional and commercial buildings may feature aluminum-framed glass doors with full height sidelight and/or transoms. (See the glossary of architectural styles in the Appendix for more information on door patterns and styles associated with particular architectural styles.)

Accepted preservation methods for the maintenance and cleaning of exterior doors:

- Inspect doors and surrounds regularly for signs of deterioration due to moisture damage, air infiltration, insect or fungal infestation, corrosion and paint failure.
- Ensure that thresholds are sloped away from the building to prevent water infiltration.
- Retain protective paint or stain coatings that prevent deterioration.
- Ensure that door hardware is in good working order.
- Use the gentlest effective method to clean door surfaces and hardware.

Properly maintained and repaired doors are both energy efficient and contribute to the historic character of the building and district. As moving units, doors require regular maintenance to keep them both functional and airtight. Original door hardware can be maintained and cleaned utilizing the standards for Architectural Metals. Consult the Standards for Wood and Paint for more information on the maintenance, cleaning, and repair of wood doors.

Accepted preservation methods for the repair and replacement of exterior doors:

- Reglaze sash and recaulk joinery as necessary to prevent air or moisture penetration.
- Repaint doors as needed to maintain a sound protective paint film.
- Weatherstrip doors and/or install storm doors to increase their energy efficiency.

Repair is both more appropriate and more cost-effective than replacement. Peeling paint, air infiltration, and broken panes are all easily repairable measures and do not necessitate removal of historic doors. If only a small area of a wood door is deteriorated or damaged, a wood epoxy product can be used to repair the unit and prevent replacement of the entire door.

In situations where replacement is necessary, it is important to find new doors that fit the original opening so the frames and surrounds do not have to be replaced. Although doors are readily available in a variety of sizes and configurations, it is sometimes necessary to have custom replacement units made by a millwork company. Vinyl, metal, or other synthetic doors are not appropriate in the historic district.

Considerations for the removal or addition of exterior doors:

The rhythm and placement of door openings is usually quite consistent on a historic building. Thus, the removal or introduction of new door openings should be undertaken with care and limited to side or rear elevations. New doors should be compatible with the overall design of the building, but need not replicate historic details and patterns exactly.

Commented [HW31]: AS: Should there be a brief discussion of historic door hardware? (knobs, knockers, locks, etc.?) sample: “It is important to match the original door hardware—hinges, handles, locks, etc.—carefully placing it on the location of the original framing members whenever possible”

Commented [HW32]: I added a note about maintaining original hardware. Do you think replicating hardware on a new door is important? Or requiring that original hardware be retained? The latter is going to be a hard one to regulate, since people can replace a doorknob or lock in a matter of an hour and I’m sure it wouldn’t occur to them to obtain a COA.

Commented [HW33]: Staff: Should there be a consistent approach to the lintel type if not necessarily the door itself? I’m thinking of a situation when the main elevation of the home has pronounced stone lintels and someone might want to use a standard steel shelf lintel on the side elevation

Commented [HW34]: Do you think this is an issue? I actually think NOT replicating a stone lintel, to differentiate it, may be preferable.

Standards: Exterior Doors

1. Retain and preserve materials and the decorative and functional features of exterior doors and entrance features that are important in defining the overall historic character of buildings within the historic districts. These include, but are not limited to doors; frames and hardware; lintels and thresholds; and entrance features including sidelights, transoms, and surrounds.

2. Protect and maintain the details, features, and finishes of exterior doors and entrance features through a program of regular maintenance and repair using accepted preservation methods. Ensure that sills are functioning properly to divert rainwater from doors and that wood surfaces have sound paint films.

3. Repair deteriorated or damaged exterior doors and entrance features through accepted preservation methods of patching, splicing, consolidating, and reinforcing. Repairs may include selective in-kind replacement of missing or deteriorated portions of historic doors and entrance features.

4. Replace in kind exterior doors and entrance features that are too deteriorated to repair, taking care to replace only the deteriorated portion rather than the entire door or feature. Replacement doors and features should match the original in material, design, dimension, configuration, detail, and texture. Consider a compatible substitute material only if replacement in kind is not technically feasible.

