

SECTION 4: EXTERIOR ALTERATIONS TO CONTRIBUTING STRUCTURES

The City of Houston has established historic districts as a way to preserve the character of neighborhoods which possess cultural, historical, and architectural significance. Good stewardship involves the responsible use and management of historic properties, protecting them for future generations. This is best practiced by maintaining the features that define the character of individual historic buildings, structures, sites, and objects of historic significance. When individual historic resources are appropriately maintained, the historic district — the collection of those resources — will be preserved as well. By taking the time to learn about character-defining features and how to treat them sensitively, we can serve as good stewards for properties in historic districts, while they are in our care.

This design guidelines document, as a whole, applies to all structures in locally designated historic districts. For ease of use, we have divided the document into sections based on the type of work being considered and the type of historic resource or property that the proposed project would affect. **This section (Section 4) focuses exclusively on exterior alterations for contributing structures.**

For additions to contributing structures, see Section 5. For exterior alterations or changes to noncontributing structures, see Section 6. For new (infill) construction, see Section 7. For relocation or demolition of any structure, contributing or noncontributing, see Section 8.

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APPLYING THE DESIGN GUIDELINES

The design guidelines in this section focus on preserving the character-defining features of historic buildings. The section is organized by *feature* — that is, by the different elements of a building. We have tried to organize these elements from general (such as building materials) to specific (such as windows or doors). You will probably need to review both general and specific guidelines for any project being considered.

Following the heading for each feature, we have provided guidelines for the preferred sequence of action: first, preserve and maintain; repair when necessary; and replace or reconstruct only as a last resort.

Most changes to contributing structures within a historic district require a Certificate of Appropriateness. Some of these can be approved administratively by the Planning Director, while others must be reviewed by the HAHC. Some changes do not require a Certificate of Appropriateness at all. Please review the following information to determine what criteria apply to your project, as established in the historic preservation ordinance.

The following types of work **do not require a Certificate of Appropriateness**.

- Ordinary maintenance and repair
- Re-roofing with in-kind materials with no change to the structure, shape, or pitch of the roof
- An alteration that is obscured from view from the street by the original structure and not merely obscured by fencing, landscaping, non-historic additions, or other impermanent obstructions
- Gutters, downspouts, storm windows and doors, window screens, screen doors, temporary emergency weatherization features such as plywood coverings over windows, porch ceiling fans, light fixtures, HVAC units, landscaping
- Fences
- Removal of burglar bars, satellite dishes, antennae, solar panels, free-standing signs, and accessibility ramps or lifts
- Installation of solar panels, antennae, satellite dishes, or other roof equipment installed on the rear half of the roof
- Installation of free-standing signs
- Painting non-masonry surfaces, and repainting previously painted masonry surfaces
- Reconstruction of a portion of a contributing structure that was completely or partially destroyed by a fire, natural disaster, or other damage not intentionally caused by the owner of the structure, only if the reconstruction is built within the same footprint and has the same exterior features as the damaged or destroyed contributing structure

The following types of work **require a Certificate of Appropriateness**, which may be **approved administratively**:

1. Removal of a window or door element that was not original to the contributing structure and replacement with a window or door element that:
 - a. Is appropriate to the historic significance of the structure; and
 - b. Does not change the size shape or location of any opening, including the trim, molding or other features associated with the opening, from which the window or door elements are to be removed
2. Removal of:
 - a. Exterior wall cladding that was not an original feature or characteristic of the structure and replacement with appropriate cladding
 - b. Non-historic additions, including attached garages or carports
 - c. Non-historic decorative elements, such as shutters or brackets
 - d. Non-historic low-profile skylights, canopies, awnings, or signs attached to the building
3. Replacement of historic materials that are damaged beyond repair with materials of the same size, shape, material, and pattern
4. Installation of:
 - a. Burglar bars
 - b. Accessibility ramps or lifts
 - c. Low-profile skylights, shutters, solar panels, antennae, satellite dishes, or other roof equipment installed on the front half of the roof
 - d. Awnings and canopies

5. Construction of:
 - a. Free-standing garages, including garage apartments, free-standing carports, and other secondary structures, that have a footprint of 600 square feet or less, located at the rear of the lot
 - b. A rear porch that is not taller than the existing structure and that does not extend beyond the existing side walls of the structure
6. Installation of any details including porch elements or detailing that have been partially lost or removed but whose existence has been substantiated by the remaining elements still in existence or historical documentation such as architectural plans or historic photographs
7. Installation of signs attached to the exterior of the building that:
 - a. Do not compromise historic exterior features on the structure;
 - b. Are 25 square feet or less in total area; and
 - c. Are installed without damage to significant historic material

A Certificate of Appropriateness may also be approved administratively for the repair or reconstruction of those internal structural elements that are essential to support a building's envelope to which they are attached (for example, interior shiplap) if the applicant demonstrates to the satisfaction of the director that the structural repair or reconstruction can be accomplished without harm to the exterior features of the building or structure visible from the right-of-way. In support of such an application, the applicant shall provide a written statement from a structural engineer, licensed by the State of Texas, that the proposed repair or reconstruction can be accomplished without harm to the exterior features of the building or structure visible from the right-of-way.

All other activities require a Certificate of Appropriateness and must meet the criteria for exterior alterations as established in the Historic Preservation Ordinance (Sec. 33-241):

1. The proposed activity must retain and preserve the historical character of the property;
2. The proposed activity must contribute to the continued availability of the property for a contemporary use;
3. The proposed activity must recognize the building, structure, object or site as a product of its own time and avoid alterations that seek to create an earlier or later appearance;
4. The proposed activity must preserve the distinguishing qualities or character of the building, structure, object or site and its environment;
5. The proposed activity must maintain or replicate distinctive stylistic exterior features or examples of skilled craftsmanship that characterize the building, structure, object or site;
6. New materials to be used for any exterior feature excluding what is visible from public alleys must be visually compatible with, but not necessarily the same as, the materials being replaced in form, design, texture, dimension and scale;
7. The proposed replacement of exterior features, if any, should be based on accurate duplication of features, substantiated by available historical, physical or pictorial evidence, where that evidence is available, rather than on conjectural designs or the availability of different architectural elements from other structures;
8. Proposed additions or alterations must be done in a manner that, if removed in the future, would leave unimpaired the essential form and integrity of the building, structure, object or site;
9. The proposed design for any exterior alteration or addition must not destroy significant historical, architectural, archaeological or cultural material, including but not limited to siding, windows, doors, and porch elements;
10. The proposed alteration or addition must be compatible with the massing, size, scale, material and character of the property and the context area; and
11. The distance from the property line to the front and side walls, porches, and exterior features of any proposed addition or alteration must be compatible with the distance to the property line of similar elements of existing contributing structures in the context area.

These design guidelines were developed based on the criteria on the previous page; for instance, Criteria 1, 4, and 5 are applicable to most of the guidelines that follow. In the interest of brevity, we have not identified all criteria that apply to each guideline, but in some cases, where we felt it would be particularly helpful, we have noted the applicable criterion.

Please note that the design guidelines in this document are numbered for easy reference and to facilitate discussion of projects between property owners, design professionals, staff, and members of the Houston Archeological and Historical Commission. This numbering system is based on the section numbers in this document and does not correspond or relate to the numbered criteria for evaluating Certificates of Appropriateness in the City of Houston historic preservation ordinance.

Reminder: Character-Defining Features

As discussed in Section 2, *character-defining features* are visible, physical parts of a building. They include the overall shape of the building, the materials with which it was built, evidence of craftsmanship in design and construction, decorative details, and elements of the site. When Criteria 1 and 4 refer to “historical character” and “distinguishing qualities or character,” they mean *character-defining features*. The most important of these features are often, but not always, located on the front of the building or structure and on other walls that are highly visible from the street.

Reminder: Minimizing the Cumulative Effects of Alterations

A series of multiple changes to a building can have a negative impact on integrity and, as a result, contributing status. Therefore, all proposed changes must be considered as part of a whole. A project that might be found appropriate, if the building has not already been altered, could be considered inappropriate as the latest in a series of changes, each of which chip away at character-defining features and the overall integrity of a building.

The entire planned project should be presented in the Certificate of Appropriateness application. Applicants who hold back “future phases” of a project in order to gain approval for initial work may find that subsequent proposals will not be approved, if the cumulative effect of all of the changes is too great and, collectively, diminishes the integrity of the building.



Building forms are visible where the wall plane is articulated.

GENERAL GUIDELINES FOR EXTERIOR ALTERATIONS

These guidelines — mass, form, and scale and historic building materials — are general to the entire building, regardless of its architectural style or original function. Guidelines for more specific building components, such as windows, doors, and siding, appear later in this section.

Mass, Form, and Scale

A building's size and shape have as much effect on its overall appearance as do stylistic details and decorative accents. In architectural terms, *size* and *shape* are more precisely described by the terms *mass*, *form*, and *scale*. These three characteristics are important by themselves, but together they determine a building's visual impact. They are among the most important character-defining features of a historic building. (See Criteria 8 and 10 on page 4-6.) For more information about mass, form, and scale, see Section 2.

4.1 Preserve the original massing, form, and scale of a historic structure.

The best way to preserve the original form and massing is to retain the original corners of the building, wherever those occur; the shape of the roof; and any porches from the period of significance. The original scale can be preserved by maintaining historic heights, widths, and proportions of building elements and architectural details (including doors and windows).

4.2 Preserve the character of historic walls.

A building's walls, which enclose its volume, are also key to preserving form, massing, and scale. In architecture terms, walls may be a single plane (that is, a flat continuous surface) or they may be *articulated*, with changes in the wall plane as areas are set in or project out. In either case, walls enclose the forms that make up the building, and so preserving those shapes also preserves massing and scale.



Preserve the original massing, form, and scale of a historic building. This includes the main building volume, any wall offsets and porches, the roof, the foundation, windows, doors, and materials.

Historic Additions

The City of Houston's historic preservation program does not seek to turn historic districts into museums. Buildings evolve over time, and an addition that was made during the period of significance (such as a side porch or a bedroom wing) may be worthy of preservation. More recent additions, particularly if not sensitively designed, may detract from the building's historic character.

4.3 Preserve an addition that has achieved historic significance.

Determine whether an addition was built during the period of significance. Construction dates on tax appraisal records are often inaccurate, but the dates shown on the inventory of properties, which was created during the designation of the historic district, should be correct. If a precise year of construction is not known, this will be indicated in the inventory with the use of "ca."; this is the abbreviation for circa, which means approximately. If the addition was building within the period of significance, determine whether it is compatible with the original building and whether the addition retains integrity. If all of these conditions are true, the addition should be considered to have achieved significance in its own right. (See Section 2 for more information about these concepts.)



