Running Exterior Trim

Fascias, rakes, soffits and corner boards aren't scrutinized like interior woodwork, but they still have to look good and stand up to weather

BY ROBERT WEATHERALL

No part of building a house is more fun than putting up the exterior trim. It's like decorating a cake or coloring in a picture. After the rush of framing lumber and plywood, the trim is the welcome stage of finer joinery that can bring out the house's character (photo facing page).

In more than 17 years of building in New England, I've learned a few things about wood, weather and details that make trim last. Some lessons come from my own mistakes, but others come from working on old houses and seeing the legacy of carpenters whose work still looks good after more than a century. I like to imagine that the work my crew and I have done will be as praiseworthy a century from now.

Good trim begins with top-notch stock

The first step we take to help ensure that the trim work stays straight and true for years to come is choosing the right material. For exterior trim, we use eastern white pine, D-select or better, almost exclusively.

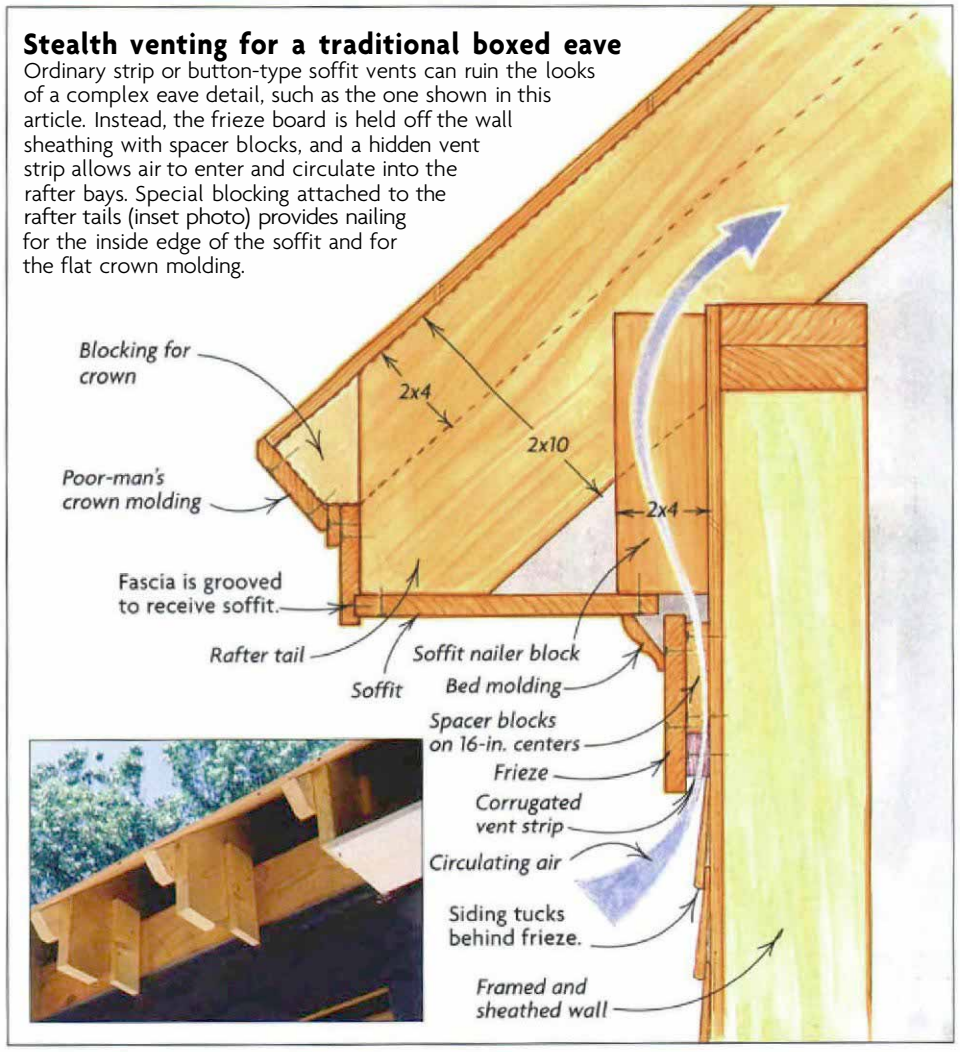
Western red cedar is also an excellent choice. Cedar is far more rot-resistant than pine, and because it's typically quartersawn or vertical grain, there is little chance of cupping and warping. However, cedar is light and brittle, and tends to split more easily than pine. Perhaps the best argument for pine is that it's less expensive, and it does not require the harvesting of old-growth trees.