5. If deterioration necessitates the replacement of an entire door or entrance features, the replacement door or feature should match the original in material, design, dimension, pattern, detail, texture, and color.

It is not appropriate to replace deteriorated doors with stock items that do not fill the original openings.

It is not appropriate to replace true divided light sidelights or transoms with those that have two-dimensional simulations of pane subdivisions, such as snap-in muntins. If not true divided light, glazing should have three-dimensional grills affixed to both the interior and exterior of the window with shadow bars between insulated glass panes.

Consider a compatible substitute material only if replacement in kind is not technically feasible. However, it is not appropriate to replace a deteriorated wood door or entrance feature on a character-defining elevation with a composite substitute material.

6. If an exterior door or entrance feature is completely missing, replace it to match the original feature, based upon physical and documentary evidence, only if the feature to be replaced coexisted with the features currently on the building. Otherwise, replace it with a new door or feature that is compatible in material, design, size, and scale with the building.

It is not appropriate to install new doors that do not fill the original openings.

It is not appropriate to install new sidelights or transoms with two-dimensional simulations of pane subdivisions, such as snap-in muntins. If not true divided light, glazing should have three-dimensional grills affixed to both the interior and exterior of the window with shadow bars between insulated glass panes.

Vinyl and vinyl clad sidelights and transoms are not appropriate in the historic districts.

7. If new doors are necessary, locate them on a rear or non-character-defining elevation, ensuring that they do not damage character-defining features or materials, or otherwise compromise the architectural integrity of the building.

8. Install storm doors that do not obscure historic detailing or trim. If multiple panes are necessary, align them with the panels of the historic door.

7. It is not appropriate to eliminate or introduce door openings on character-defining exterior walls.

8. It is not appropriate to remove or conceal materials or details of historic doors-such as beveled glass, art glass, sidelights, transoms, and decorative trimwork.

9. It is not appropriate to introduce exterior doors or entrance features to a building in an attempt to create a false historical appearance.

Note: See Sustainability and Energy Efficiency for additional standards related to storm doors. See Commercial Storefronts for standards specific to those doors.

Commented [HW35]: Staff: Should the storm door be the same color as the permanent door? This is also a question in regard to storm windows as well

Commented [HW36]: We don't regulate color, but we can suggest this if you think it's important. I'd discuss it in the energy efficiency section though.

Porches, Entrances & Balconies

Porches, entrances, and balconies are among the most prominent features of a house and contribute significantly to the overall historic character of houses within Chapel Hill's historic districts. While their stylistic details vary based on the age and style of the building, their functional yet decorative elements typically include columns, balustrades, piers, steps, soffits, beaded board ceilings, and tongue and groove floors. Most porches are one-story with their supports reflecting the style of the building. These include Classical columns on Colonial Revival- and Neoclassical-style homes, turned posts on Queen Anne-style houses, and tapered wood posts on brick piers on Craftsman-style houses. Vernacular houses in the district have simple turned or square posts. Post-World War II Minimal Traditional and Ranch houses may have decorative metal posts. However, houses constructed in the 1940s and later, especially those built in the Minimal Traditional, Ranch, or Modernist styles are generally without substantial front porches and small porches, when present, are devoid of elaborate detailing. Adding or enlarging porches on these styles drastically alters their historic character and should be avoided.

In addition to front porches, many houses feature side porches, rear porches, sleeping porches, porte cocheres, screened porches, sun porches, and balconies. Side porches are common in the districts, especially on Colonial Revival- and Minimal Traditional-style houses. Many of these side porches have been enclosed over time, while others remain open. Rear porches existed throughout the districts regardless of style and many have been enclosed to enlarge the interior living space. Porte cocheres, porch-like extensions that accommodate a vehicle, are most common on Colonial Revival- and Craftsman-style houses and typically have supports matching those of the front porch. Occasional balconies and classically stylized porticos are also found within the districts, most notably on a number of Neoclassical Revival-style houses in the Franklin-Rosemary district.

Like porches, entrances are often detailed with stylized ornamentation coordinated to convey the architectural style of the building. (See the glossary of architectural styles in the Appendix for more information on porch and entrance details that are associated with particular architectural styles.)