A side porch or a bedroom wing addition may have taken on historic significance and, thus, merit preservation.



A house with original building materials

NOTE:

For more information about appropriate maintenance methods, please see the National Park Service's Preservation Brief No. 47: *Maintaining the Exterior of Small and Medium Size Historic Buildings*.

Historic Building Materials

These design guidelines apply to all materials that are original to the building, including wood, stone, brick, metal, stucco, plaster, and concrete. Historic building materials should be preserved in place, as much as possible, and repaired when necessary. If the material is damaged beyond repair, only then should you consider replacing it. Only replace material that is damaged, and use replacement material that matches the original.

If historic materials have been covered, consider removing the covering; do this carefully, so that the underlying original building material is not damaged, and repair the original material as needed, once it is exposed.

4.4 Keep historic building materials clean.

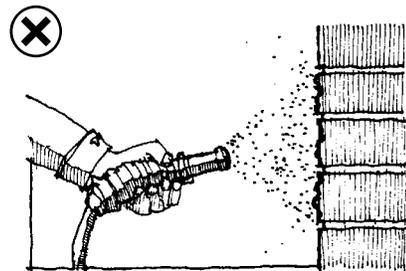
- If building materials become dirty or mildewed, use gentle cleaning products and methods, rather than harsh chemicals or abrasive treatments.
- A low-pressure water wash is preferred; avoid high-pressure or abrasive methods, which can damage historic building material.
- Mild chemicals should be tested in an inconspicuous location.

4.5 Preserve historic building materials.

- Do not remove original material that is in good condition.
- Provide proper drainage away from historic materials to minimize damage to them. For example, provide storm drains, flashing, coping, gutters, etc.
- Do not cover or obscure historic building materials.
- Consider removing later covering materials that are inappropriate.



Inappropriate siding being removed from a historic brick Italianate building



Harsh cleaning methods, such as sandblasting, can damage historic materials, changing their appearance. Such procedures are inappropriate.



Before: A historic house with inappropriate synthetic siding



After: The same house, after the historic siding was uncovered

4.6 Repair historic building materials

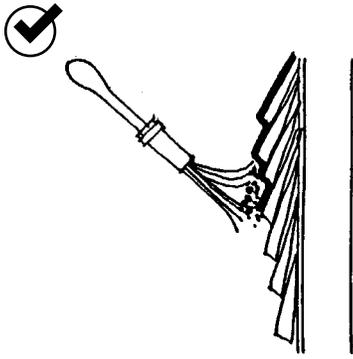
- Regularly inspect materials, so that damage can be caught and repaired early.
- Repair deteriorated historic building materials by patching, consolidating, or otherwise reinforcing the material.
- Refer to the National Park Service's Preservation Briefs for technical information about the causes of damage to materials and suggestions for appropriately repairing historic materials. (See page 9-1 in Section 9 for link.)

4.7 Replace historic materials in kind.

- Remove and replace only the material which is deteriorated or damaged beyond reasonable repair. For example, if a few pieces of siding are damaged beyond repair, then replace only those boards, not the entire wall.
- Use replacement material that matches the original in profile/ shape, finish, and size.
- Consider relocating historic material from a less visible area to replace damaged building material in a key location.
- An alternative material may be considered for a location that is not critical to the integrity of the property, such as a rear wall. (See "Locating Alterations on a Contributing Structure" on page 5-19 for more information.)



Repair deteriorated historic building materials by patching, consolidating, or otherwise reinforcing the material.



Maintain protective coatings to retard deterioration and ultraviolet damage.

Wood

Early woodwork includes siding, wall corner boards, trim around window and door openings, foundation skirting, and soffits. When properly maintained, original wood building elements can last for many years.

4.8 Protect wood surfaces from deterioration.

Paint is used to protect wood surfaces, but because it weathers over time, paint must be reapplied; the National Park Service recommends re-painting every 5–8 years, after properly preparing the painted surface. (For more information about technical information available from the National Park Service, see page 9-1 in Section 9.)

- Maintain a coat of paint on wood surfaces; repaint only as needed to prevent deterioration.
- Do not use paints or sealants that are described as being water-repellent or water-proof; these can trap moisture within the wood and cause damage.

4.9 Consider using an epoxy wood consolidant to repair small areas of rot or damage.

No matter how well wood building materials are maintained, sometimes exposure to moisture results in small areas of rot or other damage. These areas can be easily repaired using an epoxy wood consolidant. Unlike wood fillers, epoxy can be shaped, carved, sanded, and painted just like wood. These consolidants are available as liquids or putties, and are also formulated to be flexible, rather than cracking as wood shrinks or swells with changes in humidity.

- Identify the source of the moisture or damage and take steps to prevent further damage.
- Either remove damaged wood and replace it with a putty consolidant, or leave the damaged wood in place and consolidate it with the liquid version.
- When the repair is complete and the wood has been appropriately shaped and sanded, paint it to protect the rest of the original wood, as well as the repair.
- Regularly inspect for and address any ongoing problems.

Historic Masonry

Masonry is a type of construction that uses individual building units, such as bricks or stones, and binds them together with a mortar, a stiff paste that hardens as it dries. Mortar is usually made by mixing sand, water, and a binder; historically, lime was used as a binder, but Portland cement began to be manufactured in the United States in 1875, and it became widely used by the early 1900s. The spaces between masonry units, which are filled with mortar, are called *mortar joints*. These joints can be *tooled* (shaped with a tool) to give a variety of appearances and to channel water away from the surface of the masonry wall.

Brick is probably the most common masonry material used in Houston's historic districts. Natural stone, cast stone, structural clay tiles, and various types of concrete tiles, blocks, and are also found in historic buildings here. Decorative tiles, which are set in mortar, and stucco, a plaster coating often used over a masonry structure, are also common.

Masonry construction is designed to allow moisture to move from the inside of a wall or building to the outside, through evaporation or weep holes. If moisture is a problem, address the source of the leak or infiltration directly; avoid coatings or sealers which can trap moisture inside a building or masonry wall and cause damage and deterioration.

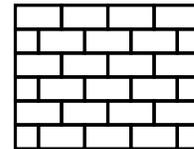
4.10 Preserve original masonry materials.

- Preserve significant masonry features, including cornices, pediments, steps, and foundations.
- Avoid dismantling and rebuilding a masonry wall (or a portion of it) if the wall can be repaired or repointed instead. Consult a qualified mason.
- Do not paint previously unpainted masonry without first obtaining a Certificate of Appropriateness.
- Clean masonry materials using gentle products designed for that specific material or type of stone. Graffiti may be removed with a poultice.
- Do not use high-pressure methods, including power washers, sandblasting, or shooting with abrasive material of any kind; do not scrub with a wire brush. Abrasion from any of these sources can damage the face of masonry units (particularly bricks) and strip mortar from joints.

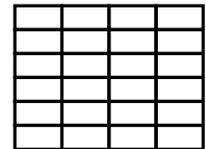


Preserve significant masonry features, including walls, cornices, pediments, steps, and foundations.

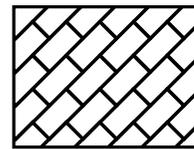
COMMON MASONRY PATTERNS



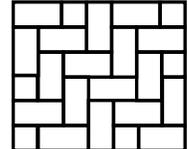
Running Bond



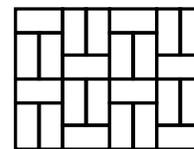
Stacked Bond



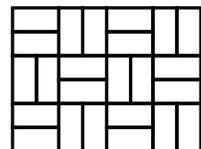
45 Degree Running Bond



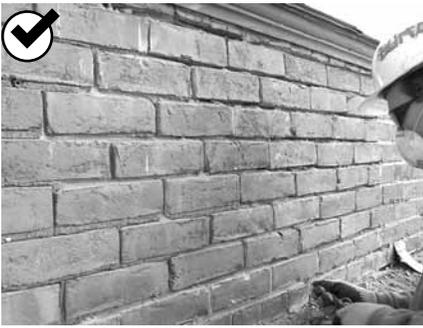
90 Degree Herringbone



Single Basketweave



Double Basketweave

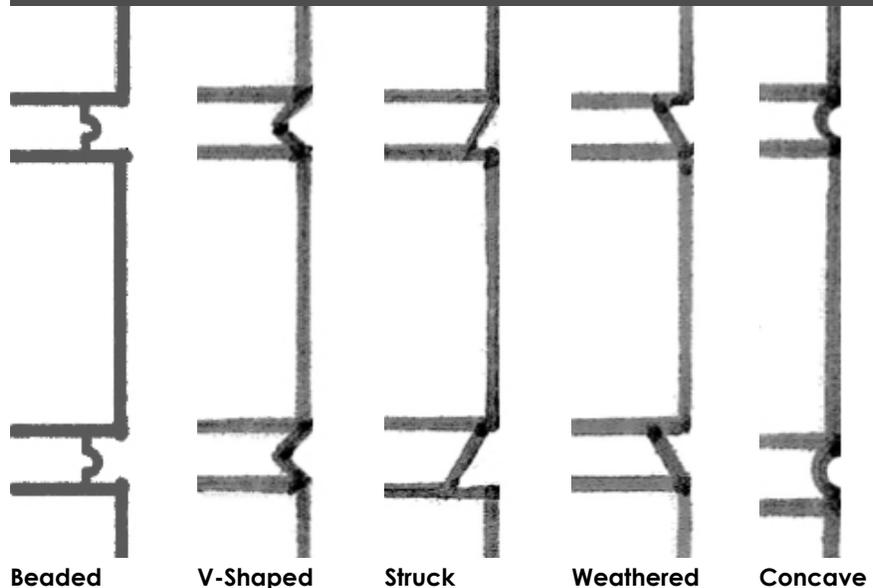


Re-point mortar joints where there is evidence of deterioration.

4.11 Repoint a deteriorated mortar joint.

- Duplicate the original mortar in strength, composition, color, and texture. Mortar color-matching and composition analysis can be provided by a qualified laboratory for a relatively small fee.
- Avoid using mortar with a high Portland cement content if a softer mortar was used originally. Mortar is supposed to be the “sacrificial” element of a masonry wall system; that is, mortar must be softer than the masonry units, so that any cracks that occur will spread through the mortar.
- Match the original mortar joint in depth, width, and profile. A qualified mason can appropriately clean, repoint, and strike mortar joints.

TYPICAL MORTAR JOINTS



4.12 Replace damaged masonry units only as a last resort.

- Match a replacement masonry unit to the rest of the historic masonry in the building. For example, source salvaged or replica bricks.
- If a large masonry feature, such as a cornice or column, is too damaged to repair, replicate it in either the same kind of material or a compatible alternative material. Consult with the Planning staff for technical assistance.

