



Citizen's Guide to

RE-ROOFING YOUR HOME

Part of the "How To's of Home Improvement" series

PURPOSE

This handout addresses the typical questions and general information associated with a reroofing project on a Single Family Dwelling. Reroofing is a term used to describe the work involved in replacing all or part of the existing roofing system components. Due to the overwhelming variables, not all applications can be included on this handout. Please note that each type of roofing system contains its own set of requirements and restrictions. Therefore this handout is intended to serve as a general guide to re-roofing based on frequently asked questions.

SCOPE

Simply stated, the roof acts as an umbrella for the house. It sheds rainwater, provides shade, acts as a windbreak and is a part of the overall weather barrier. Therefore, it is essential to maintain the roofing components and replace worn or damaged sections when necessary.

GENERAL ROOF INFORMATION

Building Code -

2003 International Residential Code. Chapter 9 Roof Assemblies. Section 907 addresses Reroofing.

Roof Types -

There are 3 main types of roofs with varying slopes (pitches) based upon their ability to drain. All roofs are required to dispense rainwater, some do it more efficiently.

1. High Slope - over 5" vertical rise for each 12" horizontal run.
2. Low Slope - 2" to 5" vertical rise for each 12" horizontal run.
3. Flat - less than 2" to minimum 1/4" vertical rise for each 12 horizontal run. Flat" roofs still maintain the required minimum slope of 1/4" per foot of drainage.

Roof Assemblies -

the roof is actually a system comprised of several components.

1. Structural support - Trusses, Rafters, or Joists that support the roof system.
2. Roof Sheathing - typically 1/2" or larger plywood or OSB (Oriented Strand Board) that is attached to the structural framing by minimum 8d(penny) nails nailed 6" O.C. at the supported edges and 12" O.C. in the field.
3. Flashing - metallic flashing material is installed before the underlayment in the valleys at inter connecting roof sections and where the roof surface meets vertical surfaces.
4. Underlayment - sometimes called roof "felt", is the moisture barrier applied on top of the roof sheathing. A good underlayment is to the roof what a quality pad is to carpet. Thicker is usually better. Keeping moisture from infiltrating not only preserves the structural integrity of the roof system, but also helps to avoid mold infestation or other damage.

5. Roofing or Roof Material - is the finished material installed on top of the underlayment.

Roofing material varies widely. Listed below are the typical types of roofing material installed on homes in the City of Scottsdale:

- A. **Asphalt (older homes) or Fiberglass Shingles.** Used on sloped roofs almost exclusively until the 1990's. In areas prone to wind, this material generally wears quickly & may require replacement much sooner than the 15 or 20 year warranty.
- B. **Clay or Concrete Tile.** This roofing material became the roofing material of choice in the 1990's because of it's variety of shapes and colors, fire resistant properties, and 50 year warranty. However, this material is relatively brittle subject to breaking when walked upon.
- C. **Rolled or Built Up roofing.** This material is usually installed on "Flat" or very low sloping roofs.
- D. **Foam or Poly Urethane Roofing.** There are several brands available and this method is replacing Rolled Roofing in most "Flat" roof systems.
- E. **Other materials.** Used sparsely are Metal Roofing, Wood Shakes, Tar & Gravel, Reflective Lightweight Rocks, and Concrete.

Attic Ventilation - proper ventilation of the attic is essential for several reasons. It aids in mold prevention by keeping the attic dry from moisture due to condensation. In the desert heat, a closed attic can be like an oven or hot air balloon that expands in the heat & contracts as the temperature cools. This expanding and contracting can cause roof and sheathing nails to work outward, weaken the roof system and permit leaks. Proper attic ventilation acts like a relief valve to relieve this internal pressure. There are different ways to achieve proper ventilation. Consult a Licensed Roofing Contractor or the City of Scottsdale Building Department for attic ventilation requirements.

