



Woodsmith **PLANS**

# TRESTLE SAWHORSES



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*Traditional joinery and a heavy-duty trestle design add up to a sawhorse that's built to last.*



◀ **Short Version.**  
Reducing the length of the posts creates a shorter sawhorse that's more comfortable for some tasks.

## Start with the Bases

A pair of sawhorses is a must-have for any workshop. The trouble is most designs are more suited for knocking together at a job site.

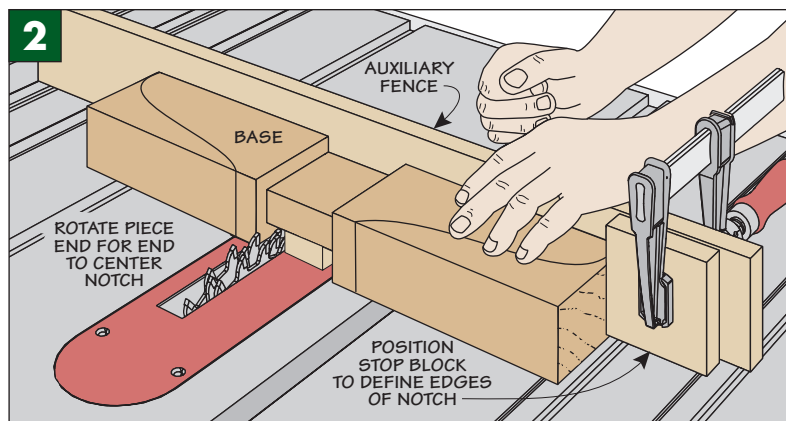
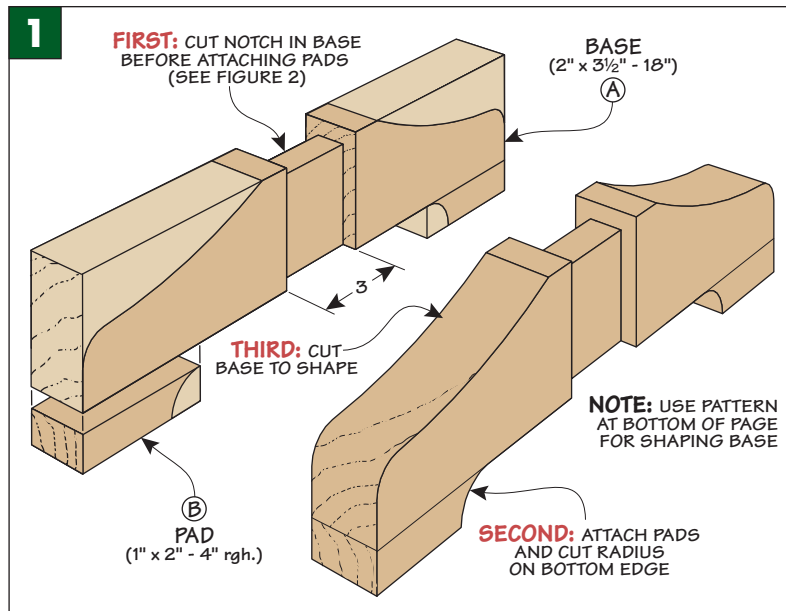
For an alternative, take a look at the sawhorses shown in the photos on the previous page. It's clear that this isn't a cobbled together design. These sawhorses have a sturdy look plus some great features.

For starters, they're made from hefty, solid lumber. And the trestle design is stout enough to support a huge amount of weight. Finally, these sawhorses are quick to build and they'll also give you a chance to hone your skills with some traditional, rock-solid joinery.

**SOLID SUPPORT.** I began by making a base for each side of the sawhorse. You can see how they're shaped in Figure 1. But what's more important is how each base is attached to the posts. I used an interlocking bridle joint for a solid connection.

This requires cutting a notch on the top and two side faces of the base. I cut the notches on the base before shaping it. You can see the table saw setup I used in Figure 2.

