

SECTION 4: CHANGES TO EXISTING BUILDINGS

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.

Since noncontributing buildings already do not support the historic qualities of the district, the criteria for making changes to them are less strict than those for contributing structures. However, the visual qualities of noncontributing structures still impact the character of the historic district, so many changes to them must be managed. *Note: If a historic building, which was classified as noncontributing due to alterations, is restored, it could be reclassified as contributing, making the owner eligible for tax incentives and other benefits.*

This section includes qualitative design guidelines — that is, those rules that are not numerically based and may require interpretation — for exterior alterations. It also includes useful information about preservation and maintenance. This information will also be useful for property owners or design professionals who are planning additions or new construction.

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PLEASE NOTE:

Check with the Preservation Office staff to determine if your proposed work requires a COA, could be approved administratively, or is exempted. (See Section 1.)

PLEASE NOTE:

See the National Park Service's Preservation Briefs for technical advice on best practices for maintaining and repairing historic building elements, at <https://www.nps.gov/tps/how-to-preserve/briefs.htm>

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.

4.1 Use care when cleaning or repairing an architectural element.

- Patch, piece-in, splice, consolidate, or otherwise address deteriorated elements using recognized preservation methods.
- Minimize damage to historic architectural elements when repairs are necessary.
- Use the gentlest means possible when cleaning or 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.

4.2 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.
- 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. 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.
- 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.



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

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.

4.3 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 before using on larger areas.

4.4 Preserve historic building materials.

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



Brick showing damage from inappropriate cleaning (photo courtesy of Heritage Ohio)

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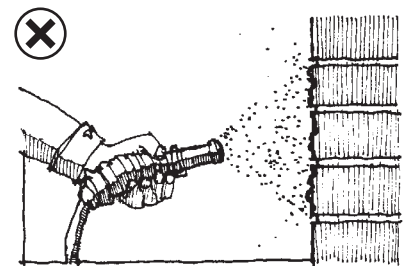
For more information about appropriate maintenance methods, please see the National Park Service's Preservation Brief No. 47: *Maintaining the Exterior of Small and Medium Size Historic Buildings*.



A house with original building materials



Inappropriate siding being removed from a historic brick Italianate building



Harsh cleaning methods, such as sandblasting, can damage historic materials, changing their appearance.

PLEASE NOTE:

For technical information about the causes of damage and suggestions for appropriately repairing historic materials, please see the National Park Service's Preservation Briefs, available online at <https://www.nps.gov/tps/how-to-preserve/briefs.htm>.

4.5 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.

4.6 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, 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 "Prioritizing Character-Defining Features by Location" on page 2-7 for more information.)

Wood

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

4.7 Maintain a coat of paint on wood surfaces; repaint only as needed to prevent 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.

- Avoid repainting for cosmetic reasons only.
- 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.
- Prime and coat all sides and edges of new wood, including cut ends, to block moisture and extend service life.

4.8 Repair, rather than replace, damaged wood whenever possible.

No matter how well wood building materials are maintained, sometimes exposure to moisture results in small areas of rot or other damage.

- Small areas of damage can often be easily repaired using an epoxy wood consolidant. These consolidants are available as liquids or putties, and are also formulated to be flexible, so that they do not crack as wood shrinks or swells with changes in humidity. Unlike wood fillers, epoxy can be shaped, carved, sanded, and painted just like 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.
- Identify the source of the moisture or damage and take steps to prevent further damage.
- Consider replacing rotten wood 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.

PLEASE NOTE:

See the National Park Service's Preservation Brief No. 10, *Exterior Paint Problems on Historic Woodwork*, for information about appropriately dealing with painted wood. <https://www.nps.gov/tps/how-to-preserve/briefs/10-paint-problems.htm>



Maintain protective coatings to retard deterioration and ultraviolet damage.

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

- Do not replace undamaged wood or a larger area than necessary.
- Use hand tools and take care to avoid damaging adjacent wood 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.

4.10 Do not replace or cover undamaged wood.



Before: A historic house with inappropriate synthetic siding



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

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 it was replaced by Portland cement, which began to be manufactured in the United States in 1875 and 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 *struck* or *tooled* (shaped) 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 and blocks are less commonly found in historic buildings here. Decorative tiles, which are set in mortar, and stucco, a plaster coating sometimes 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 paint, coatings, or sealers which can trap moisture inside a building or masonry wall and cause damage and deterioration.

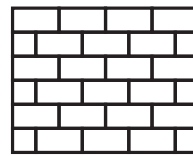
4.11 Preserve original masonry materials.

- 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 (see Preservation Brief No. 1).
- Do not use high-pressure methods, including power washers, sandblasting or 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.

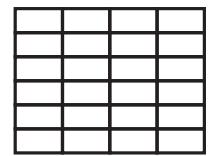
PLEASE NOTE:

For more information about appropriate maintenance methods, please see the National Park Service's Preservation Brief No. 1: *Assessing, Cleaning, and Water-Repellent Treatments for Historic Masonry Buildings*. <https://www.nps.gov/tps/how-to-preserve/briefs/1-cleaning-water-repellent.htm>

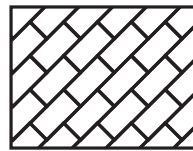
COMMON MASONRY PATTERNS



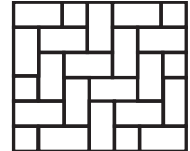
Running Bond



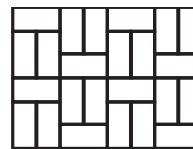
Stacked Bond



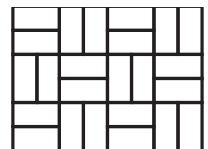
45 Degree Running Bond



90 Degree Herringbone



Single Basketweave



Double Basketweave



Concave



Vee



Flush



Raked



Extruded



Beaded



Struck



Weathered

Typical mortar joint profiles



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

4.12 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, rather than the bricks.
- Match the original mortar joint in depth, width, and profile. A qualified mason can appropriately clean, repoint, and strike mortar joints.

4.13 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, salvaged, reclaimed, or color-matched historical bricks are available from suppliers.
- 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 Historic Preservation Office 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 have incorporated 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. For example, 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.

4.14 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 steel windows or cast iron).

4.15 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 “hot” techniques such as 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.

4.16 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.



