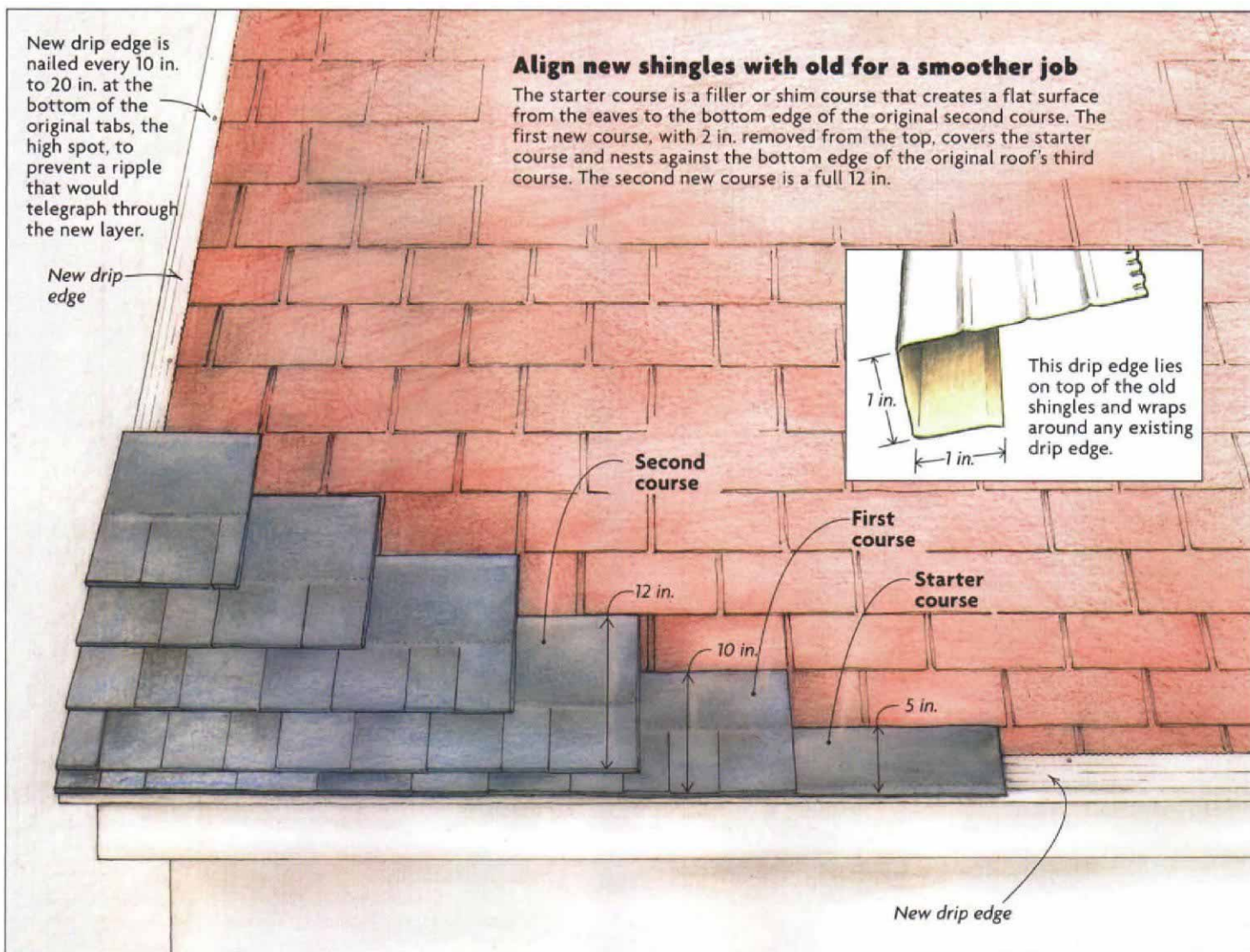


Reroofing With Asphalt Shingles

Laying new shingles over old might avoid the cost of a tearoff, but you still have to replace the vents and flashings

BY STEPHEN HAZLETT



Nothing lasts forever. Anyone owning a house long enough or buying an older house from someone else eventually has to consider a new roof. One of the first decisions to be made will be whether to tear off the existing roofing materials or to do a layover, laying new shingles directly over old (top photo, facing page). A layover may not be appropriate in every reroof situation. But an experienced, attentive roofer can often save the homeowner thousands of dol-

lars while installing a layover that will last as long as, or longer than, the original roof.

