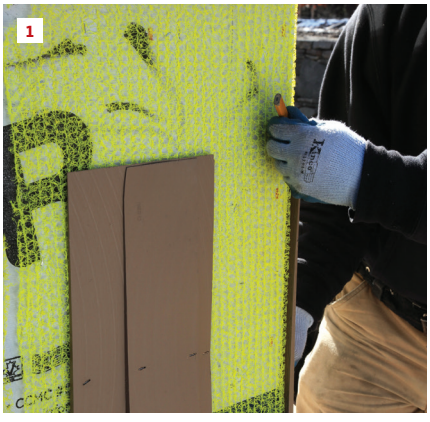
BY CHRIS YERKES



The first shingle for the starter course is scribed to the corner, leaving space for the rainscreen **(1)**. The author uses a block plane to trim the shingle to the line **(2)** and fastens it to the corner. Then he scribes the adjacent shingle to the corner **(3)**, trims it, and fastens it in place to complete the corner of the starter course. The first shingle for the outer layer of the bottom course is kept clear of the flashing below **(4)**. That shingle is scribed, trimmed, and nailed in place, with a final edge tune-up done using a block plane **(5)**.

Weaving Stained-Shingle Corners

Many installers—either from a design standpoint or because they don't want to take the extra time—simply butt siding shingles into corner boards. But I vastly prefer the classic look of woven corners, with the shingle siding wrapping seamlessly around the corners of the house.

Additionally, I think woven corners can make the corner of a house more weathertight than corner boards. You end up with multiple layers of shingles that have alternating seams and that, if installed correctly, can do a better job of keeping water out than a single butt joint between corner boards could.

We recently completed the siding shown in this article on a home for which the owners opted for chocolate-brown prestained white-cedar shingles. The project was a greenhouse addition to the home, and the short section of siding below the greenhouse glazing gives us a good opportunity to look at starting and finishing a corner in just a few courses.

STARTER COURSE

Before I start shingling, I check that the corners of the house are level with respect to each other *and* with respect to the rest of the house. I also check the spacing of the courses to make sure that the exposure will be consistent top to bottom. In this case, the bottom shingles started over the water-table flashing below, and the top shingles tucked under the trim below the greenhouse glazing above.

A corner weave works by overlapping the edges of successive shingle courses to make the corner weathertight. The trick is to keep the overlap seam in each course even and tight and to alternate the direction of the overlap from course to course.

The bottom course on every sidewall shingling project is a double course. The starter course is installed first and is then covered by a second, visible course. The starter course kicks the bottom course away from the wall at the proper angle, and also helps to

Photos by Roe Osborn

To rough-cut a shingle to the scribe line, first score it with a razor knife **(6)**, then snap off the waste **(7)**. When the shingle is fastened in place, fine-tune the edge with a block plane, holding it flat against the adjacent shingle **(8)**. A 6d stainless steel finish nail, driven through the edge and set, finishes the joint **(9)**.

make the first course weathertight.

I usually shingle a building one wall at a time, wrapping the shingles around the corner to guide the courses on the adjacent wall. I run the starter-course shingles over to about 6 inches from the next corner that I will be weaving. Then, leaving about the same distance from the corner, I install the first few shingles of the starter course on the adjacent wall.

The first corner shingle I pick extends past the corner by an inch or so. Holding the shingle in place, I scribe a line on its back along the end of the wall, leaving plenty of room for the rainscreen **(1)**. Then I plane the edge of the shingle to my line **(2)**, and staple it to the wall.

The edge of that first shingle must be trimmed precisely to allow the adjacent shingle to lie flat. If the edge sticks out too much, the adjacent shingle will crack when you fasten it, or the corner will bulge out and the corner seam will open up. And if the edge is shy, there will be a gap and the corner won't be weathertight. So I fine-tune the edge using a block plane, and then, letting my pencil follow the planed edge, I scribe the starter shingle for the adjacent wall **(3)**. I then plane it and fasten it into place.