Installation of fiber-cement siding



Faux stone panelized wall cladding
(not appropriate for the Houston Heights Historic Districts)

Alternative Materials

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 or composite decking
- Aluminum siding
- Cementitious fiber siding
- Synthetic stucco (EIFS)
- Panelized brick
- Other non-original material

Substitute materials may sometimes be used to replace historic architectural features, such as a resin-cast cornice used in place of a stamped metal cornice. An alternative material may be traditional when used for other applications, but new for the particular detail being considered.

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

- **Potential impact on historic significance.** Because removing original material diminishes the integrity of a historic building, retaining the original material is always preferred. If this is not possible, an alternative material may be considered, if it conveys the character of the original, including detail and finish, to the extent that is feasible.
- **Durability.** An alternative material should have proven durability in similar applications.
- **Appearance.** An alternative material should have a similar profile, texture, and finish as the original. For example, some synthetic siding has an exaggerated rusticated finish that is an inaccurate representation of original clapboard; many vinyl products have a glossy sheen that is out of character with painted wood or metal.
- **Cost.** Some alternative materials are promoted because their initial costs appear to be less than repairing or maintaining the original material. The lifecycle of a new material, and its long-term costs, should be considered.
- **Environmental impacts.** Consider the impacts associated with manufacture, transportation, installation, and ability to recycle.
- **Location.** Rear walls are not regulated (except on corner lots); parts of the building away from the street can be treated more flexibly than front walls or walls closer to the street.

PARTS OF A BUILDING

Siding

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 in many of Houston's historic districts. The size of the *reveal* (the portion of the siding board that is visible after installation) and the finish of the siding, whether smooth or textured, also contribute to the overall visual impact of siding.

The most common types of siding found on historic houses in the Houston Heights Historic Districts are wood siding and decorative shingles (in gables).

In modern construction, 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, structural siding must not be removed unless you have taken precautions to protect the structural integrity of the building. Please consult with the Planning staff in the Historic Preservation Office if you are unsure whether this applies to your project.

Wood Siding

4.17 Preserve and maintain wood siding in good condition.

- Keep siding painted or stained to provide a protective coating against the weather.
- Regularly inspect siding for damage, and re-attach loose siding to prevent water intrusion into the wall.

4.18 Replace wood siding in kind.

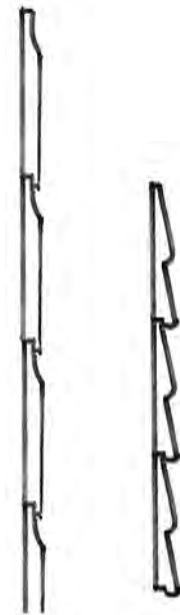
- Replace the least amount of siding necessary. Wholesale replacement is not recommended and requires a COA.
- Match the original siding in size, profile, and thickness.
- Choose a durable and sustainable species of wood, such as cedar, cypress, or Douglas fir.
- Changing to a synthetic material is not recommended.

4.19 Determine whether siding components are damaged beyond repair.

- Individual pieces of siding may be replaced in-kind, per the ordinance. If more than 50% of siding on one wall/elevation is damaged beyond repair, it may be replaced with siding of the same material, profile, and finish. This requires a COA. Please contact the Historic Preservation Office staff for information about the documentation required to substantiate this level of damage.



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Typical siding profiles in the Heights: (left) 105 and (right) 117



Asbestos Siding

Asbestos-cement siding was made by combining Portland cement with asbestos fibers. Developed by the Johns-Manville Company, asbestos siding was popular between 1900 and 1950 for its durability and resistance to fire, termites, and rot. Asbestos siding can be painted.

4.20 Do not attempt to remove or cover asbestos siding yourself. Contact a qualified professional.

- Asbestos siding does not need to be removed; if left alone, it is not dangerous. However, breaking, cutting, sanding, or otherwise destroying any material containing asbestos is dangerous and creates a health hazard by releasing asbestos fibers into the air. Do not clean asbestos siding with a pressure washer, which can break it.



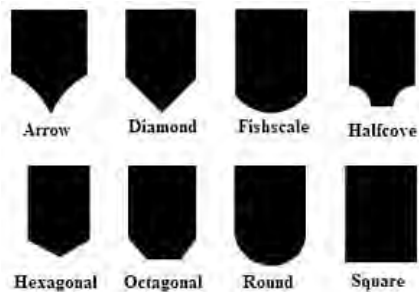
Decorative Shingles

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 (octagonal), sawtooth, diamond, square, and rectangular 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.

Examples of decorative shingles in various shapes and patterns



Typical shapes for decorative wood shingles

4.21 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.

4.22 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.
- Back-prime and paint all surfaces before installation.

Windows

Most windows are character-defining features and can help with the identification of architectural styles. This information applies to 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 likely to be less tall, although still vertical in dimension. Windows on a Craftsman house are often arranged in pairs or horizontal *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.

Windows in historic buildings were historically made of wood. Metal windows are also found in historic buildings; steel windows were common in industrial settings, and aluminum windows became popular in residential construction in the mid-20th century.

Wood Windows

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 product that is not as hard, strong, or stable. 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.

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.

4.23 Preserve the proportions of historic window openings.

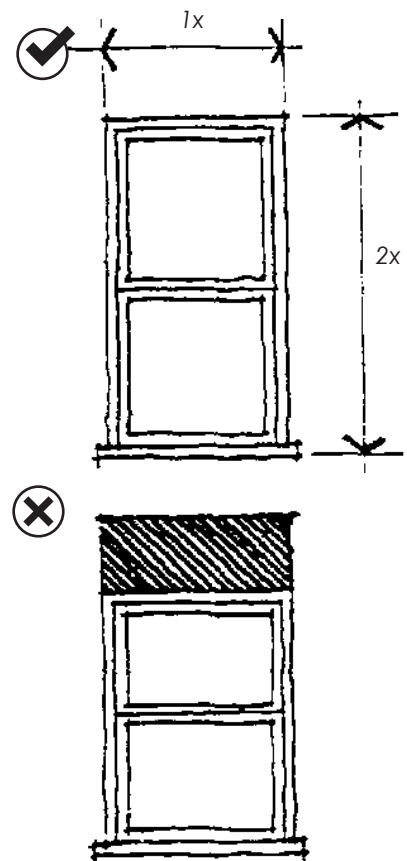
- Preserve the original size and shape of a window opening.
- Restore altered window openings on primary façades to their original configuration, when feasible.
- Do not significantly increase the amount of glass on a primary façade as it will negatively affect the integrity of the structure.

PLEASE NOTE:

The National Park Service publishes Preservation Brief No. 9: *The Repair of Historic Wooden Windows*, which is available free of charge online at <https://www.nps.gov/tps/how-to-preserve/briefs/9-wooden-windows.htm>.

