Extending the rake. **For a clean look, the top edge of the rake's crown molding extends down past the edge of the roof, where it nearly meets the corner of the gutter. The crown is protected by a tongue of asphalt roofing over a flap of aluminum flashing.**

Rethinking the Cornice Return

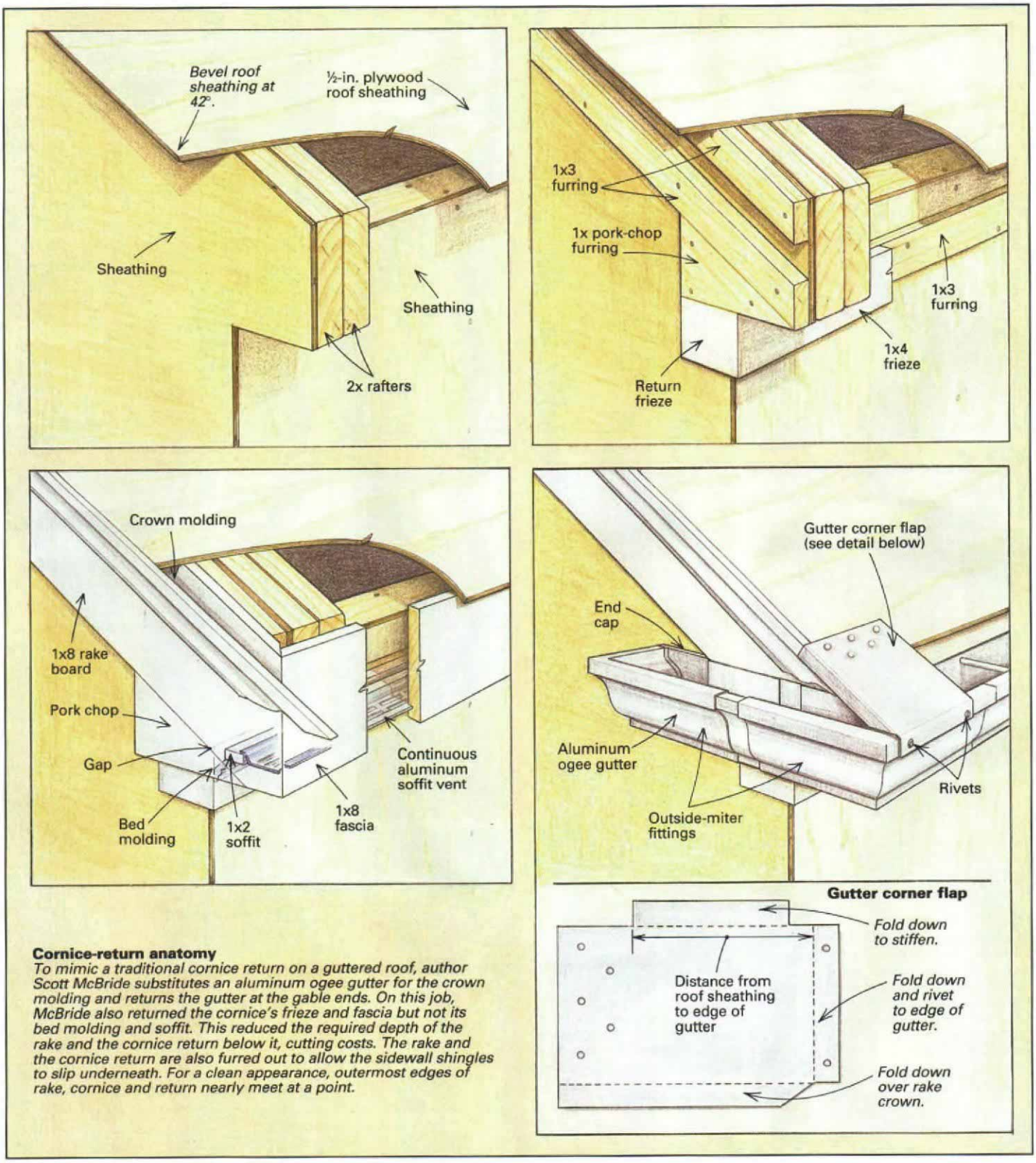
Standard ogee gutters can mimic this classical detail

by Scott McBride

Construction of traditional cornice returns (top photo, p. 48) is a lost art. Like many of the finer points of residential carpentry, returns were cast aside after WWII in the rush toward mass-produced housing. They were replaced by the "pork chop," or ear board, a no-nonsense way of resolving the transition from rake board to eaves fascia. The pork chop is an unadorned triangular piece of pine tacked up flush with the rake board (bottom right photo, p. 48).

