Siding with Clapboards

Up one side or down the other, apply them correctly

by Bob Syvanen

My dictionary says that the word clapboard probably derives from the Middle Dutch *clapholt*—"clappen" meaning to crack or split and "holt" meaning wood. And in fact early clapboards were made by splitting or riving them from logs, rather than by sawing them. Still another explanation is offered by William B. Weeden in his book *Economic and Social History of New England 1620-1789* (Corner House Publishers, Williamstown, Mass. 01267, 1978): "Bricks were laid against the inner partition or wooden wall, and covered with clay. Boards were placed on the outside, first called 'clayboards,' then corrupted into 'clapboards.'

Today the word clapboard is used generally to refer to many different kinds of horizontal lap sidings. But here in New England, the word clapboard nearly always means bevel siding (photo below).

Tools—The nailing for clapboard work is light, so a 16-oz. wood-handled hammer is right for me. I use a 10-point, 20-in. crosscut handsaw for most of the cuts. And I use a utility knife rather than a pencil for marking. A knife mark is an exact line to cut to, whereas a pencil line varies in width and leaves you guessing as to which side to cut on.

I use a tape measure, story pole and chalk line for setting course lines. To locate nailing, I plumb down the stud locations onto the face of the building paper with a 4-ft. level. A combination square, block plane and a homemade siding gauge round out the list of essential tools for siding work. I use the siding gauge to mark clapboards for a good fit against the trim. When used properly, it keeps adjustments with the block plane to a minimum (more on using the siding gauge in a moment).

Figuring material—Most wood clapboards today are cedar, redwood or pine. Common sizes are ½-in. thick (at the bottom) by 6-in. wide, ⅝-in. by 8-in. and ¾-in. by 10-in. All sorts of grades are available, but lately I've been using vertical-grain clear cedar. One surface is smooth for painting and the other is rough for staining. It comes in lengths from 3 ft. to 20 ft., wrapped up in bundles of ten boards each. These days, the price in my area for ½-in. by 6-in. cedar is $.82 per lineal ft.

Some of the best clapboards I know of are made at a small family-run mill in Sedgwick, Me. (see *FHB* #31 pp. 35-37). Their #1 Premium Clears are radially sawn from eastern white pine. Their standard size is ½-in. by 6-in. by 8-ft. maximum length.

The rule of thumb for estimating siding material is to calculate the square footage of the wall area (minus window and door open-

Beveled clapboards, the quintessential siding, have been a tradition in New England for 300 years. Despite the advent of power saws, such as the radial-arm saw standing idle in the photo below, most carpenters today still cut clapboards the same way their forefathers did—by hand.

ings) and add 25%. But there is a more accurate way. Multiply the wall area (minus window and door openings) by the area factor shown below for the size of the siding that you are using: -

Siding (assuming a 1-in. lap)	*Area Factor*
1x4	1.69
1x6	1.40
1x8	1.30
1x10	1.24

Whichever method you use, add an extra 5 percent for waste.

I think the best nails for clapboards, if you are going to leave them exposed, are ringshank aluminum sinkers because they won't ever rust and stain the siding. They're fairly expensive and not a stock item at my lumberyard. Stainless steel nails are also available. But I've used hot dipped galvanized box nails for years with no problems. Trade associations and manufacturers recommend using at least 7d nails for ½-in. by 6-in. clapboards, but as long as I'm nailing over plywood sheathing, I use 5d nails. After penetrating the plywood, 5ds still sink ½ in. into the studs. They have smaller heads than 7d nails and are less expensive. I figure 5 lb. of 5d box nails per 1,000 square feet of 6-in. siding.

Preparation—To prevent the wood from cupping, I prime the back sides of all trim and siding, including clapboards. Boards will cup when only the face is painted because moisture will be absorbed through the unpainted backside. The wider the board the more evident the problem. I've seen 12-in. corner boards on a three-year-old condo that looked like barrel staves because they were only face-painted.

Corner boards, window casings and door casings are often wider than the studs in the wall behind, leaving no nailing for the clapboards that butt into them. To provide nailing, I fill in around corners and rough openings at the framing stage with 2x4 or 2x6 studs laid flat. I run the corner boards wild at the bottom and trim them later to fit the bottom of the clapboards.

You have to take precautions to keep water from running behind trim. Inside and outside corners and openings for doors and windows are the main areas of concern. Before nailing on trim, I staple up strips of 15-lb. builder's felt, which I call splines. I make them long enough to extend 3 in. above headers and 6 in. or 8 in. below sills. At least 4 in. of felt should show at the sides of all trim (drawing, p. .51). I cover the rest of the wall with building paper as well and tuck it behind these splines except at headers, where it goes *over* the splines.