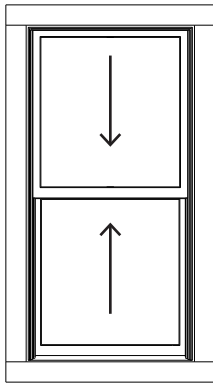


A house with intact historic windows.

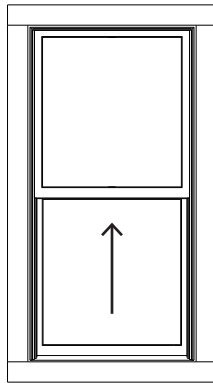


Choose a window that fits the opening; don't use a smaller window and fill in above it.

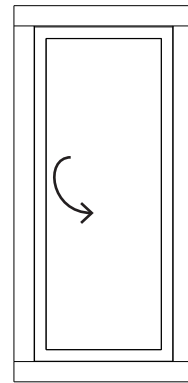
TYPICAL WINDOW TYPES



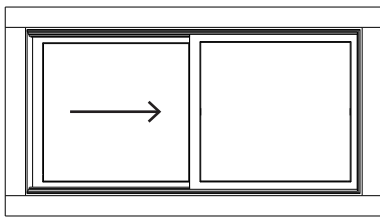
Double-Hung Window



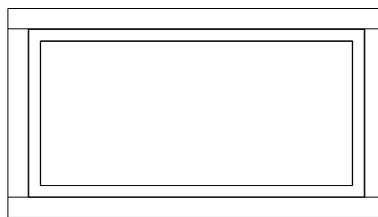
Single-Hung Window



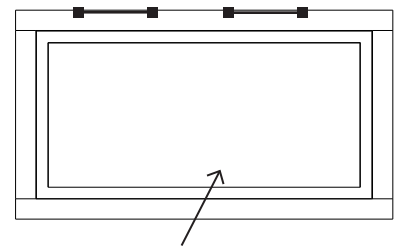
Casement Window



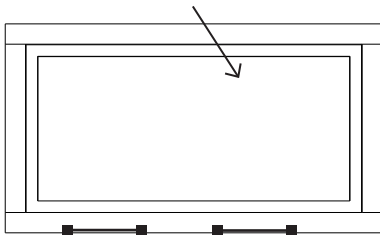
Sliding Sash Window



Fixed Window



Awning Window (hinged at top)



Hopper Window (hinged at bottom)

4.24 Preserve historic window components.

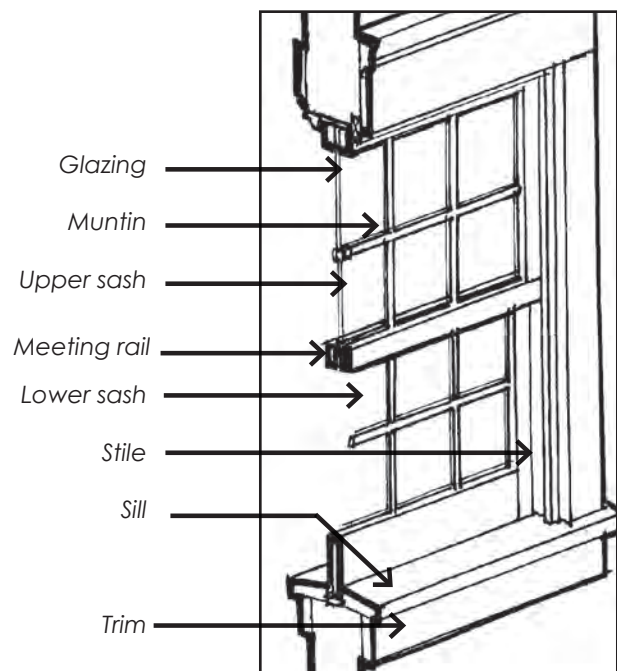
- Preserve the original size, position, number, and arrangement of historic windows in the wall of a building.
- Preserve historic window components, including the frame, sash, panes, muntins, mullions, glazing, sills, heads, jambs, moldings, operation, and groupings of windows.

4.25 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 or five-in-one tool, to cut carefully 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; do not use caulk instead of appropriate glazing material.
- 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.



Replacing glazing putty
© iStockPhoto.com/Elaine Odell



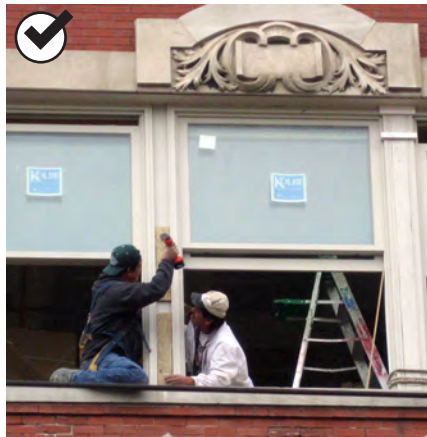
Double-hung window components



The profile of this window and its trim both lack the proper depth.



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



Appropriate new windows are the right size and material.

4.26 Determine whether window components are damaged beyond repair.

For the purposes of this calculation, a component includes an individual sash, the casing, the jamb, or the sill, as defined below:

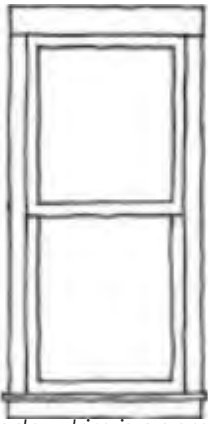
- The sash includes the stiles, rails, and muntins.
- The casing includes the vertical and horizontal trim surrounding the sashes.
- The jamb includes the interior structure of the window into which the sashes are mounted.
- The sill includes the sill and the apron.
- Each component of a window is considered separately. Only that particular component may be replaced if more than 50% of its material is damaged beyond repair due to rot, breakage, deformation, etc. Windows painted shut, cut or broken sash cords, missing sash weights, or broken glass are not considered "damage" for the purposes of these calculations.
- If all components (all sashes, as well as the casing, jamb, and sill) are individually damaged more than 50%, the entire window may be replaced with a unit that matches it, within 1/4 inch in all dimensions. The replacement window must be sized to fit the existing window opening.
- Damage to individual components may not be combined in order to obtain a total of 50%. Components may not be combined to average the damage. For example, if one component has 80% damage but another has only 20% damage, only the component with the amount of damage over 50% (not both) will be permitted to be replaced; the other must be repaired. Staff will not monitor the repairs of individual window units to determine, over time, the extent to which material in each unit is original, due to the unreasonable administrative burden that would create.

