

Fine Homebuilding

Questions & Answers

The editors invite questions on building, renovation and restoration. We also publish reader comment on answers. Send questions and comments to Q&A, Fine Homebuilding, P. O. Box 5506, Newtown, CT 06470-5506, or e-mail us at fhbqa@taunton.com.

Venting a bathroom through SIPs

The roof in my timber-frame home is covered with 10-in. thick structural insulated panels (SIPs) with tongue-and-groove pine laminated to the bottom to create the cathedral-ceiling surface. The bathrooms under this ceiling are not vented. Can I install a bathroom-fan vent with a SIPs roof?

—Dave McDonald, Millersburg, IA

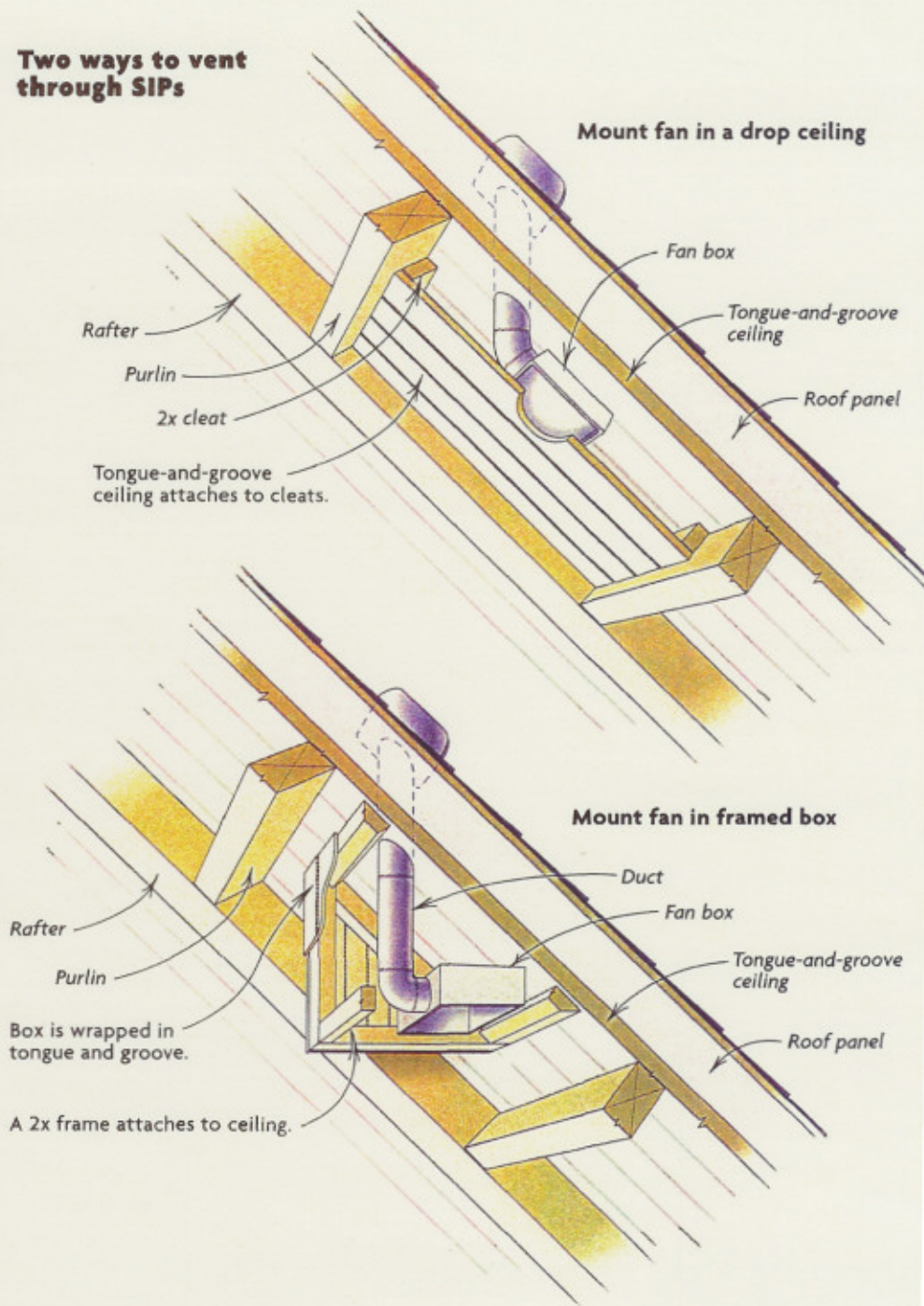
Tony Zaya of Lancaster Timber Frames in Lititz, PA, replies: The first step is to get the duct through the roof panel and out to a properly flashed roof vent. To do this, cut a hole through the panel the same diameter as the duct, and caulk around the duct to seal it in place. If the hole ends up significantly larger than the duct, say $\frac{3}{8}$ in. or more, fill the extra space with loose fiberglass insulation or nonexpanding foam.

The next step is to mount the fan box. I would not recommend fitting the unit into the roof panel because that approach would create a huge cold spot in the roof, and depending on the thickness of the roof panel, the box might not fit. There are a couple of other solutions you can try (drawing right).

The first approach is to install a drop ceiling in the area directly below where the duct exits. Most timber-frame roofs have major rafters spaced several feet apart and connected with beams called purlins. Together, these timbers form a sort of grid on the ceiling. To drop the ceiling in the grid square below the duct, simply attach 2x cleats to the purlins that are slightly wider than the fan box is deep. Then run the same species tongue-and-groove material between the purlins attached to the cleats. The box can then be cut into the drop-ceiling surface and hooked up.

The second approach is to place the fan unit in a box attached directly to the underside of the roof panel. I'd build the box out of a simple 2x frame, and then cover the box with the same tongue-and-groove material as the ceiling. If running wire to the fan box in either of these cases is a problem, I suggest fabricating a wood wire mold or cover out of the same species as the ceiling.

Two ways to vent through SIPs



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