12 Bottle Wine Rack

By **fcbecker**

Difficulty

Moderate

Cherry wood 12 bottle wine rack. This is a perfect size to store a small wine collection. It fits in small spaces, such as a counter top or wall niche. Makes a great gift item.

Tools

Kreg Tools

Wood
Project
Clamp -
6
   Wood Project Clamp - 6"

Precision
Router
Table
System
   Precision Router Table System

Other Tools

Drill Press

Table Saw

Tape Measure

Drill Press

Chisel Set

Router

Orbital Sander

Materials

Wood Products

4   Dowel Rods , 1 Inch Diameter , 48"

1   3/4" Cherry , 1x8 , 48"

Hardware & Supplies

12 1/4" X 1 3/4" Wood Dowel Pins

1   Minwax Cherry Oil -Based Stain

1   Minwax Tung Oil

1   Titebond I Wood Glue

6   Sand Paper And Disks 80 - 220 Grit

Cut List & Parts

1 3/4" Cherry Base , 3/4" X 18 3/4" X 7 1/4"

2 3/4" Cherry Dowel Holders , 3/4" X 21 1/2' X 2"

1 3/4" Cherry Top , 3/4" X 5 1/4" X 1 3/4"

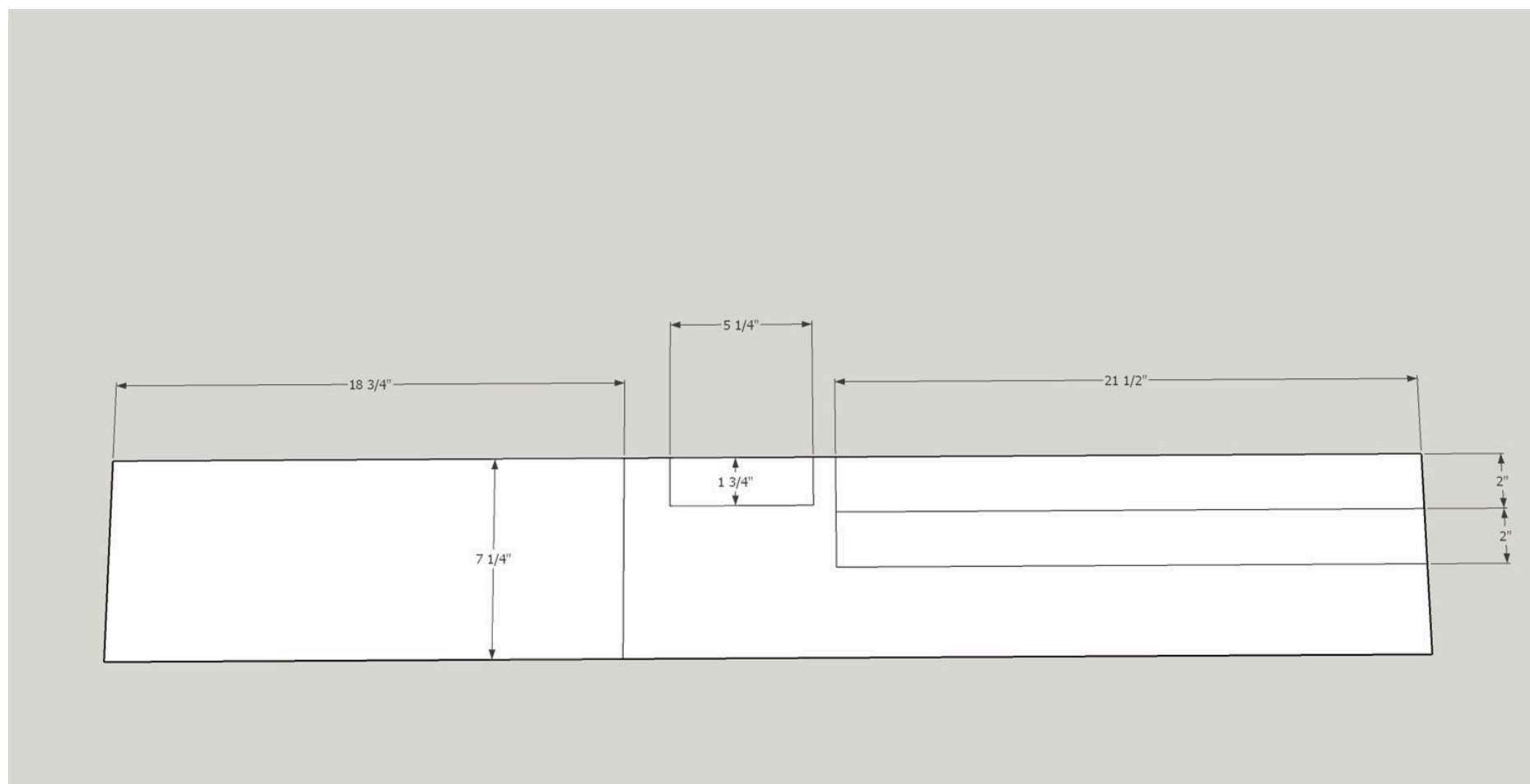**12** 1" Diameter Doweling Rods , 1" X 14 3/4"