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

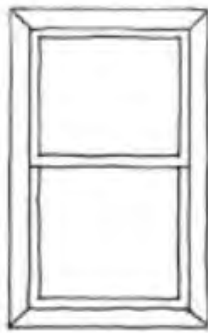
- Add weatherstripping and caulking around the window frame.
- Install a storm window or insulated window shade. Interior storm windows are available and easy to install and remove. Exterior storm windows may be added without a COA.
- Use clear ultraviolet (UV)-blocking films or low-E films to prevent heat gain. If using low-E films, place them on the most exterior window surface (such as a storm window).

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

- Do not replace an entire window if new components, such as sash packs, are available. Replace the frame as a last resort.
- Match the original sash configuration; single-hung, double-hung, casement, etc.
- If damage is confined to one sash, look for a historic salvage replacement sash.
- 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. (No flat boards.) 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.
- Although the City does not regulate glass, consider using clear window glass (glazing) to convey 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 outermost surface, to avoid damaging 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 are not recommended; if used, they must be recessed and inset to simulate a traditional window profile. Fin-mounted windows are not appropriate or compatible within the historic districts.



This window trim is appropriately size and includes a proper sill.



Avoid using same-sized trim with mitered corners.

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.

4.29 Reuse the original window to replace another that is beyond repair; move to 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. 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.

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

- Use a simple shape for the window, with 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.
- Reglazing with frosted glass is permitted if privacy is a concern.

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. Do not create a new window opening on the front of a building.

Be aware that shiplap is a structural element of an exterior wall, so installing a window in a new location may not be a simple task.

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

- Use a simple shape for the window, with 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.
- Properly detailed trim around openings should mimic a structure: the jambs should appear to rest on the sill and to support the lintel. The lintel should be deeper than the jamb width. Avoid mitered corners.

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.

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

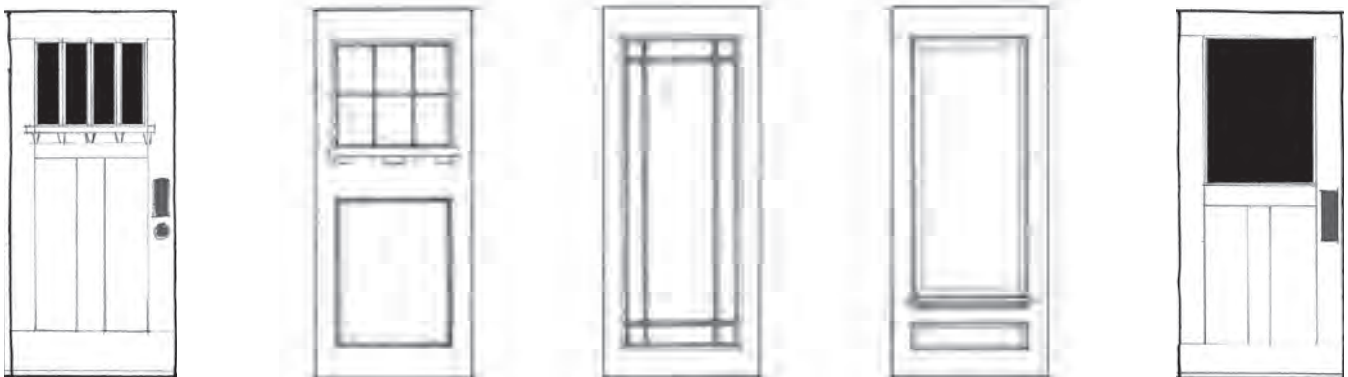
- Preserve a door's character-defining features, including its location, size, frame, panels, panes, muntins, glazing, thresholds, and moldings.
- Keep doors appropriately painted or stained to protect the wood from weather.
- Do not alter the original size and shape of a historic door opening that is located in a highly visible location.
- When possible, restore a previously altered door opening in a highly visible location.

PLEASE NOTE:

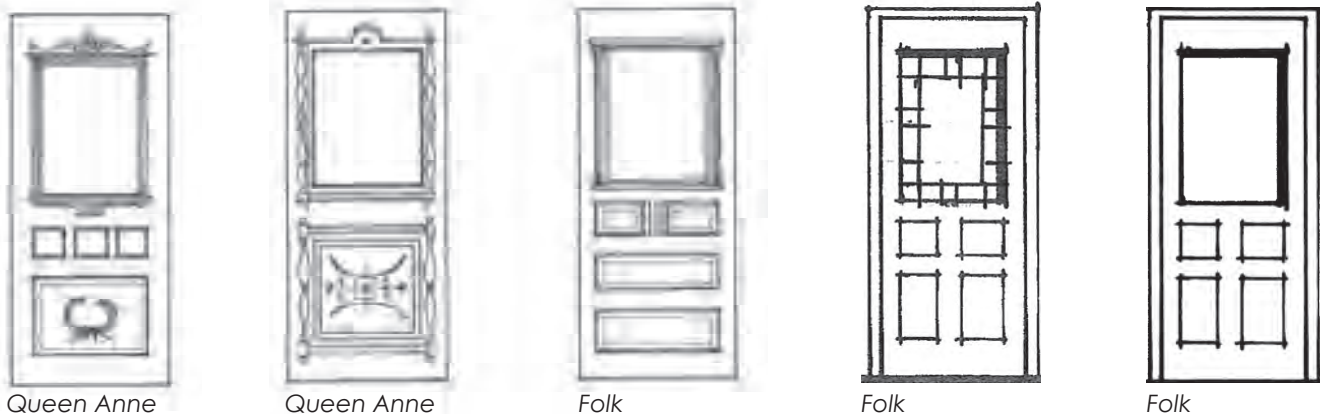
If **security** is a concern, install long-throw deadbolt locks with reinforced deadbolt and lockset strike plates. Use extra-long (3") screws to attach strikeplates through the doorjamb and into the studs.

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.

TYPICAL CRAFTSMAN RESIDENTIAL DOORS



TYPICAL VICTORIAN ERA RESIDENTIAL DOORS





This door with a transom above is appropriate for a Victorian-era house.



This replacement door with ornate, faux "leaded" glass would be inappropriate on many historic buildings.

4.33 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.

4.34 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.
- Match the material of the original door, or choose a material that will look similar after it is painted.
- If the original door design is unknown, use a design that is appropriate to the architectural style of the house.