For this house, we used 1-in. select pine (3/4-in. nominal thickness) for all the trim except the water tables, which required thicker stock. The water table was made of 2-in. #2 pine that we were fortunate enough to find at a local sawmill. It was far less expensive than the alternative, 8/4 sugar pine.

Prime exterior trim on all sides

Another step essential to exterior-trim longevity is sealing each piece front and back with primer or stain before it's installed. Moisture can enter trim through any unsealed surface, and sealing all exposed wood surfaces not only helps to keep trim from warping and cupping but also keeps moisture from lifting off the finish.

With this project—as with all projects—we try to have the wood on site far enough in advance so that the primer can dry thoroughly before we need to use it, especially in colder weather. But before we prime, we try to make any rip cuts, rabbets or grooves, such as the groove for the soffit-to-fascia joint. Cutting primed wood—especially when oil-based primer is used—can be hard on sawblades and edge tools. Last, we keep several yogurt containers on hand as primer buckets, and we judiciously prime all exposed wood after every cut.



Stealth venting for a traditional boxed eave
Ordinary strip or button-type soffit vents can ruin the looks of a complex eave detail, such as the one shown in this article. Instead, the frieze board is held off the wall sheathing with spacer blocks, and a hidden vent strip allows air to enter and circulate into the rafter bays. Special blocking attached to the rafter tails (inset photo) provides nailing for the inside edge of the soffit and for the flat crown molding.

Eave details start with a drawing

We are always eager to get the roof on our projects, and the roof can't be put on until the eave trim is done. The lines of fascia, soffit and frieze beneath them also dictate the height of the corner boards and the line of the water table. Window-casing heights are often governed by the line of the eave trim as well.

Before we start cutting and nailing and often before framing, we make a full-scale section drawing of the eave trim. The traditional boxed eaves on this project were more complex than most, done in a vernacular variation of the Greek-revival style (drawing above). Eave venting was incorporated in the frieze.

The soffit and fascia ended at the bottom edge of the roof with what we call poor-man's crown molding, or flat molding installed at a 45° angle. The drawing gave us the dimensions and locations of all the trim elements, as well as the size of the blocking that was to hold the crown and the inside edge of the soffit (inset photo above).

Fascia and soffit are assembled on the ground

The fascia on this house overhangs the soffit by 3/8 in. This overhang creates a shadowline, or reveal, along the corner of the eave, which helps to hide inaccuracies in the rafters. We created the soffit-to-fascia joint by milling a groove on the backside of the fascia 1/4 in. deep and just slightly wider than the 3/4-in. thickness of the soffit stock for an easy fit.

We assembled the sections of fascia and soffit on sawhorses, holding the soffit stock vertically and tapping the groove in the fascia down over edge of the soffit (top inset photo, p. 70). The lengths of the boards correspond to the rafter layout so that when installed, the ends of the boards land on fram-

Drawings: Rick Daskam

Fascia and soffit are assembled on the ground

The fascia with a groove cut into the back face fits over the edge of the soffit and is nailed (top photo). The assembled box with the lengths staggered on the rafter layout is then lifted and tacked in place (bottom photo) until the entire run is in position.

Eyeballing for straightness. After each trim element is tacked up, in this case the flat crown molding, it is sighted to make sure that it's straight before the nails are driven home.

ing. We drive 6d galvanized box nails or stainless-steel siding nails through the fascia to hold the joint together.

Our rule of thumb is to stagger butt joints in long lengths of trim by at least 32 in. (assuming 16-in. rafter layout). With staggered joints, the work runs straighter across the building, and there are no eye-catching areas where a lot of trim ends in the same place.

Rather than using square butt joints, we join pieces for long runs with a bevel or scarf joint. A beveled joint stays closed better despite board movement, and the joint is easier to sand or plane smooth.