Accepted preservation methods for the maintenance and cleaning of porches, entrances, and balconies:

- Inspect regularly for signs of deterioration due to moisture damage, settlement or structural damage, insect or fungal infestation, corrosion, or paint failure.
- Ensure that gutters and downspouts on porch roofs are free from debris.
- Ensure adequate drainage of porch floors so water does not collect along the foundation or on flat, horizontal surfaces and decorative elements.
- Use the gentlest effective method to clean surfaces.

Porches, entrances, and balconies play an important role, sheltering occupants from sun, wind, and rain, while extending the living space into the outdoors. However, their projecting nature makes porches and balconies especially vulnerable to the elements. Consequently, timely maintenance and repair is critical.

Accepted preservation methods for the repair of porches, entrances, and balconies:

- Caulk vertical wood joints to prevent moisture infiltration.
- Repair structural and decorative elements using the Standards for Masonry, Wood, and Architectural Metals.

- Retain protective paint or stain coatings that prevent deterioration and repaint surfaces as needed to maintain a sound, protective paint film.

Given their functional and architectural importance, every effort should be made to maintain and preserve historic porches, entrances, and balconies. The repair of masonry steps, piers, or foundations for porches and entrances are the same as those outlined in the standards for Masonry standards. Likewise, the repair of wood features is parallel to that of exterior walls, trim, and ornamentation and is outlined in the standards for Wood. Many traditional materials for porches—such as tongue and groove flooring, beaded board, balustrades, and columns—are still readily available making their replacement in kind a simple matter. However, replacement of decorative brackets, turned columns, or balusters with a distinctive detail may require custom millwork. Where possible, it is generally preferable and more cost-effective to patch deteriorated portions of distinctive elements with epoxy repair products rather than pursue wholesale replacement.

Considerations for the removal or addition of porches, entrances, and balconies:

Front porches, entrances, and balconies are such visually prominent features that it is not appropriate to significantly alter, enclose, or remove them. It may be appropriate to alter or enclose a less prominent rear or side porch, though care must be taken to ensure that original detailing is not damaged or obscured. New porches may be installed on side or rear elevations if their design is compatible with the building design, but differentiated from historic porches on the building. Where an earlier porch, entrance, or balcony is missing, it may be appropriate to reinstall the feature based on documentary and/or physical evidence. However, this is only appropriate if the feature to be reinstalled coexisted with other features currently on the building.

Standards: Porches, Entrances & Balconies

1. Retain and preserve the materials and decorative and functional features of porches, entrances, and balconies that are important in defining the overall historic character of buildings within the historic districts. These include, but are not limited to the porch form and configuration; posts, columns, and pilasters; railings and balustrades; brackets, latticework, and friezes; steps, piers, and porch floors.
2. Protect and maintain the details, features, materials, and surfaces of historic porches, entrances, and balconies through a program of regular maintenance and repair using accepted preservation methods. Ensure that drainage features are functioning properly to divert rainwater from porches, entrances, and balconies and that wood surfaces have sound paint films.
3. Repair deteriorated or damaged porches, entrances, and balconies through accepted preservation methods of patching, splicing, consolidating, and reinforcing. Repairs may include selective in-kind replacement of missing or deteriorated portions of a feature, such as column base or capital
4. Replace in kind any feature or portion of a porch, entrance, or balcony that is too deteriorated to repair, taking care to replace only the deteriorated portion rather than the entire feature. Replacement features should match the original in material, design, dimension, configuration, detail, and texture. Consider a compatible substitute material only if replacement in kind is not technically feasible. It is not appropriate to replace wood porch floors or steps with brick or concrete.
5. If deterioration necessitates the replacement of an entire feature or surface, replacement features and surfaces should match the original in material, design, dimension, pattern, detail, texture, and color. Consider a compatible substitute material only if replacement in kind is not technically feasible. However, it is not appropriate to replace a deteriorated wood features on a character-defining elevation with vinyl or a composite substitute material.
6. If a porch, entrance, or balcony is completely missing, replace it to match the original feature, based upon physical and documentary evidence, only if the feature to be replaced coexisted with the features currently on the building. Otherwise, replace it with a new feature that is compatible in material, design, size, and scale with the building.
7. If new porches or entrances are necessary, locate them on a rear or non-character-defining elevation, ensuring that they do not damage character-defining features or materials, or otherwise compromise the architectural integrity of the building.
8. It is not appropriate to remove or conceal materials or details of historic porches, entrances, and balconies-such as columns, balustrades, brackets, pilasters, steps, floors, ceilings, cornices, and trimwork.
9. It is not appropriate to remove, screen, or enclose a porch, entrance, or balcony on a character-defining elevation. Consider screening or enclosing a porch or balcony on a side or rear elevation only if the design will preserve the historic character of the porch or balcony.
10. It is not appropriate to introduce porch, entrance, or balcony features or details to a building in an attempt to create a false historical appearance.

