

A No-Math Approach to Valley Plates

Whether you're tying in new gable dormers or adding a chimney cricket, giving the valley jacks a place to land has never been easier

BY JOHN CARROLL



Depending on where you live, and who you're framing with, you'll hear valley plates called a lot of different names: valley boards, blind valleys, California valleys, reverse valleys, layover valleys, false

valleys, and sleepers. Valley plates are used most commonly when framing layover gable dormers or chimney crickets as a means of attaching the new framing to the existing sheathing and rafters, and to provide a place for the valley jacks to land. Compared to laying out and installing the ridge board and common rafters, framing the valley plate can be pretty confusing. It's possible to figure the layout using geometry—the valley plate is essentially the hypotenuse of an imaginary triangle laid flat on the roof deck. But I prefer to avoid the math, instead relying on stringlines, measurements, and some creative marking in place. □

John Carroll is author of *The Complete Visual Guide to Building a House* (The Taunton Press, 2014).

Lay out and install the valley plate

The valley jack rafters need to rest on a plate. The plate doesn't need to be beveled, but because of its thickness, you need to install it inside the valley line; the object is to get the top outside edge of the plate in plane with the tops of the common rafters.

2 Snap a line between the top and bottom points to lay out the valley.

3 Set a scrap of wood along the valley line.

1 Use a straight-edge to extend the plane of the common rafters to the deck of the main roof.

4 Set a second scrap against the ridge. Scribe along the edge to mark an angle on the first scrap. Cut along the line.

5 Place the scrap piece against the ridge. Move it along the ridge until the top corner is even with the top of the ridge.

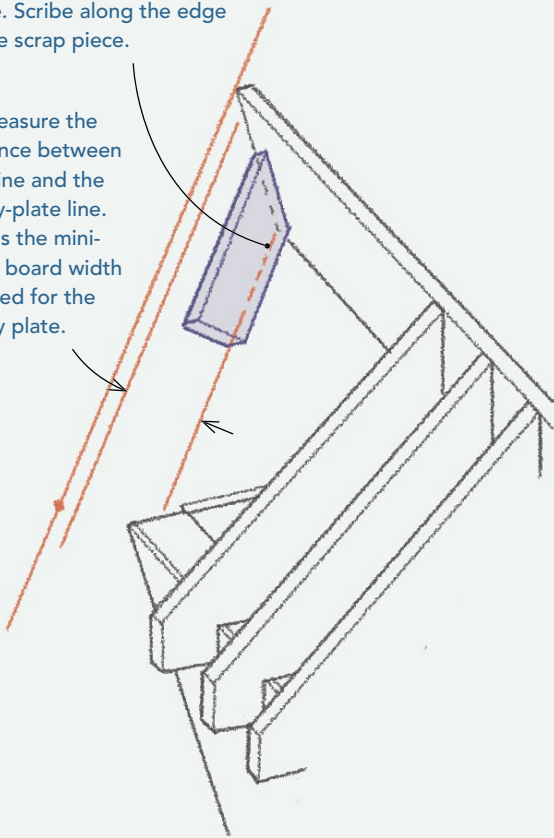
6 Mark the sheathing along the edge, and measure the distance from the valley line.

7 Transfer this distance to the bottom of the valley, and snap a line between the two marks. This is the valley-plate line.

Lay out and install the valley jacks

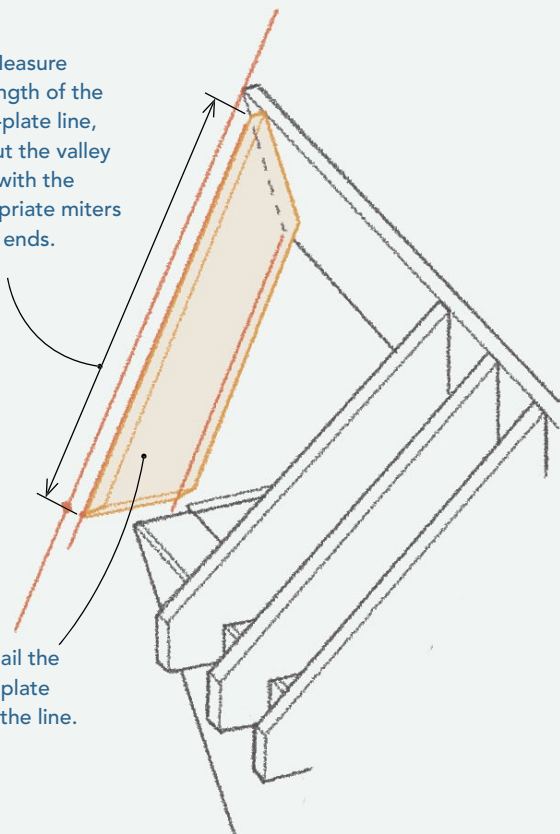
8 Slide the scrap piece down to the bottom edge of the ridge. Scribe along the edge of the scrap piece.

9 Measure the distance between this line and the valley-plate line. This is the minimum board width needed for the valley plate.



10 Measure the length of the valley-plate line, and cut the valley plate with the appropriate miters at the ends.

11 Nail the valley plate along the line.



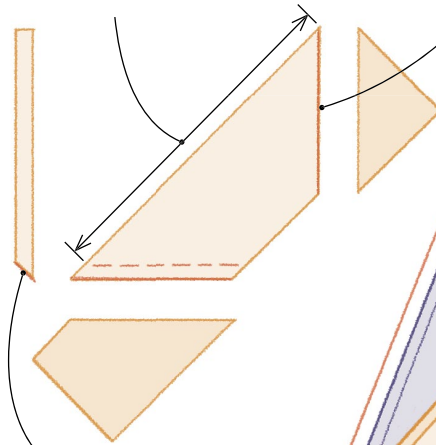
1 Hook a tape measure over the nearest installed common rafter. Mark the ridge at 16-in. intervals, to match the spacing of the common rafters. (On a small roof, there might be only one or two jack rafters.) Use a square to mark the layout on the ridge.

3 Measure the distance from the top of the ridge to the outside of the valley plate at each rafter location. This is the length of the valley jacks.

2 Place the blade (the 24-in. leg) of a framing square against the common rafter, and mark the plate along the end of the tongue (the 16-in. leg). Repeat this process, if necessary, after you install each jack rafter.

4 At the top of a piece of rafter material, lay out a plumb cut to match the common rafters. Set the saw to 0° and make the cut.

5 Mark the valley-jack length along the top edge from the long point of the plumb cut. At the mark, lay out a level line to match the common rafters.



6 Set your saw to a bevel that's equal to the pitch of the main roof, and cut along the line. Make the line the short point of the bevel.

7 Nail the jacks in place.