When the first section of fascia and soffit was assembled, we tacked it in place (bottom inset photo). We then took measurements for the next section directly from the first section. That section was then cut, assembled and tacked in place. When the run was tacked up, we sighted down the edges and faces to make sure they were straight (photo above). High spots were tapped in with a hammer, and low spots were shimmed out when necessary.

After the fascia and soffit were straightened and nailed off with 8d galvanized box nails, we ran a small rectangular molding that forms a shadowline below the crown. To set the height of the molding, I set my combination square to the right distance and made marks every couple of feet along the fascia. Our poor-man's crown came next, and again, we tacked the length in place, straightening it before nailing it home with stainless-steel siding nails. The ring shank on the siding nails has better holding for smaller molding pieces.

Building a cornice return. All the eave details except the soffit wrap around onto the gable end of this house. First, solid blocking is installed for attaching the return trim (photo top left). Next, each layer of eave trim on the return is mitered into the main run and nailed in place (photo bottom left). After the return trim is installed, a lead cap is molded over the return to keep the rain off. A wood block and a hammer are used to shape lead flashing over the return trim (photo right).

On this house, the eave details return, or wrap around the corners at the gable ends. We mitered the ends of the trim where they met the gable returns. First, the blocking was fashioned to support all the layers of the fascia and the crown detail (photo top left). Because there was no overhang on the gable ends of the house, the soffit detail was eliminated on the return. We nailed in the various layers of the house's trim (photo bottom left), and then we topped off the return with a layer of lead flashing that was molded into place with a hammer and a wooden block (photo right).

Building a frieze that breathes

The next molding we installed was the frieze, or the wide flat molding that runs below the soffit. We lay out the frieze by first focusing on the doors and windows just beneath it. On this house, the frieze was to replace the head casings. If there had been space between the head casing and the frieze, we would have sized and located the frieze according to the siding exposure. When the lower edge of the frieze had been determined, a chalkline was snapped along the wall. Because chalklines tend to sag over long distances, we check the accuracy at several points before snapping. At this point, we were not concerned about the gap between frieze and soffit, which was to be covered later by bed molding.

We usually nail 1x3 furring strips beneath the frieze board, which creates a space to hide the top edge of the siding. On this house, however, we were integrating our eave

Frieze completes the eave trim. A wide board called the frieze is installed below the soffit (top photo). A gauge block is then used to mark the position of the bed molding (center photo), which covers the joint between soffit and frieze (bottom photo).

Measuring down for the water table. Once the soffits are in, measurements are taken for the height of the water table, which has to run parallel with the soffits for the siding to go on properly.