Note: See Wood and Masonry for additional standards related to those materials. See Paint for additional standards related to painting porches, entrances, and balconies.

Commercial Storefronts

While the majority of buildings in Chapel Hill's historic districts are residential in nature, the Franklin-Rosemary Historic District includes a number of historically commercial resources, most located along Franklin Street. These early-twentieth century commercial buildings and storefronts add interest and vitality to Chapel Hill's downtown while linking the downtown to the adjacent institutional and residential areas of the Franklin-Rosemary Historic District. The first-floor-level, street-facing storefront is the most prominent architectural feature of most historic commercial buildings. It links the building to the street and its display windows, signage, and entrance entice the passerby to enter.

Most commercial buildings in this area are two stories tall with a mid-cornice or signboard separating the storefront from the upper street façade, which may also be differentiated by a change in building materials. Storefronts historically featured recessed entries that, like porches on historic homes, sheltered shoppers from the elements and provided a gracious transition from the sidewalk to the building interior. While most commercial buildings in the district have had their storefronts altered or replaced over time, reflecting an effort to modernize or accommodate new businesses, the basic elements of the storefront remain consistent. These include entrance doors with transoms flanked by large display windows above bulkhead panels. Storefronts may be sheltered by awnings and have projecting or flush signage. Upper-level windows are typically double-hung, and brick parapets feature decorative brick corbelling.

While storefronts evolve to serve changing businesses, elements of historic storefronts can and should be maintained. Their high use requires maintenance and repairs similar to those of other entrances, windows, and doors. Removing a historic storefront or replacing its historic features with incompatible, contemporary materials significantly diminishes the architectural character of a commercial building.

Accepted preservation methods for the maintenance and cleaning of storefronts:

- Inspect storefronts and building facades regularly for signs of deterioration due to moisture damage, settlement or structural damage, insect or fungal infestation, corrosion, or paint failure.
- Ensure that gutters, scuppers, and downspouts are free from debris and building walls and storefronts are free of vegetation.
- Ensure adequate drainage so water does not collect along the foundation or on flat, horizontal surfaces and decorative elements.
- Use the gentlest effective method to clean surfaces.

Accepted preservation methods for the repair of storefronts:

- Promptly repair deteriorated mortar, areas of structural settlement, and missing or damaged brick or stone on masonry buildings.
- Retain protective paint or stain coatings on wood and metal elements that prevent deterioration and repaint surfaces as needed to maintain a sound, protective paint film

Standards listed in Changes to Building Elements apply to all properties regardless of use. However, commercial buildings and storefronts have distinctive elements that warrant additional standards. Standards for Exterior Lighting and Signage are also applicable.