Directions

1 **Introduction**

Please be sure to read through complete instructions before you begin any work on this project.
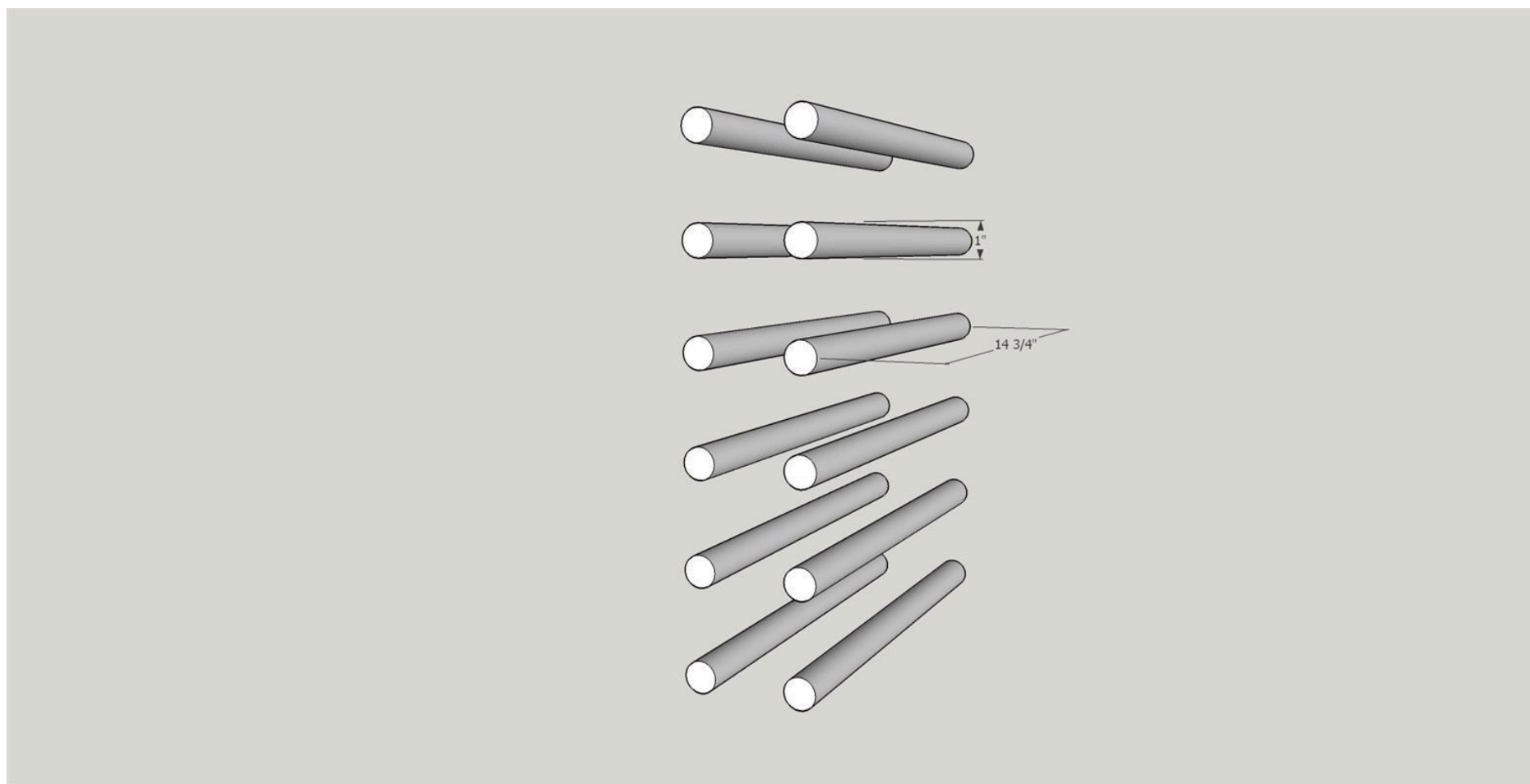
2 **Cut the cherry parts**