Historic Metals

Historically, metals were used for a variety of applications. Cast iron columns, railings, and skylights; copper or zinc roofs, gutters, and downspouts; wrought iron balcony and stair railings; and other structural and decorative features were common and can still be found on many historic buildings. More recent historic buildings incorporate steel and aluminum components. In some cases, a building component may be constructed from one type of metal and then plated (coated) with a different metal.

Like other materials, metal must be appropriately maintained. Damage can be caused by moisture, weathering, corrosion, impact damage, and failure of the material or its connections. Galvanic corrosion is an electrochemical reaction caused when two different metals, such as aluminum and steel, come into direct contact with one another and an electrolyte.

4.13 Preserve historically significant architectural metals.

- Identify the type of metal used and how it is expected to perform over time; regularly inspect the condition of metal components.
- Maintain protective coatings (including paint) on exposed metals, to prevent corrosion.
- If necessary, identify and consult with building restoration or conservation professionals who have expertise in specific types of metal (such as cast iron or steel windows).

4.14 Repair a metal feature, rather than replace it.

- Some metal building components may appear to be decorative, but may actually be structural. If you are not sure, consult with a qualified engineer or architect before beginning repair work.
- If the repair involves welding, brazing, or soldering, be sure to use materials appropriate for the specific type of metal being repaired. Consult a qualified welder.
- For patching, splicing, reinforcing, and other cold repairs, use stainless steel parts and fasteners.

4.15 Replace a metal feature in kind only when it is beyond repair.

- Match the replacement to the original feature in design, character, and finish.
- Ensure that the new metal is compatible with the original. Avoid combining metals that would result in galvanic corrosion.
- If a connector fails between two pieces of metal, replace it with another appropriate connector, rather than using caulk or other adhesive to join the pieces of metal together.



Historically, metals were used for a variety of applications, including columns, roofs, balcony railings, and other decorative features.

SPECIFIC GUIDELINES FOR BUILDING ELEMENTS

The individual components of a building and its architectural details are often associated with architectural styles, such as Craftsman, Queen Anne, Tudor Revival, or Ranch. By identifying the features that contribute to an architectural style (or more than one style, in some cases), we can make informed decisions about which features are character-defining and, therefore, should be preserved.

The relative importance of character-defining features also depends on their location. Building elements that are located on or toward the front of the building tend to be more important than those located toward the rear of the building, although that is not always the case. For example, when a building is located on a corner lot, features on the entire side that faces the street, as well as portions of the rear wall that are visible, may be significant. For more information, see "Locating Alterations on a Contributing Structure" in Section 5: Additions to Contributing Buildings.

In addition to character-defining features that represent a style of architecture and are located on a relatively prominent or visible part of the building, any examples of skilled craftsmanship (such as carpentry or masonry) should be preserved. These may include turned columns, brackets, exposed rafter tails, jigsaw ornaments, moldings, trim, and similar architectural details, as well as decorative brickwork and other patterns in masonry walls.

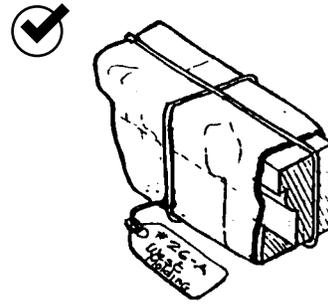
The guidelines below apply to all of the architectural elements that follow. Additional guidelines specific to individual elements are also provided on the following pages. (See Criterion 4 on page 4-6.)

4.16 Preserve significant architectural elements.

- Identify those features which are character-defining, located in a prominent or visible location, and/or examples of skilled craftsmanship.
- Maintain and preserve those features in good repair.
- Use the gentlest means possible to clean; remove rust, paint, caulk, and similar materials; and reapply paint, stain, etc. where appropriate.

4.17 Use care when repairing an architectural element.

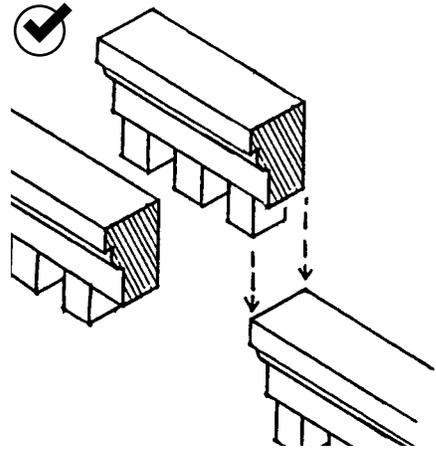
- Patch, piece-in, splice, consolidate, or otherwise address deteriorated elements using recognized preservation methods. (See the National Park Service's Preservation Briefs for technical advice; more information can be found on page 9-1 in Section 9.)
- Minimize damage to historic architectural elements when repairs are necessary.
- Use the gentlest means possible when repairing an architectural feature.
- If an architectural element must be removed for repair, use methods that minimize damage to surrounding materials and that will make the item easy to reinstall.
- Before removing the architectural element, document its location with photographs and sketches so it can be reinstalled correctly.



Document the location of a historic feature that must be removed and repaired so it may be repositioned accurately.

4.18 If repair is impossible, replicate an architectural element accurately.

- When an architectural element is too deteriorated to repair, it may be replaced with an accurate replica of that element or an identical one. (See Criterion 5 on page 4-6.)
- If exact replication is not possible, due to the lack of a source element, use a design that is substantiated by physical or pictorial evidence to avoid creating a misrepresentation of the building's history. (See Criterion 7 on page 4-6.)
- Use the same kind of material as the original detail, when feasible. A substitute material may be acceptable if the size, shape, texture, and finish conveys the visual appearance of the original. Alternative materials are usually more acceptable in locations that are less visible or where they are unlikely to receive direct physical contact, such as a cornice at the top of a wall. (See Criterion 6 on page 4-6.)
- Avoid adding architectural details, such as decorative millwork or other ornaments, that were not part of the original structure; doing so can create a false sense of history. (See Criterion 3 on page 4-6.)



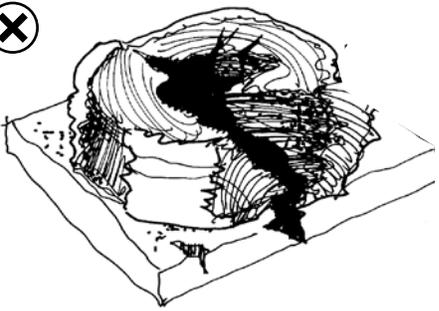
Patch, piece-in, splice, consolidate or otherwise upgrade deteriorated features using recognized preservation methods.



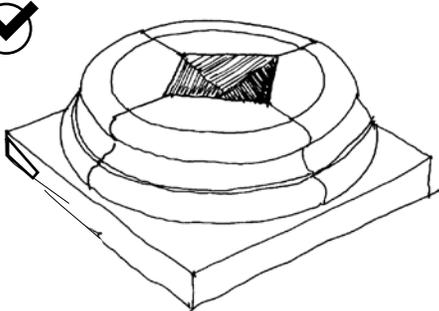
Replace an architectural detail accurately.



Distinctive stylistic features and other examples of skilled craftsmanship are character-defining features of a historic building and should be preserved. Examples above include decorative glazing, shingles, dormers, brackets, and parapets.



Deteriorated column base beyond repair.



Reconstructed column base.

Building Foundations

Every building sits on a *foundation*, which transfers the weight of the building to the ground. Historically, many 19th century buildings (regardless of size) were constructed on pier-and-beam foundations. Piers were usually built using bricks or stone blocks, laid together with mortar to create a load-bearing column. Later piers were built using concrete blocks or poured concrete and covered in a brick or stone veneer. (When wooden posts were used instead of masonry, that is called a *post-and-beam* foundation.)

To construct a pier-and-beam foundation, piers were placed at the corners of the building, then equally spaced around the perimeter and across the interior of the foundation. Heavy beams were laid across the piers, with floor joists resting on the beams, and the floor atop the joists. The house was then built on that platform. Pier-and-beam foundations have many benefits, including good ventilation and drainage, easy access to plumbing and other utilities within the crawlspace under the building, and the ability to move with Houston's heavy clay soils as they swell and shrink.

The design of a building's foundation, including the materials used, height of the finished floor, and screening details (where present), are character-defining features.

To keep animals out of the crawlspace area, it was and is common for homeowners to install *skirting* or screening between foundation piers, particularly beneath the porch. Historically, this consisted of framed lattice panels, sawn wood balusters, or horizontal wood siding. Because these materials are in contact with the ground, maintenance is essential, and they may need to be repaired or replaced at regular intervals.

See more information about maintaining, repairing, and replacing historic building materials starting on page 4-10.

4.19 Preserve and maintain original foundations.

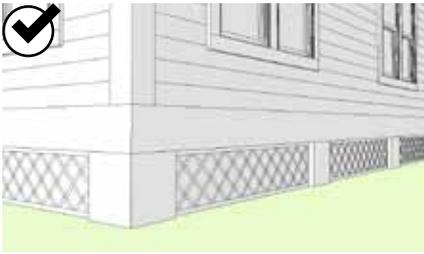
- Maintain the historic height of the finished floor above natural grade, if possible. The HAHC may allow structures to be raised to maintain an appropriate height above the soil, if there is a demonstrated need.
- Maintain original pier materials and screening (if present).
- Keep screening materials painted and secured to the piers.

4.20 Repair, rather than replace, foundation components that are damaged or deteriorated.

- Periodically inspect and repair any damage to wooden screening material.
- Re-point any eroded mortar joints, to prevent moisture infiltration and damage.
- Have piers adjusted or shimmed, if needed, to keep the house level. Consult a qualified foundation professional for more information about this process.



Maintain original materials, including piers and screening.



Screening panels may be installed between foundation piers. Screening panels should be framed around the lattice pieces.

4.21 When a foundation element must be replaced, match the original design and installation.

- Replace a brick pier with brick, or with concrete faced with a brick veneer. Do not use plain (painted or unpainted) concrete blocks.
- Match the original size and proportions of a pier.
- Replicate the spacing between piers in the foundation system.
- Replicate existing screening panels in size, design, and material(s).



Example of inappropriate unframed lattice

4.22 New screening panels may be installed between piers, even if none are present.

- Choose a screening design that is consistent with the architectural style of the house. Diagonal or square lattice is a good choice for most houses.
- Create panels by setting wood lattice, siding, or balusters into a frame. Do not use unframed materials. Do not use paneling that gives the appearance of stone or brick, or fill the space between piers with concrete blocks or other masonry.
- If using lattice, choose a pressure-treated wood product rather than plastic "garden" lattice, which has very large holes that are likely to admit animals into the crawlspace. If you build your own lattice, you may wish to use wooden slats which measure 1.5" wide and 0.25" thick and are arranged with a 1" x 1" space between, for a historically authentic appearance that will keep out animals.
- If using square (vertical-horizontal) lattice, the vertical pieces should be toward the outside.
- Inset the screening panels from the face of the foundation piers. Do not lean or attach panels against the outside of the house or piers, or cover the lower portion of a wall.
- Secure screening panels in a way that does not damage historic materials.