Not every roof should take a layover

For the homeowner, the first drawback to tearing off an old roof is that the risk associated with safely getting the old shingles off the house and hauled away could double the cost of the project. Then there is the risk of rain falling on an exposed roof, something that novices often don't consider seriously.

If tearing off the old roof is such a nightmare, why bother? For one thing, your local building code might require it. Roofing materials weigh thousands of pounds. If you're covering 15 squares (one square is 100 sq. ft.), 25-year shingles weigh about 3500 lb., and 40-year shingles weigh about 5000 lb. Double or triple that number if there are already two or three layers.

The rafters or trusses and decking will usually support two layers of asphalt shingles,

although three or four are common. Most local building codes allow only two layers: the old existing layer and one new layer. Codes vary, so ask a local official for minimum standards. If I see more than one existing layer, I recommend a tearoff, even if the municipality involved allows more than two layers, because you can't get three layers to look smooth enough. Also, flashings might be difficult or even impossible to replace; and the old flashings may not last 25 more years even though the new layer of shingles does.

If there's only one layer, I check the existing asphalt shingles for flatness. A lot of curling indicates that even a single layer of shingles will have to be torn off. The uneven surface caused by a curled shingle will telegraph through the new shingles and will not provide good support for the new roofing material. Some cracking of the old shingles is acceptable as long as they are not badly curled.

Tearing off the old roofing also allows me to inspect all roof decking and to replace any questionable wood. I can also install or replace a bituminous membrane to guard against ice dams near the eaves. Because these membranes don't adhere securely to old shingles, they generally don't perform well over old roofing. Also, virtually all the old roof flashings can be replaced during a tearoff, which might not be possible in a layover. So if a layover is possible, I carefully evaluate the existing roof vents and flashings.

If the existing roof has one flat layer of roofing and if I am confident that the house can support the weight of a second, I check the home's history of roof leaks and usually evaluate the condition of the decking from the attic. I also walk the entire roof deck, looking for any bouncy areas. Sometimes my crew and I will remove a few shingles in a suspect area to verify the condition of the decking. An extra hour of detective work at this stage of the estimating process can potentially save the homeowner several thousand dollars on an unnecessary tearoff. Finally, faced with a decision of when to reroof, it's always better to do it one year too early than one year too late.

Dimensional shingles are a good choice for layovers

One of the last decisions before the roofing project begins is which shingles to use. If a lot of money is being saved by not tearing off the existing roof, it might be wise to invest some of the savings in an upgraded shingle. My labor costs remain the same. When \$200 or \$300 in materials will make the difference between a 25-year and a 40-year roof, that upgrade gives more value per dollar. Unfor-



A layover can save time and money. If the framing will support another layer, nest the top edge of new shingles up against the bottom edge of the old to achieve a flat roof.



Repair torn shingles around old vents. When a swarm of angry wasps started coming out of this vent, the author didn't have time to remove the old vent gently. He repaired the torn first layer by cutting scraps to act as shims, preventing an uneven second layer.

tunately, homeowners who know that they will not be living in the same house for 25 years, let alone 40, rarely see it that way.

I have more success selling customers on dimensional, or laminated, shingles such as Elk Prestique (www.elkcorp.com; 800-650-0355). For aesthetic reasons, dimensional shingles work well in a layover because their texture and lamination help to prevent first-layer blemishes from telegraphing through to the new layer. On a laminated shingle, the nail must go through both sections of the

lamination. That's about a 1-in. area through the center. Feel under the shingle as you nail to be sure. Use 1½-in. nails on a layover.