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 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 is appropriate:

4.35 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.

4.36 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, keep it in an upright position and elevate it above the floor on blocks covered in plastic, to prevent moisture wicking up from the ground.

Doors on a duplex

When converting a duplex with two front doors to single family use, the treatment depends on whether the building was originally a duplex or not.

4.37 Preserve both front doors on a duplex when they are original.

- Retain both front doors; one may be made inoperable.
- Alternatively, replace one of the doors with a window and leave the other door as-is.

4.38 A previously altered front entry may be restored.

- If a building was converted from single-family use to a duplex, and historical evidence for a single front entry door is available, you may restore the front entry to its original configuration.

Installing a door in a new location

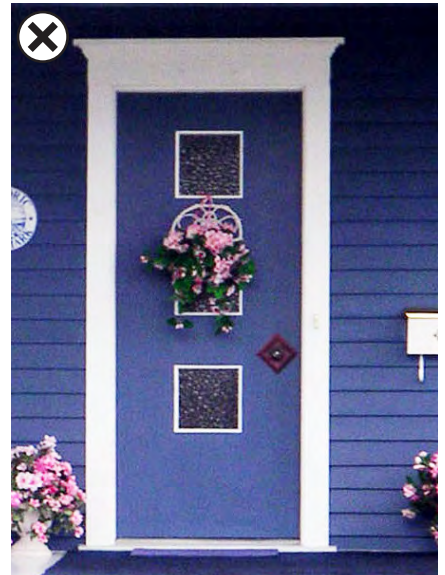
In some cases, a new door may be needed in a location that did not have one historically. This may be considered where (a) the new door would not be highly visible from the street and (b) creating the opening would not destroy any key other character-defining features. (See page 2-7 for diagrams that illustrate sensitive and less-sensitive locations for alterations.)

4.39 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.



Preserve the proportions of a historic door and its opening.



This replacement door is a style popular in the mid-20th century and would be inappropriate for a contributing building in the Houston Heights Historic Districts.



A wrap-around porch

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 a 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.

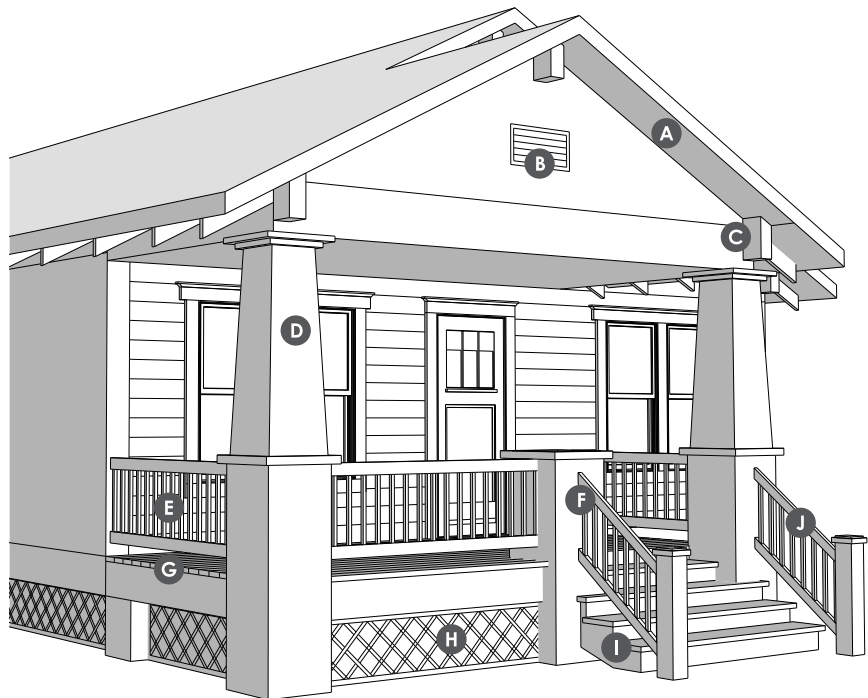
Porches typically consist of the following parts: a hipped, gabled, or shed roof, which is supported by posts or columns and finished with a ceiling; a guardrail/balustrade between the posts, which includes top and bottom rails, with balusters in between; a floor or deck; and steps from the ground to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

Note: Please refer to the Houston Building Code for additional requirements for guardrails and handrails.

TYPICAL PORCH FEATURES

KEY:

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



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 Historic Preservation Office staff, who can provide helpful guidance.

For Existing Porches

4.40 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.

4.41 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.

REPAIRING PORCH RAILINGS

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



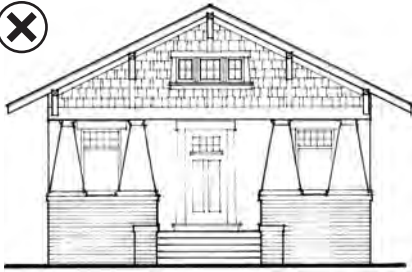
Before: A deteriorated handrail



After: Handrail repaired and the post replaced in kind



This original porch has been preserved in an appropriate manner.



Oversized columns like these are a modern interpretation of historic details and are appropriate for new construction, but not an existing historic porch.

4.42 If repair is not possible, replace only those elements of the porch which are not repairable.

- Replace a historic porch element to match the original.
- Use materials that match the style, texture, finish, composition, and proportion of the original.
- Match the guardrail (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.



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

4.43 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.
- Do not cover porch decking with tile.

Adding a New Porch to an Existing Building

A new porch may be added in a location where it will not affect the integrity of the contributing building, such as at the rear of the building or toward the rear on a side wall. A new porch can also be included as part of a larger addition, particularly when the porch helps to reduce the perceived mass and scale of the addition. A new front porch may be added to a noncontributing building where one did not originally exist.

4.44 Design a new porch to be compatible with the existing building.

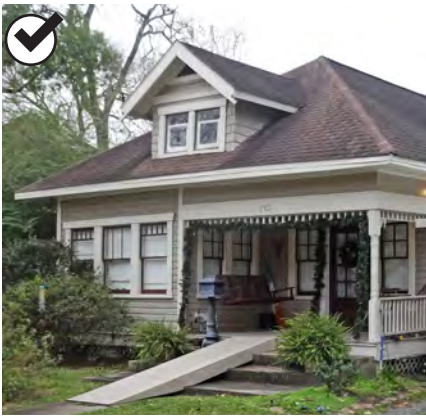
- Keep the scale, proportion, and character of the new porch compatible with the historic structure.
- Match the finished floor height of the new porch to the existing building.
- The eave height of a new porch can match the eave height of an existing front porch or be lower.
- Use materials that are similar in scale, proportion, texture, and finish to an existing front porch.

