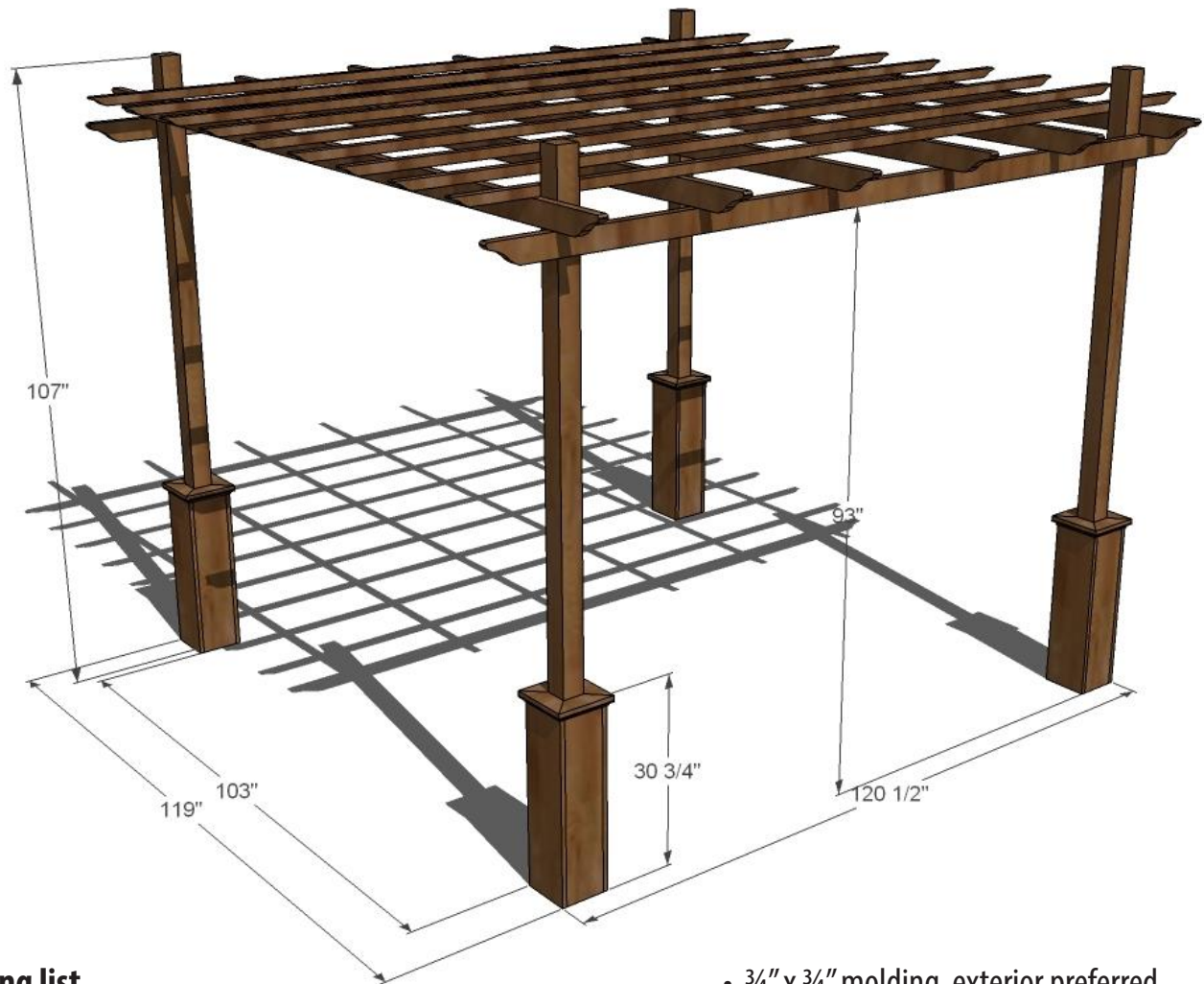


Pergola



Shopping list

- 4 - 4x4 Culpeper Ground Contact posts - 8-12 feet long (depending on how much of the posts you choose to bury or place in pier blocks)
- 4 - brackets or pier blocks or other foundation as necessary
- 8 - Culpeper Ground Contact 2x4 - 12 feet long
- 9 - Culpeper Ground Contact 2x2 - 12 feet long
- 2 - Culpeper 2x2 @ 8 feet long (these could be furring strips)
- 2 - Culpeper Ground Contact 1x4 @ 8 feet long

