

# Simple, Elegant

Although clean and unadorned, this revival of a Shaker trim package is more complex than it appears

BY JUSTIN FINK

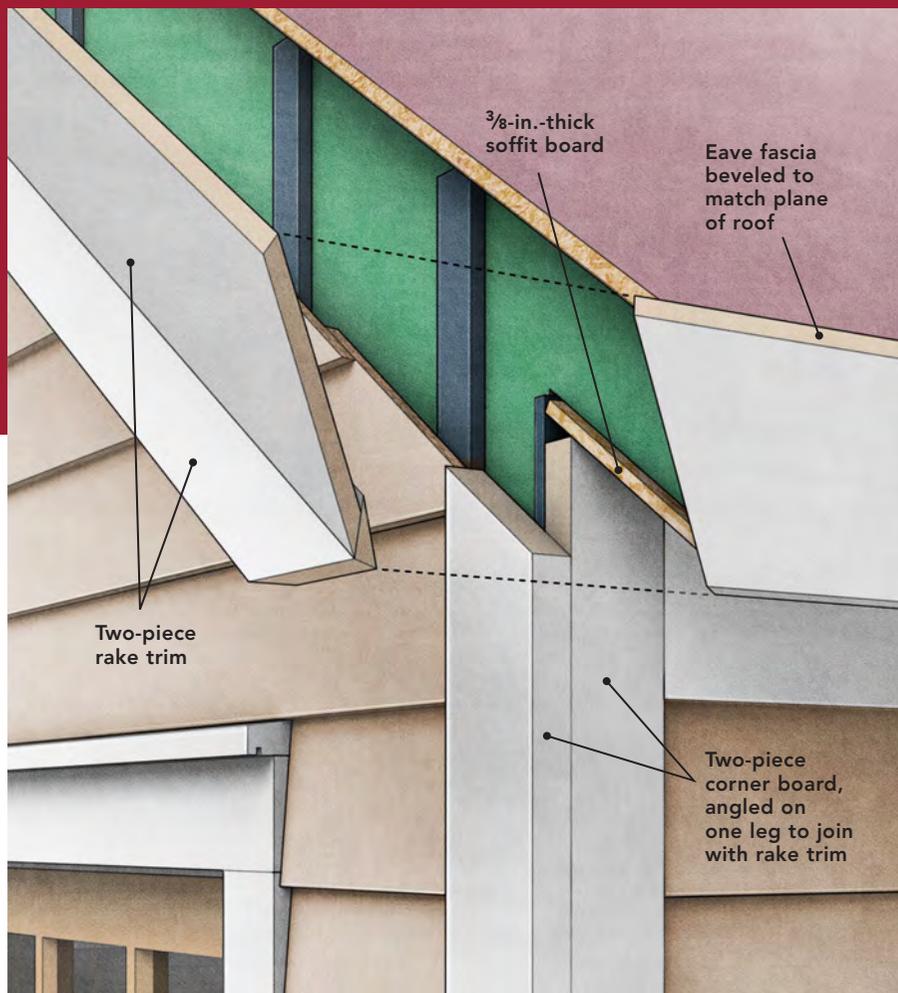
I'm a big fan of the beauty and simplicity of Shaker-style furniture and buildings, so when a client approached me wanting to build a small backyard workshop inspired by one of the outbuildings at Hancock Shaker Village in Massachusetts, I not only happily agreed, but already knew the exact building he was in love with from my own past visit to that museum.

The structure, originally built in 1922 as a screened summer house, later became a ticket booth for the museum, and then was at some point converted into a garden-tool shed, with aesthetic changes along the way (inset photo, p. 55). Although we don't know who designed and completed the latest "remodel" that brought the structure to its current version, it is itself possibly a tribute to the earlier Shaker-style forms.

## The first priority was deciding on materials

We agreed up front that we wouldn't be building a replica of the original building—in terms of actual measurements, materials, or assemblies—but rather an homage, updated and modernized with regard to materials, durability, assembly techniques, and size.