Cut the wine rack top, base and dowel supports from 3/4" cherry.
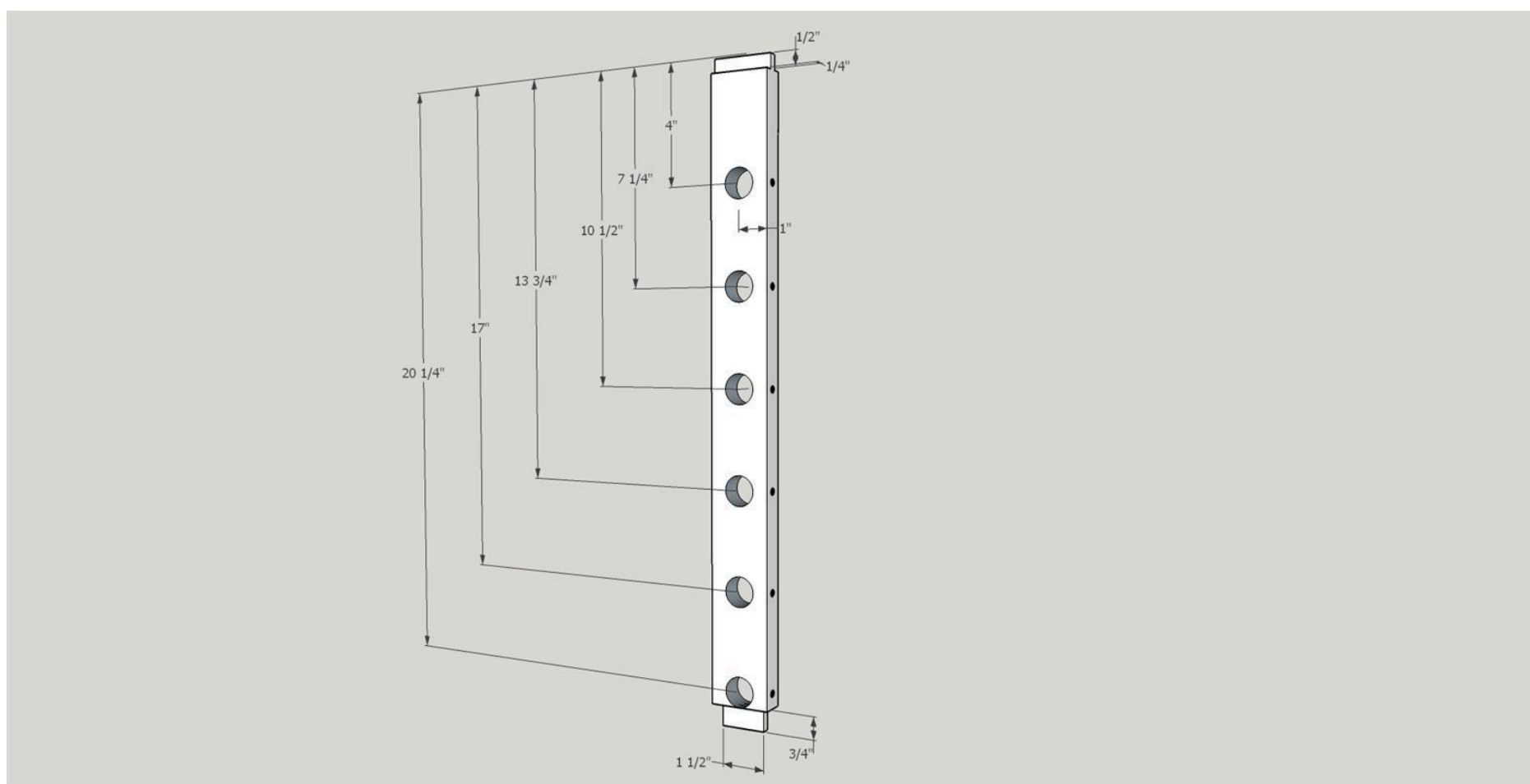
3 Cut the dowel rods