INSERT DIAGRAM SHOWING PARTS OF A STOREFRONT

Standards: Commercial Storefronts

1. Retain and preserve the materials and decorative and functional features of storefronts that are important in defining the overall historic character of buildings within the historic districts. These include, but are not limited to entrances and transoms; display windows and bulkheads; pilasters and cornices, upper-level windows and surrounds; parapets, decorative brickwork, and name or date plaques.
2. Protect and maintain the details, features, materials, and surfaces of historic storefronts through a program of regular maintenance and repair using accepted preservation methods. Ensure that drainage features are functioning properly to divert rainwater from storefronts and that wood and corrosive metal surfaces have sound paint films.
3. Repair deteriorated or damaged storefront features and surfaces through accepted preservation methods for masonry, wood, and architectural metals. Repairs may include selective in-kind replacement of missing or deteriorated portions of historic storefronts.
4. Replace in kind storefront features and surfaces that are too deteriorated to repair, taking care to replace only the deteriorated portion rather than the entire feature. Replacement features should match the original in material, design, dimension, pattern, detail, and texture. Consider a compatible substitute material only if replacement in kind is not technically feasible.
5. If deterioration necessitates the replacement of an entire storefront feature or surface, replacement features and surfaces should match the original in material, design, dimension, pattern, detail, texture, and color. It is not appropriate to install display windows and entrances that do not fill the original openings.
6. If a storefront feature is completely missing, replace it to match the original feature, based upon physical and documentary evidence, only if the feature to be replaced coexisted with the features currently on the building. Otherwise, replace it with a new feature that is compatible in material, design, size, and scale with the building.
7. Install fabric awnings in a manner that does not conceal architectural features or damage historic fabric. It is not appropriate to install pent roofs or plastic or metal awnings over commercial storefronts.
8. It is not appropriate to remove or conceal character-defining features and details of historic storefronts-such as transoms, mid-cornices, display windows, doors, sign panels, recessed entries, tiles, and bulkhead panels.
9. It is not appropriate to conceal or replace historic exterior storefront materials-such as wood, architectural metal, ceramic tile, glass, or masonry-with contemporary synthetic coatings or substitute materials.
10. It is not appropriate to introduce new storefront features that compromise the architectural integrity of the storefront.
11. It is not appropriate to introduce storefront features or details to a building in an attempt to create a false historical appearance.

Note: See Windows & Shutters for additional standards related to upper-level windows. See Lighting and Signage for additional related standards.

Accessibility & Life Safety Considerations

While the majority of buildings in Chapel Hill's historic districts were constructed as single-family homes, the adaptive reuse of historic buildings often requires modifications to meet current life safety and accessibility requirements. Even though the Commission does not review or control use of a historic building, it does review any use-related proposed change to the building exterior or site to determine if the change is consistent with design standards for the district. Non-residential buildings are more likely to already meet accessibility standards. Most commercial buildings were constructed with at-grade entrances, though modifications need to be made to accommodate doors of appropriate width or additional means of egress. Institutional buildings, including churches and campus buildings, while not necessarily constructed with accessibility in mind, have generally been modified to include ramps, elevators, and other accessible features.

The Americans with Disabilities Act (ADA) of 1990 requires accessibility to public buildings. However, in deference to their historic character, some flexibility is provided for historic properties by the ADA in meeting current standards for life safety and accessibility. The North Carolina State Building Code along with ANSI A117.1 provides the necessary guidance for ADA standards. Additionally, the North Carolina Existing Buildings Code (2018) was written specifically to address existing buildings and provides guidance for the retention of historic features without compromising life safety.

For additional information and to ensure that your project is in compliance with current building codes, please consult the Code Enforcement Officials with the Town of Chapel Hill. You may also wish to consult with the Restoration Branch of the State Historic Preservation Office.

Preservation Considerations and Best Practices

It is important to seek ways to accommodate life safety and accessibility requirements in ways that do not compromise the historic building or site. Property owners are encouraged to work with the HDC and the local code officials early in the planning process to develop creative design solutions that meet or exceed the relevant standards while preserving the architectural and historic integrity of the property. Sensitive solutions that minimize the potential impact of alterations on character-defining elevations and features and minimize the damage or loss of historic material may not immediately present themselves. However, careful and creative planning can produce such solutions.

It is particularly important to provide public access to commercial and institutional buildings. Often modest measures such as replacing door hardware, adding a simple handrail to front steps, slightly widening an entranceway, or gently sloping a recessed entry to meet a raised threshold can remove accessibility obstacles. Raised foundations create accessibility challenges for many historic buildings in providing access from the site to the first floor. This change in level generally requires the addition of a ramp or, less frequently, a mechanical lift.

