On the Job

Working With Sonotubes

by Emanuel Silva

Every porch or deck I build starts with level footings and solid, plumb concrete piers — insurance that my projects will stand for many years to come. I use 12-inch-diameter cardboard tube forms (usually Sonotubes), rebar, and a sack concrete mix. Here's my process.

After locating all the footings, I generally dig the holes by hand (1). If there are more than six, I'll consider hiring an excavator. Even though I always call Dig Safe ahead of time, there's still the chance I could run into an obstruction, and digging with a shovel gives me more control if I do. As I dig, I keep all the dirt and rocks in separate piles close by. This makes shoveling the dirt back in a lot easier, and allows me to place rocks where I want them.

I dig my holes 2 feet in diameter so that I have some flexibility if I need to slightly adjust the placement of the tube. Also, the wider the hole, the easier it is to remove dirt as I dig deeper.

When I reach our local frost depth of 48 inches, I add about 6 inches of stone to the bottom of the hole (2). This provides a good base for the footing, which consists of 6 inches of concrete to tie all the rock together and an additional 6 inches for anchoring the tube form (3).

I press the bottom of the tube a couple of inches into the wet concrete, careful to keep it plumb, level, and at the proper elevation at the top (4). I add dirt and rocks around the tube (5), tamping as I fill to prevent voids, until I'm about halfway up. I then place concrete inside the tube (6), filling it about a third of the way up and checking for plumb, level, and elevation as I go (7, 8).

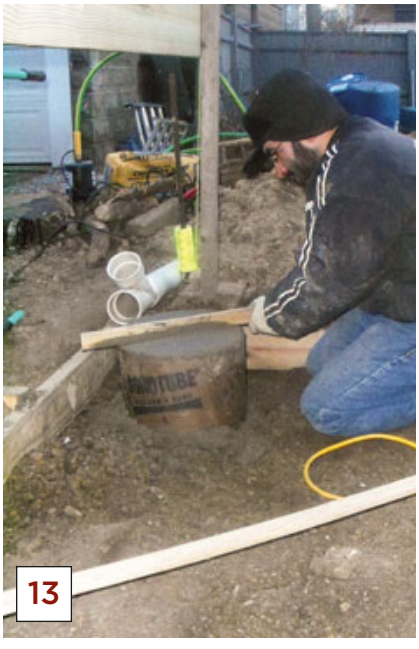
I use an Imer Rollbeta mixer (imergroup.com) that cost around $600 eight years


9


10

11


12


13

ago (9); it can handle two 80-pound bags at a time. Each tube and footing requires eight bags of concrete mix.

As I fill the tube, I add in clean rock, careful to keep it in the middle of the pier so there are no voids on the outside surface (10). After every 6 inches of additional concrete, I measure the top elevation and check for plumb. If the top drops, I simply pull up on the sides of the tube to bring it back to its correct height. If the tube leans, a light tap on the side will bring it back to plumb. Repeated checking keeps me on target as I go.

Before I place the last 6 inches of concrete, I install three lengths of #4 rebar (11). I drive them all the way to the bottom of the footing, which should prevent the footing and pier from ever separating. I embed the top of the rebar at least 6 inches from the top of the tube so that when I secure my post bracket there will be no contact between the wedge anchor and the rebar.

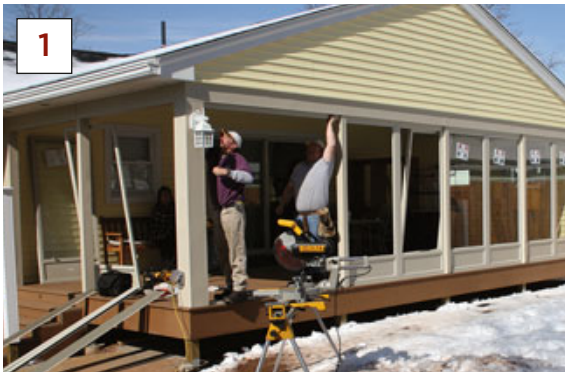
After placing the last of the concrete, I let it set for a few minutes, then tap the top surface with a straightedge to help push down any aggregate (12). I then run the straightedge across the top in a saw motion to smooth the surface (13). Within a few minutes, bleed water will find its way up to the top as curing begins. I sweep away the water with a broom, completing the pier. It will be ready to build on in another seven days.