4.45 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. Sanborn maps can show the location of the previous porch and whether it was full or partial width. If no photographic evidence exists, look at houses of the same style in your context area and design the porch using simplified versions of those porch elements.
- 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. Stone is not appropriate in the Houston Heights Historic Districts.
- Choose a railing that is in character with the style of the building, and not more elaborate 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.
- The roof of the porch may be hipped, gabled, or shed. It is not required to match the main roof of the house.



Replacement porch elements (unpainted) match the original components.



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

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.

4.46 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 $\frac{3}{4}$ inch, 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.

4.47 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 one inch in height between the starting point and ending point, the ramp should be one foot long.
- 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.

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 sometimes covered in brick or stone veneer. (When wooden posts were used instead of masonry piers, that is 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.

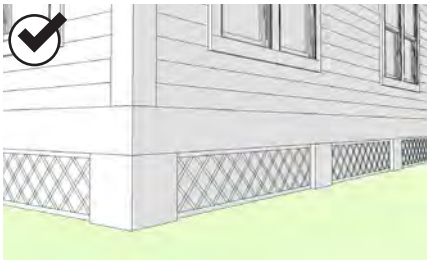
4.48 Maintain the historic height of the finished floor above natural grade, if possible.

HAHC may allow structures to be raised to maintain an appropriate height above the soil, if there is a demonstrated need. Please contact the Historic Preservation Office staff to discuss your individual situation and how best to address the conditions specific to your property.

- Foundation height should not be changed unless required to preserve the integrity of the foundation, such as problems that can occur with insufficient space between the ground and the structure. Changing the height of a foundation may damage porch piers and chimneys, which also must be raised.
- Have piers adjusted or shimmed, if needed, to keep the house level. Consult a qualified foundation professional for more information about this process.



A foundation with masonry piers



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



Examples of inappropriate unframed lattice

4.49 Maintain (or add, if desired) screening between piers.

To keep animals out of the crawlspace area, it was and is common for homeowners to install *skirting* or *screening* between foundation piers, particularly under 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.

- Repair foundation components that are damaged or deteriorated.
- Keep screening materials painted and secured to the piers.
- Periodically inspect and repair any damage to wooden screening material.
- Re-point any eroded mortar joints, to prevent moisture infiltration and damage.

4.50 New screening panels may be installed between piers.

- 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 that measure 1½ inches wide by ¼ inches thick and are arranged with a 1-inch x 1-inch space between, for a historically authentic appearance that will keep out animals.
- If using square (vertical-horizontal) lattice, install so that the vertical pieces are 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; for example, attach to mortar joints, rather than drilling into brick.

Historic Shutters

Wooden shutters are found on many historic buildings, although the number of houses in Houston Heights that may have originally had shutters is unknown. Shutters provide security and protection from weather. In the southern United States, shutters typically were constructed with angled, adjustable louvers 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 have them.

4.51 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.

4.52 Repair historic shutters, rather than replacing them.

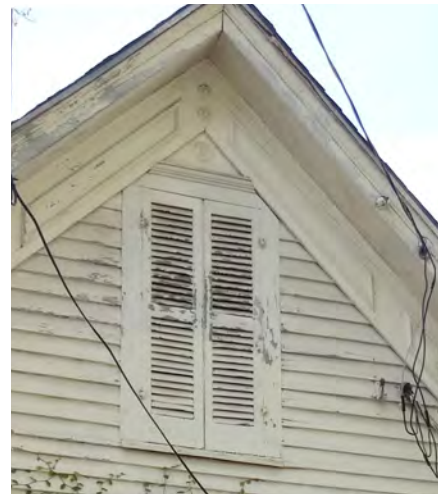
- Small areas of rot or similar damage are most likely to be found at the window sill, where water may pool or splash onto the lower edge of the shutter. Consider using a wood consolidant in these locations to preserve the original wood.
- If a patch or Dutchman repair is appropriate, remove the least 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.

4.53 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.
- Shutters should appear to be operable (even if they are not).
- Do not install shutters that are narrower than the associated window or opening.

4.54 Do not add shutters to a building that did not have them historically.

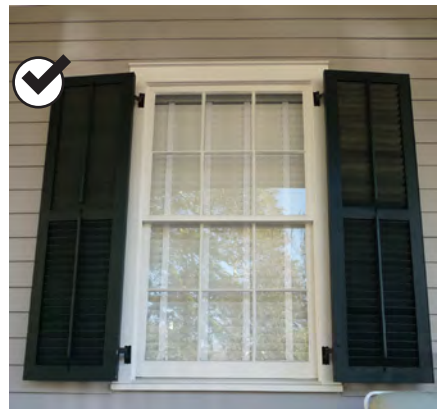
- Document the historic presence of shutters through photographs.
- Match the historic shutters in design, size, and proportion.
- Shutters should appear to be operable.



Preserve a historic wood shutter.



Use a replacement shutter that fits the window opening.



Use operable blinds or shutters hung with hinges.

PLEASE 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*. <https://www.nps.gov/tps/how-to-preserve/briefs/44-awnings.htm>



Maintain awning frames and any moving parts.



Awnings are still present on the Milroy House today.

Awnings

Awnings can provide shade and heat control in the summer and may be considered as a preferred alternative to installing replacement windows. Otherwise, awnings are most appropriate 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. A COA is not needed to replace fabric, as long as the awning frame is left intact.

4.55 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.

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

- 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.



Awnings are visible on the Milroy house in this historic photo (courtesy of Randy Pace).

Burglar Bars

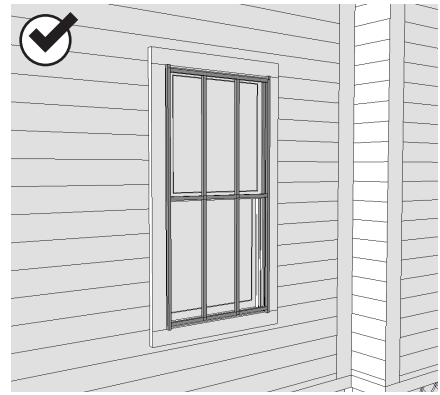
If it is necessary to install security bars (aka *burglar bars*) on a historic building, the bars should be as inconspicuous as possible and must not alter character-defining features of the building. Consider using interior, operable, or transparent devices which will not alter the exterior appearance 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.