- $\frac{3}{4}$ " x $\frac{3}{4}$ " molding, exterior preferred
- 3 - 1x10 treated @ 8 feet long
- 3 - 1x8 treated @ 8 feet long

Common Materials

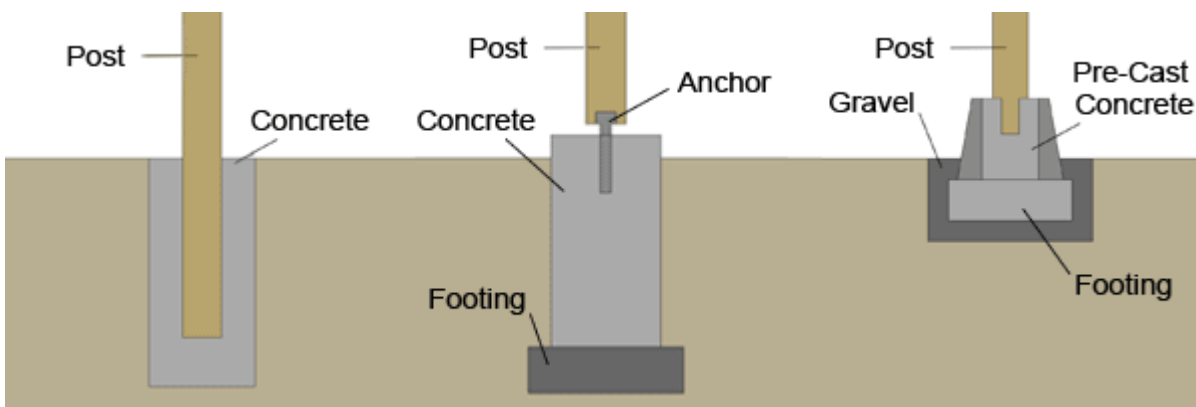
- 2 $\frac{1}{2}$ " screws
- 2" finish nails
- 3" screws
- 2 $\frac{1}{2}$ " finish nails
- 1 $\frac{1}{4}$ " finish nails
- Wood Glue



Build your own pergola!

