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HANDY



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PORCH IN PINE

Wood adds a warm welcome

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Warm Welcome

Transform your concrete porch with wood

By Blueberry Hennin



Before

A front porch should be warm and inviting — a place that evokes fond memories of lazy summer afternoons. But today houses often have a poured-concrete porch, which is more akin to a loading dock than an idyllic place to visit with friends and family. Concrete is typically used because installation is fast and cheap, but it lacks the comfort and charm of a traditional wooden porch.

We transformed this home's covered slab porch into a wooden porch without the labor of removing the concrete. Whether you are building a new covered porch or giving your concrete covered porch a face-lift, pressure-treated tongue-and-groove decking will provide an attractive look that can last for decades.

The flooring

Most wooden porch floors are constructed of 2x6 lumber evenly spaced to allow airflow. Tongue-and-groove boards are typically not recommended for outdoor use because they don't allow air and moisture to easily pass between them, and this can be an invitation for rot. However, pressure-treated Southern pine tongue-and-groove decking is designed specifically for floors of covered porches.

The boards are kiln dried after pressure treatment to prevent rot and to create a stable product. You can buy or special-order the boards at most lumberyards.

The cost of materials for this 7 x 24-ft. floor was less than \$1,000. *HANDY* Editor Larry Okrend and I built it in three days using basic carpentry tools as well as a miter saw, power nailers and a hammer drill. Every porch is different, so some of the procedures we used may not apply to your situation. But you should benefit from the lessons we learned along the way.



Apply a sealer to the concrete to minimize moisture transfer. Spread it evenly and work it into the surface with a stiff-bristled brush.

Prep work

The new wood surface adds about 2-1/4 in. to the height of an existing porch. Be sure to measure the height of the step up onto your porch and the height of the step or threshold from the porch into the house. Check with local building officials for the maximum porch-step height allowed. It is easy to add a step leading up onto the porch, but it's more difficult to change the height of the threshold

Getting Started



Stack the floorboards with stickers (spacers) to help them acclimate. Loosely cover the pile with a tarp to protect it from moisture. Be sure the pile is not in direct sunlight.



We applied the first coat of enamel before cutting the boards to length. This allowed the paint to dry while we built the frame for the porch. You can brush or spray the enamel. Wear gloves and work in a well-ventilated area.

Fastener Facts

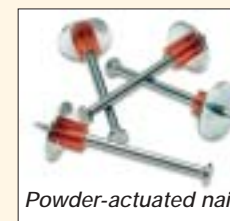
Tapcon fasteners are designed to attach a variety of products to masonry. No inserts are required, but you need to drill pilot holes in the concrete. They are reversible and removable, unlike powder-actuated fasteners. And there is no impact involved in installation, so they are unlikely to shatter the concrete.

Powder-actuated fasteners are designed to attach wood to concrete. Although installation is quick, they do create an impact, so take care not to nail close to the edge of the concrete.

The Southern Pine Council (see SOURCES) recommends hot-dipped galvanized 8d ring-shank nails to attach the floorboards to the sleepers or joists. These may be difficult to find, so you can substitute similar fasteners. We used 2-1/2-in. galvanized ring-shank siding nails. The ring shank keeps the nails from popping out of the wood as the temperature and moisture content change. As you shop for nails, be sure that the length of the nail is appropriate for your application. Drilling pilot holes helps prevent the wood from splitting. — BH



Tapcon screws



Powder-actuated nails



Ring-shank nails

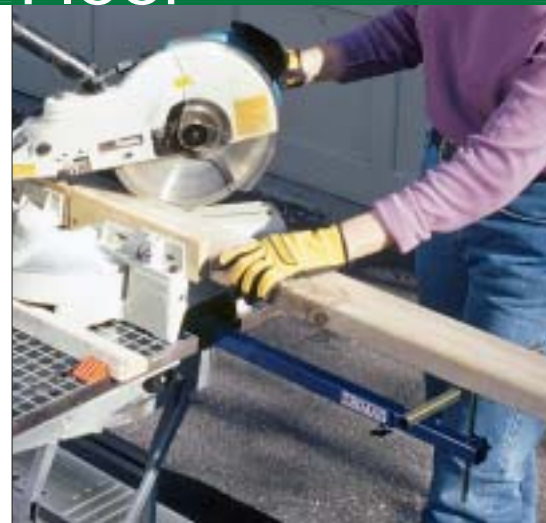
leading into your house.

Once you're ready to begin, make the work area accessible. If railings surround the porch, you may want to remove them. Ours were in good condition, and we handled them carefully so they could be reinstalled.