A generation of carpenters matured in the 1960s and 1970s with no other return in their repertoire. Then the post-modern movement came along, and suddenly the classic cornice return had to be reinvented. Unfortunately, there weren't many old-timers left who remembered how to build one (for Bob Syvanen's treatment of cornice returns, see *FHB* #15, pp. 38-41). The task was complicated further because guttering practices had changed in the interim.

In the 18th and 19th centuries, gutters usually were built into the roof and lined with sheet metal. With the gutter concealed, the cornice was free to return neatly onto the gable. Unfortunately, when concealed gutters leak, the water drips into the cornice or, worse, into the wall. In the late 1800s, builders started switching to metal half-round suspended gutters. But these gutters not only look bland, they also throw the crown molding—the crowning glory of the cornice—into



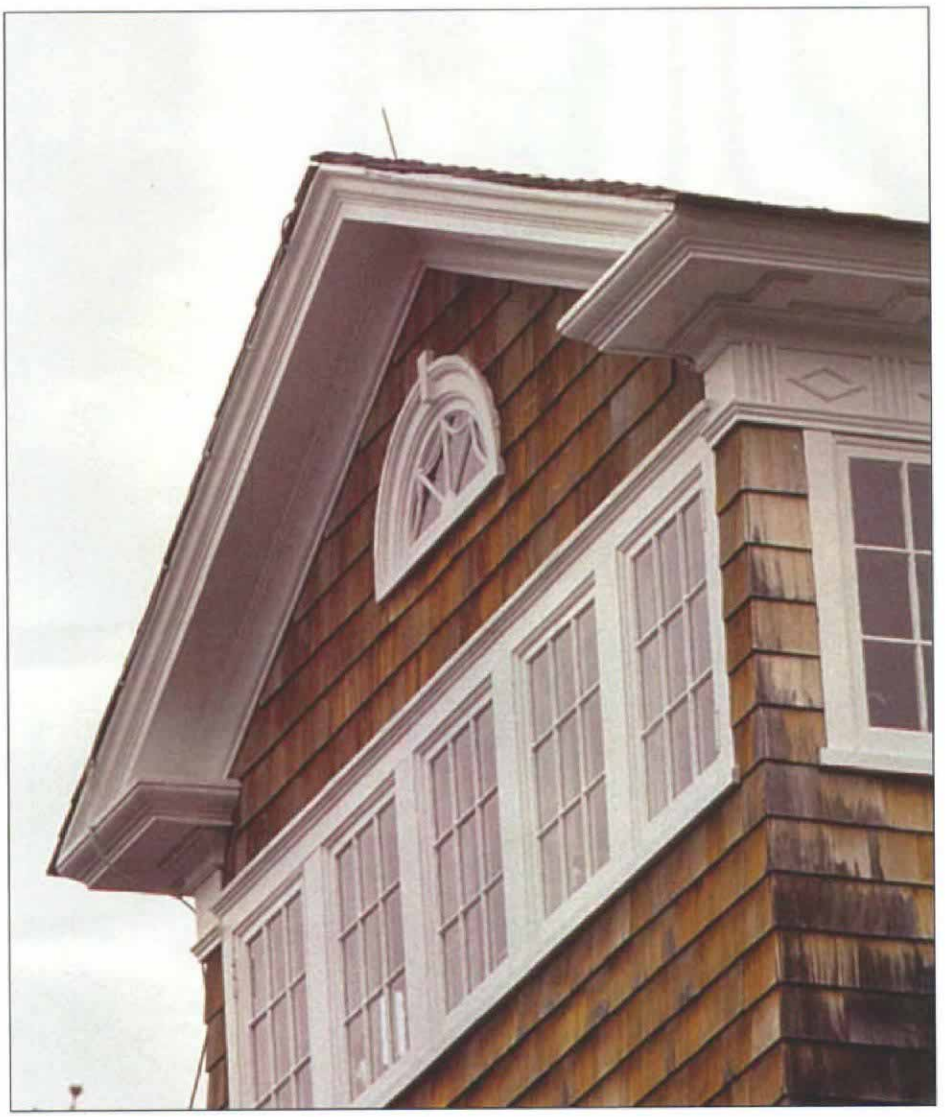
Cornice-return anatomy
To mimic a traditional cornice return on a guttered roof, author Scott McBride substitutes an aluminum ogee gutter for the crown molding and returns the gutter at the gable ends. On this job, McBride also returned the cornice's frieze and fascia but not its bed molding and soffit. This reduced the required depth of the rake and the cornice return below it, cutting costs. The rake and the cornice return are also furred out to allow the sidewall shingles to slip underneath. For a clean appearance, outermost edges of rake, cornice and return nearly meet at a point.

shadow (bottom left photo, p. 48). The metal ogee gutter, or K gutter as it's sometimes called, seems to have appeared in the 1930s. It's an ingenious idea; combine the elegant look of a traditional crown molding with the practicality of a surface-mounted gutter. Given that the strong, easy-to-install ogee gutter is here to stay, I've long sought a way to incorporate it gracefully into a traditional cornice return. After several false starts, I think I've succeeded.