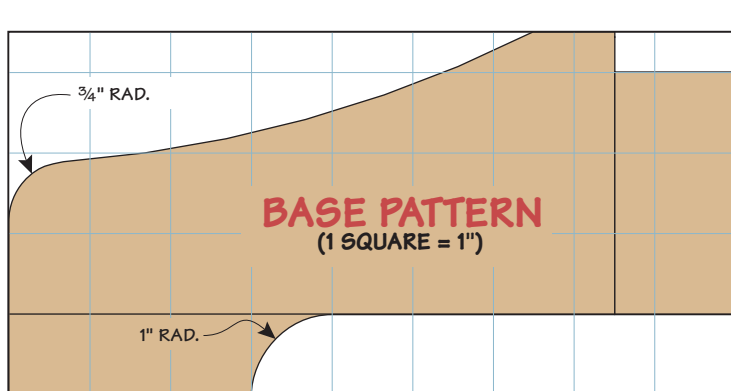
Since the notches are wider than my dado blade, I set up a stop block attached to a long auxiliary fence on the miter gauge. The stop block helps define the outside shoulders of the notches. After making one pass, all you need to do is flip the workpiece end-for-end and make another pass. This automatically centers the notch on the base. Once the shoulders are defined, you can remove the remaining waste.



**ATTACH PADS.** After cutting the notches, you need to cut the base to shape. But before doing this, cut and glue a pad to each end of the base (Figure 1). The thin pads create two feet, which gives the sawhorse more stability on an uneven shop floor. Once the pads are glued on, you can cut a radius on the inside edge.

At this point, the base is ready to shape using the pattern below. The first step in shaping is roughing out the base at the band saw.

The band saw blade often leaves a rough surface. So the last step is to smooth the curves and remove the saw marks. For this, I used a sanding drum in the drill press.



## MATERIALS

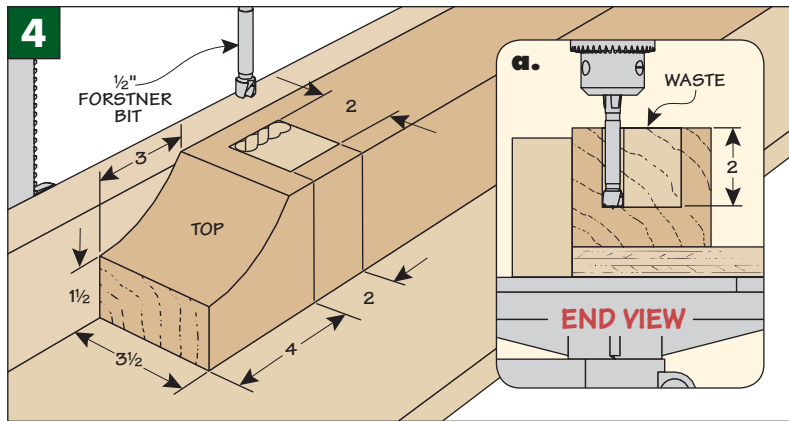
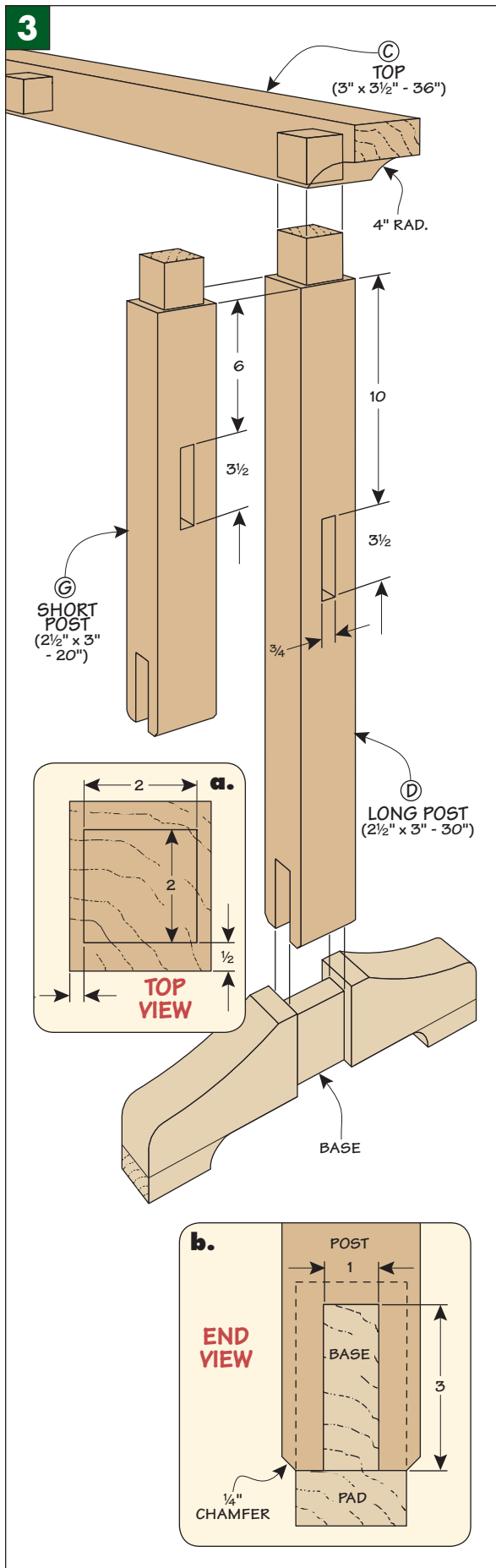
### TALL SAWHORSE (1 pair)