Life safety concerns requirements may call for the addition of fire exits, fire doors, fire stairs, or elevator towers. The visual impact of such elements can and should be minimized by discreetly locating such elements on non-character defining elevations and designing them to be compatible with the historic building in material, scale, design, and finish. Additionally, modifications should be constructed to be reversible and to allow removal without damage to the historic resource.

Commented [HW37]: Not sure if this is still the best heading for these last few sections. It didn't fit the template of the earlier sections though.

Standards: Accessibility & Life Safety Considerations

1. In reviewing proposed changes to a historic property, carefully consider related accessibility and life safety code implications to determine if the proposed change is compatible with the historic district, building, and site.
2. Meet accessibility and life safety code requirements in ways that do not compromise the historic character or significant features of the historic district or building site.
3. Meet accessibility and life safety code requirements in ways that do not compromise the historic character or significant architectural features of the building.
4. Determine appropriate solutions to accessibility with input from code officials, historic preservation professionals, and local disability groups. Work with code officials to explore alternative methods to meet life-safety code requirements while preserving character-defining features of the building and site.
5. Introduce new or alternate means of access and new life safety features, as needed, in ways that are reversible and do not compromise the historic materials, features, or character of the building.
6. Locate new or alternative means of access-such as ramps, handrails, and mechanical lifts-on rear or non-character-defining elevations. Design accessibility features so they are compatible with the historic building in design, scale, materials, and finish. Consider using vegetation to screen the features and minimize their visual impact.
7. Locate life safety features-such as fire doors, elevator additions, and fire stairs-on rear or non-character-defining elevations, minimizing their visibility from the street. Design life safety features to be compatible with the historic building in scale, proportion, materials, and finish. Consider using vegetation to screen the features and minimize their visual impact.

Commented [HW38]: Staff: Do we have anything we can use about creating larger windows for egress? We have heard from the fraternity and sorority houses that historic windows are not large enough to meet egress requirements and the applicants will be coming in to expand the window. This compromises the appearance if the window is on a character-defining façade. In other communities, there are examples where people create faux double-hung windows that are actually casements; however, those are expensive and require a custom window

Heather: I actually love the idea of a casement that mimics the size and pane configuration of a double-hung. I think anytime you alter the actual size of the opening it's a problem. Presumably they're only needing to replace the Windows that open to a fire escape and not ALL windows in sleeping rooms, right? Otherwise, may be a good question for the ncpres list-serve to see what other towns have done.

Sustainability & Energy Efficiency

Historic buildings, largely constructed prior to the advent of central heating and air conditioning systems, often took advantage of architectural elements and site features for heating and cooling. Fortunately, these elements and features often still provide energy efficiency for a building, allowing property owners to maximize their energy conserving potential while retaining historic elements and materials. A variety of traditional energy conserving features benefits the residents of Chapel Hill's historic districts. For example, on many residences, deep front porches extend the living space during temperate weather while also providing a buffer from sun, wind, rain, and snow.

Operable windows and transoms allow the control of light and air through a building, capitalizing on cool breezes to both cool and provide fresh air. Storm windows and doors provide additional insulation, while shutters, awnings, and deep roof overhangs allow the control of sunlight, reducing (or capitalizing on) solar heat gain, especially on south-facing elevations. Gable vents allow for the cooling of attic spaces by releasing warm air through the gables, while foundation vents allow air to circulate beneath the house, reducing moisture build-up. Mature shade trees protect many district buildings from the solar gain of direct summer sun, while allowing light and heat through the bare branches during the cold winter months. Other traditional building features that offer thermal relief include raised foundations, vented crawl spaces, tall attics, gable vents, and operable transoms, awnings, and shutters.

Preservation Considerations and Best Practices

Utilizing existing features can provide significant energy efficiency with little, if any, additional expense. However, like all elements of historic buildings, energy efficient building elements require routine maintenance and repair, including the following steps:

- Inspect windows and doors regularly for signs of air infiltration. Install weatherstripping or reglaze sashes as needed.
- Inspect crawl spaces and attics for air and water infiltration, adding insulation as needed.
- Ensure that water drains away from outdoor mechanical units and that they are free from debris and vegetation.
- Maintain mature shade trees.

