Traditional Trim in Vinyl and Aluminum

by Harold Chapdelaine

When I first broke into the construction business in 1973, I went to work for a roofing and siding contractor. My boss, Leo Fournier, was a conscientious man who did first-class work and who would never use vinyl or aluminum to hide problems. Instead, he taught me how to rebuild deteriorated woodwork and to install the new vinyl and aluminum trim and siding with the same care I would give any other material.

The end to routine painting has always made these materials appealing to owners of older homes. But it wasn't until I started planning a whole house renovation on Martha's Vineyard, Mass., in 1979 that I thought to combine white cedar shingles with vinyl clapboards and a vinyl/aluminum trim system. The combination was an instant success. Traditional homes in this area of Massachusetts often have white clapboards on the front facade, cedar shingles on the sides and back, and white trim; my system gives clients this traditional look, but without the maintenance hassles. The installed costs are about equal, but the long-term costs of my system are much lower (especially around here, where it's not uncommon to repaint every three to five years). And with no painting to worry about, I can do a first-rate trim job any time of the year.

I've since used the combination on everything from single-car garages to custom-designed, half-million-dollar homes. I find that the vinyl and aluminum are at least as durable as wood. Two years ago I used them on a house that sits on the crest of a hill overlooking the ocean. Soon after we finished, the house took a direct hit from Hurricane Bob's 120-mph winds. The trim sailed through without a dent.

Tools And Materials

My system is simple. It includes vinyl corner posts, aluminum or vinyl soffits and fascia, and site-fabricated aluminum rakes and rake returns (see Figure 1, next page). Despite a few tricky details, it's a straightforward installation that can be mastered by any open-minded carpenter with a little patience.

The tools required include a T-bevel for measuring angles, left- and right-handed aviation snips for cutting vinyl corner boards and aluminum coil stock, a pop-rivet gun for fastening pieces of aluminum together, a cordless drill for predrilling rivet holes, and a pair of hand seamers — also known as a hand brake — to make small bends (Figure 2, next page). The only expensive specialty item required is a sheet metal brake for fabricating the rake pieces. My brake is 12 1/2 feet long and cost around $1,000. For the occasional job, however, you can sub the work out to a sheet metal shop or rent a brake (rental yards that carry brakes seem to be the exception, so you may need to make several phone calls). Rental fees can range anywhere from $20 to $40 per day.

I use a radial arm saw or a Sawbuck to cut vinyl siding and soffit material. I use a plywood-cutting blade mounted on the saw backwards. Because the blade's teeth face away from the work, it won't chip the vinyl; rather, it burns its way through.

Combining cedar shingles with custom aluminum and vinyl trim produces a low-maintenance exterior with a traditional look

Installing the Rough Trim

The first step in trimming a house is to install the rough trim, which will serve as a backing for the vinyl and aluminum. Since it will be covered up anyway, I use rough-sawn fence board: 1x8s for rakes and fascia, 1x3s for rake accents, and 5-inch and 6-inch boards for corners, to match the width of the vinyl corner post I use.

As with any house, the rakes and fascia are installed before the roof shingles, and the corner posts before the siding. On gable walls, I simply tuck the corner post behind the rake board. On eaves walls, the top of the vinyl corner post must butt into the bottom of an aluminum F-channel: an accessory that supports the inboard edge of the vinyl or aluminum soffit. To find where the F-channel goes, I level across from the bottom of the fascia to the wall sheathing and make a pencil mark 1/2 inch below that level.

The installation sequence varies with the type of siding (Figure 3). On vinyl-sided walls, I install the F-channel right after the wood corners, with the nail flange facing down. I follow with the vinyl corners and the vinyl siding. On walls that will be shingled, I put up the vinyl corners, shingle the wall, then install the F-channel, nail-flange-up, over the face of the shingles and above the wood/vinyl corner. I nail the F-channel with 1-inch-long, smooth-shank aluminum siding nails 12 inches on-center.