<b>A</b> Bases (4)	2 x 3 1/2 - 18
<b>B</b> Pads (8)	1 x 2 - 4 rgh.
<b>C</b> Tops (2)	3 x 3 1/2 - 36
<b>D</b> Long Posts (4)	2 1/2 x 3 - 30
<b>E</b> Stretchers (2)	1 x 3 1/2 - 29 1/2
<b>F</b> Beams (3)	2 1/2 x 3 - 60

### SHORT SAWHORSE (1 pair)

<b>G</b> Short Posts (4)*	1 1/2 x 3 - 20
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\* Replaces Long Posts (D)



## Top, Stretcher & Posts

After making the bases, the next part to focus on is the top. The reason for this is simple. The posts are connected to the top with mortise and tenon joinery, as shown in Figure 3. I find it's easier to cut the mortises first. Then, you can fit the tenons to the mortises.

**MAKING THE TOP.** The top of the sawhorse starts out as a pretty stout blank (3" x 3½") so it will stand up to the heaviest loads. I eased each end with a curve that complements the curves on the bases.

Then, I cut a large mortise near each end to accept a post. After laying out the mortises, I took the piece over to the drill press and drilled out most of the waste with a Forstner bit, as you can see in Figure 4. It's a good idea to use a

fence to position the workpiece so the mortises are centered and parallel to the edge of the top.

Even with careful drilling, the mortises will still have some remaining waste to clean out and the corners to square up. To take care of this, I clamped the top to my workbench and used a wide chisel to bring the mortises to final shape.

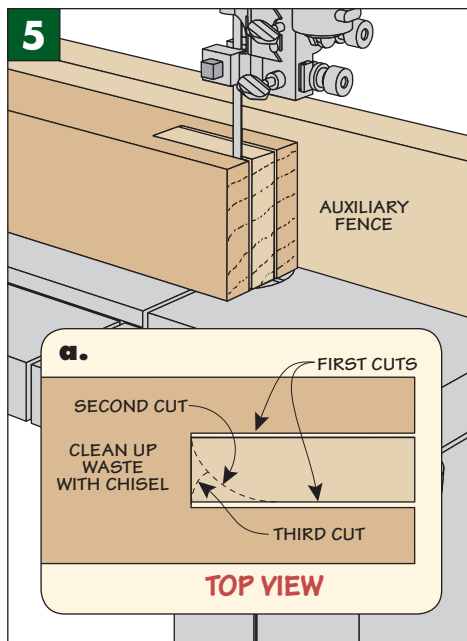
**NOW, THE POSTS.** At this point, you're ready to connect the bases and top by making the posts. But you have a decision to make — and that's the length of the posts.

Figure 3 shows dimensions for two sizes of posts. The longer posts will make a sawhorse that's 32" tall. This is a good height for most tasks. The shorter post length makes a 22"-tall sawhorse — which is just

right to create a low assembly or finishing table. Once you make your decision, go ahead and cut the post pieces to final size.