Wood Siding

Wood siding is often identified by its *profile*, or the shape of the cut end of a board. Some particularly distinctive shapes are beveled, drop, and shiplap siding. The 117 and 105 profiles are particularly common designs in many of Houston's historic districts. The size of the *reveal* (the portion of the siding board that is visible) and the finish of the siding, whether smooth or textured, also contribute to the overall visual impact of wood siding.

In modern construction, wood siding usually covers a framed structural system. Shiplap siding, used in some early types of construction methods, may also serve as part of the structure of a building. As a result, such siding must not be removed unless you have taken precautions to protect the structural integrity of the building. Please consult with the Planning staff if you are unsure whether this applies to your project.

4.23 Preserve wood siding.

- Keep wood siding painted, but avoid repainting for cosmetic reasons only. See the National Park Service's Preservation Brief No. 10, *Exterior Paint Problems on Historic Woodwork*, for information about appropriately dealing with painted wood.
- Do not replace or cover undamaged wood siding.

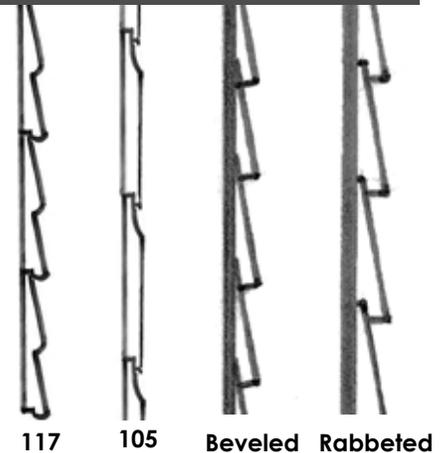
4.24 Repair, rather than replace, damaged wood siding whenever possible

- For small areas of damage, consider using a wood consolidant to preserve the original wood.
- If a patch or Dutchman repair is appropriate, remove the least amount of material needed to properly execute the repair. Use wood as close to the original material as possible (same species, grain pattern, and color) for a less visible result.

4.25 If repair is not possible, replace only the damaged wood siding.

- Do not replace undamaged boards or a larger area than necessary.
- Use hand tools and take care to avoid damaging adjacent boards during removal.
- Replace the damaged boards with siding of the same species, texture, size, and profile.
- Use stainless steel nails to prevent corrosion and staining from rust.

COMMON SIDING PROFILES



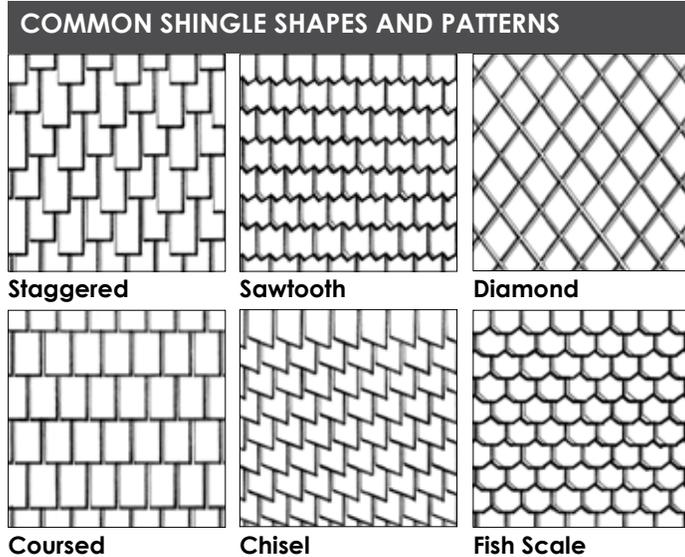
Preserve wood siding.



Preserve and maintain decorative wood shingles in good condition.

Decorative Shingles

Decorative shingles are used to create a textured wall surface. They often are used in front gables, particularly on Queen Anne and Folk Victorian houses. Fish-scale, dog-ear, sawtooth, diamond, square, and rectangle shapes are common, and these may be combined and painted to create patterns and designs.



Decorative shingles are often made of cedar, which is moisture resistant (but not “waterproof”). Shingles should be kept painted, stained, or sealed with an appropriate coating for best protection against weathering. Even so, cedar shingles may crack or deteriorate over time, and broken shingles should be replaced as needed.

4.26 Preserve and maintain decorative wood shingles in good condition.

- Keep shingles painted or stained to provide a protective coating against the weather.
- Regularly inspect shingles for damage and to ensure that they are still nailed securely. Re-attach loose shingles to prevent water intrusion into the wall.

4.27 Replace decorative shingles in kind.

- Replace the least number of shingles necessary.
- Match the original shingles in size, shape, and thickness.
- Choose a durable and sustainable species of wood, such as cedar or Douglas fir.

Porches

Porches are one of the most important character-defining features for houses in Houston's historic districts. Front porches frame and shelter primary entrances, and they often include distinctive decorative details which help to define an architectural style. Front porches often establish a consistent one-story line along a blockface. Some porches *wrap around* from the front to one or both sides of the house.

Separate side porches are present on some historic houses. When visible from the street, side porches contribute to the character of both the property and the historic district, particularly when the house is located on a corner lot and the side porch faces a street.

Porches typically consist of the following parts: a roof, which is supported by posts or columns and finished with a ceiling; a railing between the posts, which includes top and bottom rails, with balusters in between; a floor or deck; and steps from the ground to the porch, which may be flanked on either side by posts or piers and sometimes handrails.

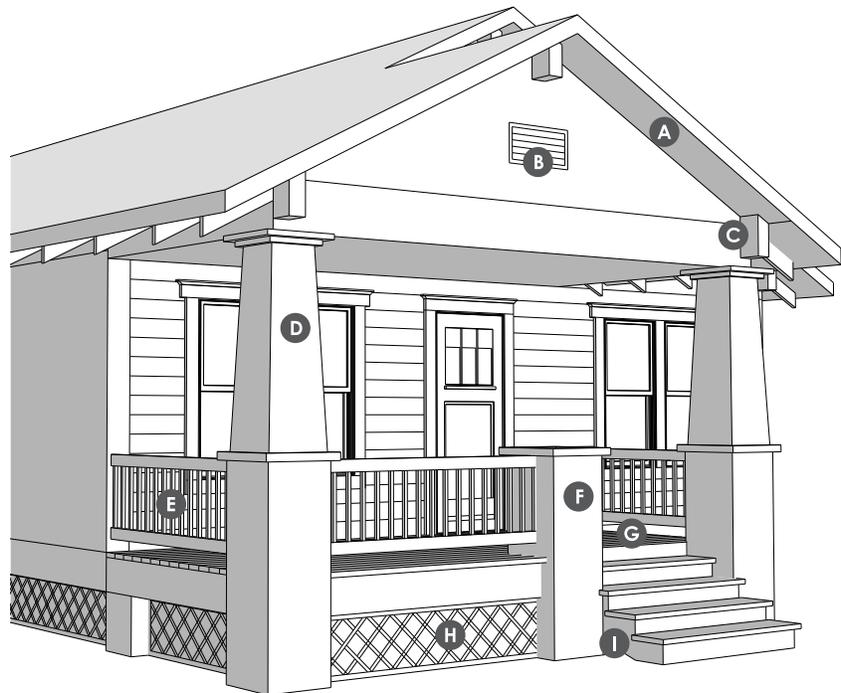


Wrap around porches are important character-defining features for houses in Houston's historic districts.

TYPICAL PORCH FEATURES

KEY:

A	Porch Eave
B	Porch Vent
C	Decorative Roof Beam / Triangular Knee Brace
D	Column
E	Balustrade/Railing
F	Raised Pier
G	Porch Deck
H	Skirting/Screening
I	Stringer





Preserve an original porch, including its form, materials, and details.

REPAIRING PORCH RAILINGS

Avoid removing original materials that are in good condition or that can be repaired in place.



Before: A deteriorated railing.



After: Railing repaired and the post replaced in kind.

Porches are such important visual elements that inappropriate changes can have a negative impact on the entire house. For example, original porch materials may have been replaced with inappropriate designs, porch components or details may be missing, or a porch may have been partially or completely enclosed to create more living space. Most of these alterations are, fortunately, reversible; many off-the-shelf products match historic designs, and custom fabrication is readily available, when necessary. A property owner who wishes to restore a porch should refer to historic photographs of the property and consult with Planning staff, who can provide helpful guidance.

4.28 Preserve an original porch, including its form, materials, and details.

- Keep wooden porch elements painted.
- Maintain the height and pitch of a porch roof.
- Do not enclose a front porch in a way that alters its open character.
- When screening a porch, do not damage or remove existing porch elements, such as posts and railings.
- Maintain the original location of front porch steps.

4.29 Repair, rather than replace, damaged portions of a porch.

- For small areas of damage, consider using a wood consolidant to preserve the original wood.
- If a patch or Dutchman repair is appropriate, remove the least amount of material needed to properly execute the repair. Use wood as close to the original material as possible (same species, grain pattern, and color) for a less visible result.
- Do not replace an entire porch when repair is possible.

4.30 If repair is not possible, replace only those elements or portion of the porch which is not repairable.

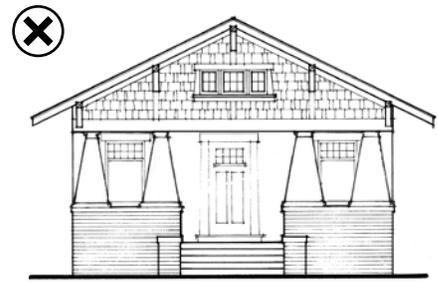
- Replace a historic porch element to match the original.
- Use materials that match the style, in texture, finish, composition, and proportion of the original.
- Match the railing (balustrade) of a historic porch in scale, profile, and character.
- Replace wooden porch steps with the same size material and profile. Substitute materials, such as composites, may be appropriate if the appearance matches the original material.

4.31 Replace porch decking with similar materials.

- When replacing deck boards, use the same size material and profile (such as tongue-and-groove). Substitute materials, such as composites, may be appropriate for porch decking.
- Do not replace undamaged deck boards.
- Do not replace a wooden porch deck with concrete.