Unconditioned and exposed to the New England elements for nearly a hundred years, the all-wood shed showed signs of deterioration. Part of my plan was to make sure this didn't happen to the new version



## AN ELEGANT ASSEMBLY

Although simple in appearance, each corner of the building's wall and roof trim is made up of six parts, which all come together in about 1 sq. ft. of space.

we were building, and that mostly comes down to a matter of managing moisture. So, other than the pine window sash protected by primer and paint, our version has no solid wood anywhere on the outside. We chose Boral TruExterior trim, a fly-ash-based product that is impervious to water, is extremely stable, and works a lot like wood. For siding, we used LP SmartSide clapboards, chosen for their crisp lines and inherent durability. All of these finishes were installed over a ventilated rainscreen assem-

bly, created with Cor-a-Vent Sturdi-Strips applied over Zip System sheathing.

## The trim was a humbling challenge

One of the quirks of the Shaker style is that it's not actually a set style. There were Shaker communities in various parts of the country, and they all built things in a slightly different way. The same was true of this outbuilding, in which the assembly details varied from one side of the building to the other, and all were clearly cut using hand tools. My first

# Roof Trim



## THE INSPIRATION

Working from the original structure, we measured trim details, studied their construction (which varied from one side to another), and then recreated the assembly for our own outbuilding.



# WORK OUT THE DETAILS WITH MOCKUPS

3D-modeling software like SketchUp is invaluable for working out how different pieces of trim will come together and the angles where they meet. But just because you can draw it doesn't mean you can build it, which became painfully obvious when I took each iteration of the design to the tablesaw and miter saw and discovered the limitations of the miter and bevel settings, maximum depth of cut, pitfalls of getting the sequence wrong, and overall acrobatics of cutting each piece. But after you land on a process that works, you can mark all of the saw settings and stock orientations right on the mockup, and then use it as a road map when you're on-site.

## EAVE FASCIA

After beveling the top edge of the fascia trim so it matches the angle of the roof (in this case, about 34°), cut the angled ends on a miter saw, with the piece set on the flat and the saw set to a 20° miter and a 45° bevel.