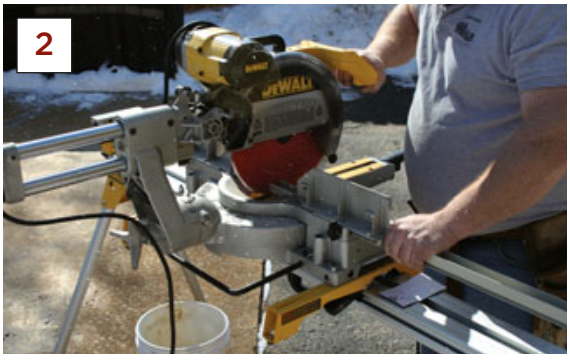
Manny Silva *owns Silva Lightning Builders, a remodeling company in North Andover, Mass.*

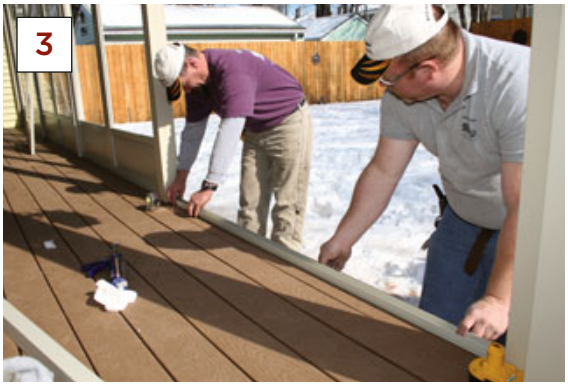
Quick Porch Enclosure

by Paul Mantoni

Over 20 years ago, on a vinyl siding job, I screened in a deck that had a shed roof. I used wooden screen doors for the panels and framed out openings to fit them. Several years later, I went back to the same house to install some windows, and the vinyl siding looked great — but the screens didn't. The frames hadn't been painted in some time; what was left of the paint was peeling, and the frames had started to rot.







I see a lot of wood trim that's been neglected, just like the screen-door frames on that porch. Being a vinyl-siding contractor as well as a deck builder, I'm interested in low-maintenance alternatives, so now I use storm doors made of aluminum instead of wood for the panels **(1)**. They last for decades with only seasonal cleaning, as the finish doesn't peel and the aluminum doesn't rot.

Aluminum storm-door panels aren't just durable; they're also versatile. The screens can be swapped for glass, extending the seasonal use of the porch considerably. Even in winter, the porch can be comfortable for parties and holidays, with the help of a space heater.

I buy the panels in custom sizes up to 42 inches in width. My supplier, Harvey Industries (800/942-7839, harveyind.com), also sells everything needed to join the panels into a screen system: upper and lower track, F-channels to attach the panels to the support posts, and H-channels for joining the panels to each other. I can get the panels in three colors and four styles, along with matching coil stock for trimming the posts. Harvey distributes in the Northeast, but there are probably similar products available in other parts of the country.

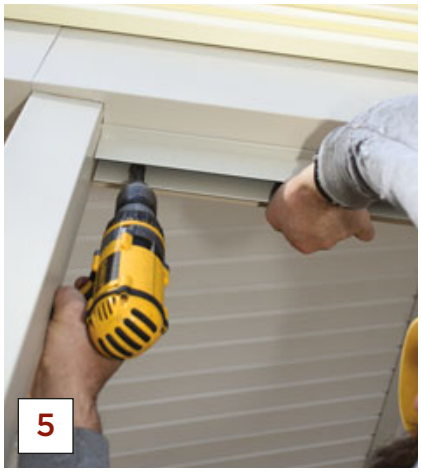
Installing the panels is straightforward. Note that there are typically two panels between each pair of support posts. On the job shown here, my helper and I had already wrapped the wood posts in coil stock.

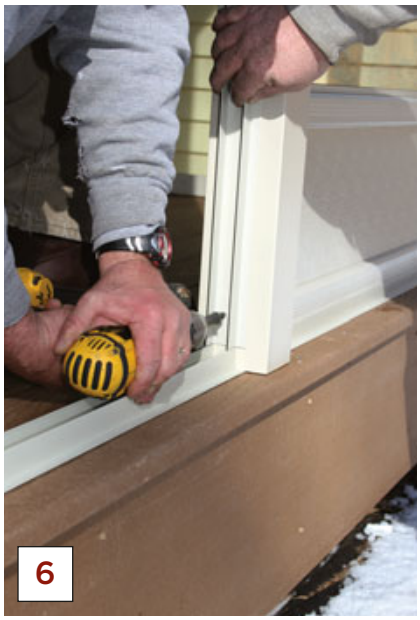
Upper and lower tracks, F-channels for the sides, and H-channels used to join storm-door panels together and to the framing are supplied long. We cut them to length using a chop saw; a standard trim blade works well **(2)**.