A final word about choosing shingles: The wise homeowner will study warranties. On paper, most warranties are virtually identical, but in practice, they are administered differently. This practice might vary dramatically by region; a respected brand in one locale may be available but poorly serviced elsewhere. A contractor or supplier who regularly handles many different brands may offer

valuable advice on which brand has excellent warranty service in your area.

When getting materials to the job site, simple planning can save a lot of effort at a nominal cost. If the site permits it, my roofing supplier is able to deliver shingles to the rooftop. Otherwise, someone will be carrying thousands of pounds, one bundle at a time, up a ladder on his shoulder.

The shingles should be positioned as flat as possible, with the stacks spread along the ridgeline to distribute the weight. Shingles become brittle at lower temperatures and can

be damaged if a bundle is bent over the ridgeline. On a steeply pitched roof or in cold weather, I have the shingles delivered to the ground, where they can be stored perfectly flat. If shingles must be delivered to the ground, I get them as close to the house as possible without blocking the customer's driveway or garage and without interfering with ladders or staging.

Prepare the site

With the materials on site, I can begin work on the roof. First, I sweep off leaves, twigs or

other debris. Ridge vents and hip and ridge caps are removed at this time. If just a few shingles have curled corners, the corners can be clipped off. Occasionally, an entire shingle tab will be removed and a scrap tab nailed in its place to act as a shim. On roofs with plywood or oriented-strand-board decking, I frequently find at least one 4-ft. vertical ripple in the roofing. Invariably, removing a few shingles in that area reveals one edge of a panel that was not nailed down during the house's construction. I nail down the offending piece, replace the missing tabs and move on.



ONE-SIZE-FITS-ALL WASTE-STACK FLASHING

The author peels away part of the rubber boot to fit the diameter of the vent stack and slides the new flashing over the stack. As new courses overlap the flashing, the author uses a hooked utility knife to cut the shingles so that they lie flat around the boot.



Once the roof surface has been cleared and repaired, I install new drip edge. Where conventional drip edge was originally installed, I like to use a drip-edge style we call 10/10 (drawing p. 84). This drip edge has a J-channel profile with a 1-in. by 1-in. bend that wraps around the edge of the existing shingles and drip edge.

If the original roofing lacked drip edge, I cut back any existing shingle overhang so that conventional drip edge can be installed tight against the fascia and rake boards. I nail the drip edge at the high spot at the bottom of a shingle tab, every 10 in. to 20 in. up the rake. The high spot is the bottom of each shingle tab. The low spot is the top of the tab. The difference between the high and low spots is exactly the thickness of each shingle. Nailing at a low spot in the middle or upper part of a tab would cause a ripple in the drip edge that might telegraph through the new layer of shingles.

Cut the starter and first courses to nest new shingles against old

Installing the new layer of shingles begins with the starter course. Remember, the starter course is a filler or shim course; it will be covered and does not count as the first course. Assuming that the existing roof has standard 5-in. exposures, the starter course should also be about 5 in., forming a shim between the eaves and the tab of the second course (drawing p. 84). I cut off the top 5 in. or so of a new shingle, saving the lower 7 in. of this shingle to use later as the highest course on the slope.