Cut twelve 14 3/4" dowel rods from 1" diameter dowel rod stock. Use 150 grit sandpaper to smooth any rough spots.

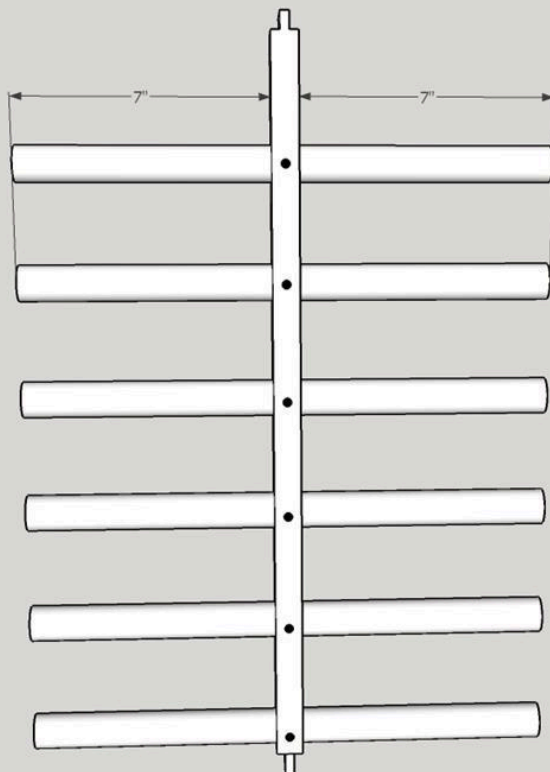

4 Prepare the dowel holders

Drill six 1" diameter holes in each dowel holder. The holes should be centered (1" from the edges) and spaced as shown in the following diagram. Cut a 1/4" X 1/2" X 2" tongue centered in the top of each dowel holder. I use a Freud (99-036) Adjustable Tongue and Groove Bit set mounted in a Kreg router table to cut the tongues. Alternatively you can use a table saw. Cut a 1/4" X 3/4" X 1 1/2" tenon in the bottom of each dowel holder. I used the Tongue Cutter bit and my table saw to cut the tenon.

