

# An Elegant Border for Your Deck

Herringbone corners and hidden fasteners require slight framing modifications, but the result looks spectacular

BY JOHN MICHAEL DAVIS

**T**here are a lot of parts in a deck, but in the end, it's the decking that everyone notices. One thing I've learned building decks in New Orleans's brutal climate is that of all a deck's parts, the decking also takes the most serious beating.

My default method for fastening deck boards is to use stainless-steel screws run in such dead-straight lines that they become part of the design. On this project, however, the homeowners wanted ipé decking, so I decided to upgrade to a hidden fastening system to showcase the wood. I speculated that the time and material expense for using hidden fasteners would not be much costlier or labor intensive than screws.

At the time, everything I knew about hidden fasteners came from a *Fine Homebuilding* article ("Deck-Fastener Options," *FHB* #178 and online at [FineHomebuilding.com](http://FineHomebuilding.com)). I remember being impressed by the EB-TY system ([www.ebty.com](http://www.ebty.com)), even in a field of other innovative products, so I decided to give it a try on this project.

EB-TY fasteners come in different sizes for various thicknesses and types of decking. Here, I used the EBE004, which has a built-in spacer of  $\frac{3}{32}$  in. and is specified for the  $\frac{5}{4}$ -in. ipé I was installing. I made some jigs and took a production-minded approach to installation that kept labor time similar to screwing down the boards. The EB-TY system cost about twice what screws would have, but to me, it's a good value. There are no fasteners visible, so the deck looks clean and elegant. Also, the top surface remains unbroken, which makes for a more durable board.

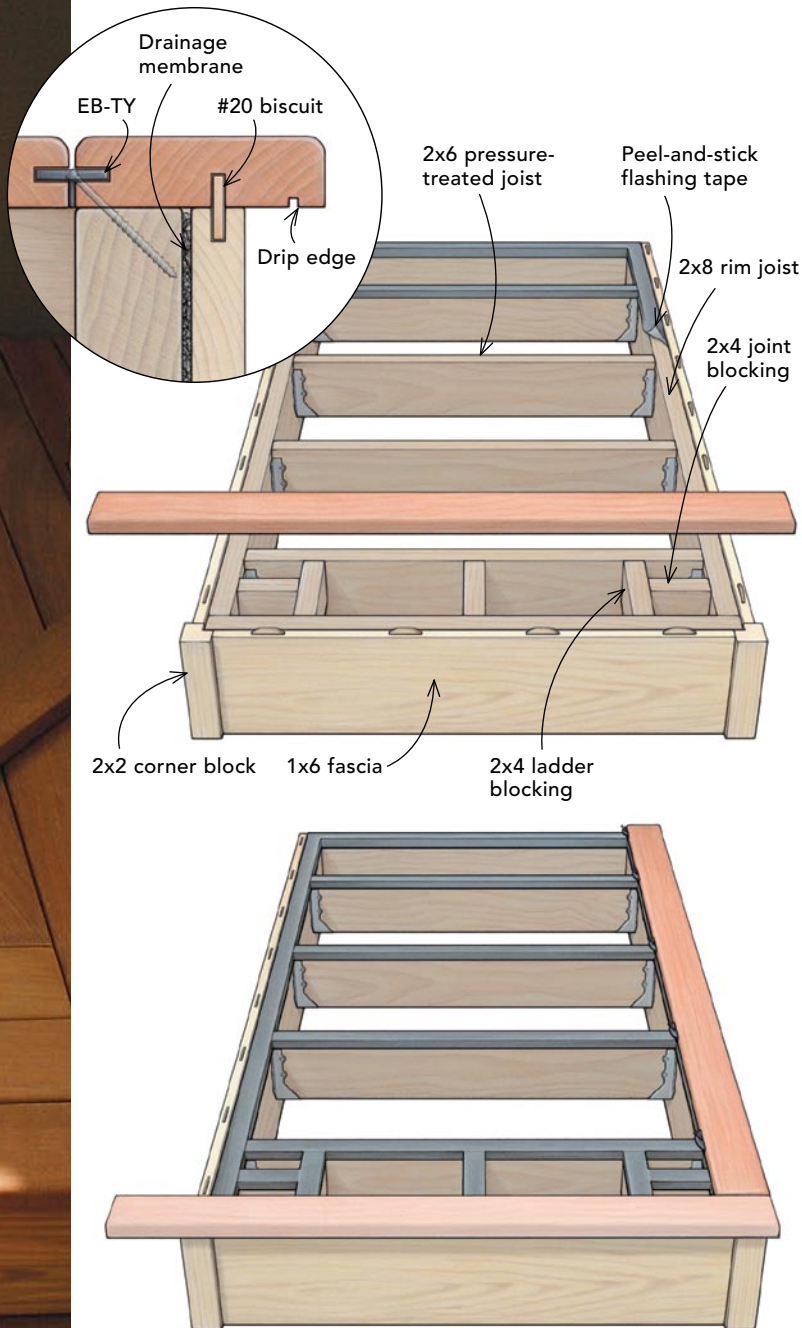
## Use butt joints outside

During the design, I decided to wrap the rim joists with a 1x10 pressure-treated clear-and-better southern-yellow-pine fascia board. Given the anatomy of this deck, I knew that some lags, screws, and nails would be visible in various places around the rim joist. Because I would need to use