Returning the gutter—My first attempt to integrate the ogee gutter into a traditional return consisted of simply mitering the end of the gutter. It wrapped around the corner over the pork chop and then terminated at an end cap. This looked okay, but it sure didn't sing like the originals.

Then I realized that wooden cornice returns don't just stop once they turn the corner—they turn *another* corner and dead-end at the gable wall. Okay, so I connected a second outside miter fitting to the first one, with a short length of gutter in between. One leg of this second fitting had to be cut off, leaving just enough room for an end cap to be riveted on. Visually, this helped quite a bit, but there was still something wrong. After studying a lot of old-style cornice returns, it hit me: The outermost edges of the rake, the cornice and the cornice return should all meet at one point, or at least appear that way from the ground. The eye can't help but follow these

Drawings: Bob Goodfellow



Cornice evolution. **Traditional cornice returns often featured a soffit and a full complement of cornice moldings capped by a flashed water table that prevented water damage. In the example above, the top edges of the rake, the cornice and the return meet at a point for an uncluttered look. In the late 1800s, half-round metal gutters began to supplant less-dependable built-in gutters. Bland in appearance, the half-round gutters obscured crown moldings (photo below). Nowadays, standard ogee gutter routinely substitutes for crown molding and simply dead-ends at the corners of the roof. The pork chop, an unadorned 1x triangle that's installed flush with the rake board (photo right), has virtually replaced the traditional cornice return.**

lines, and if they converge neatly, a little visual ping goes off.

One problem with my gutter return was that the lip of the eaves gutter sat above the projected roof plane. When viewed from the gable end, the gutter jutted above the rake line. Another problem was the way the return looked from the front. It stuck out 4 in. past the flat rake board like a cow's ear. No wonder it looked clunky.

Working out the details—On a recent job in Rye, New York, I was determined to get my cornice act down. I started drawing the cornice details before the second-floor wall framing was up.

I needed three drawings: a vertical section through the eaves, a section through the rake cut perpendicular to the roof and a horizontal section of the eaves-end cornice return, which is a sort of plan view. My goal was to make the total projection of the eaves, including the gutter, equal to the projection of both the cornice return and the rake. This would allow all three edges to come to a point.

I started with the eaves section, drawing a 2x6 wall with a 2x10 rafter on top of it at the given pitch. Then I sliced thin sections of the different trim elements to use as templates and juggled them around to find a workable configuration. I knew that extending the rake would be the most difficult part; to keep eaves and rake projection roughly equal, I designed the eaves with a minimum overhang.

To keep the eaves overhang as shallow as possible, I called for a narrow 1x2 soffit and slipped the fin of the continuous aluminum soffit vent into a groove plowed in the back of the fascia (drawing p. 47). The fascia itself would be 7½ in. wide, allowing me to use 1x8 stock for it without ripping. The wider-than-usual fascia was also part of my design strategy; it would allow me to align the outside lip of the gutter with the plane of the roof so that the top edge of the gutter would meet the line of the rake at the comer.

Returning all of the cornice elements onto the gable, minimal as they were, would produce an 11¼-in. overhang for the cornice return. To align the rake with the comer, I would then have to frame an 11¼-in. rake overhang—more work than I had contracted for. I compromised by returning only the fascia and the frieze, in addition to the gutter (photo p. 46). This would keep the lip of the gutter return close to the house so that it would nearly align with the lip of a 5½-in. crown molding mounted on a furred-out rake board.

A section drawing of the rake helped me figure out the overhang needed on the roof sheathing to support the top of the rake crown molding. The drawing also made it easy to determine the cutting bevel along the edge of the sheathing, which depends on the particular crown used. During installation we let the plywood run long, then snapped a chalkline at the correct distance and cut it with a circular saw set at 42°.

Corner flaps—To bring the rake crown molding down to the corner of the gutter without exposing the molding to the weather, I took my cue from the built-in gutters I've seen. They typically have a narrow tongue of roofing at each end that

Photos this page: Bruce Greenlaw

extends down to cover the lower end of the rake crown molding. The built-in gutter dead-ends at the inboard edge of the tongue. Around the corner, a flashed water table caps the cornice return's crown molding (the water table is simply a piece of wood that's sloped away from the house to shed water). The rake crown dies into the top of the water table.