I flash the head casings with copper, zinc or aluminum. This flashing should extend over the felt splines at the top corners of the windows and doors. I use rolls of 8-in. wide zinc most of the time because I like the way it works, but I use copper for really first-class work. I cut a strip as long as the head casing, then I cut it lengthwise with a utility knife, giving me a 4-in. wide strip. I bend the flashing over a 2x4 and space the bend so that ⅛-in. of flashing will extend beyond the casing. After nailing it in place and applying the clapboards, I use a 2x4 block and bend the extra ⅛-in. of flashing over the edge of the casing.

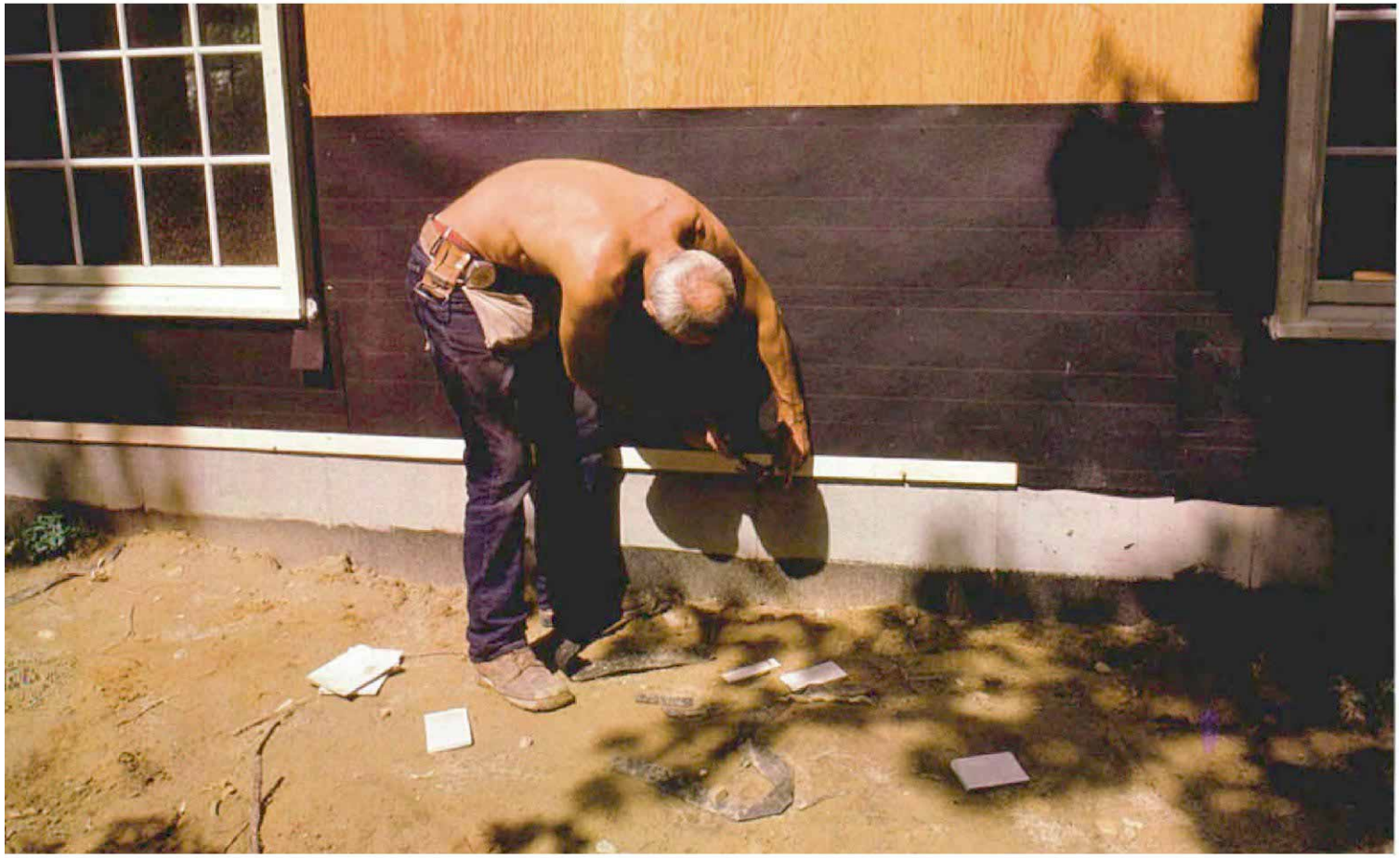
The course lines for clapboards are marked on a story pole. The pole can then be held against the frieze board anywhere around the house in order to transfer the lines to casings and outside or inside corner boards. *Photo by Pat Syvanen.*

At the bottom corners of windows and doors, the 6 in. or so of exposed spline should run behind the first course of siding below the sill and over the top of the second course below that. I trim the excess with a utility knife.