When you lay the new floor over the concrete, you'll create a void between the decking and the concrete. If the concrete slopes toward the house, water can accumulate there; in that case, you'll need to apply a concrete resurfacer to change the slope. Once you've fixed this problem, you can begin laying out the framework for the new floor.

Inspect the concrete surface to be sure it is solid; then apply a concrete seal. We treated ours with UGL Latex-

Framing the Floor



Snapping a chalk line helps ensure that the sleepers are spaced 16 in. OC (photo, far left). We measured and marked to the outside position of each sleeper.

We used a miter saw to cut angles on the sleepers (photo, near left). Be sure to wear gloves, a dust mask and eye and ear protection. Also remember to collect the sawdust as you work. (See "Safety Guidelines", p. 39.)

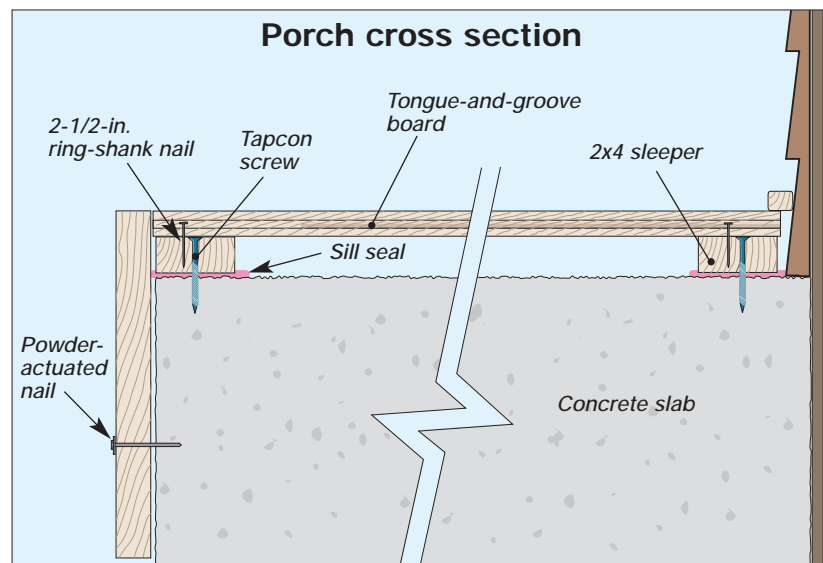


As you drill into the wood and concrete, withdraw the bit from the hole often to remove sawdust and concrete dust and to make bits last longer. After the sleepers are installed, look for variations in overall surface height. You may need to level some sleeper tops with a sharp chisel.



Based Drylok Masonry Waterproofing (see SOURCES). Both pressure-treated wood and concrete are hygroscopic, meaning that they are likely to absorb or release water when the weather changes. The waterproofer makes the concrete resistant to absorbing and releasing water. This extra step prevents the concrete from sweating and exposing the wood to water. Although pressure-treated wood is unlikely to rot, it can expand when it absorbs water.

After the waterproofer dried, we stored all of the lumber on the porch. Even though the floorboards are kiln dried after treatment (KDAT), they still



need to acclimate to the site's temperature and humidity.

The 2x4 sleepers and skirt boards were wet and needed time to dry and acclimate. Do not store the wood in direct sunlight or in a heated space; this can cause it to bow, twist or crook. It's best to let the wood acclimate close to the temperature at which it will be installed and cover it loosely with a tarp.

After a one- to two-week acclimation period, you can paint the wood. The Southern Pine Council (SPC) recommends applying a coat of paintable water-repellent sealer to all four sides and the ends of each floorboard. After adequate drying time, apply a coat of high-quality, mildew-resistant, oil-based exterior primer. (A solid-color stain should never be used on a porch floor because of its low resin content.) We were able to skip the primer step because the porch enamel we used was self-sealing; we just applied a thin coat to all four sides of each board before we cut the wood to size. Be sure to coat the ends of the boards after they are cut and before they are installed.

Laying sleepers

The pressure-treated 2x4 sleepers are fastened to the concrete first. They are crucial because they provide a space between the floorboards and the concrete, which allows air to circulate and keeps the floorboards dry.

Install the sleepers 16 in. OC with sill seal between them and the concrete, and leave a 1-in. gap between the ends of the sleepers and the house. The sill seal is a membrane that allows air to pass under the sleepers so they can dry easily. The 1-in. gap between the sleepers and the house allows the 2x4s to expand without damaging the house.

Floorboards Step-by-Step



You may need to tap the floorboards into place with a hammer. Use a floorboard scrap to protect the board edges — strike the scrap with the hammer to knock the board into position unscathed.



Paint the groove edge of the board just before you install the next board to ensure an effective seal against moisture and provide a good bond between floorboards.