4.32 If a porch element or the entire porch is to be reconstructed, base the new design on historical evidence.

- Where an entire original porch is missing, base the replacement design on physical evidence (such as ghosting of post profiles remaining on wood surfaces) or on photographic evidence.
- Size columns and posts appropriately for the porch roof they are supporting and for the bases on which they rest. For example, slender posts will be visually out of balance with large roofs and massive bases.
- Select columns and posts that are appropriate for the architectural style of the house. For example, slender turned wood columns are typical for Queen Anne houses, while thicker square-tapered columns are typical for Craftsman houses.
- Do not use metal columns or railings unless there is clear evidence that they were used historically.
- Use a brick base beneath a wood column only for a Craftsman house and where evidence is available that this previously existed.
- Choose a railing that is in character with the style of the building, and not more elaborate or simple than what existed historically.
- If a one-story porch has its own roof, the height of the porch roof should be lower than the main roof. Porch eave height may be taller on a two-story porch, since the second-story porch floor must be the same height as the second-story floor of the building.



Design a replacement porch feature to relate to the overall scale of the primary structure. In this case the porch columns are out of scale and are inappropriate.



Consider restoring a porch to its original condition. This porch enclosure is inappropriate.



This original porch has been preserved in an appropriate manner.



Replace a historic porch element to match the original.



Preserve the proportions of a historic door and its opening.



This would be an inappropriate replacement door for any contributing building in the districts.

Doors

Many types and styles of front doors can be found on historic Houston buildings. Some are solid wood with decorative panels, while others are wood with glass lites; some have sidelights and transoms. The door is often one of the primary character-defining features of a historic building, and a door's character is based on its design, materials, and location. When a new door is needed, it should be in character with the building, especially when it is the primary entrance.

4.33 Preserve the proportions of a historic door and its opening.

- Preserve a door's character-defining features including its location, size, frame, panels, panes, muntins, glazing, thresholds, and moldings.
- Keep doors appropriately painted or stained to protect the wood from weather.
- Do not alter the original size and shape of a historic door opening that is located in a highly visible location.
- When possible, restore a previously altered door opening in a highly visible location.
- If security is a concern, install long-throw deadbolt locks with reinforced deadbolt and lockset strike plates. Use extra-long (3") screws to attach strikeplates through the doorjamb and into the studs.
- For energy efficiency, apply caulk around the interior door frame and maintain or install weatherstripping. Historic solid and paneled wood doors have good thermal properties.

4.34 Repair, rather than replace, a historic door.

- For information about repairing the window or lites in a door, see information about repairing historic wood windows.
- For small areas of damage, consider using a wood consolidant to preserve the original wood.
- If a patch or Dutchman repair is appropriate, remove the least amount of material needed to properly execute the repair. Use wood as close to the original material as possible (same species, grain pattern, and color) for a less visible result.

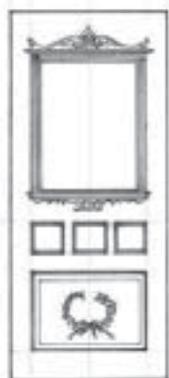
4.35 If a door cannot be repaired, match its replacement to the original.

- If a similar door on the same building is available to be moved from a less prominent location, this option is preferred.
- If an existing replacement door is not available, match the new replacement door to the original door's design. For example, the number, size, and arrangement of panels and lites should be the same.

TYPICAL CRAFTSMAN RESIDENTIAL DOORS



TYPICAL VICTORIAN ERA RESIDENTIAL DOORS



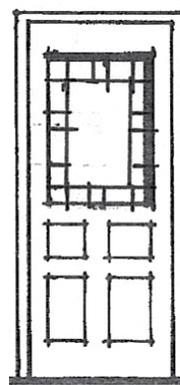
Queen Anne



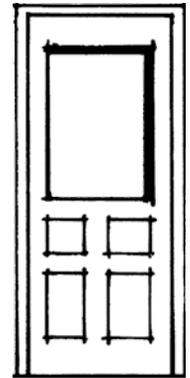
Queen Anne



Folk

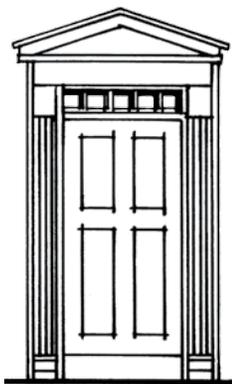


Folk



Folk

TYPICAL COLONIAL REVIVAL RESIDENTIAL DOOR





This door with a transom design is most appropriate on a Victorian era house.



Generally ornate or fake leaded glass is inappropriate on most historic styles. Ornate leaded glass is appropriate on high style Victorian Era buildings.

- Match the material of the original door.
- If the original door design is unknown, use a design that is appropriate to the architectural style.

Altering an existing door opening

A change in the size and shape of an original door opening may be considered if (a) the door is not highly visible from the street, such as on a side wall toward the rear of the building, and (b) the existing door is not a key character-defining feature of the building and, therefore, may be altered without substantially affecting the integrity of the historic building. Do not alter a historic door opening on the front of a building. If a change to a door opening is appropriate:

4.36 Design the new door to be compatible with the historic building.

- Use a design that is simple in character and of its own time, so that the door will be easy to identify as being new.
- More flexibility in door design, including size and detailing, may be considered farther back on the side wall of a building.

4.37 Reuse the original door in another location, if possible, or consider storing it for future use.

- If a door opening is to be altered, consider using the original door to replace another door in a more prominent location that is beyond repair.
- Store a historic door in a location where it will be protected from weather and moisture. If storing a historic door in a garage, elevate it above the floor on blocks covered in plastic, to prevent moisture wicking up from the ground, or place the door across the ceiling rafters.

Installing a door in a new location

In some cases, a new door may be needed in a location that did not have one historically. This may be considered where (a) the new door would not be highly visible from the street and (b) creating the opening would not destroy any key other character-defining features. (See the diagrams which illustrate sensitive and less-sensitive locations for alterations, in Section 2.)

4.38 Design the new door to be compatible with the historic building.

- Use a design that is simple in character and of its own time, so that the door will be easy to identify as being new.
- More flexibility in door design, including size and detailing, may be considered farther back on the side wall of a building.

Accessibility

If accessibility solutions, such as ramps or lifts, are needed, owners of historic properties should comply to the fullest extent possible with the Americans with Disabilities Act (ADA) and Texas Accessibility Design Guidelines (TAS) provisions, while also preserving the integrity of the character-defining features of their buildings and sites. Design accessibility solutions to minimize impacts on a historic structure.

Installation of accessibility ramps and lifts require a Certificate of Appropriateness but can be approved administratively by the Planning Director. The removal of ramps and lifts does not require a Certificate of Appropriateness.

4.39 Adapt historic doorways to make them accessible.

- Instead of widening an existing door opening, install offset or "swing wide" door hinges to increase the usable size of a door opening by two inches.
- Consider replacing door thresholds with beveled alternatives, no higher than $\frac{3}{4}$ ", to allow wheelchairs and scooters to maneuver over them easily.
- If historic door hardware is removed for replacement with accessible alternatives, such as lever handles, store the original hardware in a secure location where it will be protected from weather, so that it may be reinstalled at some point in the future.

4.40 Add ramps or lifts to provide access to at least one door.

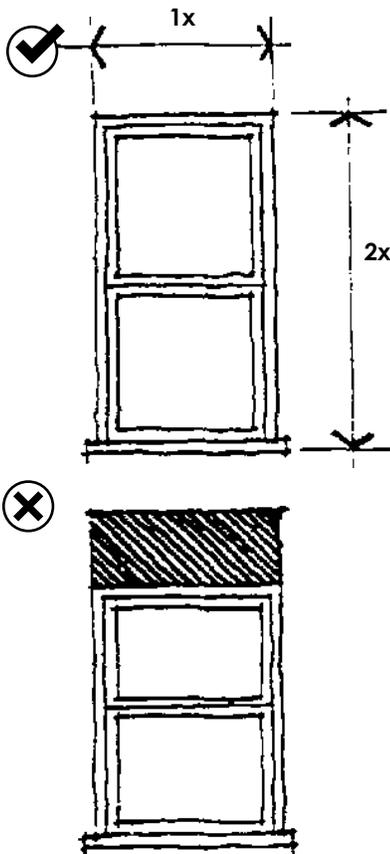
- The Americans with Disabilities Act recommends that a ramp to be used by someone in a wheelchair or scooter should have no more than a 1:12 slope; that is, for every 1" in height between the starting point and ending point, the ramp should be 1' long.
- Locate a ramp or lift system at one end of a porch, to minimize the visual impact.
- If porch components must be removed in order to create access for a ramp or lift, take photographs to document the original condition of the porch. Use hand tools and take care that the components to be removed are not damaged. Store the original components in a secure location, away from weather, with a copy of the photo documentation (also protected from weather). Additional notes about the project may help someone to re-install the removed porch elements in the future.



A temporary ramp that does not alter character-defining features is appropriate.



Preserve historic windows.



Preserve the original size and shape of a window opening

Windows

Most windows are character-defining features; often, they help us identify architectural styles. This includes all types of windows as well as window-like wall openings, such as gable vents that provide ventilation for attic spaces.

The proportion, profile, lite pattern, material, and location of windows all contribute to the character of a window. For example, Queen Anne houses often have tall, narrow windows, reflecting the more vertical orientation of that architectural style. On the other hand, Craftsman houses tend to be more horizontally oriented, and their windows similarly are more likely to be shorter, wider, and grouped into pairs or *ribbons* (multiple windows, side-by-side) within a single frame. Some windows are more decorative than others, with leaded glass or multiple panes in an upper sash; these windows are usually found at the front of a house, and they are particularly important to preserve.

Historic wood windows that were built before 1940 are likely to have been constructed with old-growth timber, which grew slowly and naturally, resulting in strong wood with a tight grain. Lumber available today is farmed to grow quickly, resulting in a softer, weaker, less stable product. The quality of historic wood windows is usually far superior to a new wood window, and historic windows should be preserved and repaired, not replaced. In many cases, a historic window that is damaged or deteriorated can be repaired by re-glazing, patching, and splicing wood elements. A homeowner with a few hand tools can complete most window repairs, with no special skills needed. The National Park Service publishes Preservation Brief No. 9: *The Repair of Historic Wood Windows*, and many other publications, videos, and resources are available free of charge online.

Although studies have shown that 90% of energy loss from a building is through attics, doors, and floors – not windows – historic windows can be made more energy efficient. Repair and weatherization is usually less expensive than replacement. If an original window has been so damaged that it cannot be repaired, however, its replacement should be in character with the historic building.

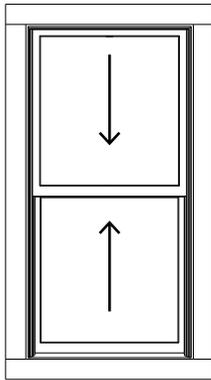
4.41 Preserve the proportions of historic window openings.