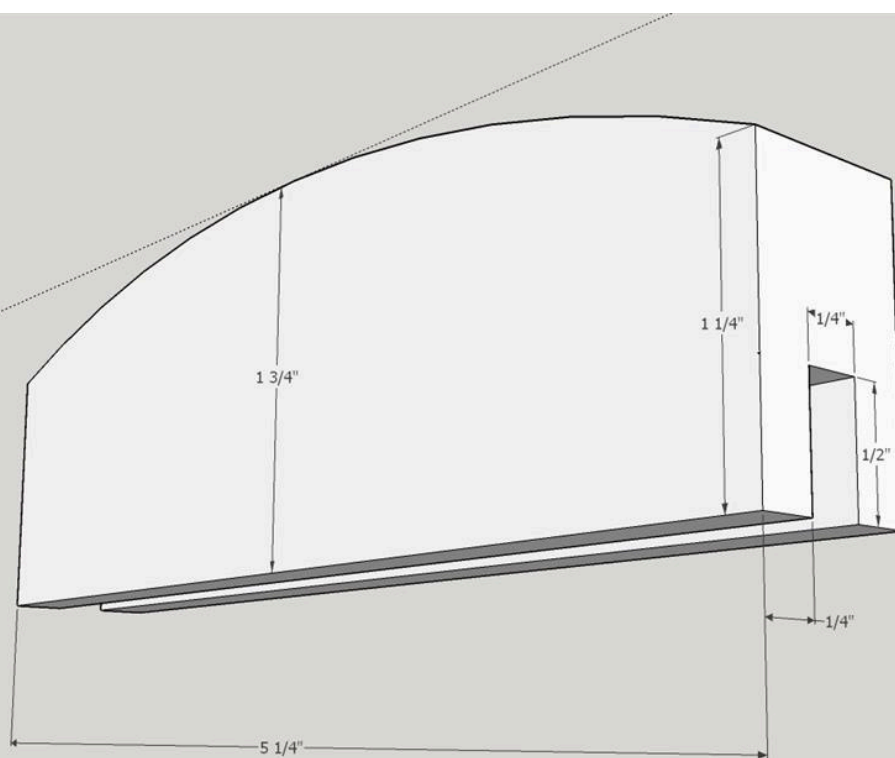**5** **Preparing to Insert dowel rods**

Insert the twelve dowel rods into the dowel holders. Seven inches of rod should protrude on either side. The 1" dowel rods will eventually be held in place with wood glue and 1/4" X 1 3/4" dowel pins. Use a drill press with a 1/4" drill bit, set to a depth of 1 3/4" to drill the hole for each dowel pin through the holder and the dowel rod. Please center each hole properly. After the drilling is complete remove the dowel rods.
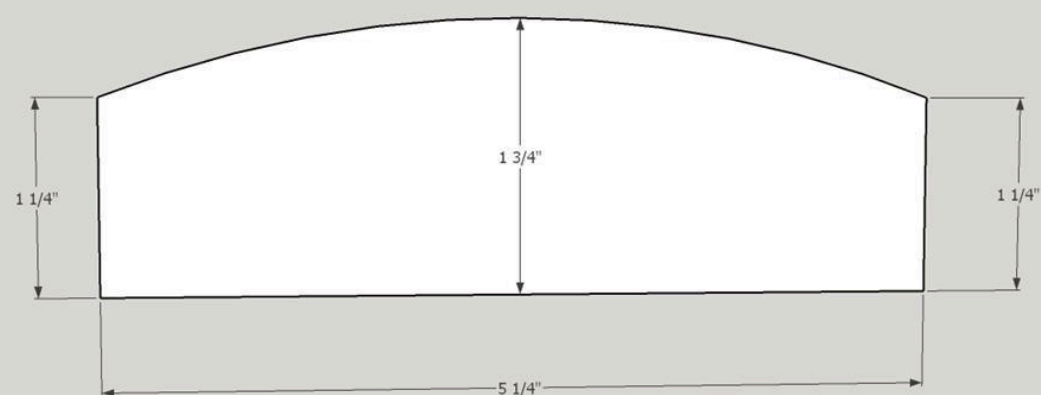