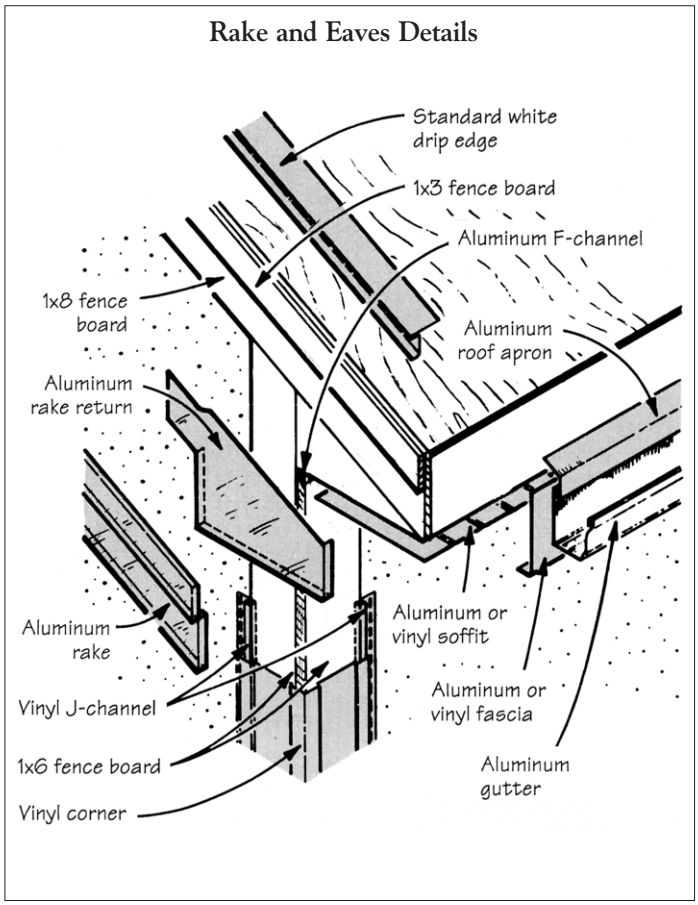

Figure 1. *The author uses inexpensive, rough-cut fence boards to back the vinyl corner posts and aluminum rake and fascia. Aluminum trim pieces are attached with nails; the seams are sealed with silicone caulk and fastened with rivets.*

Figure 2. *Hand seamers are useful for making small bends in aluminum trim.*

Corner Posts

Although several vinyl products are available for trimming corners — including two- and three-piece systems that can be used to form various profiles — I use a one-piece, 6 1/2-inch-wide vinyl corner post.

I begin by installing vinyl J-channel along the outside vertical edge of each corner board, nailing it in the same way as the F-channel. The top edge of the vinyl corner is trimmed so that one side butts into the rake board and the other butts into the F-channel at the soffit. The vinyl corner itself doesn't require nails; it simply snaps over the edges of an interlocking J-channel, which goes up first. I usually put an aluminum trim nail at the top of the corner post to prevent it from sliding. A 7/8-inch space in the J-channel accepts cedar shingles. Since vinyl clapboards have a narrower profile than wood shingles, on vinyl-sided walls you must install a second, 5/8-inch J-channel before nailing up the clapboards (Figure 4).

Soffits

The interlocking soffit material is available in vinyl and aluminum. It consists of 4- or 5-inch-wide strips separated by V-grooves or decorative beads. These grooves add rigidity to the soffit and absorb expansion. Soffit material is available in fully vented, partially vented, and nonvented versions. The net free ventilating area of aluminum or vinyl soffit can range from less than 3 to more than 9 square inches per lineal foot of soffit material. On most homes, I alternate vented soffit strips with nonvented ones, but you can increase vent area by using vented soffit throughout.

To install the soffit, I measure from the inside of the F-channel to the outside of the fascia board. I subtract 3/8 inch from this measurement to compensate for expansion, and cut the soffit material to this length. I slide one end into the preinstalled F-channel and bring the other end flush with the outside of the fascia (Figure 5). Using 1 1/4-inch white aluminum trim nails, I fasten each nail flange and V-groove to the edge of the fascia.

Rakes And Returns

While the soffit material is being installed, someone should climb the ladder and start making the rake