SECOND LAYER OF BOTTOM COURSE

I hold the first corner shingle for the second layer of the bottom course so that the bottom of the shingle is even with the bottom of the starter course, about 1/4 inch above the flashing. As recommended by Maibec (and as required by the International Residential Code), I offset the shingle edge at least 1 1/2 inches from the nearest gap between shingles in the previous course—in this case, the starter course **(4)**—and I make sure my corner shingles are always a minimum of 3 inches wide.

Using a sharp pencil, I draw a line on the back of the shingle, following the edge of the corner. If there's only a small amount of material to remove, I shave to the line using a block plane, and when the edge of the shingle is nearly perfect, I nail it in place. I do any fine-tuning by making a couple of passes with a block plane, keeping the sole of the plane absolutely flat against the adjacent shingle **(5)**.

Sometimes, though, there's too much material to efficiently remove it with a plane, so I first score near my scribe line using a razor knife **(6)** and snap off the waste **(7)**. Then I plane the edge to the line, fasten the shingle in place, and use a block plane to fine-tune the edge until it's even with the adjacent shingle **(8)**.

FASTENING THE CORNER

I always use stainless steel fasteners—in this case, 16-gauge staples 1 1/4 inches long with a 7/16-inch crown—to attach sidewall shingles. I fasten each sidewall shingle with two fasteners 1 inch up from the top of the exposure line and about 3/4 inch in from each edge. Fasteners should be driven flush, not overdriven.

For corner shingles, I add a third fastener—a little closer to the corner edge and a little lower than the fastener on that side of the shingle. This helps to stabilize the shingle and anchors the free edge at the corner.

I finish the corner on each course by hand-nailing a 6d stainless steel ring-shank trim nail through the face of one shingle and into the edge of the abutting shingle about 2 inches up from the bottom edge **(9)**. I finish by setting the nail flush.

WEAVING SUCCESSIVE COURSES

After nailing in all the bottom-course shingles along the wall, I measure up for

the exposure I need and draw a level line around the corner **(10)**. It's imperative that the shingles on the corners be installed dead-on level.

Given the water-table trim on this project, I trimmed the bottom-course shingles before fastening them because I couldn't plane to the bottoms of the shingles after they were installed. But in most cases, I fasten the shingles first and then trim them flush, which is what I did with the successive courses.

To create a true shingle weave on a corner, the direction of the seam needs to alternate from course to course. For this corner, the seam on the bottom course faces the front of the building, which means that the seam on the next course needs to face the side of the building.

I trim each corner shingle as before, doing the rough cut with a razor knife **(11)**, and planing the edge even with the corner. Then I apply and trim the facing shingle, as described previously. On a larger job, I might use a mini-router with a bearing bit to rough-cut the edge, letting the bearing ride on the adjacent shingle. But even with a router, I would finish the edge with a plane.

A level line guides each following course **(10)**. Trim shingles in place using a razor knife **(11)** and a block plane. A corner notch lets the top courses slip into a rabbet in the trim above **(12)**. At the top, the cutting is completed with a knife **(13)**. The top course is hand-nailed **(14)**. A coat of matching stain finishes the corner **(15)**.

TOP COURSE

I continue to install the shingles up the wall, alternating the direction of the seam with each course. Near the top of the wall, the shingles must be cut shorter, and for these courses I usually cut enough shingles for the entire course to the proper height on a table saw.

With this project, the top courses of shingles fit into a rabbet on the back of the trim. I build these corners as I did the ones for the lower courses, but I notch the upper corner of each shingle so that it slips into the rabbet **(12)**. That lets me cut and plane the shingle in place.

I fasten and trim these corners the same as I did the ones below, planing as much as I can and then using a razor knife to trim the very top **(13)**.

The final course must be face-nailed **(14)**. Some contractors try to get away with a finish nailer for this step, but I prefer the control and the clean, finished look of hand-nailing with trim-head nails—which are also much better at holding the shingles than finish nails. I snap a line across the course in non-permanent chalk to keep the face nails in a neat, straight line. The corner for the top course is fastened and trimmed the same way.

FINISHING

When the entire corner is finished, I check all the edges and smooth out any minor irregularities with a block plane. At this point, I'm shaving off tiny slivers.