## FASCIA

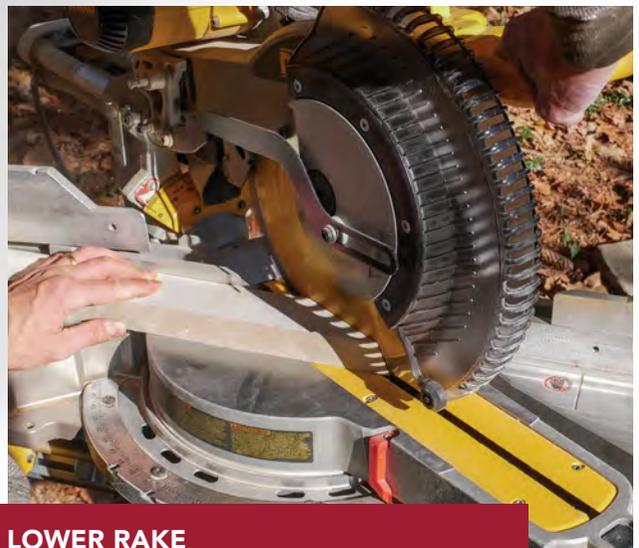
Inside of the right-hand gable

## UPPER RAKE

## LOWER RAKE

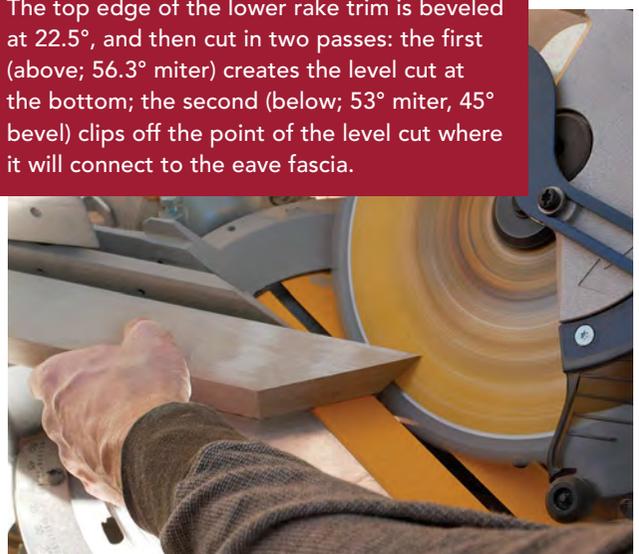
## Mock up and mark

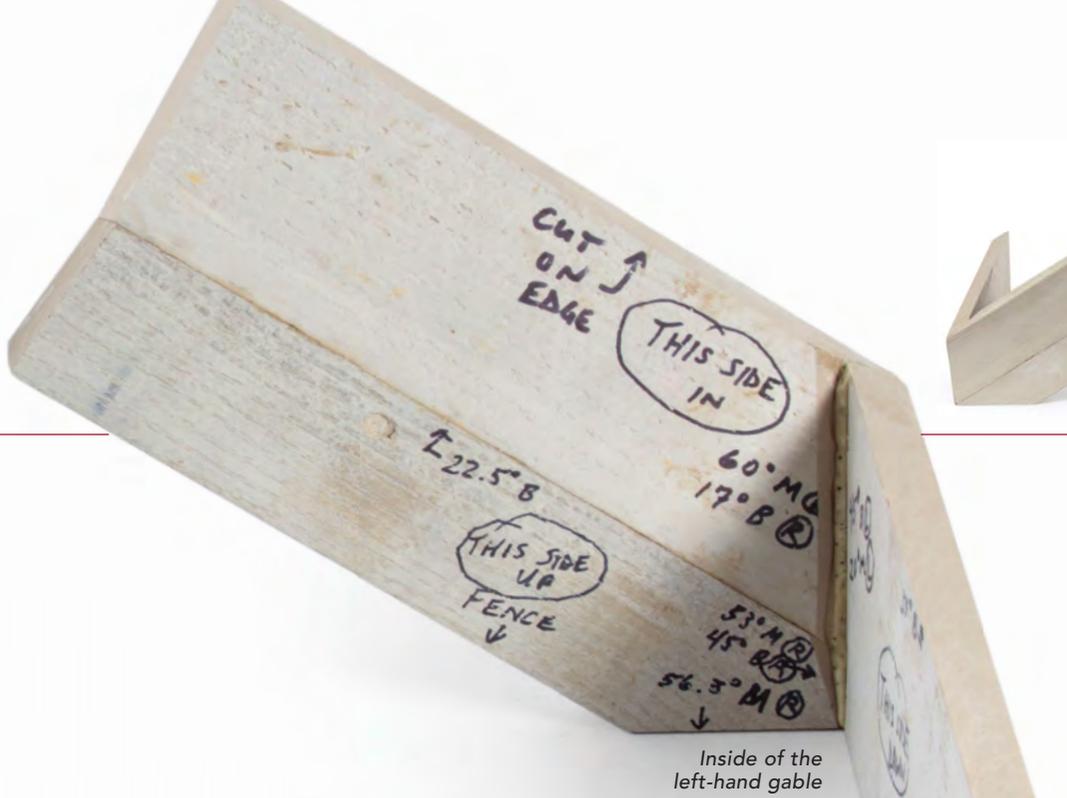
Keeping track of the cuts by labeling the bevels, miters, and orientations on the inside of the mockups makes cutting in the field relatively easy.



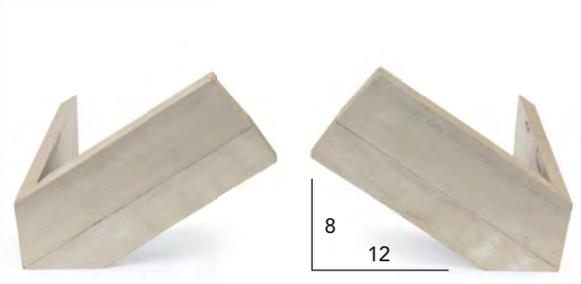
## LOWER RAKE

The top edge of the lower rake trim is beveled at 22.5°, and then cut in two passes: the first (above; 56.3° miter) creates the level cut at the bottom; the second (below; 53° miter, 45° bevel) clips off the point of the level cut where it will connect to the eave fascia.