- Preserve the original size and shape of a window opening.
- Restore altered window openings on primary façades to their original configuration, when feasible.
- Do not significantly increase the amount of glass on a primary façade as it will negatively affect the integrity of the structure.

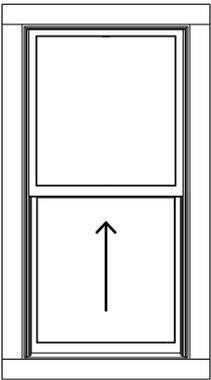
4.42 Preserve historic window components.

- Preserve the original size, position, number, and arrangement of historic windows in a building wall.
- Preserve historic window components, including the frame, sash, panes, muntins, mullions, glazing, sills, heads, jambs, moldings, operation, and groupings of windows.

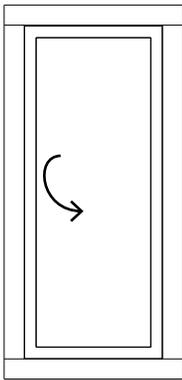
TYPICAL WINDOW TYPES



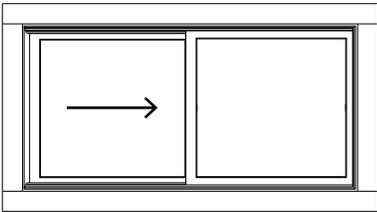
Double-Hung Window



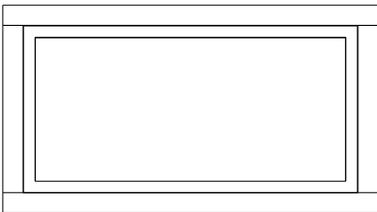
Single-Hung Window



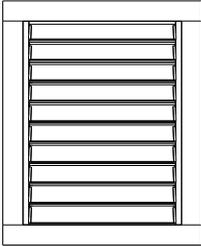
Casement Window



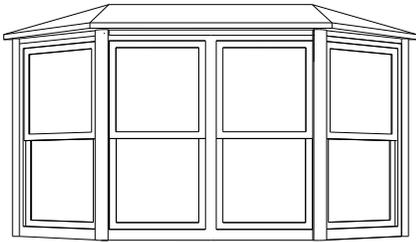
Sliding Sash Window



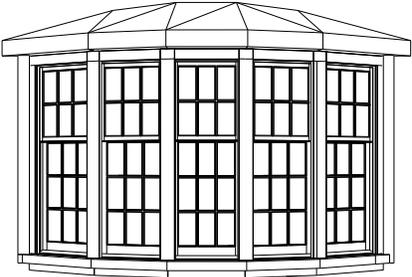
Fixed Window



Jalousie Window



Bay Window



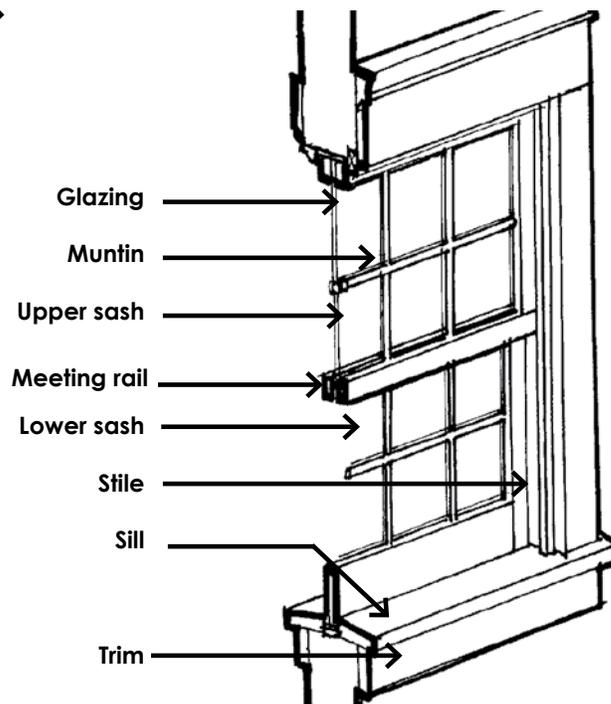
Bow Window

4.43 Repair, rather than replace, frames, sashes, and other features.

- Windows that have been painted shut are not considered damaged. Use hand tools, such as a putty knife, to cut through paint around the window sash without damaging it. Gently pry the window open, using a small pry bar, if necessary.
- Broken sash cords can be replaced by a handy homeowner with just a few tools.
- Brittle or missing glazing putty or glazing strips can be replaced.
- Small areas of rot or similar damage are most likely to be found at the window sill, where water may pool or splash onto the lower edge of the sash. Consider using a wood consolidant in these locations to preserve the original wood.
- If a patch or Dutchman repair is appropriate, remove the least amount of material needed to properly execute the repair. Use wood as close to the original material as possible (same species, grain pattern, and color) for a less visible result.
- Avoid painting windows shut.
- If using heat to strip paint from windows, take care to remove or otherwise protect the glass.

4.44 Enhance the energy efficiency of an existing historic window, rather than replacing it.

- Add weather stripping and caulking around the window frame.



Double-hung window components.

- Install a storm window or insulated window shade. Interior storm windows are available and easy to install and remove.
- Use clear ultraviolet (UV)-blocking films or low-e films to prevent heat gain. If using low-e films, place them on the most exterior window surface.

4.45 If replacement cannot be avoided, match a new window to the original.

- Match the original sash configuration; single-hung, double-hung, casement, etc.
- Select a similar profile and depth of trim, as well as the arrangement and number of layers of trim from the frame to the glass. All new windows must be recessed.
- If the original window had divided panes (lites), select a replacement window that is made with genuine muntins, with panes of glass set between them. Do not choose a window with strips of material located between large panes of glass to simulate muntins.
- Use the same material as the original window, especially on highly visible walls. Consider an alternative material only if the appearance of the window components will match those of the original in dimension, profile, and finish. The type of material is likely to affect the dimensions of the sash components; historic wood windows often have more narrow sashes and frames than modern synthetic windows, due to the nature of the material and manufacturing process.
- Use clear window glass (glazing) that conveys the visual appearance of historic glass. Visible differences in the reflectivity of new vs. historic glass can have a negative impact. If transparent low-e glass is used, ensure that the low-e glass is the outer-most surface and not covered with a storm window.
- While windows with unfinished metals, metallic finishes, and reflective window glazing are allowed, if mounted appropriately, they are not recommended.
- Vinyl windows may be used but must be recessed and inset to simulate a traditional window profile. Fin-mounted windows are not appropriate or compatible within the historic districts.



Using a new window that lacks the depth in trim profile is inappropriate.



Unfinished metal windows such as these alter the character of window openings, and should not be used in highly visible locations.



If replacement cannot be avoided, match a new window to the original.



Before: damaged sill



After: concrete sill replacement

Altering an existing window opening

Although preserving all historic windows is recommended, a change in the size and shape of an original window opening may be considered (a) in a location that is not highly visible from the street, such as on a side wall toward the rear of the building, and (b) when the existing window is not a key character-defining feature. Do not alter a window opening on or near the front of a building.

4.46 Reuse the original window in another location, when feasible, or store it.

- If a window opening is to be altered, resulting in the removal of an original window, consider using that window to replace another that is beyond repair.
- Original windows that have been removed may also be used in an addition, in some cases.
- Store an original window in a location where it will be protected from damage and weather. If storing in a garage, store the window upright and elevated on plastic-covered blocks to keep moisture from wicking from the ground to the window. Do not store a window in a flat orientation, where glass is more likely to be broken, or stack windows on top of one another.

4.47 Design a new window to be compatible with the historic building.

- Use a simple shape for the window, use a profile that is simple in character, to identify the window as being new.
- More flexibility in window design, including size and detailing, may be considered farther back on the side wall of a building.

Installing a window in a new location

Occasionally, a new window may be needed in a location that did not have one historically. This may be considered where (a) the new window would not be in a highly visible location and (b) creating the opening would not destroy any key character-defining features, such as on a side wall toward the rear of the building. (See the diagrams in Section 2 of the design guidelines that illustrate sensitive and less-sensitive locations for alterations.) Do not create a new window opening on the front of a building.

4.48 Design a new window to be compatible with the historic building.

- Use a simple shape for the window, use a profile that is simple in character, to identify the window as being new.
- More flexibility in window design, including size and detailing, may be considered farther back on the side wall of a building.

Historic Shutters

Wood shutters are found on many historic buildings. Shutters provide security and protection from heat and storms. In southern parts of the United States, shutters typically were *louvered* (constructed with angled, adjustable louvers), rather than solid, to allow ventilation while blocking the sun. Not all historic houses had shutters, however, and while historic shutters should be preserved, shutters should not be added to a building that did not historically feature them.

4.49 Preserve a historic shutter.

- Do not remove historic shutters.
- Shutters are meant to be operational; do not nail them to the wall. Use original hardware, if it still exists, or source appropriate replacements.
- Louvered shutters should be installed so that the louvers angle down and back toward the house when the shutters are open.
- Keep shutters painted, particularly on the upper surfaces, which are more prone to weathering. If painting shutters, ensure that they remain operational afterward.

4.50 Repair historic shutters, rather than replacing them.

- Small areas of rot or similar damage are most likely to be found at the window sill, where water may pool or splash onto the lower edge of the sash. Consider using a wood consolidant in these locations to preserve the original wood.
- If a patch or Dutchman repair is appropriate, remove the least amount of material needed to properly execute the repair. Use wood as close to the original material as possible (same species, grain pattern, and color) for a less visible result.

4.51 If repair is not possible, match a replacement shutter to the original.

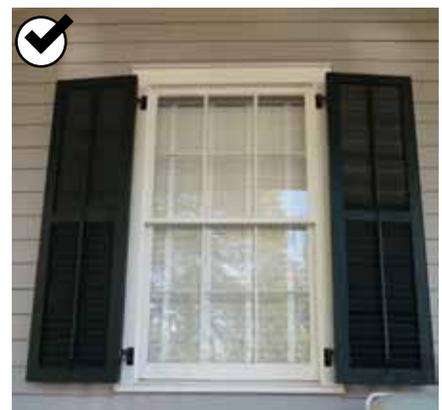
- Match the size, depth, texture, and scale of the original shutters. The type of material is not regulated, as long as it is visually compatible.
- A replacement shutter should appear to be operable (even if it is not).
- Do not install shutters that are narrower than the associated window or opening.



Preserve a historic wood shutter.



Use a replacement shutter that fits the window opening.



Use operable blinds or shutter hung with hinges.