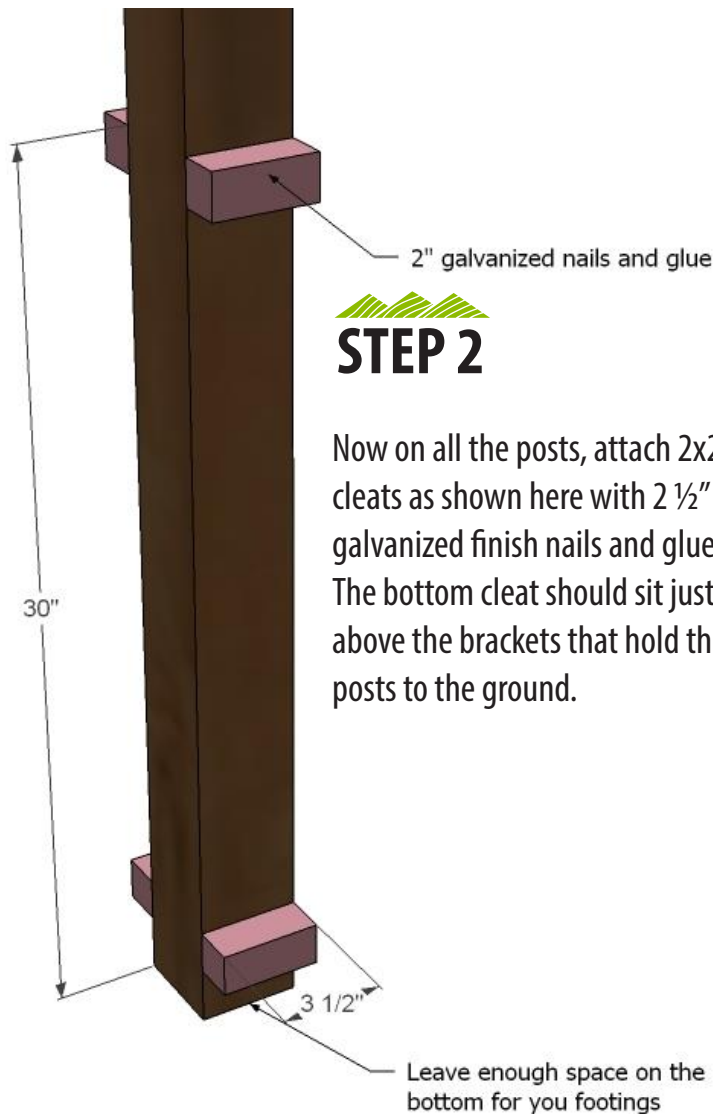
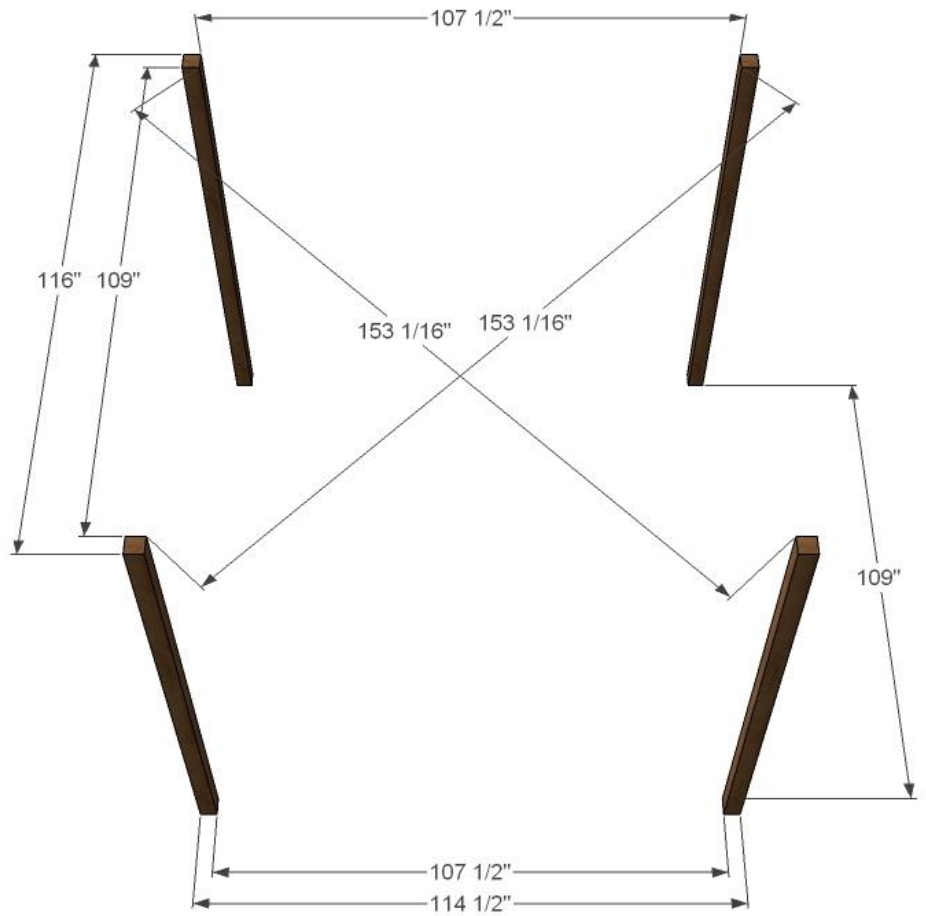
The first and most important part of this project is to set your footings properly. There are several different means to do this - if you are setting your pergola on a wood deck or concrete patio or other stable level foundation, you can simply screw the post brackets to the deck as done here by Popular Mechanics (<https://www.popularmechanics.com/home/how-to-plans/a32316828/how-to-build-a-pergola/>). It's a good idea to review this link regardless, as there is lots of good information in there.

Now if you do not have a foundation in place, you are going to have to make one for the pergola. This can be done to whatever degree you see fit and depends on what type of soil is on your lot (hopefully gravel).



STEP 1

Set the posts in the ground. Make sure to space the posts exactly as shown above, and that the posts are square (take diagonals). The posts need to stick out of the ground 107" - but you may need the posts to be longer if, for example, you are using buried pier blocks.