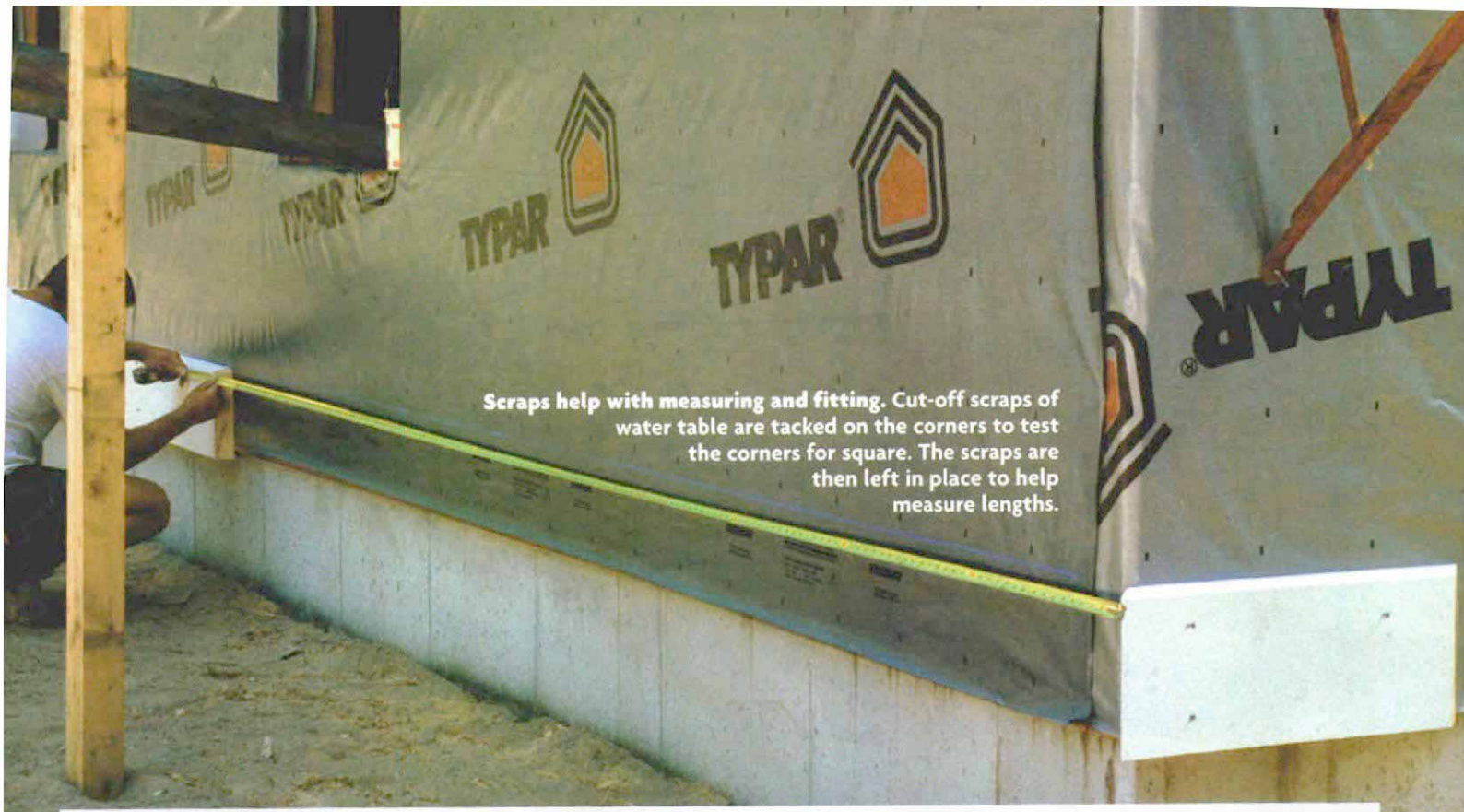
ventilation into the frieze (drawing p. 69), so we couldn't use a solid spacer. First, we nailed 1-in. thick blocks vertically at every stud location. Next, a corrugated vent strip (Cor-A-Vent; 800-837-8368; www.cor-a-vent.com) was nailed in below the blocks. Solid blocking replaced the vent strip at all window and door locations. With the frieze boards nailed on top, this system provided both the eave ventilation and a space for the siding.

Next, the frieze boards were cut and installed over the blocks, and the frieze was returned onto the gable end (photo top left). We cut a block of wood to the same dimensions as the bed molding and used it to mark the position of the molding every few feet along the soffit (photo center left). The bed molding was then nailed in following the lines (photo bottom left) but was stopped at the corner instead of continuing onto the gable end.

Water tables follow the soffit lines

Once the soffits were permanently installed, we were able to measure down for the location of the water table (photo right), which is a wide bevel-edge board that runs along the lower edge of the sheathing. Earlier, we had beveled the top edge of each board with a table saw and a jack plane and then primed the boards.

After the chalklines are snapped for the water table, we miter the ends of a couple of cut-off scraps. As we work our way around the house, we use the scraps to test the corners, which can be a bit out of square. Once we've determined the exact angle at each cor-



Scraps help with measuring and fitting. Cut-off scraps of water table are tacked on the corners to test the corners for square. The scraps are then left in place to help measure lengths.

Water table dresses up the bottom edges of the house

After the water table has a test-fit, the boards are nailed in place (photo left). Lead flashing for the bottom edges of the corner boards is slipped behind the housewrap and over the water table (photo right).

ner, the scrap is left tacked in place and used for pulling our measurements (top photo).