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

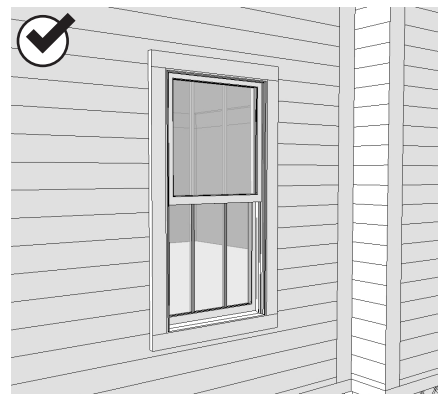
- Locate security bars inside the structure, if possible.
- Avoid an ornate design that would be out of character with the historic building.

4.58 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 must be reversible.



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



Locate burglar bars inside the structure, if possible.

PLEASE NOTE:

Roof pitch, or steepness, is described as "X-over-12" where X is the number of inches the slope rises vertically for every 12 inches that it runs horizontally.



A front gabled roof



A hipped roof



A hip-on-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. Craftsman roofs typically have a 5-over-12 or 6-over-12 pitch, while Queen Anne roofs are steeper, with an 8-over-12 pitch or higher.

"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 identify a building's architectural style.

Typical 19th and early 20th century roofing materials included slate, metal, wood shingles, clay tile, asbestos-cement 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.



4.59 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.

4.60 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.

4.61 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.
- Do not attempt to repair an asbestos-cement shingle roof yourself. Walking on asbestos-cement shingles can cause cracking and other damage. Contact a qualified contractor that specializes in slate or tile roofs.



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



Asbestos-cement shingles have an estimated 50–70 year service life.



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.

PLEASE NOTE:

A certificate of appropriateness is not required for ordinary maintenance and repair, or for reroofing with in-kind materials with no change to the structure, shape, or pitch of the roof.

Re-roofing includes replacing shingles and/or underlayment/decking. Repairing or reinforcing existing roof joists or rafters as needed to meet windstorm certification requirements, or adding hurricane straps, also does not require a COA.

See: DIVISION 4. - CERTIFICATES OF APPROPRIATENESS
Sec. 33-237. - Exemptions.



The red metal roof on this house is more appropriate for a commercial building, not a residential one.

4.62 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.
- An asphalt or asphalt-fiberglass composition shingle is appropriate for most styles and periods, unless specialty roofing materials (such as slate or clay tile) are present. Either three-tab or architectural (dimensional) shingles may be used. 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.
- Metal roofs are allowed for additions to **residential buildings**.
 - Material should be a typical metal color (silver, bronze, etc.) with a matte, nonreflective finish.
 - Material should be appropriately sized for a residential building. For example, standing seam metal roofs should measure approximately 18–24 inches between interlocking seams. (If ribs are present between the interlocking seams, measure between the seams, not between the seam and the rib.)
- Metal roofs for additions to **commercial buildings** should be appropriately sized and may be finished in a neutral color.
- 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.

4.63 Preserve and maintain a historic dormer.

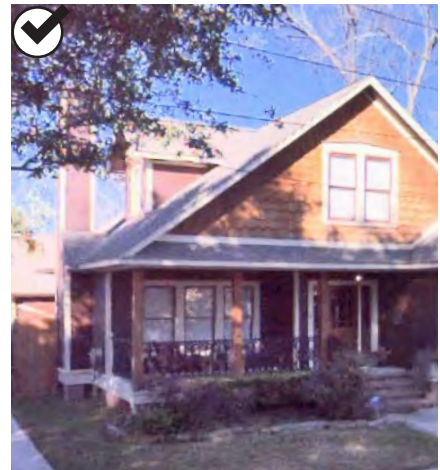
- Maintain the original size and shape of a dormer.
- Original dormers which are located on a front-facing roof should be preserved.
- For additional information about the parts of a dormer, refer to the guidelines for preserving and maintaining roofs, windows, and walls.

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

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

4.65 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.

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

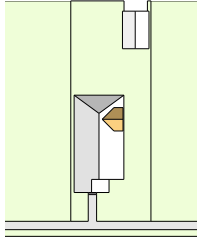
- Dormers must be functional — to create additional living space or allow light to enter an attic space — not merely decorative.
- The style of a new dormer should be in keeping with the style of the house.
- Locate a new single dormer in a location that is toward the rear of the house and on the side 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.
- A dormer must be inset from the first-floor side wall below it.

APPROPRIATE AND INAPPROPRIATE DORMER DESIGNS

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

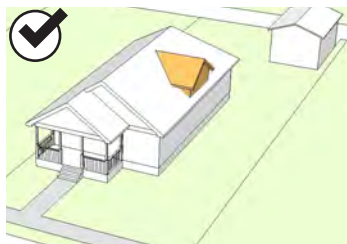
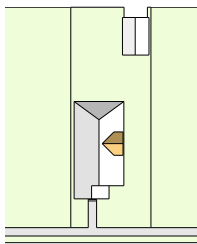
Single Gable Dormer at Rear of Roof

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



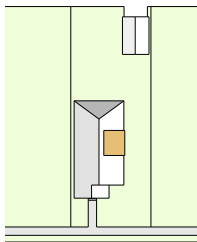
Single Gable Dormer at Mid-Point of Roof

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



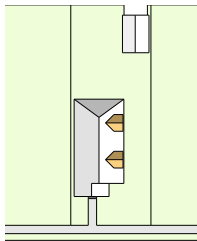
Single Shed Dormer at Mid-Point of Roof

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



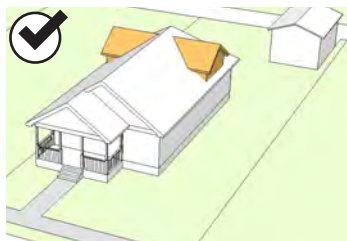
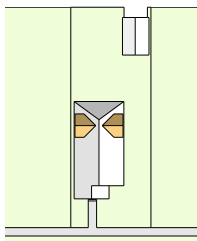
Two Gable Dormers, Traditional Spacing

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



Two Gable Dormers, Aligned at Rear of Roof

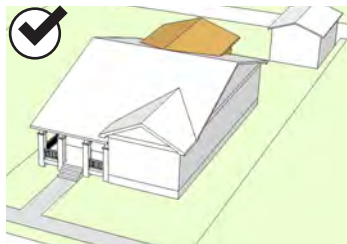
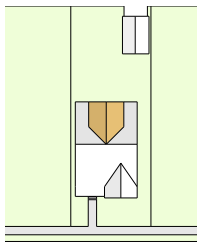
- Ridge line maintained
- Eave line maintained
- Dormer in historic proportions