STEP 2

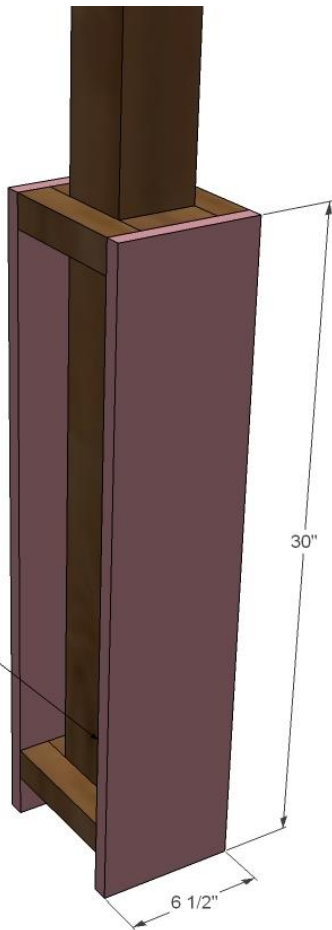
Now on all the posts, attach 2x2 cleats as shown here with 2 1/2" galvanized finish nails and glue. The bottom cleat should sit just above the brackets that hold the posts to the ground.



STEP 3

Complete the cleats by adding the other 2x2s as shown.

STEP 4



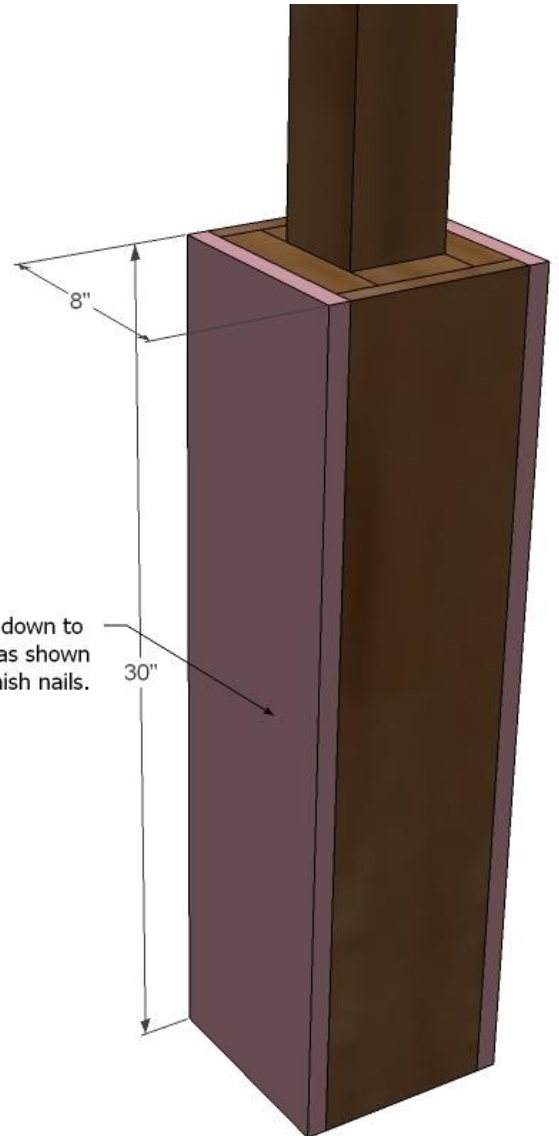
You will need to rip the 1x8 boards down to 6 1/2" widths and nail to the 2x2 cleats as shown here.

Rip your 1x8s down to 6 1/2" widths and use finish nails to attach to the cleats.

The trim boards should be cut so that they hide the foundation.

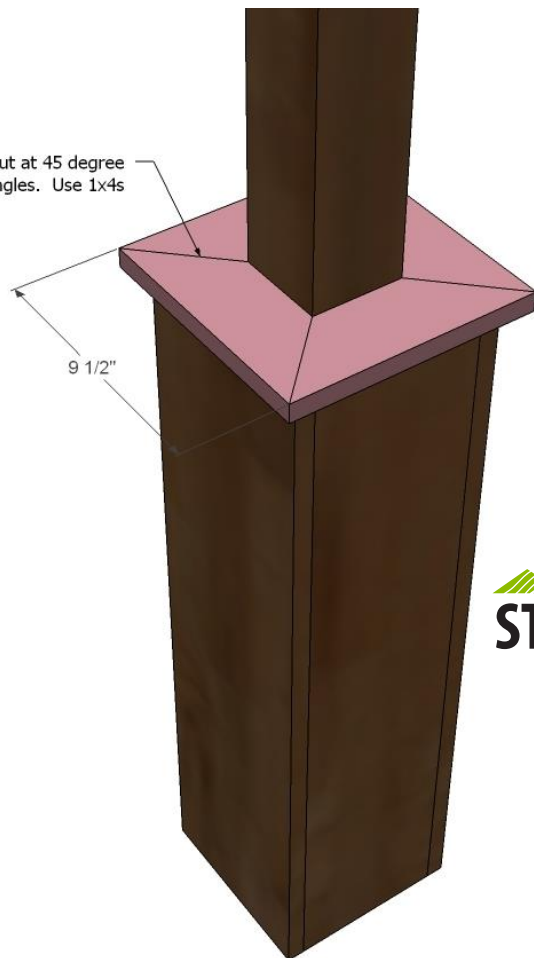
Optional: Cover the posts in stone veneer.