Inside of the left-hand gable



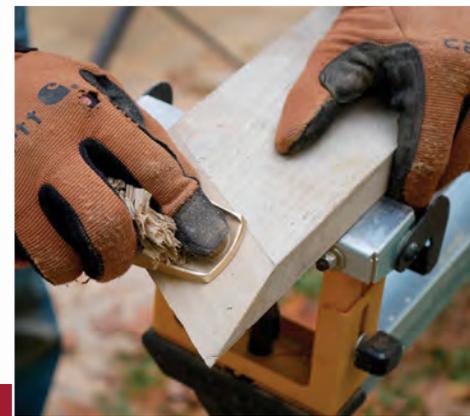
### Angles for an 8-pitch

These bevel and miter angles are specifically for an 8-in-12-pitch roof, but can be adjusted for a roof with a different slope.



### UPPER RAKE

Joining the eave fascia and upper rake trim requires a steep miter; in this case, about 62°. My saw maxes out at a 60° miter, so after making the cut (with the stock on edge and the saw set to a 60° miter and a 17° bevel) I used a block plane to finish the job. For saws with even less miter capacity, it may be easier to shim between the trim and the fence to achieve the desired angle. The top edge of this piece also needs to be beveled to plane out with the roof sheathing.



To see a video of this Shaker-style roof trim coming together, visit [FineHomebuilding.com/magazine](https://www.finehomebuilding.com/magazine).

challenge was to figure out how to recreate the assemblies using power tools, which I felt would be the most accessible path toward sharing the details of this build.

The skirtboard and corner boards are relatively standard fare, but the roof trim is anything but. Despite looking very simple, the intersection of the eave and rake trim

proved to be mind-bending (photos above). I'm known to be bullheaded in my desire to figure out building details, but after hours of modeling the roof trim several different ways in SketchUp, then attempting to make mockups with the necessary cuts in my shop, ending in failure day after day, I was close to admitting defeat.

After about a week of this cycle of designing and mocking up, I managed to land on a sequence and assembly that works—and aside from a few swipes of a block plane on one piece, it all can be done using only a tablesaw and miter saw.

To keep all the bevels, miters, and orientations straight, I made mockups for both sides

# TAKE IT ONE PIECE AT A TIME

When it came time to graduate from mockups to the actual building, I was expecting another round of humbling trial and error. But what I found was that installing the real pieces was easier than the shop mockups, because with the sequence and cuts already established, I only had to focus my attention on one piece of trim at a time, just like any other job. To make this work, you need to have measured drawings worked out ahead of time.



**1. SOFFITS COME FIRST**

Start the roof trim by attaching the soffit boards, which should be flush with the front edge of the rafter tails (or front edge of the subfascia, if present).



**2. PREASSEMBLE AND PLUMB**

Preassemble corner boards, plumb in both directions, and fasten. One half of the corner board should be straight at the top so it butts into the soffit board, and the other half angled to match the slope of the roof and set down the height of the planned rake trim.



**3. ALIGN THE FASCIA**

These angled fascia boards extend beyond the gable so they can later receive the rake trim. Alignment is key; the heel of the miter should meet the butt end of the soffit board. When working solo, attach a temporary support to the side of the building to hold up the far end of the board while you focus on the miter.

**4. START AT THE BOTTOM**

The narrow lower rake trim rests on the angled corner board and extends all the way to the roof peak. If working alone, drive hand nails into the sheathing farther up the gable to support the trim while you focus on getting tight joints at the bottom.

**5. MEET IN THE MIDDLE**

At the peak of the gable, align the pieces and mark a plumb line where they overlap. Cut just outside the line on each piece, and then sneak up on a tight fit using a sharp block plane. When satisfied with the joint, add glue and pin it together using opposing finish nails.