## THE BORDER STARTS WITH TWO BOARDS IN ONE SQUARE CORNER

Three courses of deck boards weave together in the corners to form the herringbone pattern. Boards are held in place by EB-TY fasteners, which fit into slots and attach to the joists. Blocking beneath the joints supports the pattern and fasteners. The perimeter boards get two grooves (inset below). The inner groove receives biscuits that run along the fascia and help to start things off square. The outer groove acts as a drip edge to keep water out of the biscuited joint. Fascia boards terminate into corner blocks in lieu of miter joints.



**Biscuits replace screws.** Instead of using screws and plugs through the face of the perimeter boards, the author chose to biscuit them to the fascia. Run the starter board long; it will be cut after the field is laid. Dry-fit the starter board with the biscuits in place. After applying glue to the biscuit slots, the biscuits, and the groove, reapply the board and clamp it in place.



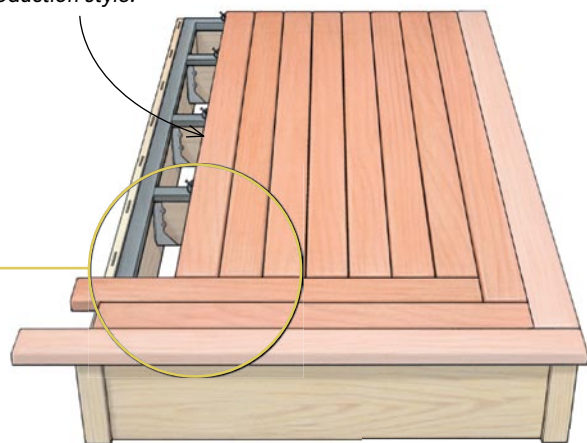
**Slot the first board in place.** After gluing and clamping the first board, determine where the second board will intersect and where the third board will end. Cut the slots using a router out-fitted with a slot-cutting bit. Bending over the board to make a cut like this is dangerous, so use caution. Using a biscuit joiner before the board is installed is another option.

## FINISH THE CORNER, AND FILL THE FIELD

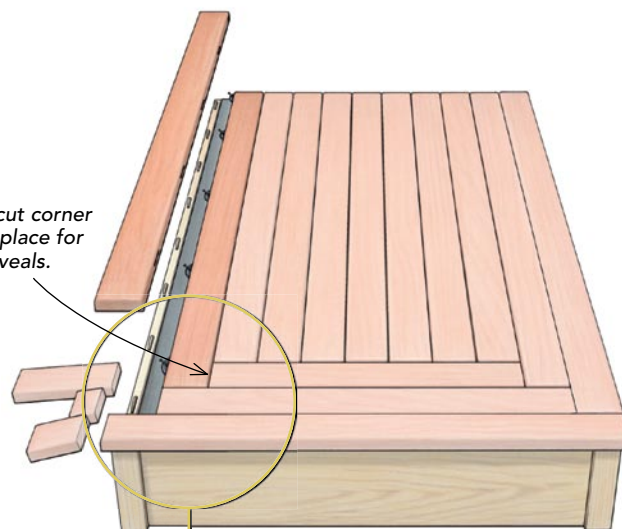
**Move from the corner out.** Once the first herringbone corner is complete, install the field. Cut the field boards the same size, and use a biscuit joiner to slot both edges of the board at each joist location. Each board interlocks with the previous one. Move in this fashion until there are only three boards left to install.



Cut all field boards; then install them production style.



Carefully cut corner boards in place for precise reveals.



## CUT, SLOT, AND WEAVE TO FINISH

**Cut the front boards in place.** Before installing the last two boards, cut the innermost border board in line with the edge of the last field board. Start the cut with a circular saw, ideally a 4½-in. trim saw. Trim saws are easier to control and create a thinner kerf. Fein's Multi-Master (photo right) is the best tool for finishing the cut because its Flush Cut blade eliminates the possibility of cutting into the next board. It's also possible to use a jigsaw outfitted with a short blade, a Japanese finishing saw, or a sharp chisel. Ease the edge of the cut end with a ¼-in. roundover bit, then slot the end and its mating board to receive an EB-TY. Slot only one edge on the last board; then glue, biscuit, and clamp it in place.



stainless-steel fasteners and take extra time installing them so that they looked like part of the design, a fascia board that hides the fasteners seemed like a logical option. This tack turned out to be of dubious economic value when compared with the price of stainless-steel fasteners, but it does dress things up.