STEP 5



Rip the 1x10 boards down to 8" widths and nail on as shown here with exterior finish nails.

Ends cut at 45 degree angles. Use 1x4s



9 1/2"

STEP 6

Post caps: miter 1x4s at 45 degrees around the bases as shown.

Use finish nails and glue to attach.

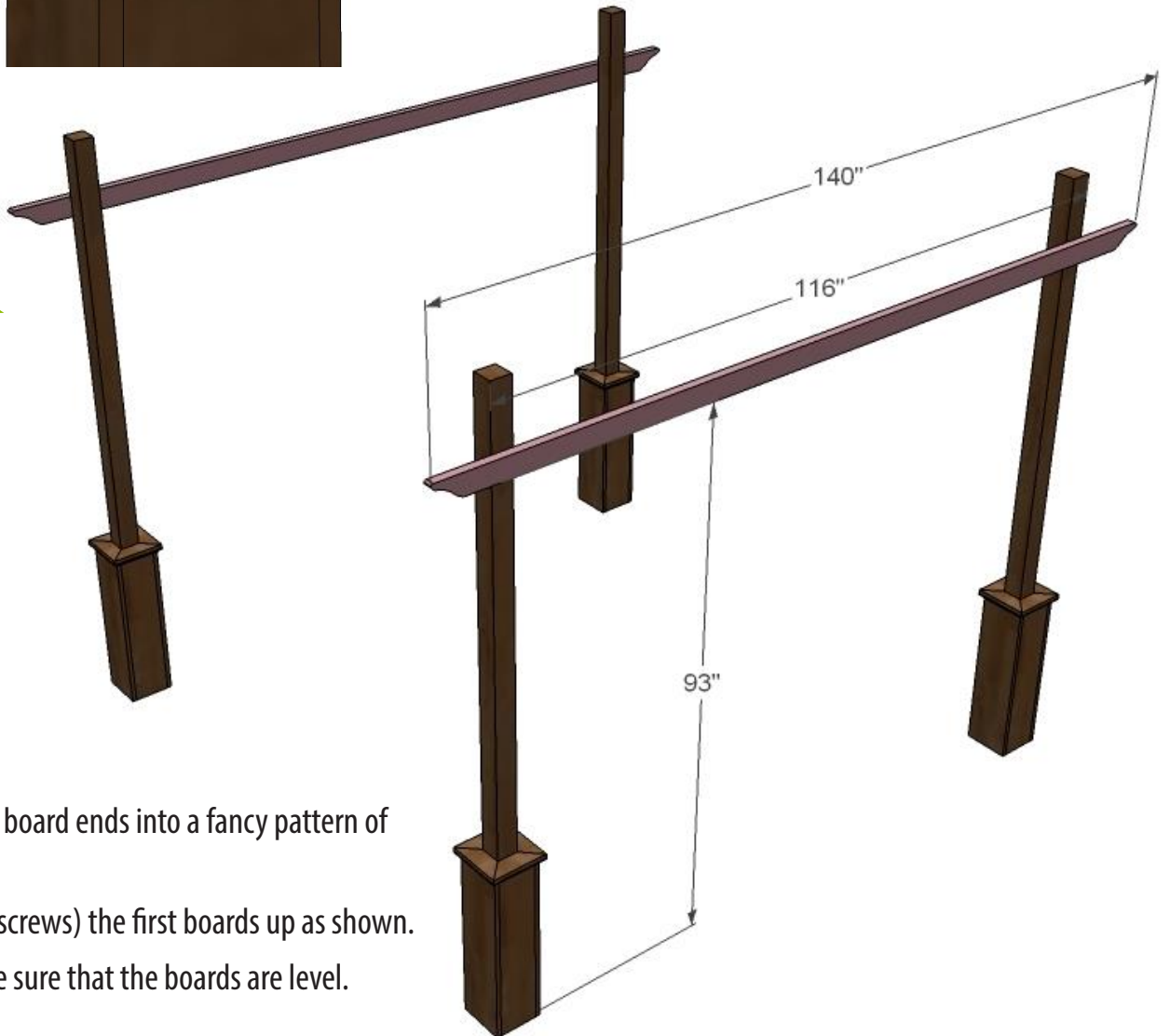
STEP 7



Trim the base out with the 3/4" molding and use finish nails and glue to attach. Miter the corners at 45 degree angles.

