

CITY OF GRANBURY
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Historic Preservation
DESIGN GUIDELINES

11. ROOF SYSTEMS INCLUDING MEMBRANES, FLASHINGS AND ROOF DRAINAGE

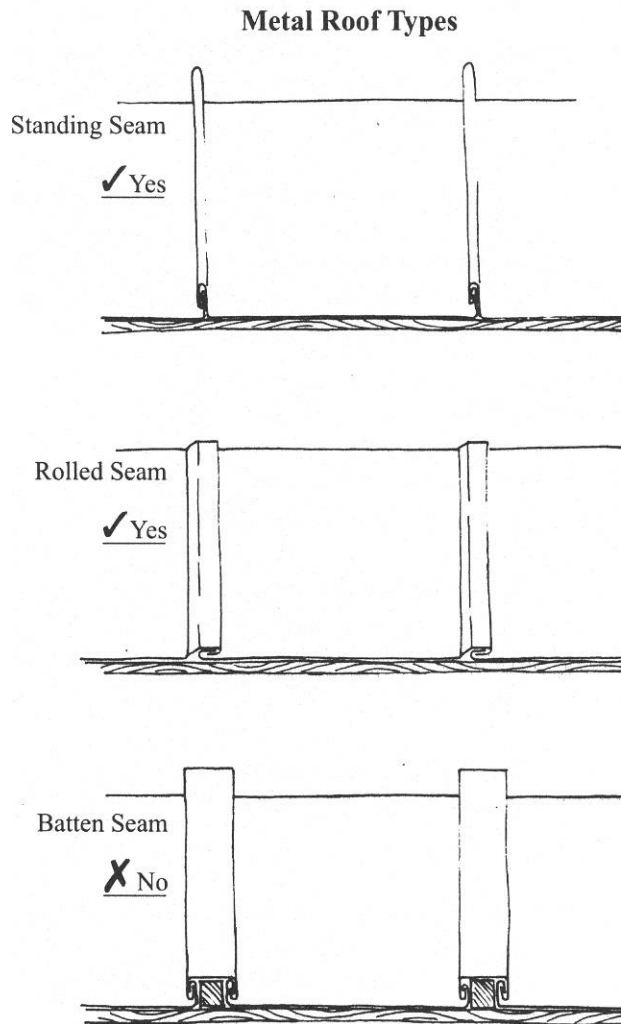
Commentary:

Roofs, which are major visual components of buildings, come in four basic shapes-gabled, hipped, gambreled, and flat. They are often interrupted with dormers and sometimes with turrets and cupolas. The roof profile is usually the most distinguishing feature of an architectural style.

- Pitch: Roof styles vary in “pitch”, or the steepness of the roof angles.

- Roofing Materials: The product of the earliest period of Granbury history, the hand-split shake, was changed to machine-cut, smooth shingles as soon as lumberyards were established. The roofing materials that were most typical of the late 19th century and early 20th century in Granbury were metal (including standing or flat seam, corrugated iron or steel roofs, and stamped or pressed metal shingles of varying shapes), wood shingles, composition shingles, asbestos shingles (today prohibited), and clay tiles in a few instances. Later in the 20th century, tar, gravel, and bituminous asphalt flat roofs were also employed.

- Shingles: In the late 19th and early 20th centuries, craftsmanship in laying shingles was a much more developed art than found today. Before removing any shingles on a historic building, photograph and measure the dimensions of the original shingle and the number of inches laid to weather. Remember that standards for laying roof tile have fallen, and an experienced and knowledgeable craftsman is important to both the historic look and the life of the roof.



- Replacing shingles: If a roof must be replaced, consider that the rafters, lath, and other wood support members were not originally designed to carry extra weight. Therefore the decayed material must be removed, and the sway-back set of the old timbers corrected before adding the new material.
- Metal Connectors: There were more iron mongers and other metal craftsmen in the Victorian era to make timber connectors for buildings. Regard carefully rusted iron connecting devices sometimes found in Victorian attics and devise new connectors where necessary.
- Roof Drainage Systems: In many cases, gutters and downspouts were not used originally in Granbury buildings. Gutters and downspouts require constant clean-out maintenance, or they can cause eave decay. If gutters are not present to drain the roof, defense from splashing on the bottom three feet of the building should be considered. Concealed gutters or valley gutters, used in some building styles, require concealed downspouts. These may be behind cornices and within columns, pilasters, or within the walls of the building. They require vigilant maintenance.
- Crests: Metal and wooden crests or clay tile lined the ridges and hips of some roof styles. Decorative metal weathervanes, finials, lightning arrestors, ornamented steep gables, turrets and hip ridges were also utilized on various roof styles.
- Mortar Joints over Roofs: The mortar joints in masonry chimneys and parapets above roofs and the flashings of roofs into masonry chimneys and parapets are often a source of failure in the moisture envelope of the building. The temperature changes at the tops of buildings are subject to greater swings in the freeze-thaw cycle, and cause mortar to crack and decay faster than in other parts of the building.