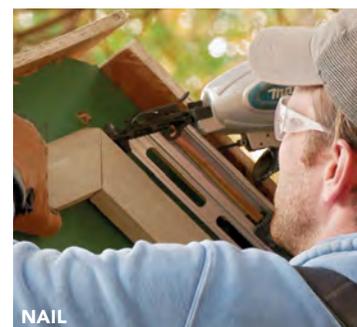
**CUT**



**FIT**



**GLUE**



**NAIL**



#### 6. TURN THE CORNER

The upper part of the gable rake trim is the trickiest part of this job. Unlike the eave trim, which is installed plumb, the upper rake trim projects out like a piece of crown. The necessary joint, a compound miter, may take some trial and error to get a good fit.



#### 7. BISECT AND CONNECT

Join the two pieces of upper rake together at the peak, using glue and one or two nails to tack the miter together. Again, if the joint needs to be finessed, a sharp block plane works very well with fly-ash trim.



#### Go with polyurethane glue

Although not my favorite to work with, polyurethane glue is the best choice for joining pieces of fly-ash-based products. Water-based glues, although technically acceptable, don't soak into the material very well. Plus, the foaming action of polyurethane helps fill the inevitable small gaps at complicated joints, and can be shaved off later with a sharp chisel.



#### 8. CLAMP FOR A TIGHT JOINT

At this point, the trim is only attached with 15-ga. finish nails, mostly to tack it together and still allow room for readjustment. Once you're happy with how all the joints are fitting, apply glue and place some clamps on the two-piece rake to help pull it together and keep it tight while the glue sets up and foams. Later, fasten with siding nails and/or solid backing where desired.

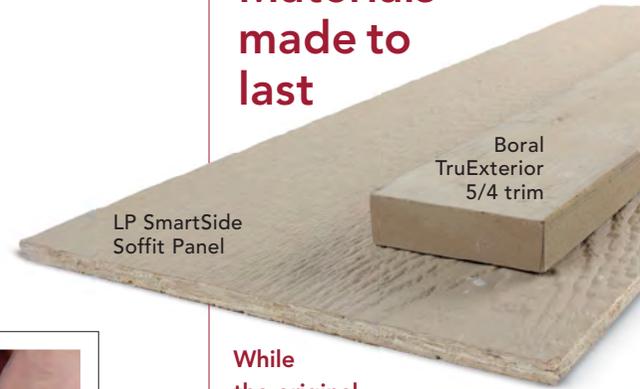
of the roof, and marked all of the necessary cutting information right on each piece (photos pp. 56-57). These became my on-site road map for assembling the real thing.

If you use these details on one of your own projects, I think you will come to respect the proportions, restraint, and overall aesthetic of the Shaker style, but most of all the crafts-

manship. My guess is that the work will have you scratching your head during the process, and when you're done, you'll stand back and look at the completed assembly and say, just as I did, "What was so hard about that?" □

Justin Fink is editorial director. Photos by Rodney Diaz, except where noted.

## Materials made to last



LP SmartSide Soffit Panel

Boral TruExterior 5/4 trim

While the original structure was made with solid-wood trim and clapboards, we opted for engineered materials because of their inherent resistance to the elements. Crisp edges and wood-like surfaces were still a priority, but we avoided egregious faux wood grains that often, ironically, make the materials look especially fake.

We chose Boral TruExterior for the trim, installed smooth-side out, because it cuts like butter, installs like wood, and allows for sharp miters—as long as you're careful with the edges during assembly. A respirator is a good idea when cutting this material, and I suggest having a cordless leaf blower on-site—the gritty fly-ash dust gets everywhere, and can wreak havoc on the inner workings of power tools.

For the clapboards and soffit boards we chose LP SmartSide products, which are a sort of über-OSB that cut and fasten like real wood—but with no worries about cups, splits, or crooked boards. Good out-feed support is a must for these products, which aren't fragile despite their thinness, but are very floppy.