Measure and add molding.
Use 1 1/4" finish nails and glue.

STEP 8

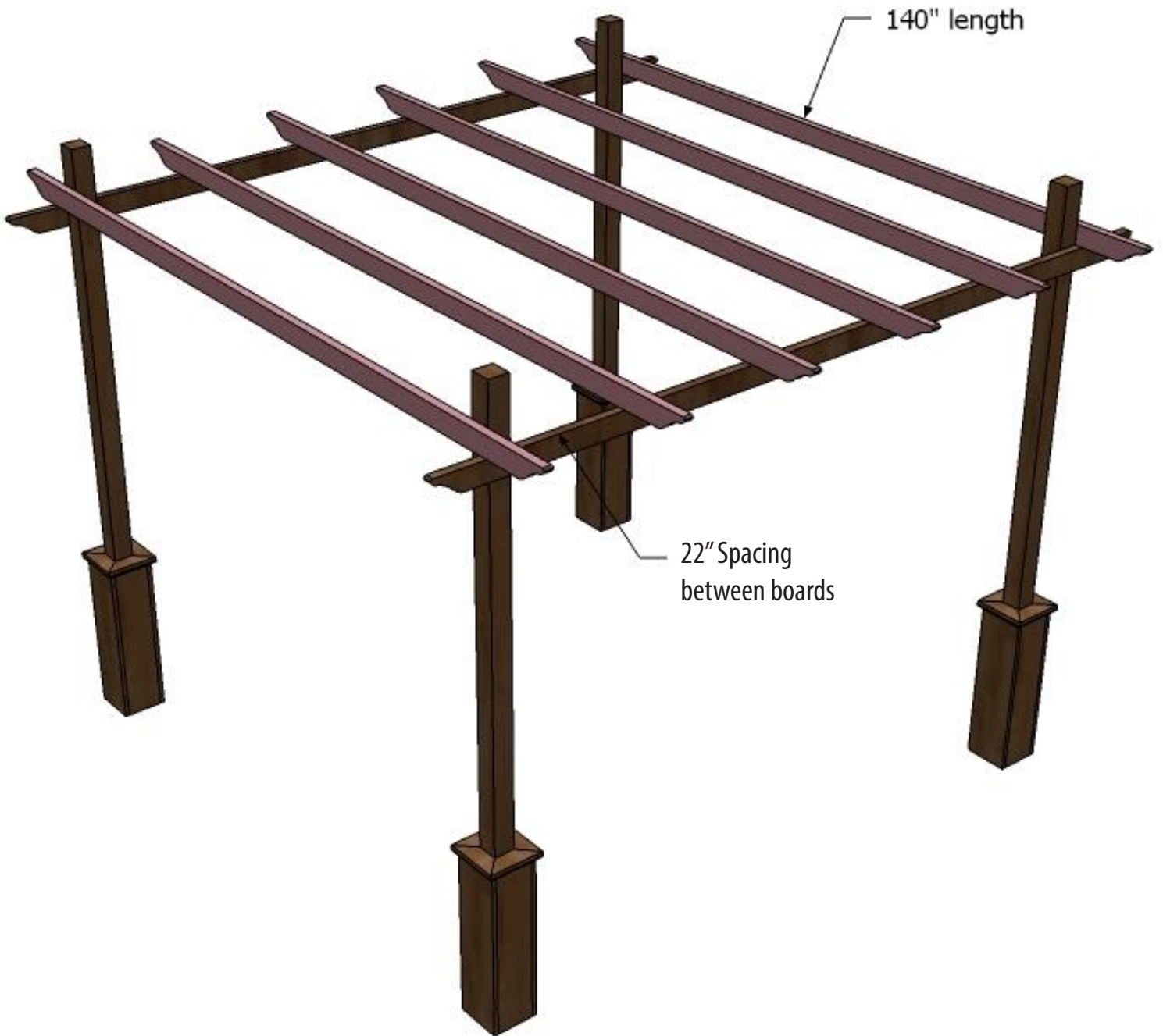


Cut all pergola top board ends into a fancy pattern of your choice.