Awnings

Awnings should only be applied when evidence (such as photographic evidence or ghosting – physical marks on the house) suggests that they were used historically. Fabric awnings have a limited service life of about eight to ten years, if left up year-round. When replacing fabric awning covers, choose a durable, weather-resistant material, such as canvas or a similar woven fabric.

4.52 Preserve and repair an original awning, if possible.

- Do not remove an original historic awning that is made of a material other than fabric.
- Maintain awning frames and any moving parts.
- Keep awnings clean.



Maintain awning frames and any moving parts.

4.53 If historical evidence shows that an awning was present, a new awning may be installed, as long as it fits the window or door opening.

- Use a shed-type awning for a rectangular window or door opening.
- Use rounded awning forms over arched windows to match the curve of the window opening.
- Do not install a rounded (bubble or dome) awning over a rectangular opening.
- Do not install awnings so that they cover transom lights or decorative millwork, unless historical evidence or documentation shows this condition.

NOTE:

For more information, refer to the National Park Service's Preservation Brief No 44: *The Use of Awnings on Historic Buildings, Repair, Replacement and New Design*.

Burglar Bars

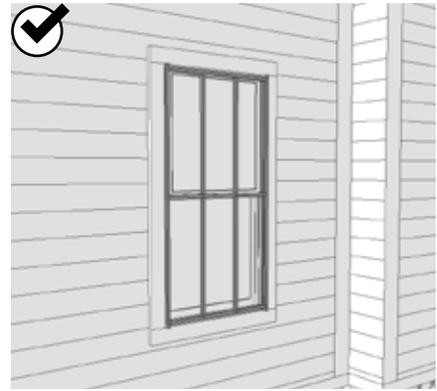
If it is necessary to install security bars (aka *burglar bars*) on a historic building, the bars should be as inconspicuous as possible and must not alter character-defining features of the building. Consider using interior, operable, or transparent devices which will not alter the exterior appearance of the building. The installation of burglar bars requires a Certificate of Appropriateness, but this can be approved administratively by the Planning Director. Removal of burglar bars does not require a Certificate of Appropriateness.

4.54 Minimize the visual impact of burglar bars and similar security devices.

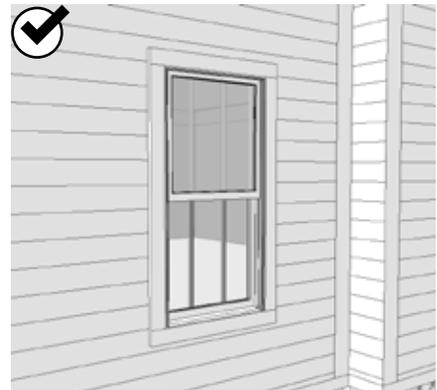
- Locate security bars inside the structure, if possible.
- Avoid an ornate design that would be out of character with the historic building.

4.55 Do not damage character-defining features when installing burglar bars and similar devices.

- Identify character-defining features in advance and plan to avoid drilling, cutting, or removing them during the installation process. The installation of burglar bars should be reversible.



Minimize the visual impact of burglar bars by avoiding ornate design and not damaging features of the building.



Locate burglar bars inside the structure, if possible.



Preserve the original form of a historic gable roof.



Preserve the original form of a historic hip roof.



Preserve the original form of a historic clip gable roof.

Roofs

A roof is a prominent character-defining feature of a historic building. The shape, pitch, complexity, materials, and treatment of eaves and soffits are all key characteristics of a roof.

Many roofs on older residential buildings have one of the following shapes: gabled, hipped, pyramidal, hip-on-gable, gable-on-hip, or some combination. Roof shapes may be simple or complex; they may be sloped with a steep pitch or a low pitch. “Flat” (actually flat-appearing, but still slightly angled) roofs are found in many commercial and some later Mid-Century residential buildings. Along with a roof’s shape, its complexity and pitch can help us identify a building’s architectural style.

Typical 19th and early 20th century roofing materials included slate, metal, wood shingles, clay tile, asbestos tile, and composition materials. Today, dimensional composition shingles are common. Slate and clay tile roofs are secured with metal fasteners, which may deteriorate over time and need to be replaced. These roofs can be damaged by unskilled repair attempts; consult with a qualified roofing company that specializes in these products in historic applications.

Eaves may be boxed, with soffits, or open with exposed rafter tails. They may be wide or narrow, and may be ornamented with brackets or braces. All of these character-defining details are stylistically distinctive.

While slate, metal, and tile roofing materials should be preserved, composition shingles are designed to have a limited service life. When replacing roofing materials, the new material should be similar in size, shape, and texture with what was used historically, if that is known. If documentation is not available, examples from similar buildings may be considered. A Certificate of Appropriateness is not required for re-roofing with in-kind materials, as long as there is no change to the structure, shape, or pitch of the roof.

If you have or are seeking windstorm insurance, the roofing contractor may need to use impact-resistant shingles, install them in a certain way, and possibly install strapping to secure the roof deck to the trusses, in order for your roof to receive windstorm certification by a qualified inspector. Please consult your insurance agent for more information.

4.56 Preserve the original form of a historic roof.

- Maintain the perceived ridge line, eave line, and orientation of the roof, as seen from the street.
- Maintain the size, shape, and pitch of the historic roof (and dormers, where present).
- Do not alter the pitch of a historic roof.



Preserve original roof materials.



Avoid removing historic roofing material that is in good condition.

4.57 Preserve the original eave depth and design.

- Maintain traditional overhangs; these contribute to the building's historic character.
- Do not cut back soffits or exposed roof rafters.

4.58 Preserve original roof materials.

- Avoid removing historic roofing material that is in good condition or that can be repaired.
- Preserve decorative elements, including crests and chimneys.
- Retain historic roof detailing, including gutters and downspouts.



Do not cut back a roof eave so it is flush with the wall.



Maintain traditional overhangs; these contribute to the perception of the building's historic scale and its character.



Patch and replace damaged areas of the existing roof.

4.59 Repair, rather than replace, historic roofing materials and details, if possible.

- Re-attach loose shingles or other materials.
- Fix any roof leaks or damage immediately.
- When roof materials such as glazed clay tile or slate are in need of repair, consult with a qualified roofing company that specializes in these materials on historic buildings.
- Patch and replace only those areas that are damaged, rather than replacing the entire roof.

4.60 Apply new roof materials that convey a scale and texture similar to historic materials.

- Use materials that appear similar in texture, pattern, and finish to the original roof material.
- A composition shingle is appropriate for most styles and periods, unless specialty roofing materials (such as slate or clay tile) are present. Windstorm-certified, impact-resistant shingles are permitted.
- If new roof decking is needed, consider using a material with a reflective coating on the underside for better energy efficiency.
- If installing a new metal roof, apply it in a manner that is compatible with the historic character. Use metal with a matte, non-reflective finish and a ribbed panel or low-profile standing metal seam. Commercial-scale or high-profile standing seam metal roofs are not allowed.
- A tile or slate roof is only appropriate where documentation indicates that it was used historically.

Dormers

A dormer is a small structure that projects from (sticks out of) the roof and has its own roof, window(s), and walls. Dormers were often used, historically, to house a window so that light could enter an attic space. In some cases, dormers were used to create headroom in upper floors and finished attics, creating additional livable space. Dormers may be found singly or in pairs; their roofs are typically the same style (gabled, hipped, etc.) as the main roof of the house. Lower-profile, shed-roofed dormers can be found on some bungalows.

Dormers are subordinate in scale and character to the primary roof. Where they are already present, historic dormers should be preserved. New dormers, if desired, should be compatible with the character of the historic building and subordinate to the primary roof.

4.61 Preserve and maintain a historic dormer.

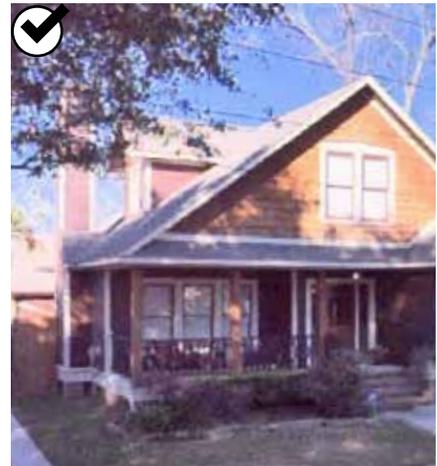
- Maintain the original size and shape of a dormer.
- Original dormers which are located on a front-facing roof should be preserved.
- For additional information, refer to the guidelines for preserving and maintaining roofs, windows, and walls.

4.62 Repair, rather than replace, deteriorated or damaged elements of a dormer.

- See the guidelines for repairing roofs, windows, and wall materials.

4.63 If repair is not possible, replace only those elements that are beyond repair.

- See the guidelines for repairing roofs, windows, and wall materials.



Preserve and maintain a historically significant dormer.



Locate a new single dormer in a location that is toward the rear of the house and on the side of the roof that is as close to the middle of the lot as possible.



This dormer overwhelms the house and is inappropriate.

4.64 Design a new dormer to be compatible with the historic structure.

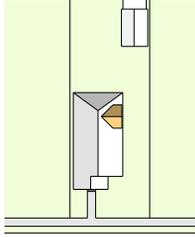
- The style of a new dormer should be in keeping with the style of the house.
- Locate a new single dormer in a location that is toward the rear of the house and on the side of the roof that is as close to the middle of the lot as possible. Do not locate a new dormer on a front-facing roof.
- If two dormers are desired on the same side of the roof, they may be arranged with a historically appropriate spacing between them and do not necessarily need to be located toward the rear of the building.
- If two dormers are desired and they will be on opposite sides of the roof, they may not extend to or cover the ridge of the roof, and they must be located in the rear half of the roof.
- Use a simple design that can be distinguished from, but is compatible with, any historic dormers.
- Do not cover the ridge of the roof with a new dormer.
- Do not extend the dormer over the eave of the roof; set it back from the eave.

APPROPRIATE AND INAPPROPRIATE DORMER DESIGNS

These images illustrate how the design guidelines for adding a dormer would apply to a series of alternatives.