I mimicked this arrangement. Instead of extending the roof sheathing to support the tongue of asphalt roofing, though, I installed a simple flap made from white aluminum coil stock (coil stock is trade jargon for prefinished aluminum on a roll). The edges of the flap were turned down with hand seamers to stiffen them, and a fin in front laps over the lip of the gutter. But as it turned out, the gutter used by my gutter contractor is wider than the sample I had obtained from a lumberyard. As a result the flaps fell short, but they still get enough support from the extended rake crown. The tongues of the asphalt roofing were glued to the flaps with roofing mastic.

Splitless nails—Because of all my planning, installation of the cornices went like clockwork. I set up a cutting bench with a Hitachi 15-in. miter saw recessed into the top. This machine swings to 58°, so I could even cut the acute miter at the bottom of the rake crown molding.

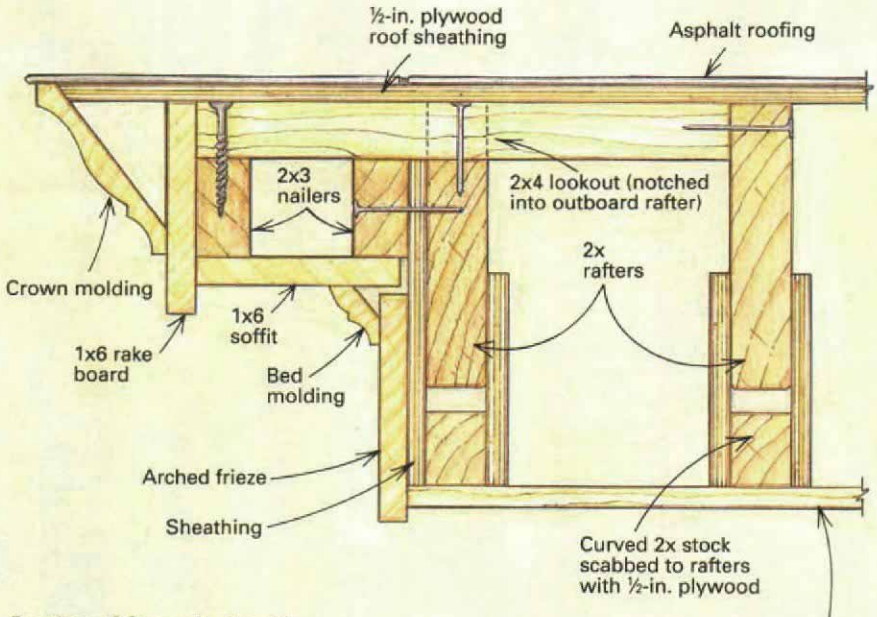
The job's general contractor, Frank DiGiacomo, showed me an exterior trim nail that I had not seen before. Called a "splitless," the nail is made by the W. H. Maze Co. (100 Church St., Peru, Ill. 61354; 815-223-8290). A splitless nail is a cross between a finish nail and a box nail. The small, flat head makes it easier to drive than a finish nail and resists trim warpage. The narrow diameter of the shank is less likely to split wood, which is how the nail got its name. The splitless nail has a hot-dipped zinc coating for corrosion resistance and is available in 6d, 8d and 10d sizes. I used these nails exclusively for assembling the cornice.

A variation at the entry—On the entry porch of the Rye project, where the return would be more visible, I decided to frame a full rake overhang by notching 2x4 lookouts into the end rafters (drawing right). This full overhang allowed me to maintain a constant soffit width for the eaves and the cornice return, the latter of which would line up with the rake crown (photo right). Because there is no gable wall for the cornices to return to, the returns make one extra 90° bend and dead-end into the porch ceiling.

I had intended to use aluminum gutters in place of crown molding for the cornice returns as I had done on the higher gables. But once the gutter was installed, it looked way too wide. I replaced it with a 4½-in. crown molding capped by a flashed water table. This looks good but leaves the rake crown sticking a bit proud of the cornice. It isn't too noticeable, though. When I lived in New York we used to say, "Fugetaboutit." Here in Virginia, they say, "It is what it is." □

Scott McBride is contributing editor of Fine Homebuilding *and lives in Sperryville, Va. Photos by the author except where noted.*

Return of the cornice. **Because the cornice return on this entry porch is so prominent, the author framed a full rake overhang, which maintains a constant soffit width for the eaves and the cornice return. The drawing below shows how the rake overhang is built.**



Section of framed rake. *More expensive than a furred-out rake, a framed rake projects far enough to shelter a full cornice.*