**JOINERY.** Now it's time to cut the joinery on the posts. There's an open mortise at the bottom of each post to receive the notched foot of the base. In the middle of the post is a through mortise to accept the stretcher. And the top of the post has a tenon to match the mortise cut in the top.

I decided to cut the tenon on the top of each post first. This was a simple task using a dado blade in the table saw.



After cutting the tenon on each post, you can turn your attention to the open mortise at the bottom. Here, I used the band saw. With the help of a fence, I made the long, straight cuts to define the sides of the mortise, as shown in Figure 5.

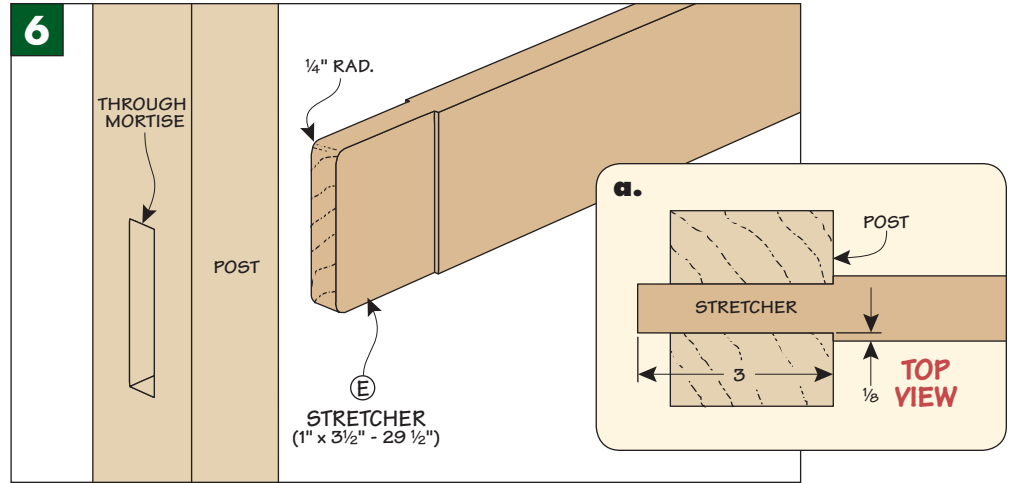
Then I removed the fence and made a sweeping cut from one side to the opposite corner to define the end of the mortise. A final cut from the opposite direction cleans up the other corner.

The remaining joint you'll need to cut on each post is the through mortise in the middle, as shown in Figure 3. As you drill out and clean up the mortise, keep a couple of goals in mind. First, the walls of the mortise should be smooth and square to the face of the workpiece. And you want the cuts to be free of tearout.

There's one last detail to complete on the post. And that's to rout a chamfer on the inside and outside face of the lower end, as illustrated in Figure 3b. You can do this at the router table. Just be sure to use a backer board to prevent tearout.

**STRETCHER.** The final piece of the sawhorse you'll need to make is the stretcher. This piece provides side-to-side rigidity. The stretcher attaches to the posts with a through mortise and tenon joint, as you can see in Figure 6.

Once you've completed the mortises, you can dry-assemble the posts and the top to determine the final length of the stretcher as well as its shoulder-to-shoulder length. If you take a look at Figures 6 and 6a, you can see how the ends of the stretcher extend through the post and are rounded over on the top and bottom edges.



There's one other thing to note about the tenon on each end. There are only shoulders cut on the wide cheeks — not the top and bottom.

**SOME ASSEMBLY.** At this point, you can assemble the sawhorse. First, you'll glue a base to each post. I applied a clamp across the joint so the sides of the mortise were in firm contact with the notch on the base.

**CROSS BEAMS.** To make the pair of sawhorses I built even more versatile, I made a set of three beams,

as you can see in Figure 7. The beams simply rest on the top of the sawhorses and are sized to support a sheet of plywood to create an assembly or finishing table.

I cut a notch near each end of each beam to fit over the tops of the sawhorses. Finally, the beams have curves cut on each end to match the curves of the sawhorses.

Whether you build the short or tall sawhorses, they're sure to be a handy addition to your workshop.