6 **Cut the groove in the top piece**

Place a 1/4" by 5 1/2" groove in the center of the bottom edge of the top. I use a Freud (99-036) Adjustable Tongue and Groove Bit set mounted in a Kreg router table to cut the groove. Alternatively you can use a table saw.
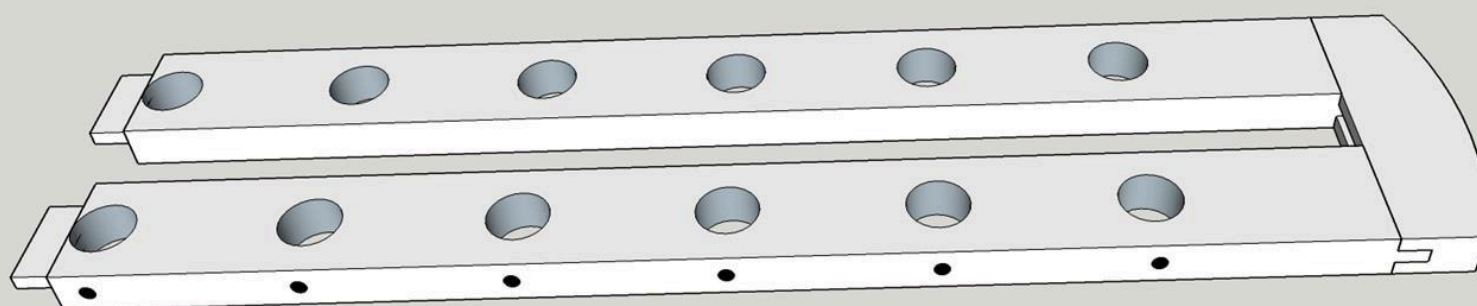
7 Cut the arc in the top piece

Using the dimensions in the following diagram draw an arc on the side of the top piece. Using a band saw or a jig saw cut the arc.

8 Assemble the top and dowel holders.

Using wood glue attach the two dowel holders to the top. Use clamps to hold in place until the glue is dry. Please note that all twelve 1/4" dowel pin holes should face out.
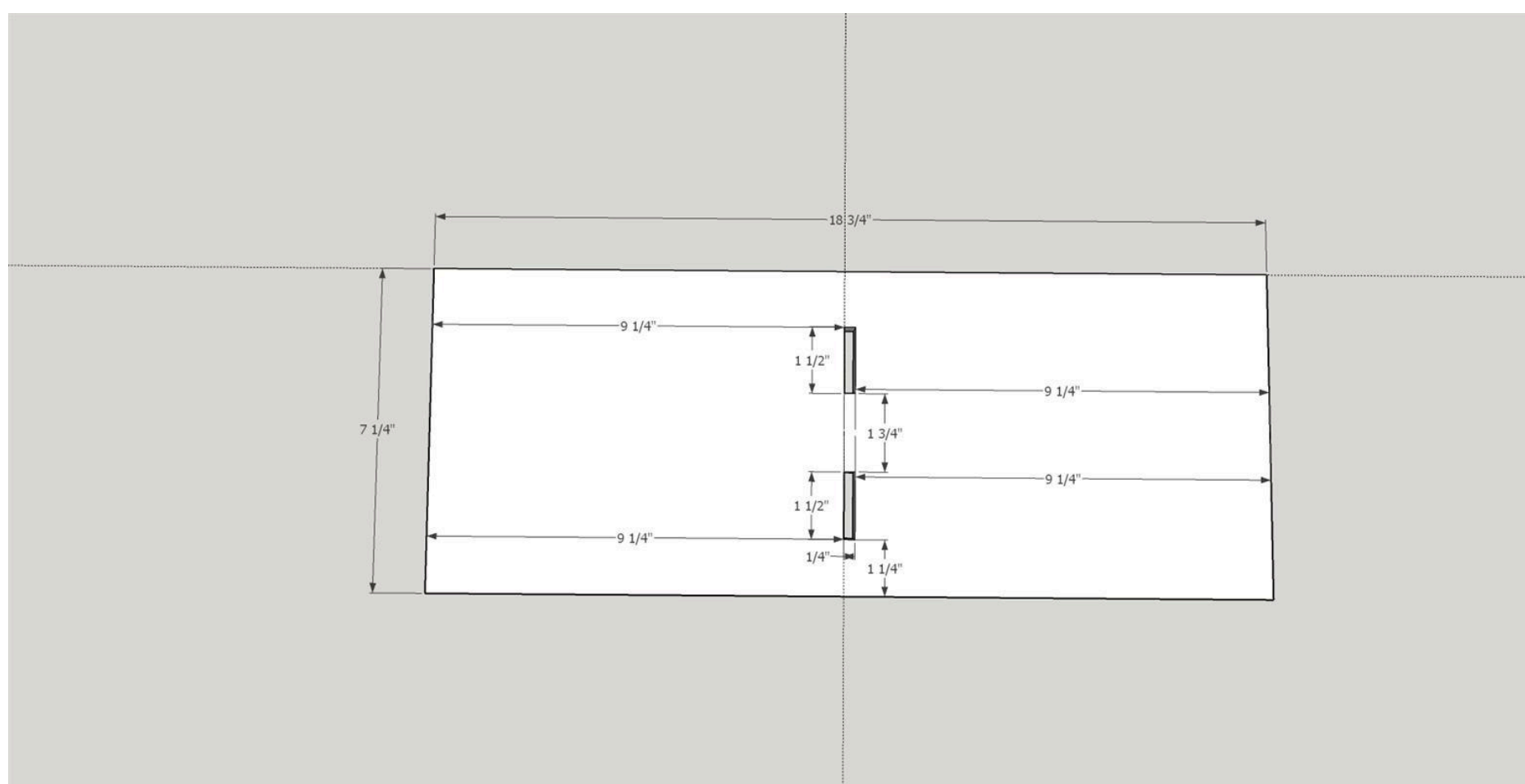
9 Round over the edges