I also decided to create a border with three courses of deck boards. Framing the perimeter with a border isn't a new concept, but corners are typically done with mitered joints. In my experience, mitered joints in exterior applications don't fare well. Wood moves across the grain, so miters are prone to opening. I was wary of this fact even with ipé, which doesn't move much, and especially with the southern-yellow-pine 1x fascia.

With wood movement in mind, I stuck to square cuts and butt joints for the decking and the fascia. I ran the border around a field of deck boards and, instead of miters, made a herringbone design in the corners. The fascia boards die into corner blocks, which I incorporated into the design (drawing p. 29).

### Clean, shape, and seal every board

Although the ipé showed up on the job site in good condition, I took the time to clean and dress up the boards. After choosing the best side, I sanded it lightly with 80-grit paper on a random-orbit sander to remove surface flaws. Next, I put a ¼-in. radius on the two top edges with a roundover bit and router. Later, when the boards were cut to length, I rounded over the ends, too.

Once the boards were prepped, I cleaned them with naphtha, then laid them out across the joists, where I applied a coat of Flood's CWF-UV Clear Wood Finish ([www.flood.com](http://www.flood.com)) to the tops. This brought out the wood's true glow. Once the deck was complete, I applied a second coat for further protection.

The dense ipé soaked up the sealer in varying amounts, which left some boards darker than others. I sorted the boards into a pleasing arrangement, taking into account grain pattern and direction, and placed the most beautiful boards where they would be most visible. Then I numbered each for sequence on the bottom and drew an arrow for direction.

### Start with the border

This deck is fairly large, about 17 ft. wide by 15 ft. deep, and is broken up into three sections. I treated each section separately, starting with the first course of border boards, then the second, then the third. Once the

border was established for each section, I filled in the field boards, working from one side of the deck to the other.

The key when laying the border was to establish a square corner. If I had been using screws and plugs to start the border, this process would have been tedious. But I used biscuits, so I was able to rely on the groove they run in. The groove parallels the edge of the deck board and locks into the fascia, which is attached directly to the square framing.

The perimeter also had to be established first to determine the length of the field boards, so I completed a corner with all three courses. This corner became a reference point for determining the length of the field boards. I cut them all to the same length so that each would hang over the rear rim joist equally.

### Lay the field production style

Installing the corner boards took some time. I glued and clamped the outer boards, then cut the EB-TY slots in place with a router. Then I dry-fit the next two courses, marked the joist layout directly on them, and cut the slots. This was the best way to make sure I got the herringbone corner joints exactly where I wanted them. There were more than 1000 slots to cut in the field boards, though, which could have been a daunting task. So I built a site-made slot-cutting jig with the materials I had on hand (photo right).

The two boards that were to be laid last became the base for the jig. A stop block screwed into one end aligned each board to layout lines marked on the jig's base. Then I placed the first board upside down on top of the fixture boards and locked it in place with cleats. Now it was merely a matter of placing each board in the fixture in the correct direction and sighting the layout lines with the biscuit joiner, which made a tedious task fast, accurate, and easy.

Finally, I found out quickly that it was easier and faster to do everything I could while the boards were in the fixture. Therefore, once the slots were cut, I installed the EB-TYs and drilled pilot holes for the screws. Drilling pilot holes is mandatory with ipé and a good idea with pine. The self-drilling screw tips might let you slide when using pine, but the screw would probably run with the grain in some spots, causing splits. □

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## Fastener feedback



An EB-TY, which looks like a plastic biscuit with legs, slips into a slot cut in the edge of the board directly over each joist. The legs, or splines, hold the fastener off the joist and create a ⅜-in. gap between deck boards (other sizes are available for 2x decking). A stainless-steel trim-head screw goes through the EB-TY and deck board at a 45° angle into the joist.

- While I erred on the side of "dead-on" when aligning the slot center with the joist center, I learned quickly that there is about ⅜ in. of wiggle room from side to side.

- The EB-TY itself has about the same amount of built-in "slop" in the slot as a wooden biscuit, which gives you a slight amount of additional play. I figure that just sighting the jig's layout lines with the joiner, rather than marking the board for every slot, produced around a plus or minus tolerance of ⅛ in., which is fine if everything else is also that close.

- Once fastened, the EB-TYs were pleasantly forgiving when accepting the next board's slot. It is possible to torque the outer flange over by cinching down too much on the screw. But I quickly got a feel for just right by putting a finger under the flange as I drove in the screw. There was also a slight click when the screwhead seated into the EB-TY's hole.

- Once I figured out the jig arrangement for cutting slots, the process went quickly, considering the huge amount of repetitive motion. I appreciated that the gap spacing is automatically built into the system, which helped both in consistency and in labor time savings.

- The ⅜-in. gap between boards is too narrow to be practical; it won't let plant debris fall through. But much of this deck is covered, so the gap seemed acceptable.