On the bottom of the window sills, I cut a ½-in. deep rabbet wide enough to receive the upper edge of the clapboard. Most windows come with this rabbet, but I check to make sure it fits the clapboards I'm using. If you have to cut or widen it, you're better off doing it before the window is installed. A circular saw with a rip guide will do the job nicely. It can be done after installation, using a utility knife and a chisel, but it's not easy.

To protect the space under the sill, I cut a piece of felt 8-in. wide and about 6-in. longer than the sill. I tuck this behind the side splines and hard up into the rabbet. The bottom goes over the paper below.

At the top of the wall, I rabbet the bottom of the frieze board so that the top edge of the top course of clapboards fits behind it. I use a router for this and make the rabbet ½-in. deep by whatever width it takes to receive the upper edge of the clapboard. I pack out rake



After the builder's felt is applied, a starter strip, representing the amount of overlap between courses, has to be nailed up so that the first course of clapboards will lay at the same angle as all the rest. Use 2-in. rippings from the top edge of the clapboards.

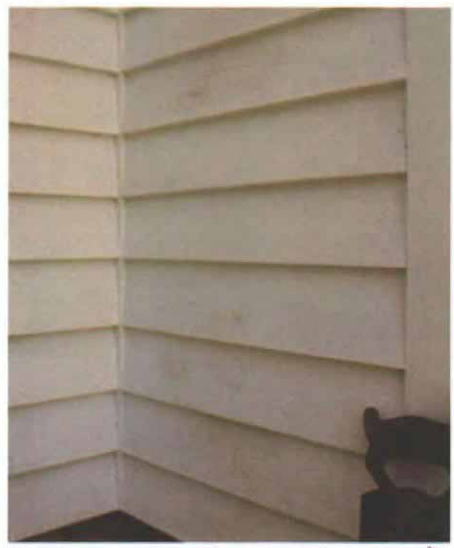
boards with 1x3 furring, or thicker stock if necessary, depending on the thickness of the clapboards. I nail them flush with the top edge of the roof sheathing (on houses without overhangs) and then nail the rake boards into them. This leaves enough space to slip the clapboards neatly under the rake.

Layout—I try to lay out courses so that the bottom edges line up evenly with window sills, header casings and frieze boards. This looks good and minimizes the number of boards I have to notch. I vary the exposures slightly if I have to—¼-in. more or less isn't noticeable, especially when spaced out over several courses. When I can't work it out exactly right, I choose the least objectionable option. If the height of door tops is different from window tops, I lay out the siding even with the window tops because there are more of them. When window tops are a few inches below the frieze board, I lay out the siding to avoid a narrow course under the frieze. An even better solution here is to use a wider frieze board that eliminates the need for a narrow strip of clapboard over the windows.

The maximum exposure for a 6-in. clapboard (it actually measures 5½ in.) is 4½ in. The exposure cannot be increased because the minimum 1-in. overlap at the upper edge would be lost. If I have a window opening that's 56 in. high, I divide 56 in. by 4½ in. The result is 12.44, which I round off to 13 and divide into 56 again. I come up with an exposure of slightly more than 4¼ in. for each course. In general, there is a lot of fudging of course exposure, and the time to do it is when laying out the walls.

To keep layouts consistent around the building, I make up a story pole that reaches from the bottom of the frieze board to a few inches below the top of the foundation. The frieze board is the reference point from which all of the layout marks are made (photo on previous page). In addition to clapboard course lines, the story pole shows door casing heights, the bottom of window sills and the top of window casings. The story pole can then be used for layout on the gable walls as well by aligning it with the tops of the window casings.

The course marks on the story pole are first marked to indicate the butts or bottoms of the clapboards. However, I start at the bottom of a wall when applying clapboards, setting them to a chalk line locating the upper edge. So to make the story pole work, I add the width of the clapboard to each butt mark. To avoid confusing these marks with the other layout marks, I make them very dark. Transferring the measurements from the story pole to corner boards and door and window casings is the last step of preparation.