Once the glue in the top/dowel holder assembly is dry use a roundover bit mounted in a router table to shape the outside edges of the assembly. How large you make the roundover is a matter of personal taste. I usually use a 1/2" radius bit set to a very shallow cut. You can now sand the assembly. I start with 100 grit and end with 150 grit sandpaper.

10 Mortising the bottom

Using the following diagram draw the mortise positions and dimensions on the bottom board. Rough cut the mortises using a drill press with a 1/4" drill bit. Then use chisels to clean up and finish the cut. Alternatively you can use a mortising machine, if one is available, or a router if you have the proper bit and template.
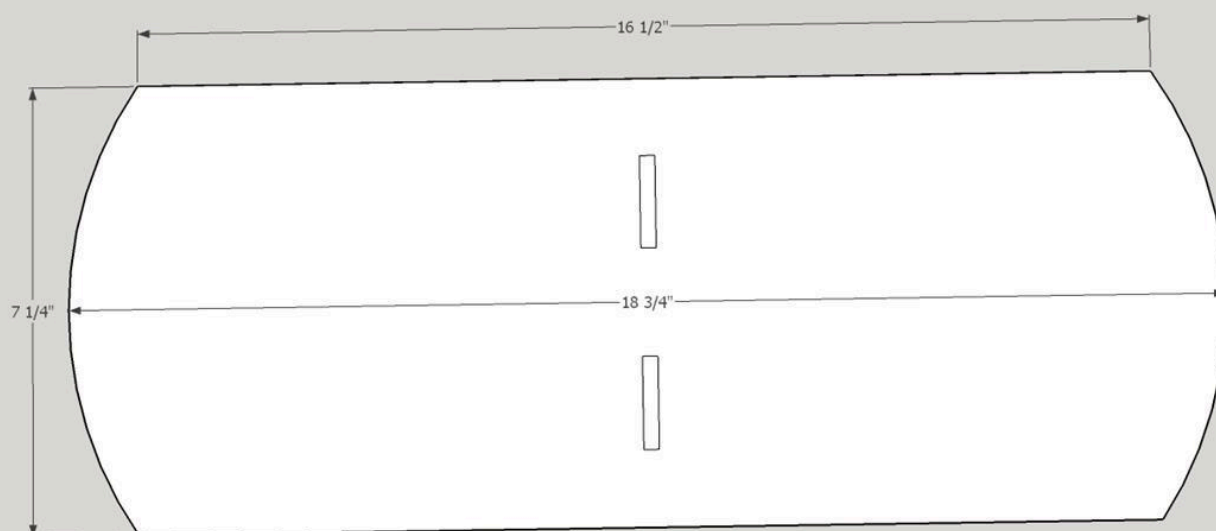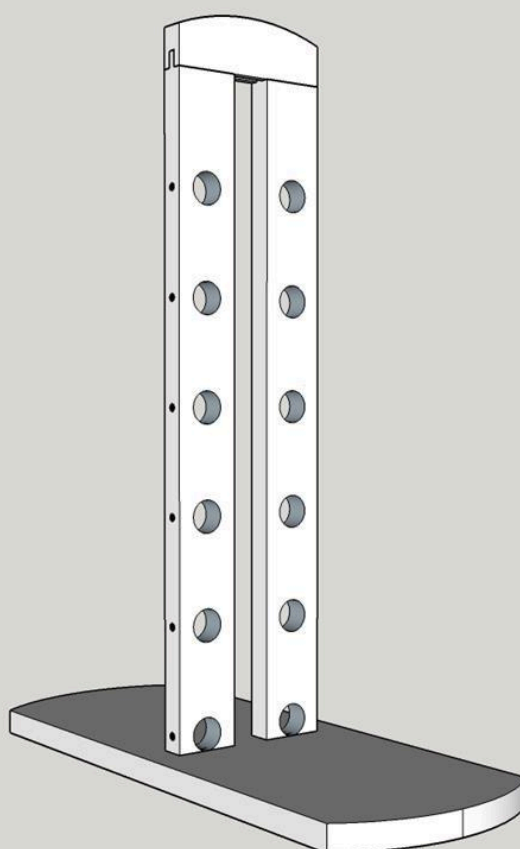
11 **Completing the bottom**

