

Build a garage pergola

Use milled brackets and pressure-treated lumber to create an elegant canopy over your garage door

BY PAUL HOPE + PHOTOGRAPHS BY KOLIN SMITH



COST \$311

TIME Two days

DIFFICULTY Easy. Buying brackets keeps the cutting simple.



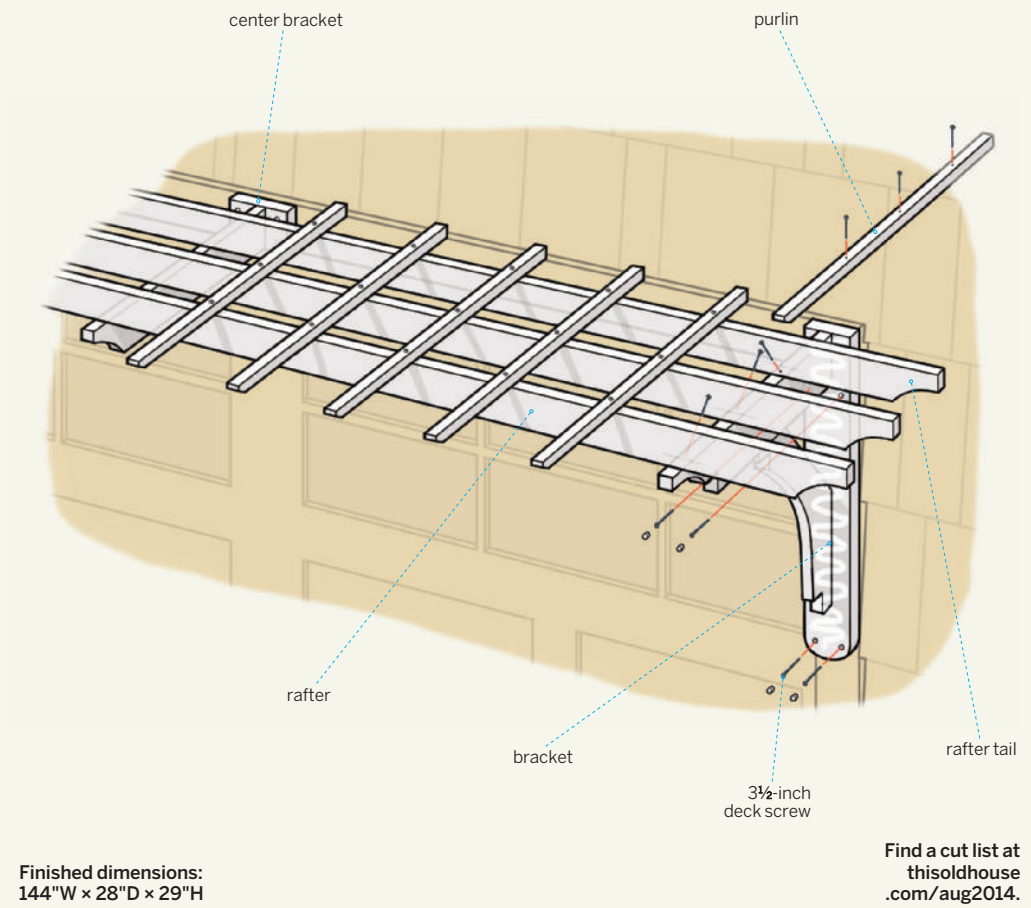
THE GARAGE DOOR IS THE FIRST THING most of us see when we arrive home, so it better be a sight worthy of admiration. Impossible? Not at all: Perching a pergola upon shapely brackets adds architectural dimension and intriguing shadow lines to this otherwise utilitarian entry point. Our approach calls for mounting ready-made brackets to the door's casing—and the framing behind it—then attaching an assembly of rafters and purlins shaped to complement your home's existing trim. Follow along as *This Old House* senior technical editor Mark Powers guides you through making this decorative structure, which looks as good freshly installed as it would draped in flowering vines.



Brackets: Port Orford cedar Original style end bracket, \$88, and Contemporary style center support, \$55, Auer-Jordan; arbororiginal.com

DAY-TO-DAY
TIMELINE

SATURDAY Make the parts (Steps 1–2).
SUNDAY Build and install the pergola (Steps 3–5).



- TOOLS**
- clamps
 - combination square
 - 1-gallon paint can
 - jigsaw
 - 120-grit sandpaper
 - miter saw
 - 2½-inch sash brush
 - drill/driver
 - ¾-inch combination countersink bit
 - ½-inch bit
 - bit extender with flexible shaft
 - caulk gun
 - level
 - tape measure

- MATERIALS**
- 2×4 pressure-treated lumber** Get three 12-foot boards for the rafters.
 - 2×2 pressure-treated balusters** Get six 8-footers to make the purlins.
 - 24-by-24-inch cedar side brackets** Get two.
 - 3½-by-24-inch cedar center bracket** Get one.
 - 3½-inch deck screws** Get a 1-pound box.
 - 2½-inch deck screws** Get a 1-pound box.
 - acrylic adhesive caulk** Get one tube.
 - ¾-inch wood plugs** Get one package.
 - solid-color acrylic exterior stain** Get 1 gallon.