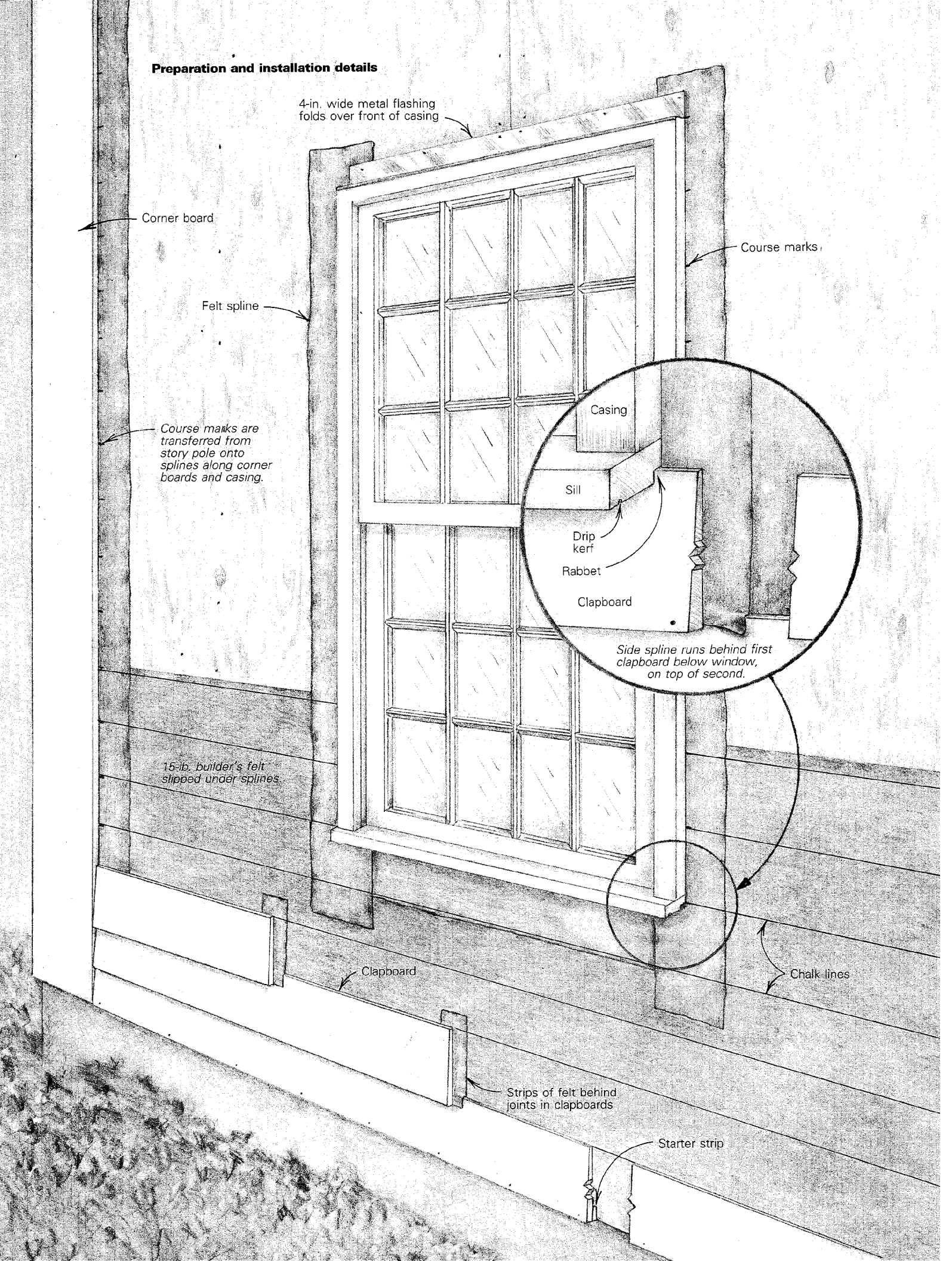


At inside corners, a square stick, usually ¾-in. by ¾-in., is nailed up and the clapboards butt into it.

Clapboarding—After the lower portion of a wall has been covered with felt, a beveled starter strip, 2-in. wide and the thickness of the top edge of the clapboard is nailed in place (photo above). I like to let it lap about ½ in. over the top of the foundation. The first clapboard course is laid to a snapped chalk line that locates the top edge of the clapboard. Traditionally, clapboards were applied from the top course down (some carpenters still do it that way) because early clapboards were hand-split and the top edges were not parallel to the bottom. The trued-up bottom edge became the control edge, and applying from the top down was the only way clapboarding could be done. If

Drawing: Michael Mandarano

Preparation and installation details



you're using scaffolding that attaches to the wall, then working from the top down eliminates the hassle of leaving out clapboards and filling them in later. To work from the top down, I snap lines corresponding to the bottom edge of the clapboard. The uppermost board goes on first, and I nail it near the top edge. That allows me to slip the second course under the bottom edge of the first, until it's on the chalk line, and nail through both courses. I follow the same procedure all the way down.