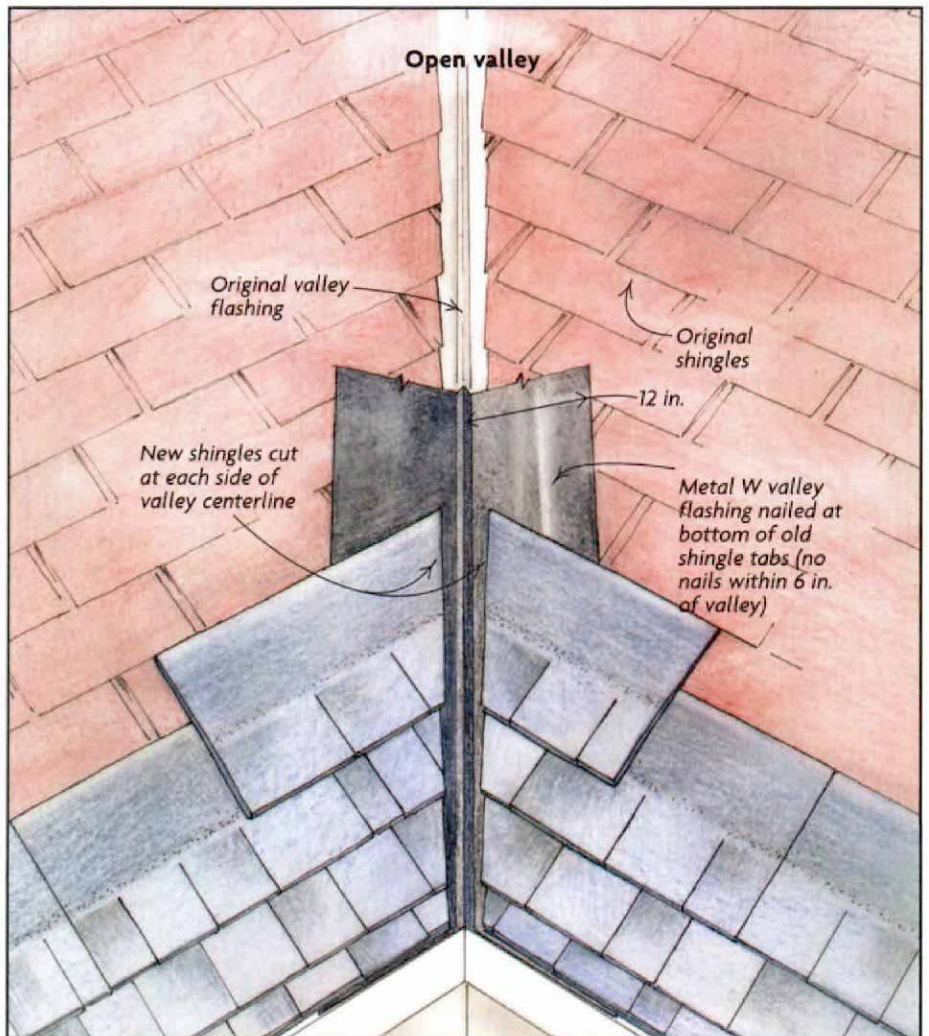
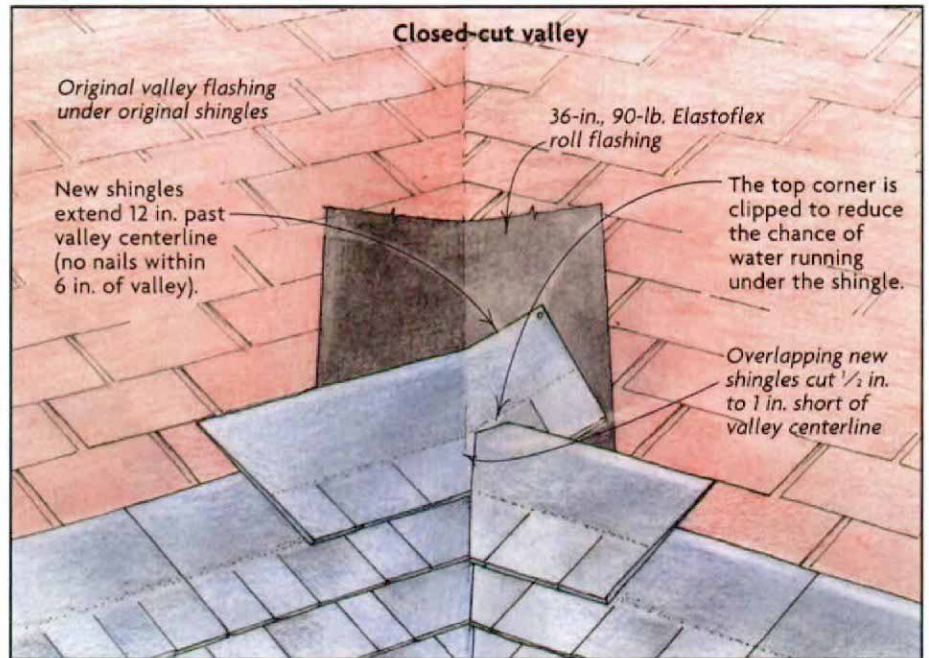
The 5-in. strip is laid over the tab of the original roof's first course. Together, that 5-in. strip and the tab of the original roof's second course provide a flat, 10-in. high area in which to lay the new first course of shingles. Because most shingles are 12 in. high, I cut off the top 2 in. of the new shingles to be used in the first course. (Many dimensional shingles are about 13 in. high, so I cut off the top 3 in. of those shingles to fit them into the 10-in. high area.)