APPROPRIATE AND INAPPROPRIATE DORMER DESIGNS

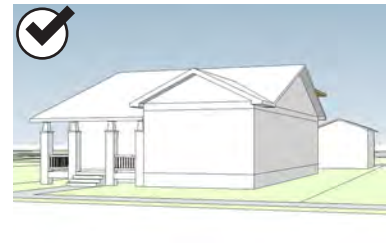
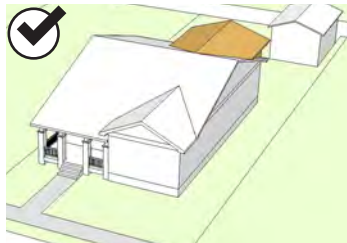
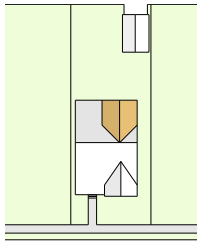
Single Gable Dormer at Rear of Side-Gable Roof (centered)

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



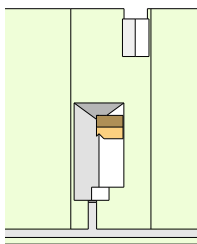
Single Gable Dormer at the Rear of Side-Gable Roof (moved to one side)

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



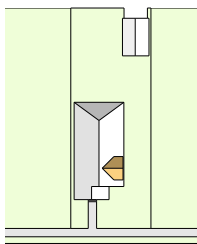
Tall Gable Dormer at Rear of Roof

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



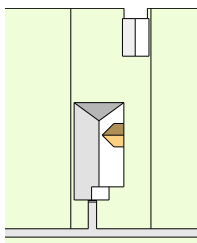
Single Gable Dormer at Front of Roof

- 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.

4.67 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 pages 4-7 and 4-8.

4.68 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.

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

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



A typical brick chimney



Many historic chimneys are located on the sides of houses in Houston.

PLEASE NOTE:

For information about installing solar panels on the roofs of historic buildings, please visit <https://www.nps.gov/tps/sustainability/new-technology/solar-on-historic.htm>.

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 panels should be designed, sized, and located to minimize their effect on the character of a historic building.

4.70 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 panels to remain subordinate to the roof.
- Mount solar panels flush with the roof slope.
- Use a solar panel design that is similar in color to the background of the roof when feasible.
- Ensure that any exposed hardware, frames, etc., have a matte finish, and blend with the roof color (to the extent feasible).
- If possible, locate solar panels toward the rear of the roof.

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

- Protect exterior woodwork, masonry, and 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 panel so that the ridge line and edges of the roof remain visible.
- Locate a solar panel 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 panels to a roof.
- Do not damage the structural integrity of the roof when installing a solar panel.
- Technologies change over time. Install a solar panel so that it can be removed and the original character of the roof can be restored.

PLEASE NOTE:

For more information about historic signs, see the National Park Service Preservation Brief No. 25: *The Preservation of Historic Signs*. <https://www.nps.gov/tps/how-to-preserve/briefs/25-signs.htm>

Signs

Signage options for traditionally commercial buildings are different than those for residential buildings that have been converted for commercial use. Painted signs on a previously unpainted masonry wall require a COA; no other paint-only signs do. All other types of signs require a COA.

All signs must meet the City of Houston Sign Ordinance (Chapter 46).



A small hanging/bracket sign located under a canopy in the public right-of-way



A noncontributing strip center with internally-lit plastic channel letter signs

4.72 Do not remove or damage historic signs.

Historic signs are those which have gained historic significance due to age; photographic documentation may support this.

- Historic signs which advertise businesses that are no longer on the property may be kept intact or refaced.
- “Ghost” signs (painted on a building) may be restored if this work is done appropriately.

4.73 Use minimal hardware to attach a sign to a building.

4.74 Signs must be appropriate in size, scale, and number.

- Design a sign to be is in scale with the size of the building.
- Appropriately designed signs that are 25 square feet or less in area may be administratively reviewed.
- A commercial sign on a strip shopping center must fit within the storefront space allotted to that business.
- Depending on the building size and location, more than one sign may be appropriate

4.75 Locate and mount a sign appropriately for the type of building.

- Signs should be parallel or perpendicular to the public right-of-way and may not obstruct key character-defining features of the building.
- Signs on commercial building may be placed:
 - Flat against the wall above entrances, windows, storefronts, canopies, or awnings; may not cover windows or decorative architectural elements such as cornices
 - Hanging beneath a canopy, perpendicular to the building
 - Projecting from and perpendicular to the building, mounted on a bracket or vertical fin/blade
 - As painted lettering directly on the building (COA required for masonry buildings)

- Signs on residential buildings which have been converted to commercial use may be placed:
 - Hanging from and in line with a front porch beam
 - Flat against a front porch beam
 - Flat against wall within gable
 - As painted lettering directly on the building (COA required for previously unpainted masonry buildings)
 - As lettering on a canopy or awning
 - On a bracket mounted perpendicular to the building
- Roof signs are not allowed.
- Consider using window signs or decals, monument signs, or pole signs (none of which are regulated) as an alternative to attaching a sign to a building. Window signs should not cover more than 50% of a window.

PLEASE NOTE:

Plastic cabinet signs or channel letters may be considered **only** for a noncontributing structure.



Open faced, individual letters inset with neon lighting, located above the entrances and canopy on stilts instead of against the wall face

4.76 Select an appropriate material for the sign.

Decisions about appropriate materials may depend on the type and style of building. Signs may be fabricated from the following materials:

- Wood
- Metal
- Paint applied directly to the building
- Fabric
- Neon
- Individually cut metal channel letters/graphics
- Acrylic non-illuminated letters

Creative signs that represent the kind of business being advertised are encouraged.

4.77 If desired, select an appropriate method of lighting a sign.

If a sign is lighted, it must be illuminated indirectly, using an external light source. Signs may be illuminated using the following methods:

- Flood lighting or gooseneck lighting
- Neon
- Lighting inside open-faced metal cabinet letters
- Reverse-channel (backlit) individual letters mounted on the building with a separate light source behind each one
- Signs may not be internally illuminated.



A noncontributing building with signs located within allotted storefront space, placed above entrances along the canopy