

ROOFS - Guidance for Repair, Maintenance and Replacement

Guilford Association Architectural Committee

ROOFING

Slate and tile roofs are a critical design feature of Guilford homes. The homes were designed so that the roofs help establish the character of the individual buildings and the community as a whole, going far beyond being just functional. Slate is the predominant material used on Guilford roofs but there are also several distinctive types of tile in evidence. Slate is a natural product and the appearance cannot be duplicated using substitute materials. It is one of the most aesthetically pleasing and durable of all roofing materials. Slate roofs can, and should be, maintained and repaired to effectively extend their serviceable lives.

It is a requirement of the Guilford Architectural Guidelines that slate and tile roofs be retained on Guilford homes. If replacement is necessary, slate or tile must be used as the material for a new roof. *In no case will asphalt or fiberglass shingles be approved as a roofing material.*

Repairing Slate Roofs

Broken, cracked, and missing slates should be repaired promptly by an experienced roofer in order to prevent water damage to interior finishes, accelerated deterioration of the roof and roof sheathing, and possible structural degradation to framing members. However, if installed properly, slate roofs require relatively little maintenance and will last 60 to 125 years or longer depending on the type of slate that was used, the roof slope and exposure. Some slates have been known to last over 200 years.

The natural weathering of roofing slate shows as a slow process of chipping and scaling along the layers of the stone. Paper thin layers flake off the surface of the slate and the slate eventually becomes soft and spongy as the inner layers begin to come apart, or delaminate. Over time, the chemical and physical changes that occur as the slate weathers cause an increase in absorption and a decrease in both strength and toughness. Slate roof repair is viable for localized problems and damaged roofs with reasonably long

serviceable lives remaining but the repairs need to be performed by roofers that are experienced working with slate. Roofing companies that regularly work on slate roofs include:

The Fick Brothers Roofing Co.
Roland Slate Co.
Marathon Roofing
Peter McCreesh

The Architectural Committee does not endorse any roofing company. These names are being provided as a resource.

All Slate Is Not The Same

Slate is stone mined in quarries in several locations in the U.S., primarily in the northeast. Slate quarried in different areas has different characteristics and color. The most common colors are grey, bluegrey, black, various shades of green, deep purple, brick red, and mottled varieties. All can be seen on different Guilford houses. Color is no indication of durability or life span but slate quarried in different areas has different estimated life.

There is a grading system for the various slate types and the grade of the slate should always be specified by a contractor when a roof is being repaired or replaced. The grading system is very simple: S-1 means the slate will last 75 years, S-2 slate is meant to last 45 to 75 years and S-3 slate is meant to last 45 years or less. However, slates of all three grades generally do last longer than the required minimums.

Replacing a Slate Roof

If a slate roof is beyond repair and must be replaced, replacing with new slate may be a big financial undertaking but it is a worthwhile investment in your home and your neighborhood. Guilford is a National Historic District and roof replacement if done to historic standards may be eligible for tax credits granted from the Maryland Historic Trust. The application for tax credits is available on the web page of the Maryland Historical Trust at the following link: <http://www.marylandhistoricaltrust.net/taxcr-ap.pdf>

Flat roofs on decks and above room extensions that are not seen from the exterior of the house can be of roofing materials such as EPDM (rubber), bitumen roof systems or built up applications.

Roof Flashing

Flashing is critical to the roof's function and like the roof itself is important to the appearance of Guilford homes. It is, however, the weakest point in any roof and failure of the flashing system is usually a major cause of roof deterioration. Flashing is made of thin sheet metal formed to prevent water from entering a building at joints, intersections and changes of pitch. It is typically installed around chimneys, parapet walls, dormer windows, roof valleys, vents, and intersections of porches, additions or bay windows.

Flashing often fails before roof surfaces, particularly with more durable roofing such as slate, resulting in interior leaking. If the flashing deteriorates, it is possible to replace it without replacing the entire roof. When replacing flashing or installing a new roof, it is important to select a flashing material that has an anticipated life span similar or longer than the roofing.