INFORMATION RESOURCES

There are several informational sources pertaining to roofing methods and materials. Listed below are a few:

City of Scottsdale Library

Licensed Roofing Contractor

The Internet - hailed as the "Information Superhighway", has a plethora of information about roofing materials and installations.

Home Improvement Store

Specialty Books

Roofing Material Manufacturer

COMMON QUESTIONS

Most, if not all, of the frequently asked questions can be answered by consulting a Licensed Roofing Contractor. Be aware that a Licensed Contractor may ask for a fee for their consulting services. A Licensed Roofing Contractor can be located in the Phone Book or by calling the Arizona Registrar of Contractors at 602-542-1525.

Q: When should I Reroof?

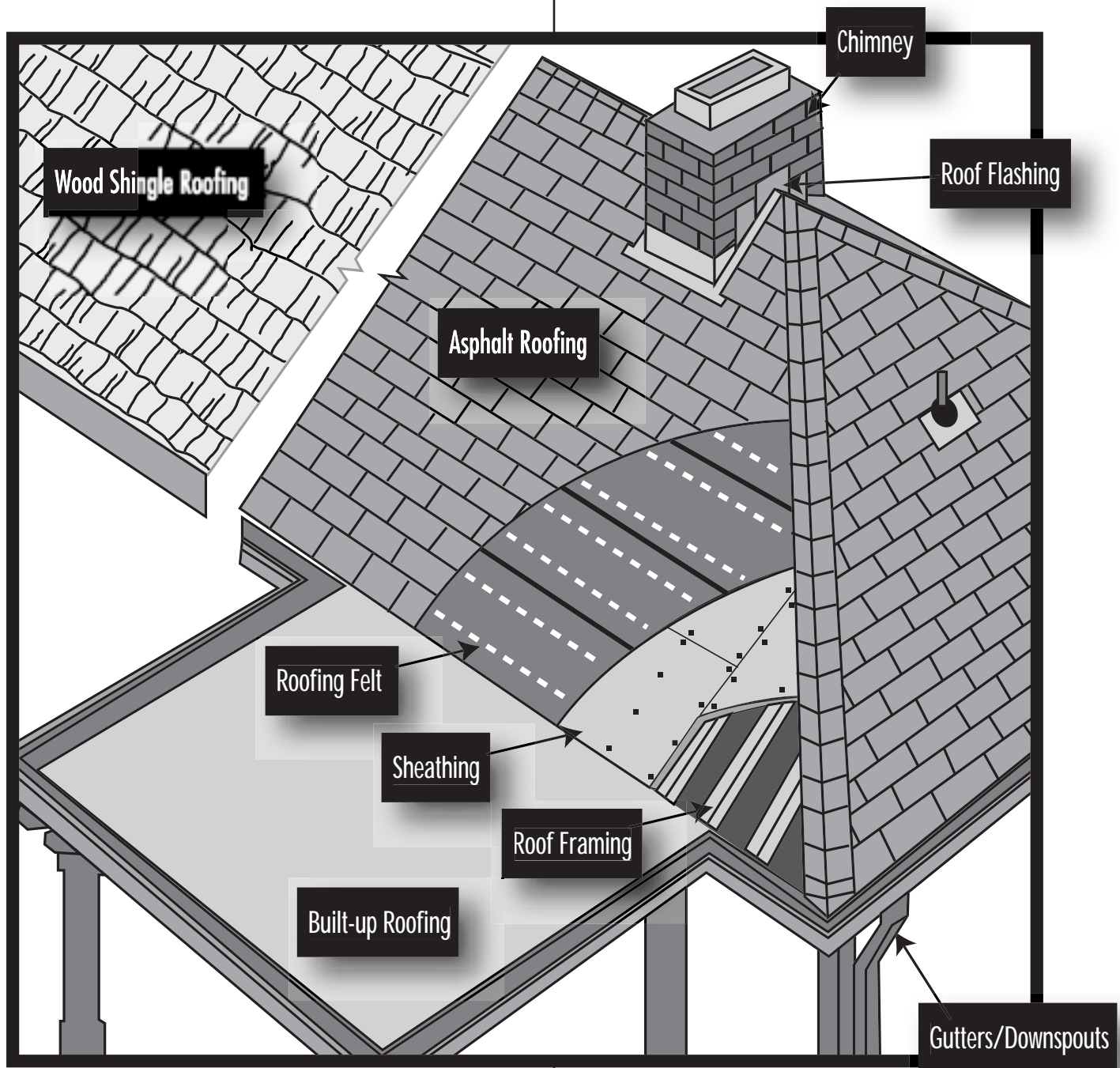
A: Generally, when the roof warranty is near expiration or the roofing material is damaged or shows signs of excessive wear. The exterior elements take their toll on all roofing, but wind is the most damaging in the southwestern desert. When water has the opportunity to seep in, it too can cause major damage to the roof system.