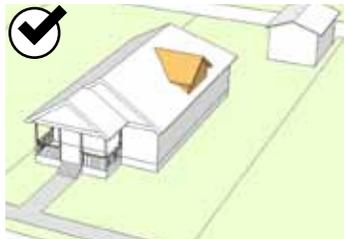
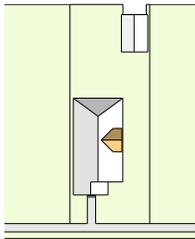
Single Gable Dormer at Rear of Roof

- Ridge line maintained
- Eave line maintained
- Dormer in historic proportions



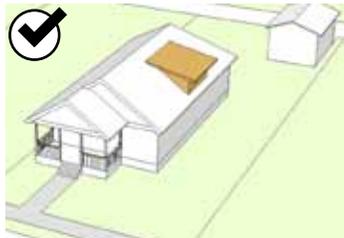
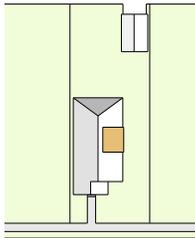
Single Gable Dormer at Mid-Point of Roof

- Ridge line maintained
- Eave line maintained
- Dormer in historic proportions



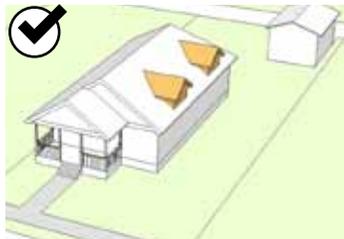
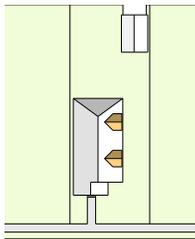
Single Shed Dormer at Mid-Point of Roof

- Ridge line maintained
- Eave line maintained
- Dormer in historic proportions



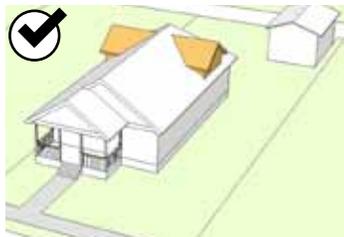
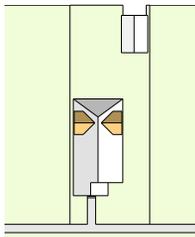
Two Gable Dormers, Traditional Spacing

- Ridge line maintained
- Eave line maintained
- Dormer in historic proportions



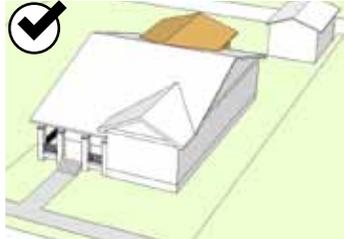
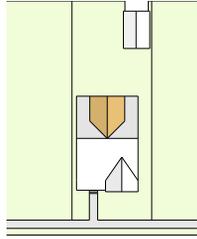
Two Gable Dormers, Aligned at Rear of Roof

- Ridge line maintained
- Eave line maintained
- Dormer in historic proportions



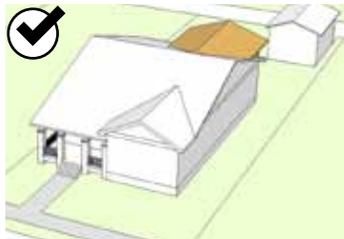
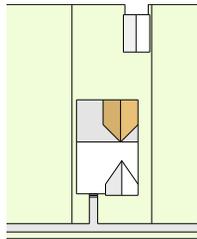
Single Gable Dormer at Rear of Side-Gable Roof (centered)

- Dormer aligns with historic ridge line
- Eave line maintained
- Dormer in historic proportions
- Dormer hidden from street view



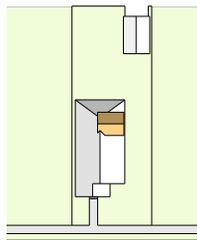
Single Gable Dormer at the Rear of Side-Gable Roof (moved to one side)

- Dormer aligns with historic ridge line
- Eave line maintained
- Dormer in historic proportions
- Dormer minimally visible from street view



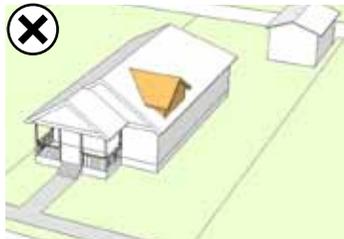
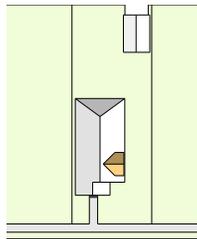
Tall Gable Dormer at Rear of Roof

- Dormer extends past ridge line
- Eave line not maintained
- Dormer is out of proportion



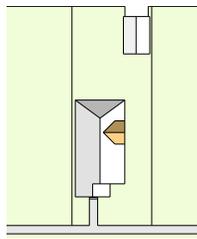
Single Gable Dormer at Front of Roof

- Dormer is not in a subordinate location
- Ridge line maintained
- Eave line maintained
- Dormer in historic proportions



Single Gable Dormer at Mid-Point of Roof Extending Out to the Side

- Dormer extends past the historic sidewall
- Ridge line maintained
- Eave line not maintained



Chimneys

Chimneys appear on many historic buildings. In addition to being functional, chimneys are distinctive features which accent rooflines; they should be preserved when that is feasible.

In Houston, exterior chimneys historically were located on any side of a building; interior chimneys are also found in historic buildings.

Common chimney problems include blockages from creosote and other materials, cracks or other damage to the chimney flue, cracks or deteriorated mortar in the brickwork, and issues with the chimney cap or crown, which protects the top of the chimney opening from weather and pests.

4.65 Preserve a historic chimney.

- Do not cover a historic brick chimney with any other material.
- For more information about cleaning, maintaining, and preserving historic masonry, see “Historic Masonry” on page 4-13.

4.66 Repair a historic chimney that has deteriorated.

- Consult with a qualified chimney professional to regularly inspect and repair a chimney, as needed. A mason can help with brick, mortar, or stucco damage.

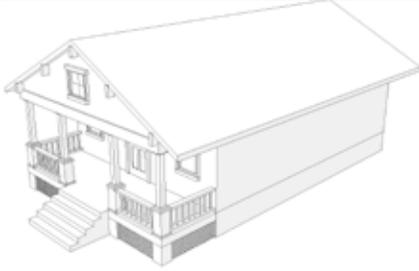
4.67 Construct a new chimney to be in character with the style of the house.

- Brick or stucco are appropriate materials.
- Do not cover a chimney with siding or leave a metal chimney pipe exposed.
- If there is already a historic chimney, located any new chimney in a less visible location.

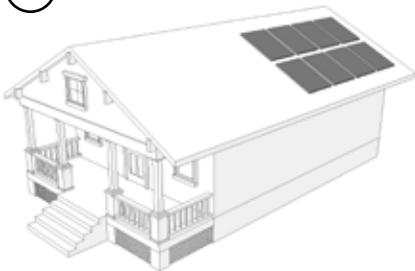


Preserve and maintain a historic chimney.

LOCATING SOLAR COLLECTOR PANELS ON AN EXISTING BUILDING



Historic condition: Gable facing street, side is south facing



Panels are set back from the front façade and are flush with the roof.



Panels are on the front of the roof and are highly visible.

Roof Equipment

Equipment such as antennas, skylights, satellite dishes, and solar panels may be installed on a roof. A Certificate of Appropriateness is required before these items can be installed on the front half of a roof, but the Planning Director can approve that administratively. No Certificate of Appropriateness is needed in order to install roof equipment on the rear half of the roof.

Solar collectors should be designed, sized and located to minimize their effect on the character of a historic building. Most collectors are photovoltaic cells, which are combined into a set, or panel; several panels are then combined to create an array.

When locating roof equipment on the front half of the roof, the following design guidelines apply.

4.68 Locate and size roof equipment to minimize its effect on the character of a historic building.

- Locate roof equipment to the side of the roof, below the ridge line, and set it back from the front wall. Do not locate a skylight so that it spans the ridge of the roof.
- Do not locate equipment on front-facing roof slopes.
- Skylights must be low-profile or flush with the roof. Bubble skylights are inappropriate.
- Size the solar array to remain subordinate to the roof.
- Mount solar collectors flush with the roof slope.
- Use a solar array design that is similar in color to the background of the roof when feasible.
- Ensure that exposed hardware, frames, and piping have a matte finish, and blend with the roof color to the extent feasible.

4.69 Do not damage character-defining features when installing roof equipment.

- Protect exterior woodwork, masonry, or trim details.
- Minimize the amount of historic roof material that is to be removed when installing a skylight.
- Avoid obscuring character-defining features such as ornamental details and decorative shingle designs.
- Locate a solar collector so that the ridge line and edges of the roof remain visible.
- Locate a solar collector so that the roof form and materials remain prominent. A substantial amount of the roof surface should remain visible.
- Use the least invasive method to attach solar arrays to a roof.
- Do not damage the structural integrity of the roof when installing a collector array.
- Technologies change over time. Install a collector so that it can be removed and the original character of the roof can be restored.

USING ALTERNATIVE MATERIALS ON A HISTORIC STRUCTURE

An alternative material is one which is different from that used originally for a specific application. Such materials may also be called "substitute," "replacement," "synthetic," or "imitation" materials, and can include:

- Vinyl siding
- PVC decking
- Aluminum siding
- Cementitious fiber siding
- Synthetic stucco
- Panelized brick
- Other non-original materials



Fiber cement siding

Substitute materials may replace historic architectural features such as a resin-cast cornice used in place of a stamped metal cornice. In other cases, an alternative material may be traditional when used for other applications, but new for the particular detail being considered. Using wood to replace an original stamped-metal cornice is an example.

Alternative materials may be considered by the HAHC on a case-by-case basis as replacement materials and for use on a new addition or new building in a historic district. They will consider:

Potential Impact on Historic Significance. Removing original material diminishes the integrity of a historic building by reducing the percentage of fabric that remains from the period of historic significance. Retaining the original material is always preferred. If this is not feasible, alternative materials may be considered. When used, an alternative material should convey the character, including detail and finish, of the original to the greatest extent feasible.

Durability. An alternative material should have proven durability in similar applications. While some new materials are very sturdy, others may degrade quickly and can be difficult to repair.

Appearance. An alternative material should have a similar profile, texture and finish as the original. Some synthetic siding has an exaggerated, rusticated finish that is an inaccurate representation of original clapboard, and many vinyl products have a sheen that is out of character with that of painted wood and metal.

Location. Up close, it is easier to identify some alternative materials due to differences in texture, finish and feel. Tapping on a hollow plastic column does not convey the same experience as the original. For this reason, locations that are more remote are better. Similarly, alternative materials are more acceptable on rear walls.

Cost. Some alternative materials are promoted because their initial costs appear to be less than repairing or replacing the original. When the other qualities of appearance and durability are proven, then the less expensive option may be appropriate. However, long-term, life cycle costs should be weighed. Often, the up-front saving is deceptive.

Environmental Impacts. The environmental impacts of alternative materials should be considered including impacts associated with manufacture, transport, installation and ability to recycle.

Interaction with Historic Building Materials. Some alternative materials may interact negatively with historic materials. For example, some metals may corrode and stain original materials and some window and siding materials may expand and contract with temperature changes in ways that degrade weather-protection properties.