Trimming and Facing



We notched some floorboards to fit around the porch posts and cut the rest to length after installation. A circular saw wouldn't cut up to the post, so we used an electric handsaw (left) to cut flush with the post and completed the cuts with a circular saw (above). Be sure to place a tarp beneath the cutting area so that you can collect and dispose of the sawdust safely.



Because the skirt board is decorative, not load-bearing, we used a powder-actuated nail gun to fasten it to the concrete. Although it is flush against the concrete, there is enough space between the board and concrete to allow drainage.

We used a tape measure and chalk line to mark the position of the sleepers. Rather than marking the center line, use your chalk line to mark the edge of the sleeper position. This allows you to see exactly where the edge of each 2x4 should sit. Be sure to leave a 1/2-in. space between the first sleeper and the house.

After marking all the lines on the concrete, we laid out the sleepers to check the fit and to be sure the 2x4s were cut to the correct length and angle. We needed to make several angle cuts to build the framework around a bay window, so we cut each piece to fit and set it in place.

We first fastened the row closest to the house and then worked toward the outside, being sure to put down sill seal between the wood and the concrete. We drilled clearance holes in the wood and pilot holes in the concrete before installing Tapcon screws to attach the sleepers to the concrete. When drilling, pull the bit out of the hole frequently to clear waste. This not only makes drilling easier but also extends the life of the bit.

Some of the 2x4s that we used were of slightly different thicknesses at the ends. To fix this, we trimmed the ends with a sharp chisel. Perfectly level sleepers would be ideal, but at the very least there should not be any sudden changes in height. The floorboards can withstand slight gradual changes, but severe changes may cause them to crack.

Floorboards and trim

The key to a long-lasting porch floor is to reduce the possibility of dimensional changes in the wood resulting from moisture fluctuations. Applying the finish prior to installation helps. Many builders also apply a coat of water-repellent sealer to the tops of all floor joists (or in this case, the sleepers), according to the SPC. In addition, you'll need to apply a coat of oil-based porch enamel to the tongue or groove edge and to the ends of each board during installation. This can be messy because you will be installing boards while the paint is wet. But this procedure ensures an effective seal against moisture penetration and a good bond between floorboards.

Final Details

Unlike interior flooring, tongue-and-groove porch flooring is blind-nailed directly to the floor joist or sleepers with hot-dipped galvanized 8d ring-shank nails. Because the nails penetrate the edge of the boards, you should use a nail set to sink the heads below the surface. Be sure to position the ends of the floorboards at least 1/2 in. away from the house to allow for movement. This space is easily concealed with decorative exterior



For the trim, we used 1x2 pressure-treated wood painted with porch enamel. A cordless finish nailer made installation easy, and a scarf joint disguised the seam between two long pieces of trim.

trim. We used pressure-treated 1x2 strips, but cedar would also work. Once you've finished installing the floorboards, apply two coats of oil-based porch enamel to the surface and exposed ends.

Maintenance of a tongue-and-groove porch floor is similar to that of a regular porch floor. You'll need to repaint the flooring every three to five



Use enough paint to thoroughly coat the wood. This protects it from weathering and provides a finished appearance. As we touched up the trim with a brush, we also coated the fasteners with paint.

years, depending upon weather conditions and the amount of exposure to direct sunlight. Watch for water accumulation, structural decay and raised fasteners — these are major problems that should be corrected quickly.

Safety Guidelines

The use of pressure-treated wood continues to generate controversy. Although the wood is treated with chemicals that are potentially dangerous, there is no safety risk if you follow the manufacturer's guidelines for use and handling. In the case of our porch floor, several coats of enamel helped to further seal the wood and its chemicals from human and environmental contact.

The Southern Pine Council recommends wearing gloves when handling the wood, and wearing a dust mask and collecting all sawdust when cutting treated lumber. In addition, you should work outside whenever possible, and always dispose of treated-lumber scraps and sawdust according to manufacturers' recommendations and in compliance with state and federal regulations. Finally, you should never burn pressure-treated wood because toxic chemicals can be released. For more information, visit the SPC Web site (see SOURCES).



SOURCES

Black & Decker (electric handsaw)
Hampstead, MD; 800-544-6986
www.blackanddecker.com

Ironclad (gloves), Los Angeles, CA
888-314-3197, www.iclad.com

ITW (Ramset), Schaumburg, IL
800-348-3231, www.itw-ramset.com
(Paslode), Vernon Hills, IL
800-682-3428, www.paslode.com

Porter-Cable (circular saw)
Jackson, TN; 800-487-8665
www.porter-cable.com

Southern Pine Council
Kenner, LA; (504) 443-4464
www.sfpa.org

UGL (concrete waterproofer)
Scranton, PA; 800-845-5227
www.ugl.com



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