Next, we cut the boards and tack them in place using the scraps to determine the fit (photo bottom left). Long pieces are joined together with 45° scarf joints. We used a block plane to tune the scarf joint wherever needed. When we were satisfied with the straightness and fit of a length of water table, we nailed it off with 10d galvanized box nails and moved to the next side of the house. Lead flashing was added for the corner boards (photo bottom right), and later, when we sided the house, the rest of the water table was flashed with the flashing tucked under the housewrap for proper water shedding.

Buttoning up the corners

Corner boards connect the eave trim with the water table. This house was to be sided with cedar clapboards, so we were able to use ¾-in. stock for the corners. If a house is sided with shingles, we use 5/4 stock that can hide the edges of the shingle butts. If 5/4 stock is used for corner boards, we use the same thickness for window and door casing.

As with the eaves, we preassembled the sections of corners on the ground before putting them up (photo left, p. 74). Preassembling the corner sections helps them to span any irregularities in the sheathed corners of the house. And it's much more difficult to achieve a tight corner joint when assembling corner boards in place.

To make the corner boards the same size in each direction, we ripped an amount equal to

Finishing off the corners. Corner boards are nailed together on the ground before they go on the house (photo above). Preassembled corner boards span irregularities in the framing and sheathing more easily. Nails driven along the edges of the corner boards are less likely to split the wood (photo top right). And for that final decorative note, a small band of capital molding is popped in under a drip cap to finish off the tops of the corner boards (photo bottom right).

the thickness of the stock off one of the two legs. Then we measured, cut and nailed the boards together on the sawhorses.

We were able to build these corners with single boards, but when the corner height is greater than the stock length (for a two-story corner, for instance), we make up the required length by joining the lengths of stock with beveled scarfjoints. These joints in the corner boards have to be cut so that water sheds to the outside of the boards. We try not to make any piece of corner-board trim less than 3 ft. long, and we offset the scarf joints on the two legs. For example, if 5 ft. is added to the bottom of a 16-ft. piece on one leg, we put the 5-ft. section at the top of the adjacent leg.

We slid the assembled corners up under the frieze boards and again tacked them in place to assess their straightness and squareness. When we were satisfied, we nailed off the corners, driving most of the nails along the outer edges of the boards (photo top right) with an occasional nail driven close to the corner where the boards were joined. Nails should not be driven in the middle of the boards where they can split.

The final detail we applied was the capital trim around the tops of the corner boards (photo bottom right). Trim pieces fit under flashing that had been slipped under the frieze before the corners were installed.

Rake trim finishes off the gables

We usually duplicate the soffit and fascia detail on the rakes, but without gable over-

Furring-strip rake spacer. Two courses of 1x3 strapping create a space under the rake boards for the siding. Note: Scaffolding should have guardrails and toe boards to make it safer.

Decorative trim finishes the rake

Bevel-edge trim milled on site is nailed onto the rake boards. Primer in the bucket is applied to the cut ends of the trim as it is installed.

Looking up the rake. Instead of gable overhangs, 1x3 strapping was nailed along the edge of the roof (photo left) with the rake boards nailed on top. The space behind the rake boards below the strapping hides the ends of the gable siding. A strip of decorative trim milled on site finishes the rake (photo above).

hangs, the best we could do was to make the rakes mimic those details (drawing above). We started by running furring-strip spacers that hold the main rake board ¾in. off the face of the gable wall (photo above). Just as with the frieze boards, the furring strips gave us space to tuck the siding into.

After the furring strips were nailed in, we ran the main rake boards. The level cuts where the boards fit over the return flashing were our first cuts. We then tacked the rake board in place until all the boards were cut and fit.

After working up from the corners, we made our final cut at the peak where the two rakes met. We made a plumb cut at the roof pitch on each side, leaving the length a little strong. The extra length gave us a little room to adjust the cut. Again, we used a sharp block plane to fine-tune the peak cut.

When the main rake boards were all fit and tacked in, we went back and nailed them off. The final rake-trim detail was an angled piece of molding we fabricated on site to imitate the crown on the fascia. With our peak angle all set from the main boards, we worked from the peak down, installing the final decorative trim (inset photo).

When the trim is installed, we do one thing to keep the painters happy. If the trim color differs from siding color, we hit the edges of the trim with finish paint to spare them the brushwork after the siding is on. □

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