When I'm happy with all the edges, I apply a healthy coat of matching solid-color stain to any bare wood **(15)**. I make sure to get the exact stain from the shingle manufacturer so that the corners blend in seamlessly with the rest of the shingles when the stain dries. I also dab a little stain on the heads of all the exposed nails, making them all but disappear.

Chris Yerkes owns Cedarworks, in Brewster, Mass.

Working on the flat roof of an existing building, Rob Paisley and his crew lift panels of National Gypsum eXP gypsum board into place for a fire separation wall **(1)**. The wax-impregnated product is designed to resist months of outdoor exposure during construction. Two layers of 1-inch material will provide two hours of fire protection. Shown here, the second layer must be slipped into the narrow space between the existing structure and the new building **(2)**. Steel H-studs slip over the edges of the gypsum board to hold it in place **(3)**.

Two-Hour Fire Separation Wall

BY TED CUSHMAN

Portland, Maine, is like many cities on the Atlantic Coast: In the popular parts of town, housing is scarce and property values, along with rents, are rising. In the older, fully built-out parts of the city, developers are looking for high-density solutions. In many cases, the answer is an infill project. Outdated, older single-family homes are being torn down, and the few small remaining empty lots are being developed to support shoulder-to-shoulder multifamily construction.

Last month, *JLC* showcased the balcony structure of a new four-unit apartment building in Portland, built on a tight lot with close setbacks. This month, we'll take a look at a nearby building under construction that's not just close to the neighbor—it's touching it (well, almost).

We talked with contractor Rob Paisley on site during the framing of the new apartment building. The property is sited on a double lot, adjacent to an existing building that dates back to the 1800s.

A recent change in the neighborhood's zoning allows the developer to build a new four-story structure directly abutting the older house. But while that zoning change was pending, Paisley renovated the existing house. Now, he's constructing the new building next door.

"When you do that," Paisley explained, "the new structure has to be completely isolated from the old one." To accomplish the required fire separation, Paisley and his framing crew built a typical two-hour firewall (in Paisley's phrase, a "burn wall") between the two structures as they framed the new building.

Photos by Ted Cushman

This isn't the only fire-rated wall in the building. The building's two stairwells and its elevator shaft are each isolated from the rest of the structure with two-hour fire-rated assemblies. That was a challenging problem, said Paisley. "There is no plate-to-plate connection anywhere in this building," he said. "It literally has to be broken everywhere, which makes this hard."

With no wood-to-wood connections, keeping the walls straight and plumb has had its own difficulties. And with four occupied floors above the garage level, topped off by a walkable rooftop patio, resistance to lateral loads is also a concern. "This project encompasses every bit of residential and commercial you'd be likely to see in one building," said Paisley. "It could be a crash course for somebody who has never done it before."

Paisley beefed up structural assemblies in several places—for instance, adding shearwalls in the garage level and applying structural sheathing to both faces of some wall assemblies. For the wall backing up the two-hour gypsum-panel assembly, Paisley's crew installed old-school diagonal bracing between the studs.

As the new building rose next to the old one, the two-hour fire separation assembly had to be pieced together in between. That's accomplished using light-gauge-steel H-studs and C-runners, attached to the wood framing with aluminum breakaway clips. The 4-foot-by-2-foot pieces of gypsum board slip into the channels of the vertical H-studs and horizontal C-channels, and are secured lightly to the metal with screws. Then the metal framework is attached to the wood framing of the buildings on either side using the aluminum clips.

The gypsum board is tested to hold up for two hours in the event of a fire, allowing time for occupants of adjacent buildings to evacuate and for firefighters to extinguish the fire. If fire spreads into the wood walls on either side of the firewall (and the assembly works as designed), the heat of the fire will melt the aluminum clips only on the affected side, so that collapsing stud walls on that side would not pull down the firewall.

Ted Cushman is a senior editor at JLC.

Paisley uses metal screws to pin the H-studs and C-channel to the gypsum board **(4, 5)**. At each stud location, he places a heat-softenable breakaway aluminum clip **(6)**. He then screws the clip to the C-channel **(7)** and to the stud **(8)**. If a fire should cause a structural collapse on one side of the wall, the clips would melt and allow the wood to fall away, leaving the firewall intact to protect the other building.