Copper, terne, steel, lead and aluminum are all used for flashing. The longevity of each material is based upon its thickness and whether it is galvanized, treated or coated. Generally, copper or lead coated copper has the longest life span, followed by steel, with aluminum being highly susceptible to punctures, tears and a galvanic reaction to other metals and some roofing materials.

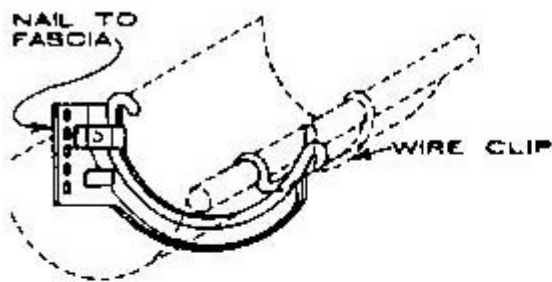
Given the permanence of slate, it is a poor economic decision to use anything but the most durable of metals and skilled workmanship for installing flashings. Copper is one of the best flashing materials and is used in most Guilford homes. Others have terne metal, also an acceptable flashing material, but it needs to be painted and therefore requires more maintenance.

For Guilford homes, ridges and valleys on visible gabled roofs with slate covering are to be maintained or constructed in accordance with the historic common practice. They and other flashing connections between the roof and masonry surfaces are to be copper or terne metal.

GUTTERS AND DOWNSPOUTS

Gutters are typically located near or along the bottom edge of a roof slope to collect rainwater. Built-in gutters are hidden from view from the ground within or behind architectural features such as cornices or parapets. Built-in gutters are formed of flashing materials. Hanging gutters are attached to the building just under the roof slope edge.

In most Guilford homes, the hanging gutters were originally half-round when profiled in cross section. *The Architectural Guidelines require that gutters that are half-round and the same size and profile as the original gutters be maintained.* When installed they must be attached by hangers into the fascia of the house. Ogee style gutters do not meet the architectural guidelines and will not be approved for future replacement. Gutters attached by straps to the roof surface are not acceptable and can damage a slate roof.

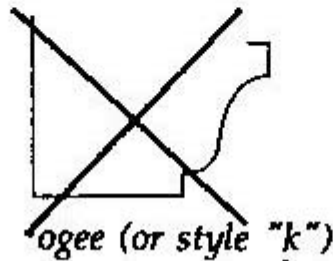


#10 combination hanger

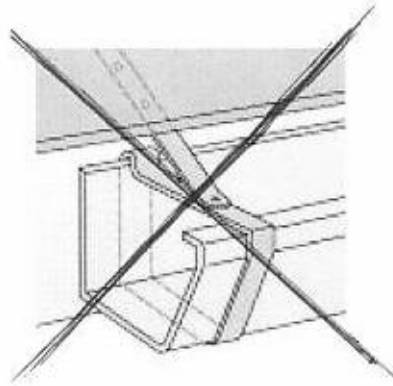
*also, #12 or #30 shanks with
circle hanger (not illustrated)*



semi-circular (half-round)



ogee (or style "k")



Gutter Material

Hanging gutters are made of copper, galvanized metals, aluminum and recently vinyl. Similar to flashings, gutter materials have different longevities. Generally, copper has the longest potential life span, followed by steel, with aluminum being highly susceptible to punctures, tears, dents and galvanic reaction to other metals, and vinyl can become brittle, fracturing in low temperatures.

Most Guilford gutters are copper and the Architectural Guidelines require that they be replaced in the original material. However, in some cases replacement gutters of galvanized metals or heavy gauge aluminum will be approved if painted to match wood trim. Vinyl gutters are not approvable.

Downspouts are generally surface mounted to a building's exterior to conduct a gutter's water down the face of the building to the ground or an underground drainage system. Similar to gutters, downspouts can be fabricated of copper, galvanized metal, aluminum and vinyl with similar characteristics, in a round or rectangular profile.

As with gutters, replacement downspouts of galvanized metal or heavy gauge aluminum may be approved if painted to match wood trim. Vinyl downspouts are not approvable.