Q: Is it necessary to hire a roofing contractor or can the homeowner replace a roof?

A: A homeowner may perform the work. However, there are many caveats that discourage a novice from doing so. The first and most important is safety. Working on a roof can be dangerous and lethal even for the experienced, but especially for the inexperienced. Also, a Licensed Roofing Contractor is required by State Law to warranty their installations.

Q: Can I use the roof tile I just bought in Mexico?

A: Mexican tile is often desired for a Mediterranean appeal. The Building Code requires all materials in the Roof Assembly to be tested and approved by a nationally recognized testing agency within the United States. If a Rolled Roofing System is first installed, the Mexican tile may be installed over the Rolled Roofing System, however, a Roofing Contractor may not warranty this type of installation.



Q: Can a new roof covering be installed over an existing roof?

A: The building official may permit the re-covering of existing roofing based on the condition of the roof and the type of roof to be applied. Following are general rules for each specific roof type:

BUILT UP ROOFS

Built up roof covering shall be completely removed before applying the new roof covering. Exception: The Building Official may allow existing roof coverings to remain when inspection reveals all of the following conditions:

1. That the roof structure is sufficient to sustain the weight of the additional dead load of the roof covering.
2. Fire retardant requirements are maintained.
3. The existing roof covering is securely attached to the deck.
4. The roof is structurally sound.
5. The existing insulation (if installed) is not water soaked
6. Roof drains and drainage are sufficient to prevent extensive accumulation of water.

ASPHALT SHINGLES

Maximum one overlay of asphalt shingles may be applied over one existing asphalt shingle roof.

WOOD SHAKES

New roof covering shall not be applied over an existing shake roof unless the new roof covering has a special fire retardant listing approved by a nationally recognized testing agency. One overlay of shakes can be applied over an existing asphalt shingle roof with a slope of 4 and 12 or greater.

WOOD SHINGLES

One overlay of fire retardant wood shingles may be applied over existing one layer of existing asphalt shingles.

TILE ROOFS

Tile roofing may be applied over existing roof coverings when approved by city building plan review and substantiated by structural data indicating that the existing roof framing system is adequate to support the additional weight of the tile covering and the roof slope is 4 and 12 or greater.

Q: Do I need a Building Permit?

A: A building permit is required if any part of the roof sheathing or structural framing is either repaired and/or replaced. Reroof permits may be obtained by the home owner or a licensed contractor. The owner of the property is ultimately responsible for insuring that a reroof permit is issued. A Permit may be obtained at the One Stop Shop located on the first floor at 7447 E. Indian School Road.

INSPECTION REQUIREMENTS

The Inspection Card lists in detail the required inspections. The following inspections are for information and may vary depending upon the installation.

1. Roof Sheathing
2. Flashing and Felt (Underlayment)
3. Final Inspection

PHONE NUMBERS

One Stop Shop (Building Permit)
408-312-2500

Inspection Services
480-312-5750

Automated Inspection Request Line
480-312-5796

Arizona Registrar of Contractors
602-542-1525

WEB SITES

City of Scottsdale
<http://www.ScottsdaleAZ.gov>

Arizona Registrar of Contractors
<http://www.rc.state.az.us/>