The second and all following courses are full-height shingles and are butted tight to the bottom edge of the old roof's next course (top photo, p. 85). This nesting method provides a positive-stop gauge to the work, greatly increases the roofer's speed and eliminates the snapping of horizontal chalklines.

Failure to use the 5-in. starter course, failure to cut 2 in. off the top of the first course or failure to use the nesting method will cause the new roofing layer to have a wavy appearance, with the waves running horizontally across the roof. According to the

Install new valley flashings

Valleys are vulnerable to damage and should have new flashings installed on top of the old valley before the layover.





New counterflashing. When reflashing a chimney, the author grinds out the mortar for new counterflashing one course above the old. And yes, he should have used a mask or respirator for this work to protect his lungs.

Asphalt Roofing Manufacturers Association (301-348-2002; www.asphaltroofing.org), the nesting method "minimizes any unevenness that might result from the shingles' bridging over the butts of the old shingles. It also ensures that the new horizontal fastening pattern is 2 in. below the old one," which will help to prevent splitting the deck boards.

Replace the vents as you go

Most roof flashings and vents will be replaced during a layover. I replace vents and flashings as I get to them.

Slant-back or pod vents are easily replaceable. I remove the nails securing the bottom edge of the vent. Next, I carefully reach inside the vent for a firm grip and quickly hinge it upward. If the vent was properly installed without a lot of tar or caulk gooped

over it, this method usually pulls the vent and its nails out from under the shingles quickly and neatly. The hinging action is critical to this trick. I use only metal vents because plastic vents grow brittle over time. Any first-layer shingles torn during this removal are either nailed back down or replaced with scraps of new shingles (bottom photo, p. 85).

The replacement vent is installed just as in new construction. Any ridge vents will also eventually be replaced with a style that allows me to nail ridge caps over them, such as Cor-A-Vent (www.cor-a-vent.com; 800-837-8368).

Warning: Roofvents seem to be great nesting places for wasps. Removing a wasp-filled roofvent 30 ft. in the air on a 12-in-12 roof can really add excitement to your day. Unless

you think on your feet a lot faster than I do, have a safe spot picked out ahead of time to toss the wasp-filled vent.

Replace the flashings

The waste-stack flashing can often be quickly removed using tin snips, a pry bar and sometimes a roofing hatchet. If a metal waste-stack flashing doesn't look like it will come off easily, I simply cut a few slits in it with my roofing hatchet where the flashing meets the waste stack and flatten it enough that the new flashing will fit over it easily without leaving a visible ripple. This measure is not so much to increase speed as to avoid tearing out old shingles that will then have to be replaced. I usually replace the waste-stack flashing with a metal and rubber unit that gives a tight fit. New waste-stack flashing units come with adjustable rubber gaskets that can be cut to fit different waste-vent stacks (photos p. 86). Also, on some older houses with cast-iron stacks, the flared end of the stack may be above the roofline, and an all-rubber waste-stack flashing can stretch over the flare.