To get good fits at corner boards and casings, I hold the clapboard in place, straddle it with my siding gauge, and mark it with the utility knife while the gauge is held hard against the trim (cover photo). I like a snug fit at the trim, but not so tight as to push the trim around. This is important around vinyl windows that have no wood casings. They are very flexible, and the narrow side casings are easily pushed to accommodate a piece of clapboard that's too long. I use a block plane to adjust bad or tight-fitting joints.

When there are many courses of a specific length of clapboard, I cut one piece to fit and then check it at each course above to see where else it will fit. When I'm lucky, I can use the fitted clapboard as a pattern for all. Even if the pattern works for only half the courses, duplicate cutting is a time-saver. It works particularly well with very short lengths of clapboards, where I can set up a stop block and cut them on the radial-arm saw or table saw.

All butt joints between clapboards in the field of a wall should occur over a stud, with each end nailed to that stud. To make the joint leakproof, I put a 2-in. wide strip of building felt (I cut a whole mess of them beforehand) behind this butt joint. The traditional way to make this joint is by shaving or skiving the clapboard ends so they overlap by around 2 in.

I nail into each stud about ½ in. above the butt of the clapboard so that the nail also goes through the top of the course below. This is another area in which I disagree with the manufacturers and trade associations, who recommend nailing just above the course below. The reason they call for this is to allow room for the clapboards to expand and contract. But when I'm using 6-in. clapboards, the exposures are around 3½ in. to 4 in., and with the clapboards painted on both sides, there is no movement resulting from moisture problems.

Nailing above the top edge of the course below can result in splitting and cupping if you hit the last lick too hard, particularly with red cedar. Sometimes the bottom edge of the clapboard will cup away from the course below, which looks bad and doesn't seal the joint. But the main reason I nail through both courses is that, if the clapboards are going to be painted, I always set the nails so they can be filled later. And if you try to set nails in clapboards where they have no support directly behind them, the clapboards will split.

To fit clapboards around a round window, the clapboards are laid out on the ground and a pattern of the window, made of building felt, is traced onto them.

Corners—At inside corners I butt the clapboards against a ¾-in. square corner stick (bottom photo, p. 50). The size of the stick depends on the thickness of clapboards and exposure). I nail it over a creased spline of 15-lb. builder's felt.

There are two choices for the treatment of outside corners. I prefer butting the clapboards against corner boards, but you can miter the clapboards as well. To miter them, hold the clapboard in position and mark the backside at the corner. Set the clapboard in a miter box (a site-built miter box tall enough to accommodate the clapboard works best), shim the bottom out equal to the lap over the course below and make a 45° angle cut. Adjust the fit with a block plane. Cross nail through the miter with 4d galvanized finish nails.

Gables—I like to tuck the clapboards behind rake boards rather than fit them to the bottom edge of the rake. To determine how thick the packing strip must be, I stack a few pieces of clapboard to simulate the wall, and then measure. For ½-in. by 6-in. clapboards with a 4-in. exposure, a ¾-in. packing strip works well.

If you have to side around a gable vent, arch-top or round window, it's easiest to make a pattern out of building felt and lay out the cuts on the ground (photo above). It saves a lot of last-minute ladder-top fitting.

Finishing up—I set nails as I go because if a clapboard should split then, it's easy to replace. If I have to remove a clapboard after courses have been nailed in place above, I drive the nails through with a large nail set. Since the nails in the course above go through the top edge of the board I'm replacing, I drive them through this board as well. A new board is set in place and nailed. The bottom edge of the course above is renailed and the old nail holes filled.

Setting all the nails is extra work, and a lot of people don't bother. But if the clapboards are going to be painted, they look much better if the nails are set and filled. Paint doesn't hold up well over galvanized nail heads. I fill all nail holes with Old Time Putty (Sterling Cark Lurton Corp., Malden, Mass. 02148), taking care not to dimple or dent the filled hole.

I have seen carpenters push putty into nail holes, cut it by sliding the hand to the side and then wipe the residue with a finger. The result is a dent at the hole with putty all around it. When the house is painted, every nail location is accented. To avoid this, I take a wad of putty in one hand, push it firmly into the hole and then slice if off at the surface of the clapboard with a clean putty knife. □

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