The installation of storm windows and, to a lesser extent, storm doors can further enhance the weathertightness of an historic building. When considering storm windows, look for units with narrow profiles that can be sized to fit the existing openings and finished in a color that blends with the existing windows. Historically, screens and storm windows were not operable, but were instead interchangeable units were interchanged in the spring and fall. If selecting operable storm windows with integrated screens, it is best to choose windows that align with the existing sashes of double-hung windows so their visual impact is minimized. Likewise, storm doors fitted to the existing opening with a large, single glass pane, conceals less of the existing door and are less visually intrusive. Because condensation between windows and storm windows causes can deterioration to historic windowsills and sashes, it is essential that the ventilation holes at the base of storm units are kept clear and open.

In addition to maximizing the impact of energy efficient building elements, updated mechanical systems, new communication systems, and contemporary energy efficiency measures are sometimes necessary or desirable to increase the comfortable use of the building. The discreet siting of new HVAC systems, condensers, additional vents, satellite dishes and solar panels can minimize their visual impact on the district and the individual property. They should be sited in

Commented [HW39]: AS: add or make clear that these can be with removable/replaceable screening & glazed units as well as (and in my opinion preferable to) the type with screens that slide up and down.

Commented [HW40]: I added a little language. Let me know if you think it needs more. We can also include graphics of the different kinds of storms. I've also seen interior storms, which don't conceal the windows at all (from the outside), but their tension mounted frames are not ideal for larger windows.

rear yard, side/rear yard, and rear roof slope locations sufficiently screened from view with landscaping or appropriate fencing. Further, care should be taken to ensure installation has the least possible impact on the historic features and materials of the building.

In general, the introduction of underground utility lines that reduce the intrusion of additional overhead lines and poles is encouraged. However, in trenching, take care to avoid damage to the tree roots and archaeological resources.

Commented [HW41]: AS: What is status of using/installing home geothermal systems in NC? In Ohio it was becoming popular – had to think about how the installation might affect the site/trees/archaeology.

Commented [HW42]: Let's plan to discuss this with solar panels during the committee meeting. I think the only real problems are ensuring that it 1. Doesn't disrupt the foundations of buildings and 2. Doesn't disrupt archaeological remains and 3. Doesn't do significant damage to mature tree roots. So, I guess its about location really. Is there an above-ground component to the systems?

Standards: Sustainability & Energy Efficiency

1. Retain and preserve energy-conserving features, especially those that are important in defining the overall historic character of buildings or site features within the historic districts. These include, but are not limited to shade trees, porches, gable vents, awnings, operable windows and transoms, and shutters.
2. Increase the thermal efficiency of historic buildings through appropriate methods such as caulking and weatherstripping, and by introducing energy efficient features such as storm windows and doors, historically appropriate awnings, and operable shutters where appropriate.
3. If desired, introduce narrow-profile exterior or interior storm windows so that they do not damage or obscure the historic sash or frame. For wood or painted metal windows, select exterior storm windows with a painted or factory-finished color that is compatible with the sash color. Operable storm window dividers should align with the existing sash division of double-hung windows. Storm windows with a bare aluminum finish may be appropriate for post-1945 buildings in the historic districts.
4. It is not appropriate to replace operable windows with fixed glazing, to replace clear glazing with tinted glazing, or to replace multiple-paned windows or doors with single-pane thermal sash with flat, applied muntins.
5. If desired, introduce full-light storm or screened doors constructed of wood or aluminum. Install doors so they do not obscure or damage the existing door or frame. Select storm or screened doors with a painted or factory-finished color that is compatible with the door color. Storm or screen doors with a bare aluminum finish may be appropriate for post-1945 buildings in the historic districts.
6. If historically appropriate, install fabric awnings over storefront, window, porch, or door openings with care so historic features are not damaged or obscured.
7. Install low-profile roof ridge vents only if they will not destroy historic roofing materials and features or otherwise compromise the architectural character of the building.
8. Locate new mechanical equipment, utilities, and water collection devices including air-conditioning and heating units, meters, exposed pipes, and rain barrels or cisterns in locations that minimize their visibility from the street and do not alter or remove historic fabric from the building or compromise character-defining building features. Screen them from view with vegetation or fencing.
9. It is not appropriate to install condensers, skylights, ventilators, solar panels, antennas, satellite dishes, and mechanical or communication equipment on roof slopes or building elevations that are visible from the street or in locations that visually compromise the architectural character of the historic building. Low-profile solar panels may be appropriate on rear elevations or low-sloped roofs. Green roofs or other roof landscaping may be appropriate if not visible from the street and if care is taken to not damage the roof structure.

