

Exterior Molding Repairs That Last

BY TOM O'BRIEN

Exterior trim elements are what make a “house” a “home.” Rip the ornate porch and korbeled soffit off of a classic New Orleans Shotgun, for example, and what you're left with might as well be a trailer. Giving these beautiful, vulnerable pieces the fortitude to stand up to the constant onslaught of nature is labor intensive and requires occasional maintenance. But experience has taught me that if you do it right the first time, they will enjoy a long and happy life.

As a case in point, I was recently asked to repair a handrail on the front porch of a 19th century Italianate home in our town's central historic district (1). A unique feature of this rail was how it wrapped around the porch column, rather than simply butting up to it. Although the design was beautiful, the manner in which it was assembled had left it vulnerable to moisture intrusion; the joint where the rail sections attached to the column was obviously problematic, but it wasn't until I excavated the damage that I discovered that the bullnose edges were separate pieces, nailed and glued on. With all of those vertical joints solely dependent on caulk or glue to shed water, it's no surprise that rot eventually found a foothold (2).

Fortunately in this instance, the rot was limited to the area immediately surrounding one of the columns. In consultation with the homeowner, we decided to make the necessary repairs as durable as possible and come up with a plan to inspect the remaining porch parts on a regular basis to prevent further damage.

After digging out all the loose, punky decay using a painter's 5-in-1 and a scratch awl, we determined that two mitered rail sections that formed an outside corner and two short lengths of bullnose on the opposite corner would have to be replaced (3, 4). The other soft spots we found were prime candidates for epoxy repair. After we excavated all the rot and cleaned it out using compressed air, we tented the column with plastic sheeting and left it to dry for a week or so.

In the meantime, I went about replicating the molding profiles and pretreating them to prevent moisture intrusion and rot.

I don't have a woodworking shop, but whenever I've needed a short length of a molding that's not readily



The porch trim on a historic 19th-century Italianate home wraps around the porch column, rather than simply butting up to it. Although beautiful, the design is vulnerable to moisture intrusion, which inevitably led to rot. This prompted the author to use epoxy as part of a long-term solution.



New England's volatile climate took its toll on this porch trim (2). A few severely damaged pieces had to be replaced (3). But those with minor deterioration, such as this column (4), which would have been prohibitively expensive to replace, could be stabilized with borate-based wood preservatives and repaired with epoxy.



The author cut replacement moldings to size on a table saw, then primed them on their reverse sides (5). As soon as the primer was dry, he immersed the end grain in a borate solution to prevent rot formation (6).



Before the miters are assembled, the author drills a hole and inserts a Bor8Rod that will provide an extra measure of insurance against rot (7).



Marine epoxy adhesive ensures that miter joints that are exposed to the elements won't separate (8).



With two coats of paint and an annual inspection, this repair should last indefinitely (9).

available from a supplier, I've always been able to get there by some combination of portable planer, table saw, router bits, and profile sander. For this project, it turned out that the bullnose was exactly the same shape as a 1⁵/₁₆-inch closet pole, so all I needed was a table saw (5).

After I shaped and rough-cut all of the pieces to length, I treated all surfaces that wouldn't be cut or glued with a coat of fast-drying primer. Then, I dipped the end grain of each into a borate solution (Wood Care Systems; ewoodcare.com) that soaks into the wood and kills rot spores before they have a chance to multiply (6).

Back on the jobsite, the old handrail pieces that we decided to save were given a double shot of borates. First, I sprayed the liquid solution on all of their porous (unpainted) surfaces. Then I drilled a ²³/₆₄-inch hole through the mitered ends and the edges that would be covered by the replacement bullnose, and I inserted a 1/3-inch-by-1-inch Bor8Rod into each hole (7). This crystalline tube of boric acid, which is available in a variety of sizes, serves like a time-release capsule that stays dormant unless it gets wet, whereupon it dissolves and kills any rot spores that attempt to gain a foothold.

The installation process was straightforward carpentry work, although slightly messier and more time-sensitive because I used epoxy to repair the minor rot damage and assemble the joints, all at the same time. (For more information about epoxy wood repair, see "Beating Wood Rot," Feb/09).

I began the assembly process by setting up a miter saw on the stoop, cutting all of the pieces to size, then clamping and dry-fitting to ensure that everything would come together smoothly at the same time. Then I donned a pair of latex gloves and mixed up a small container of two-part marine epoxy (West System; westsystem.com). Using a flux brush, I applied the liquid epoxy, as if it were a primer, to the areas in the old trim that had suffered minor rot damage and to the cut edges of the new moldings.

As soon as the wood was saturated with epoxy, I added West System #407 Low-Density Filler to the remaining liquid and stirred enough of it in to create a gap-filling adhesive roughly the consistency of mayonnaise. After spreading a thin layer of this concoction on one side of each joint (8), I assembled the pieces and fastened them with stainless steel air nails. Then I wiped the squeeze-out from each joint and covered the repair with plastic to keep the heat in overnight.

The following day, after I sanded the rough spots, all the railing would require from then on was primer, caulk, paint, and (hopefully) an annual inspection (9).

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