Roof Shapes

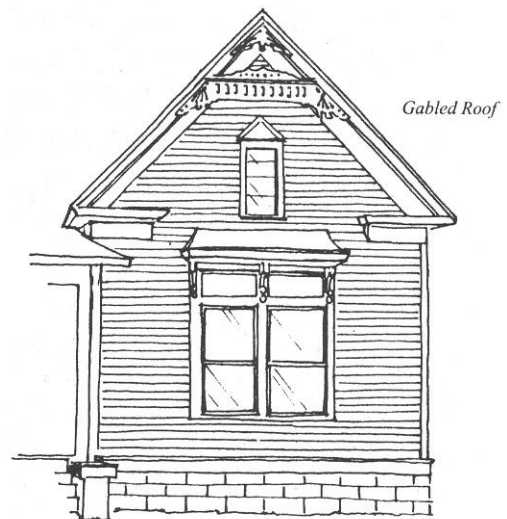
Restoration of building roofs in a historic district generally shall be compatible with the district.

When restoring roofs and other architectural components, original architectural shapes and materials shall be used, which will maintain the building's compatibility with the historic period of the rest of the district.

Maintain / restore the original style, pitch, location and material of all components of a roof on every historic building.

Document in measured drawings and photographs the sizes and composition of materials employed in the original roof, and take care to repeat in restoration the original roof form. Be prepared to show the Historic Preservation Commission the evidence of precedence for replaced parts. Seek their approval for substitutions.

Avoid altering the angle or pitch of a building's roof.



Maintain the perceived line of the roof from the street.

Maintain the original size and shape of dormers, chimneys, roof ornaments and all components of the building silhouette. Do not enlarge or add new dormers to a historic building.

Preserve or restore original skylights. Flat skylights, mounted flush with the roof, *may* be considered where original glass skylights have been lost, with the approval of the Historic Preservation Commission. Use a glass or plastic approved for fire safety for skylights. Add new skylights to historic buildings only in concealed locations.

Roofing Materials

Identify and Retain the original roof materials where feasible.

Avoid removing roof material that is in good condition.

Replace roofing material only when necessary. Use the same material as the original, or with the approval of the Historic Preservation Commission, use a material and pattern that are historically appropriate to Granbury and to the building.

If there is documentation for the original or an early roof on a building, use roofing materials that are the same in size, shape, texture, and color. Often, such evidence can be found under the roof or in the attic. If there is no documentation, use the roofing materials of similar historic buildings in Granbury, with approval by the Historic Preservation Commission.

Wood shingles that are specially treated to retard combustion and weathering may be considered for historic homes. Except for log cabin roofs, shakes shall not be used. Rafters and lath supporting fire-rated shingles shall be treated to retard combustion.

Metal shingles may be considered when faithful to the design and scale of the original. The ribbing of rolled, standing, or flat seam metal roofs shall be fabricated to match the original.

Corrugated metal roofing seamed with U-shaped battens in imitation of old roofs shall not be allowed on historic buildings, though historic corrugated roofs shall be acceptable.

Roll roofing may only be installed where it is faithful to the original material.

Gutters and Downspouts

Maintain original downspouts and gutters when possible. If replacement is necessary, use a design similar to the original.

If gutters and downspouts must be added for proper drainage, use a design consistent with the original style of the building, or a design as simple as possible, and mount them to minimize their visual impact.

Chimneys and Vents

Maintain existing old chimneys. If repairs are necessary, match the original materials, colors, shape and masonry as closely as possible.

Use appropriate mortar mixtures, of a strength no more than the original. Portland cement mortars shall not be used. (See guidelines on exterior walls and masonry.)

Proposed new chimneys, and demolition of existing old chimneys must be approved by the Historic Preservation Commission. The Commission shall inspect them for unsightly crickets.

Place vents for wood stoves on the side or rear walls. Their placement must take into consideration neighboring buildings. Because of possible fire hazards, the addition of any type of burning or heating stove or fireplace must be approved by the Historic Preservation Officer in coordination with a city building inspector.

Run modern plumbing and HVAC vents to the roof in concealed locations behind ridges or parapets so as not to be visible from any major facade. Keep all such vents away from valleys and ridges in the roof.

Fire-safety in chimneys is a major concern in the protection of old buildings. Broken mortar within the chimney and the buildup of fire residue are the two chief causes of chimney fires. The safest answer is to recognize that the hazard to the fine old building is not worth the risk, and to close the chimney. Another answer is to rebuild decayed chimneys with a more modern flue liner, and of course, to have the used chimney cleaned and inspected on a regular basis.

Note that the technology for the rebuilding of fireboxes by masons was in decline since the 1950s, in recent years there has been a resurgence in restoring historic fireboxes. The principle of the Count Rumford fireplace, a high, almost square, shallow mouth with a narrow, 4-inch throat damper just behind the mouth at the front of the smoke chamber, has given way to deep low boxes that do not emit heat and offer less light than formerly.

Ridge, Turret and Chimney Decoration

Employ the original scale for metal replacements of finials and ornamental ridges.

Where there is evidence of elements lost from rust, employ photographs to have scaled drawings made of the replacement parts desired, and submit these drawings for approval to the Historic Preservation Commission before fabrication.

Prohibited:

- *Removing or radically changing roofs, roof lines, roofing materials or elements that are important in defining the historic character of the building so that, as a result, the building's character is diminished.*
- *Changing the historic appearance of roofs or features through the use of inappropriate designs, materials, finishes or colors.*

- *Repairing or replacing a roof or its feature using inappropriate materials.*
- *Bubble or domed skylights visible from the street shall not be permitted on historic buildings.*
- *Shake shingles.*
- *Demolition of old, existing chimney stacks.*