2 MAKE THE PURLINS

A] Shape the purlins. Take the first 2×2 and use a combination square to draw a 45-degree line across one corner, ½ inch below its top edge. Set the blade of a miter saw to 45 degrees, slide the piece along the fence until the mark lines up under the blade, and hold it firmly in place. Pencil a reference line on the saw bed at the end of the purlin. Cut the corner. Position each of the remaining pieces at your reference line, then make the miter, as shown.

B] Stain the parts. Lightly sand the purlins and the three brackets with 120-grit paper. Stir the stain thoroughly and brush a thin coat onto all sides of each part. When dry, recoat the pieces and allow the stain to cure.



TIP Buy brackets the same width as the casing around your garage door to ensure a seamless look and easy installation.

SEE HOW IT'S DONE
To watch a video of this project, blipp this page or go to thisoldhouse.com/aug2014

3 INSTALL THE BRACKETS

A] Lay out the holes. Use a drill/driver fitted with a combination countersink bit to bore a pair of evenly spaced holes near the top and bottom of each of the three brackets. Locate the holes at least ½ inch from the edges of the bracket. If the arm of the bracket is in your way at the top, use a bit extender with a flexible shaft to drill the countersinks, as shown.

B] Anchor the brackets. Apply caulk to the back of the first bracket and hold it in position, flush to the inside of the garage door casing. Using a ½-inch bit, drill a pilot hole through one of the bottom countersinks, then drive a 3½-inch deck screw through the bracket and casing and into the framing, as shown.

C] Plumb the brackets. Use a level to plumb the bracket, then draw a reference line on the head casing, as shown. Holding the bracket plumb at the line, drill pilot holes through the three open countersinks. Secure the bracket with three more 3½-inch deck screws. Squirt a dab of caulk into each screw hole and cap them with ¾-inch wood plugs to conceal the fasteners. Install the other two brackets.

1 MAKE THE RAFTERS

A] Design the rafter tail. Clamp a 2×4 to your work surface. Use a combination square to measure and mark lines across the board 1 and 4 inches from its end. On the 1-inch line, make a tick mark 1½ inches from the top edge of the rafter. Now, position a 1-gallon paint can so that its arc connects the tick mark and the point where the 4-inch line meets the rafter's bottom edge. Trace along the can to create the curved detail on your rafter tail, as shown.

B] Cut the tails. Follow the line with a jigsaw to shape the tail, then use the piece as a template to trace the detail onto the uncut ends of the other boards. Cut the marked tails and use one of them to mark and shape the uncut end of the template board. Sand the curved cuts lightly with 120-grit paper.

ILLUSTRATION: GREGORY NEMEC





A



B

4 BUILD THE PERGOLA

A] Mark the rafters. Gang the rafters together on edge and flush them up at both ends. Use a combination square to mark a spot 6 inches in from each end. Then draw a line across the top of the rafters at the mark, as shown, at each end.

B] Clamp the assembly. To position the rafters, subtract their total thickness ($4\frac{1}{2}$ inches for our three 2×4 s) from the depth of the brackets (24 inches) and divide by 4 to get equal spacing on each side of the rafters ($4\frac{7}{8}$ inches). Cut spacer blocks to length and wedge them between the rafters. Clamp the assembly together, using scraps as cauls to protect the fresh stain.

C] Install the purlins. Subtract the total thickness of 14 purlins from the distance between the end marks from Step 4A and divide by 13 spaces. Cut one spacer block to match that spacing; make a T-shaped block to set the rear overhang. Be sure that the backs of the purlins do not extend past the bracket plates. Install the end purlins inside their lines and work toward the middle, using the blocks to set the spacing, as shown. Drill pilot holes and secure with $2\frac{1}{2}$ -inch deck screws.



C



\$25,200 in prizes!

Blipp this page or go to thisoldhouse.com/win for a chance to win one carriage-house-style garage door (seven prizes, each worth up to \$3,600) from Clopay's Coachman collection. See page 14 for details.



5 INSTALL THE PERGOLA

A] Position the pergola. Measure and mark the midpoint of your pergola on the face of the front rafter. With a helper, hoist it onto the brackets. Shift the pergola to align the mark with the middle of the center bracket.

B] Fasten the pergola. Standing on a ladder, clamp the pergola to the brackets, keeping the back of each purlin a good $\frac{1}{4}$ inch from the siding. Use a combination bit to bore angled pilot holes through the sides of the rafters and into the brackets. Use $3\frac{1}{2}$ -inch deck screws to fasten the pergola in place. ■



A



B