Valley flashing is crucial. Luckily, it's also one of the easiest flashings to deal with during a layover because the old valley is simply left in place and the new one installed over it. I prefer to use a metal W valley flashing, and again, as with drip edge, I take care to nail on the high spots.

Some customers prefer the look of a closed-cut valley, in which shingles on one side are cut short of the valley centerline and shingles from the other side cross the valley to underlap those that have been cut (drawing p. 87). Don't be tempted to skimp on flashing here. I have torn off many roofs where the second layer of roofing did not incorporate a new flashing in a closed-cut valley.

Flashing in a closed-cut valley is hidden, so color is not critical. Roll roofing rated at 90 lb. is frequently used for valley flashing; but lately I have been using a modified bitumen product such as Elastoflex by Polyglass (800-222-9782; www.polyglass.com). It looks a bit like 90-lb. roll roofing on steroids: thicker and much more durable. That extra durability pays off later when the customer climbs on the roof to retrieve a child's Frisbee and steps right in the center of the valley.

For some reason, roofers often neglect chimney flashing during layovers. Roofers typically will shingle up to the existing chimney flashing, run a bead of caulk around it and move on. I like to remove all old counterflashing and caulk. I leave old step flashing in place, but I make sure it is flat on the roof and against the chimney. I install a new

apron, step flashing and back-pan flashing. (In this region, we use back pans rather than crickets on the highest face of most chimneys.) Then, after grinding a new kerf (photo facing page), I install counterflashing just as on any other chimney-flashing project.

When installing new counterflashing, it would be ideal to reuse the old kerf instead of grinding a new one. But usually, the old kerfs are clogged with caulk and concrete nails. Also, a new kerf allows you to raise the new counterflashing higher than the old, thus covering up ancient tar and caulk stains.

Painted aluminum coil is the material most often used for flashing in my area. It comes in 15 to 20 different colors, but brown metal against brown bricks works well on virtually every roof. I do sometimes use black metal on a black-shingled roof.

The most difficult flashing area to replace during a layover is wall flashing (drawing bottom right). Vinyl siding generally accommodates flashing replacement easily because of its flexibility. Aluminum siding is a bit trickier, but still manageable. Wood clapboards in good condition will frequently accommodate slipping in additional flashing, but a few lower nails might need to be removed. In all cases, it's a real help during a layover if the siding installers have left the siding raised a finger's width above the roof. This detail was more common when wood clapboards were the norm because carpenters did not want the siding in constant contact with wet roofing.

Wood shingles, old asbestos and fiber siding can be brittle and difficult to work new step flashing under, however. I have found old wood-shingle siding by far the most difficult to work with. This material is so delicate that even during tearoffs, roofers often leave the existing sidewall flashing in place rather than risk damage to the siding by trying to remove it. Each case is different, and hard-and-fast rules just don't apply. This area is one area where the roofer's judgment and experience can provide better results than a strict, by-the-book, replace-it-all approach.

One of the great things about a roof layover is that the finish and cleanup work is minimal compared with a roof-tearoff project. Because we don't need a Dumpster on the job and because there are no big trash piles, it is a simple matter of putting wrappers and scraps in trash bags, right on the roof, as we work. Usually, all the job debris fits in one or two standard trash cans, which I empty during our next tearoff project. □

Stephen Hazlett owns Hazlett Roofing & Renovation Ltd. in Akron, Ohio. Photos by David Ericson.



Front-wall flashing. To flash where a lower roof meets the front wall of an upper story, the author first lays the new shingles up to the wall, covering the old flashing. For the last course, he uses the 7-in. shingle left over from cutting the starter course (photo to above). New flashing goes up under the siding and is nailed down.