Screw (3" exterior screws) the first boards up as shown.

Use a level to make sure that the boards are level.

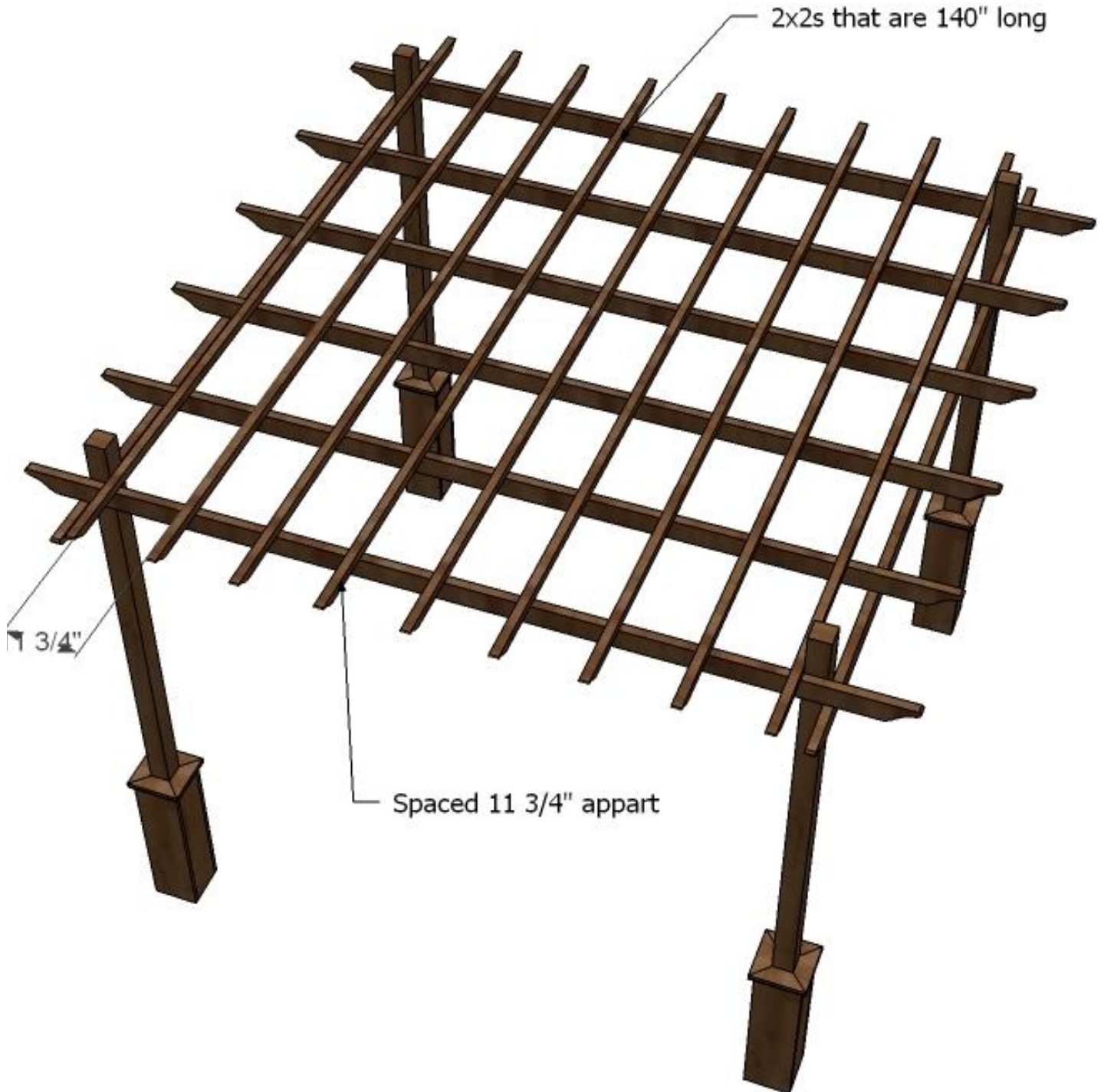
STEP 9



Take a square of the project (see step 1). When diagonals match, rest two more 2x4s on top of the existing 2x4s, to the outsides. Screw to the posts as shown above.

Add the remaining 2x4s spaced 22" apart, using either brackets, pocket hole screws, or long screws carefully predrilled and countersunk from the top.