Commented [HW43]: Staff: We need to address solar panels. Not sure if it would be best to create a subsection specific to solar panels under this heading or just incorporate a few standards. There's been some rumblings that historic districts are not allowing solar panels and prohibiting residents from being sustainable. My suggestion would be to allow solar panels on non street-facing facades and allow them out outbuildings. See Denver's standards for solar panels:
https://www.denvergov.org/content/dam/denvergov/Portals/646/documents/landmark/design_standards/Denver_Landmark_Standards-complete.pdf

Heather: Let's definitely discuss with committee and add standards specific to solar panels. That said, your link is dead, but I'll locate it before our meeting next week.

Disaster Preparedness & Planning

In central North Carolina, natural disasters typically take the form of hurricanes, tornados, and ice storms. Though Chapel Hill is generally in a well-protected part of the state, severe storms can still bring damage including fallen trees, flooding, and wind damage to roofs, siding, windows, and porches. Fire can also be devastating to historic buildings, especially those in dense urban areas.

Preservation Considerations and Best Practices

Routine maintenance and repair of building materials and elements is essential regardless of the potential for severe weather. The building and site maintenance outlined in the preceding sections will ensure that the historic building and site are protected from wind, rain, snow, and ice.

However, it is important for property owners to prepare for severe weather by performing a property audit to assess risks, identify vulnerabilities, and correct them. This will involve looking for potential site and building hazards and taking appropriate measures as recommended in the standards. Fortunately, many of these measures are part of an ongoing maintenance routine, so ensuring they are performed regularly will not only serve well when severe weather threatens, but will also help to keep the historic building and property in good condition.

Standards: Disaster Preparedness & Planning

1. Assess the property for run-off, soil erosion, and still water, and correct drainage problems.
2. Look for damaged or dead limbs on trees, and inspect trunks and roots for damage. Consult with a registered arborist for appropriate removal methods.
3. Ensure that landscaping and shrubbery are at least 24 inches from foundation walls to prevent excessive moisture and cracking. Prune or relocate landscaping that is closer than this measure.
4. Check foundations, basements, and crawl spaces for cracks or evidence of water infiltration. Stabilize foundations where needed and consider installing a sump pump for basements and crawl spaces if there is potential for water accumulation.
5. Ensure that metal, slate, and shingled roofs, as well as roof flashing, are in good condition. Keep gutters and downspouts clear to avoid roof damage and water infiltration on walls and foundations.
6. Check the stability of the chimney by examining mortar joints and repointing bricks where necessary. Consider installing a chimney cap to prevent water infiltration.
7. Install appropriate storm windows and doors in a manner that maintains historic integrity and does not damage historic elements. Ensure that operable shutters are in good working condition so they can be closed before severe or potentially damaging weather to protect windows from breakage. See standards for Windows & Shutters, Exterior Doors, and Sustainability & Energy Efficiency.
8. If immediate repairs are needed after damage from a storm, temporary measures may be performed without a Certificate of Appropriateness (CoA). However, the damage must be documented along with the emergency/temporary measures that were taken and a CoA must be obtained for the permanent repairs. In the case of emergency repairs, the increased fee for retroactive COAs may be waived.

Commented [HW44]: AS: do we want to consider their appearance & make any recommendations – what options are there? (also see my comment on chimney pots under masonry)

Commented [HW45]: I honestly don't know much about chimney caps and I've really only seen metal ones. If you think people are going to start installing overly decorative ones, let's discuss.