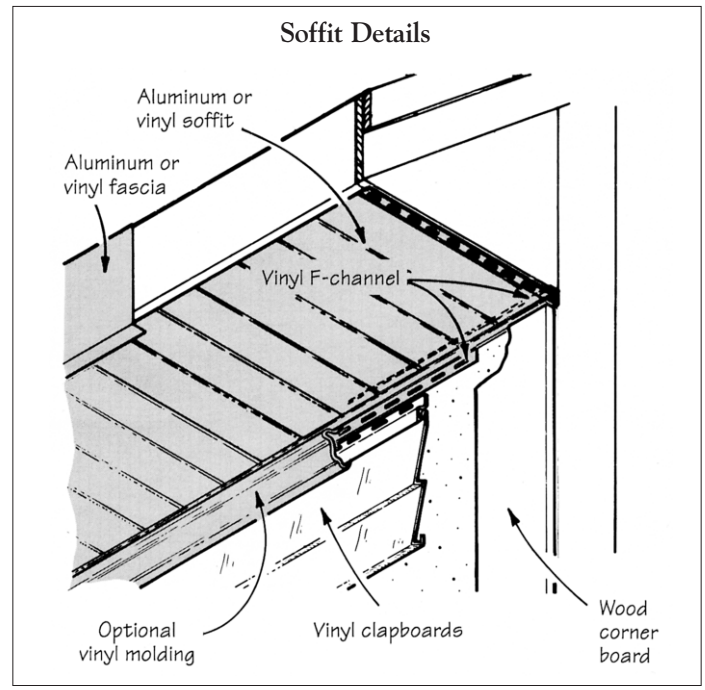

Figure 3. *F-channel is an accessory that supports the aluminum or vinyl soffit where it meets the house. On shingled walls (above), the F-channel goes on after the shingles, flange up. With vinyl siding (left), the F-channel goes up first, flange down, and can support an optional crown molding.*

Figure 4. *At a corner where cedar shingles and vinyl siding meet (left), the author uses 7/8-inch J-channel to support the vinyl corner boards. On the vinyl-sided wall, he adds a second 5/8-inch J-channel (right) to compensate for the vinyl's narrower profile.*

Figure 5. *When installing aluminum soffit, the author leaves 3/8 inch for expansion inside the F-channel.*

Figure 6. *The aluminum rake returns (left) lap over the ends of the soffit and bend around the end grain of the wood rake and the back of the wood return. The aluminum rake and fascia then lap over the aluminum return (right).*

returns (Figure 6, next page). The aluminum returns, which get installed before the rakes themselves, are the most time-consuming detail in the entire trim system. Using the hand seamers, I fold the edges of a piece of coil stock so that they lap over the end of the soffit, under the fascia, and around the back of the return. I fasten the bottom bend to the soffit using aluminum pop rivets and nail the top edge of the return to the rake board with two white trim nails.

The rake material should lap over the aluminum return, and should bend around the end grain of the wooden rake and accent boards. It should also cover the face nails on the gable shingles. If I've face-nailed the gable shingles tight to the bottom of the rake board, I can easily cover them by making the aluminum rake an inch or so wider than the wooden rake boards.

I form the rake profile with my sheet metal brake, then bend the ends with my hand seamers. The size of my brake limits me to 12 1/2-foot lengths of aluminum. For rakes shorter than 23 feet, I make two pieces that are half the length of the rake plus a foot or so for fitting and overlap. Longer rakes must be divided into three equal lengths. Upper pieces should overlap lower pieces by at least 4 inches.

To install an aluminum rake piece, I slide its top edge under the gable end drip edge. Then, using white aluminum trim nails, I face-nail 2 or 2 1/2 feet on-center, 1 1/2 inches up from the bottom edge. I lay a bead of silicone sealant between the rake and rake return, then pop-rivet them together with rivets 2 inches on-center and 1/2 inch above the cut line. At the gable peak, I extend the first aluminum rake piece 2 inches beyond the plumb cut of the wood rake board, overlap it with the opposing piece, then seal the joint with pop rivets and silicone.

Fascia

The fascia is easy after working on the gables. Vinyl fascia comes ready-made; you can fabricate an aluminum fascia by making a 3/4-inch bend along a length of 8-inch coil stock.

Working from staging, I slide the first piece of fascia behind the roof apron that I use as an eaves drip-edge, then scribe its end to follow the rake profile. After cutting with aviation snips and checking the fit, I install the piece with silicone sealant at the edges. I face-nail the fascia high enough that it will be covered by the aluminum gutter (about 4 inches up from the bottom) and pop-rivet the bottom bend to the soffit. Adjacent lengths of fascia should overlap 4 to 6 inches.

Gutters

My favorite gutter system is made by Alcoa (Stolle Corp., P.O. Box 716, Sidney, OH 45365; 513/492-1111). The backbone of this system is the *Roof Apron*, which is installed along the eaves and serves as both a drip-edge and an interlocking support for the back of the gutter. Because no fasteners are driven through the back of the gutter, it's free to expand and contract without buckling. The roof apron also makes gutters easy to hang. After assembling a gutter on the ground, I just bring it up to the edge of the roof and snap it into the roof apron.

The front edge of the gutter is held in place with hangers, installed at every rafter tail (which I carefully mark when installing the roof apron). I alternate between bar hangers and strap hangers: The bar hangers keep the gutter straight by holding its outer edge a uniform distance from the fascia; the strap hangers are stronger, so they increase the gutter's weight-carrying capacity. ■

Harold Chapdelaine owns Lamberts Cove Associates Inc., a building company in West Tisbury, Mass.