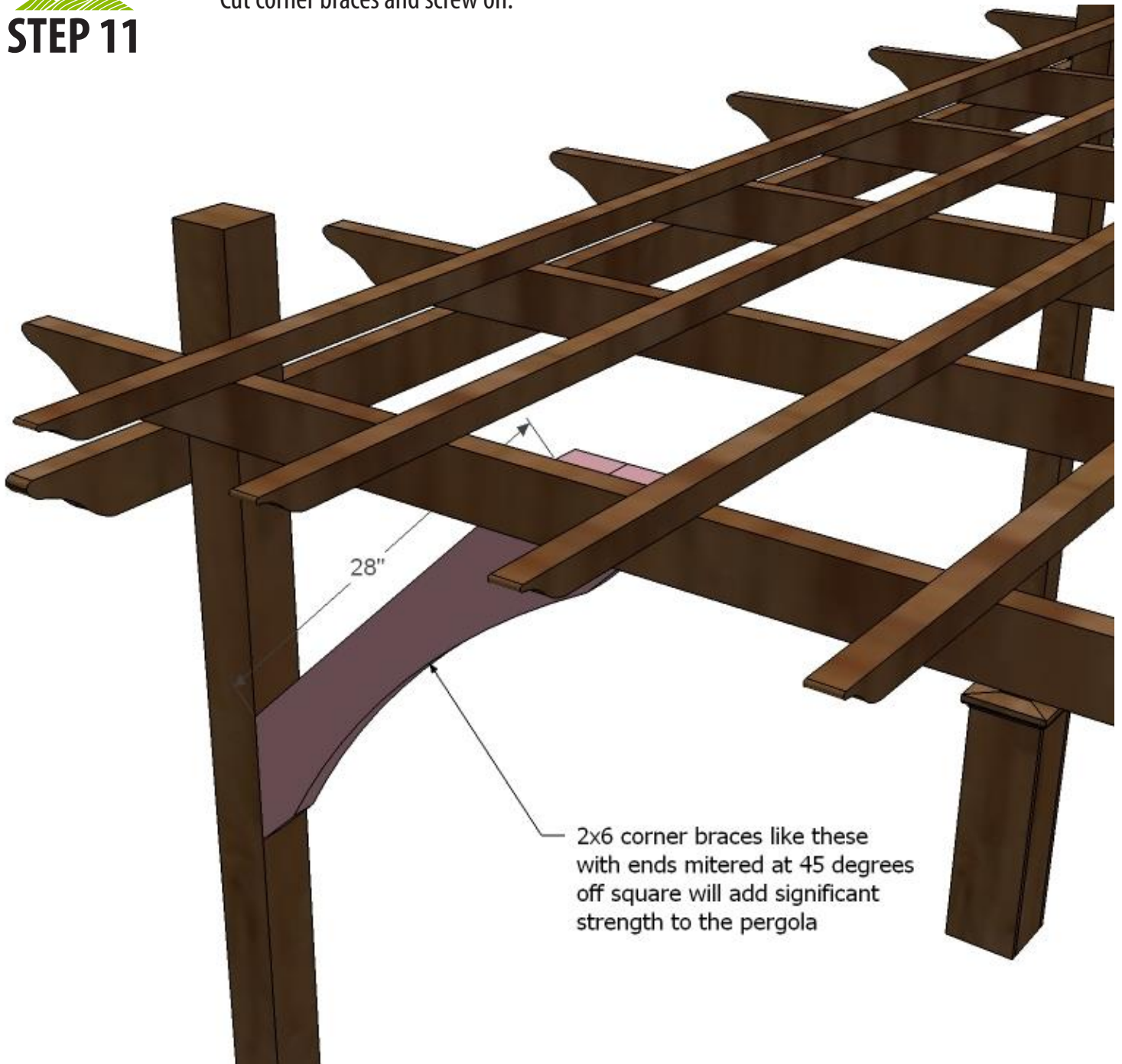
STEP 10



Space out the final 2x2s and screw to the 2x4s and to the 4x4 post (when present) with 3" exterior wood screws and glue. Make sure you fasten to all the 2x4s for the most support.

STEP 11

Cut corner braces and screw on.



Finishing Instructions

Fill all holes with wood filler and let dry. Apply additional coats of wood filler as needed.

When wood filler is completely dry, sand the project in the direction of the wood grain with 120 grit sandpaper. Vacuum sanded project and work station to remove sanding residue. Wipe project clean with damp cloth.

Finish with paint, stain, polyurethane or other method you prefer.