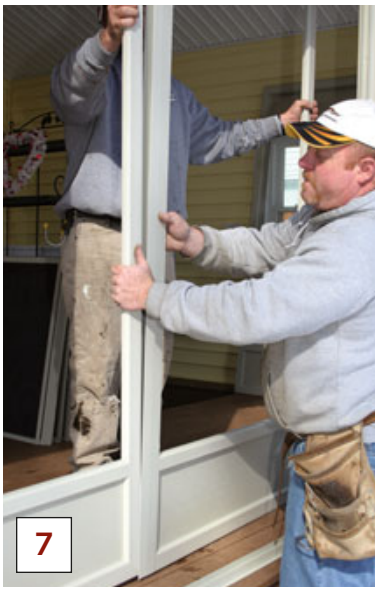
After bedding the base track in caulk, we screw it to the

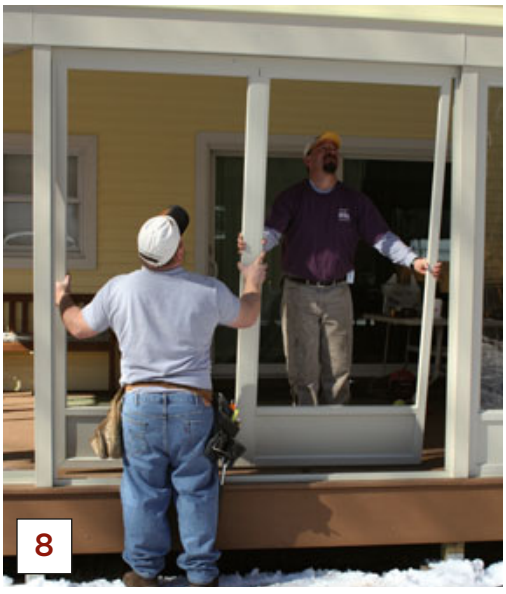
decking (3), then drill weep holes 3 inches from the ends and 16 inches on-center. After carefully measuring to make sure the panels will be plumb (4), we attach the top track in the same way (5). The top track has a deeper profile than the bottom track to allow the door panel to be lifted up and then dropped into place.

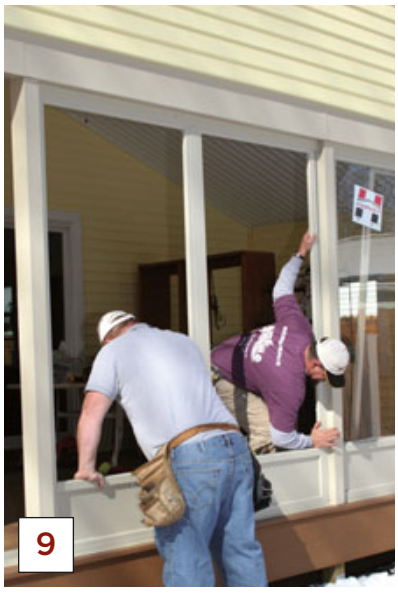
Next I install F-channels along the posts (6), again checking to make sure that the top and base tracks are perfectly aligned. With the glass or screens removed to lighten the load and reduce the risk of damage, we join each pair of panels with an H-channel that's cut to fit between the top and bottom tracks (7). We slide the joined pair of panels up into the deeper top track until they clear the bottom of the opening, then drop the panels into the base track (8). After adjusting the fit around the perimeter (9), we screw the panels to the F-channels and the H-channel (10). Finally, depending on the season, we install the glass or screens in the panels (11).

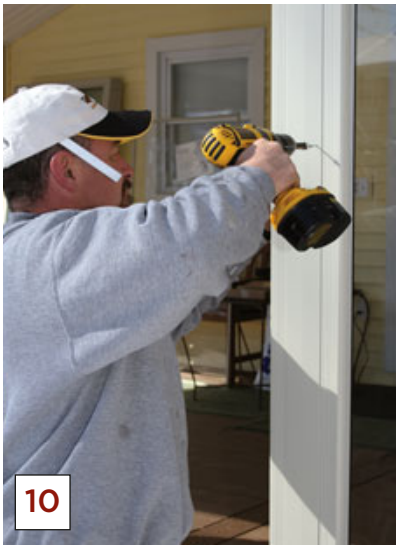

5

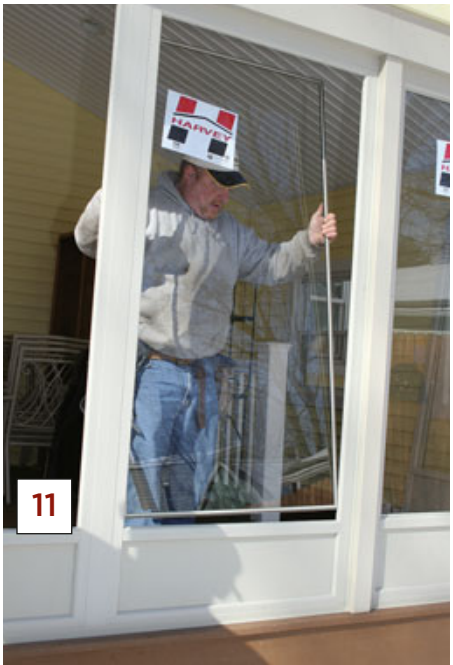

6


7


8


9


10


11

Paul Mantoni *owns Exteriors Plus in Terryville, Conn. This article first appeared in* Professional Deck Builder *magazine.*