

Letters

Prefers Hot Roof to Cold

The article “Retrofitting an Insulated Cold Roof” (11/08) does a good job of identifying the problems of condensation, heat loss, thermal breaks, and ice dams associated with this type of structure. I’ve used the same technique successfully for a couple of decades. However, times change, and I have discontinued this practice because it’s too slow, too expensive, and — most important — not the most effective method.

Today, I use a so-called “hot-roof” approach, applying high-density spray urethane foam from the inside. In addition to having a high R-value, this closed-cell foam is a moisture barrier. It’s also quite strong and adds rigidity to the roof structure. We haven’t had any problems with this approach. If the client insists on a “cold” roof, I install spacers over each rafter, followed by an additional layer of sheathing, then the roofing the client chooses. The standing-seam metal in the article is a great roof, but it’s generally a hard sell when the cost comes to light.

Dan Harp
Aurora, Minn.

Cold-Roof Details Critical

The details shown in “Retrofitting an Insulated Cold Roof” are wrong from an energy standpoint. Air leakage is typically the No. 1 cause of ice damming, followed by lack of insulation. If an attic is air-sealed, then insulated correctly, attic ventilation is not necessary. In fact, adding attic ventilation will increase air leakage into the attic and can make ice damming worse, not to mention increase the home’s energy bills. The ice problem can be treated less expensively and more effectively by addressing air leakage and lack of insulation from inside the attic.

The method the author describes can work, but the joints between the foam panels need to be air-sealed and the sheets need to be sealed to the roof. This should be done with caulk, foam, or an appropriate tape (not duct tape) so that cold air cannot move around, under, or between the sheets of foam. If the foam board is not sealed in this manner, air will definitely be moving through it. (Take it from someone who has done blower

door tests and infrared scans on 1,000 homes in Vermont and has seen it many times.)

Also, the original soffit vents must be sealed off and the soffits filled with dense-packed cellulose or a two-part foam. If this is not done, cold air will come in under the new foam insulation, negating its benefit.

The cold-roof method as shown may stop ice damming, but it’s because of the standing-seam roofing: Snow easily slides off and doesn’t stick around long enough to make ice. But until that foam is air-sealed correctly and made part of a seamless thermal envelope, the method isn’t lowering the customer’s energy consumption.

Geoff Wilcox
Berlin, Vt.

Back to Basics

Overall, I really enjoy every issue, but I wish there were more emphasis on time-honored techniques and materials rather than so much coverage of the latest and greatest applications. I feel our industry is losing touch with the tradition of quality craftsmanship that comes from a good grounding in fundamentals. As an example, there are many builders who think they can stop any chance of future water damage on a new house by plastering everything with a peel-and-stick membrane rather than focusing on proper layering of all the parts of a good weather-resistant barrier.

Stephen DeMetrick
Wakefield, R.I.

Concrete Epoxy Anchor

In “Adding to an Existing Slab Foundation” (12/08), the author mentions that he drills 1/2-inch-diameter holes for #4 rebar pins installed with SET 22 High-Strength Epoxy-Tie adhesive. The minimum drill-bit diameter that we recommend for the proper installation of #4 rebar pins is 5/8 inch. While we certainly appreciate that the author cites the use of our product for this application, we also want to make sure the text is technically correct.

Bret Turley, P.E.
Simpson Strong-Tie