Use the dimensions on the following diagram to draw arcs on either end of the base. Use a band saw or jig saw to cut the arcs. Then round over the base using the setup from step 9. Now sand the piece ending with 150 grit sandpaper.
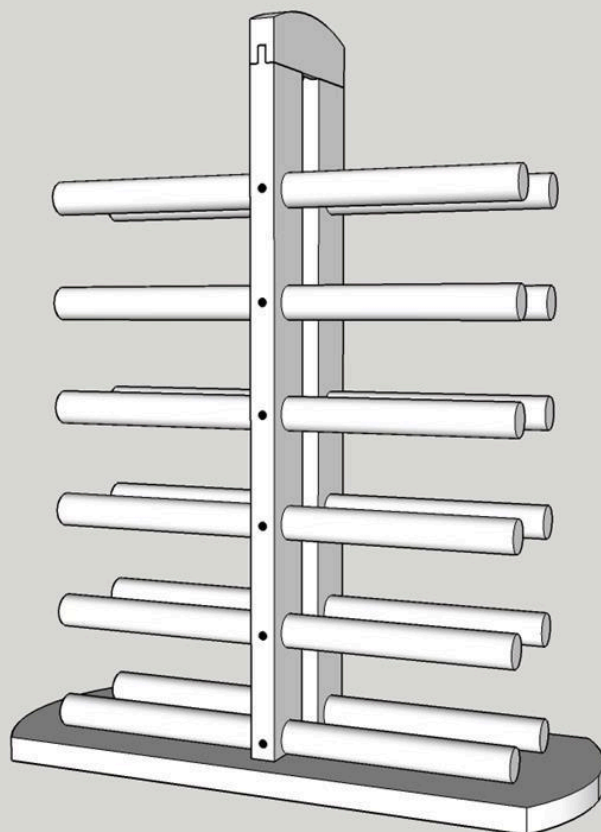

12 **Attach the base**

Using wood glue attach the top/dowel holder assembly to the base by inserting the tenons into the mortises. Hold in place with clamps.

13 Insert dowel rods

Insert the twelve dowel rods making sure that they are spaced properly and that the holes for the 1/4" dowel pins are aligned. One at a time, slide the dowel rods about 1/2" out of center and add glue there. Return the rod to its proper place. Add some glue to the 1/4" X 1 3/4" dowel pin and drive it in place. Repeat this process for the remaining eleven dowel rods. After completing the placements use a damp rag to remove any excess glue.

14 **Finishing**

Now that the build is complete use 220 sandpaper to do a once over on all surfaces in preparation for the finish. Clean well to remove all dust. (I use compressed air and clean dry rags) I chose to use Minwax Cherry Oil-Based Wood Finish to stain the wine rack. After the stain dried I used Minwax Tung Oil finish. I gave the wine rack three coats following manufacturers instructions.