

CHIEF'S SHOP PLAN OF THE WEEK



SIMPLE WOODWORKING: BOOKCASE



ABOUT THESE PLANS

On this first page you will see above the project complete. On the last page you'll find the finished outer dimensions. Be sure to read ALL of the project steps before you start.

To the right is a list of the Lumber, Hardware/Supplies, and Tools you will need to complete this project. A measuring tape and pencil are not included because that should be pretty standard and self explanatory.

Below What You'll Need is the Parts list. This also is included on the Cutting Diagram page, which is the next to last page of this plan document. Also on the Cutting Diagram page is an estimate of the cost of the lumber. This estimate doesn't include any other supplies and does not factor in sales tax.

Throughout these plans you'll find the icons below:



LAYOUT

This indicates a diagram detailing the dimensions of a project part and/or the placement for pocket holes, screws, nails, etc.



NOTE

Notes are the instructions for a particular step/section of the project.



TAKE CARE!

This indicates when to pay close attention to the diagrams, take precautions for safety, etc.



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WHAT YOU'LL NEED



LUMBER

Solid Wood Version

- 1 - 1/2 x 6 x 2
- 2 - 1 x 3 x 8
- 1 - 1 x 10 x 8
- 3 - 1 x 12 x 8
- 1 - 1/4 x 4 x 4 sheet of plywood

Plywood Version

- 1 - 1/2 x 6 x 2
- 1 - 1/4 x 4 x 4 sheet of plywood
- 1 - 3/4 x 4 x 8 sheet of plywood

(availability will vary)

HARDWARE/SUPPLIES

- 1 1/2" screws (optional)
- 1 1/2", 3/4" brads
- 1 1/4" pocket hole screws
- shelf pins
- pocket hole plugs
- wood glue, wood filler,
- paint/stain, furniture glides

TOOLS

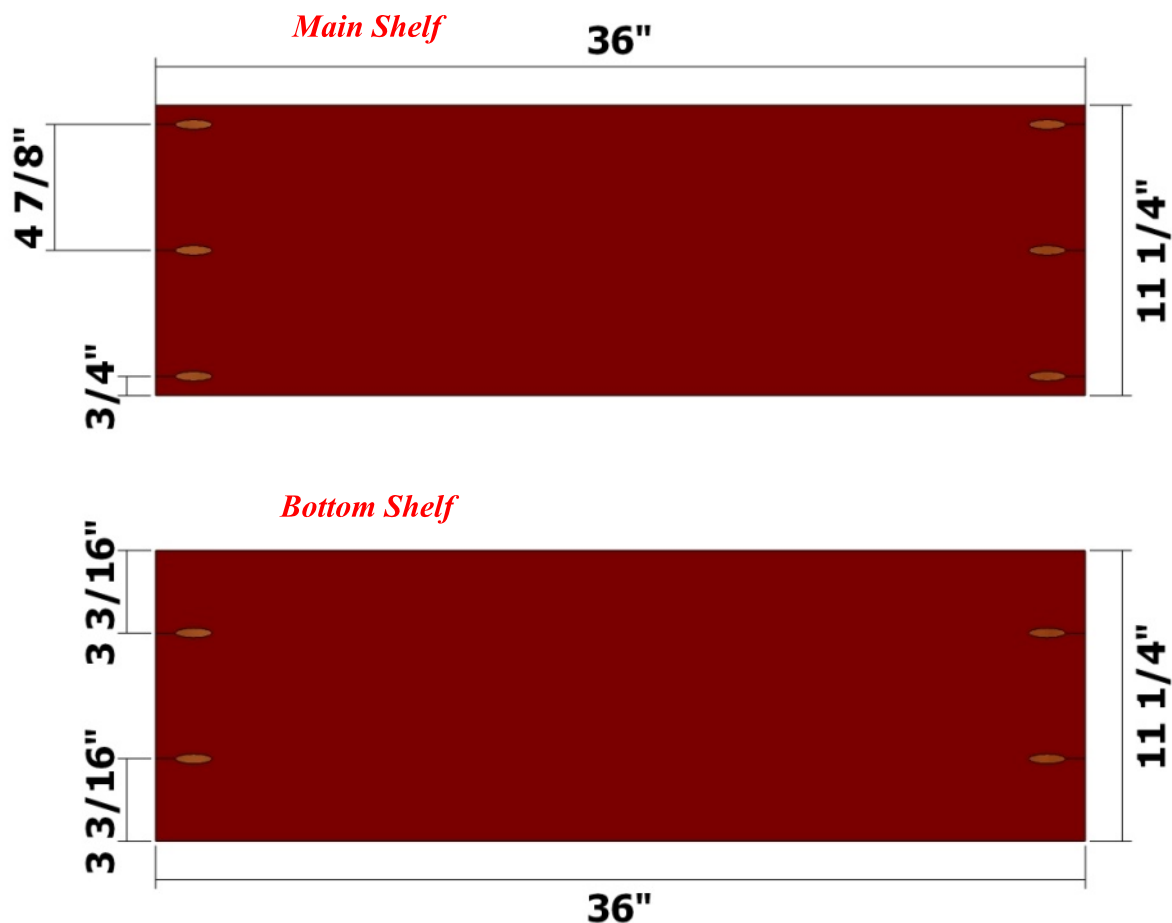
- table saw
- miter saw
- jigsaw or bandsaw
- sander
- pneumatic nailer/hammer
- drill/driver
- Kreg Pocket Hole Jig
- Kreg Shelf Pin Jig
- clamps
- square
- long flexible metal ruler
- or long scrap strip

PARTS

- Bottom Shelf (1)** - 3/4 x 11 1/4 x 36
- Main Shelf (1)** - 3/4 x 11 1/4 x 36
- Divider (1)** - 3/4 x 11 1/4 x 18 3/4
- Sides (2)** - 3/4 x 11 1/4 x 36
- Front Rail (1)** - 3/4 x 2 1/2 x 36
- Back Rail (1)** - 3/4 x 2 1/2 x 36
- Bottom Rails (2)** - 3/4 x 1 3/4 x 36
- End Stiles (4)** - 3/4 x 4 1/4 x 36
- End Rails (2)** - 3/4 x 1 3/4 x 7 3/4
- End Shelves (6)** - 3/4 x 4 x 7 3/4
- Magazine Rack (2)** - 1/2 x 5 1/2 x 7 3/4
- Back (1)** - 1/4 x 36 x 37 1/2
- Top (1)** - 3/4 x 11 1/4 x 46
- Shelves (3)** - 3/4 x 11 1/4 x 17 1/2*

*adjust as needed
All parts are listed in actual dimensions. Refer to the Cutting Diagram on the last page of this plan as a guide for determining the specific board from which to cut the parts.

 LAYOUT



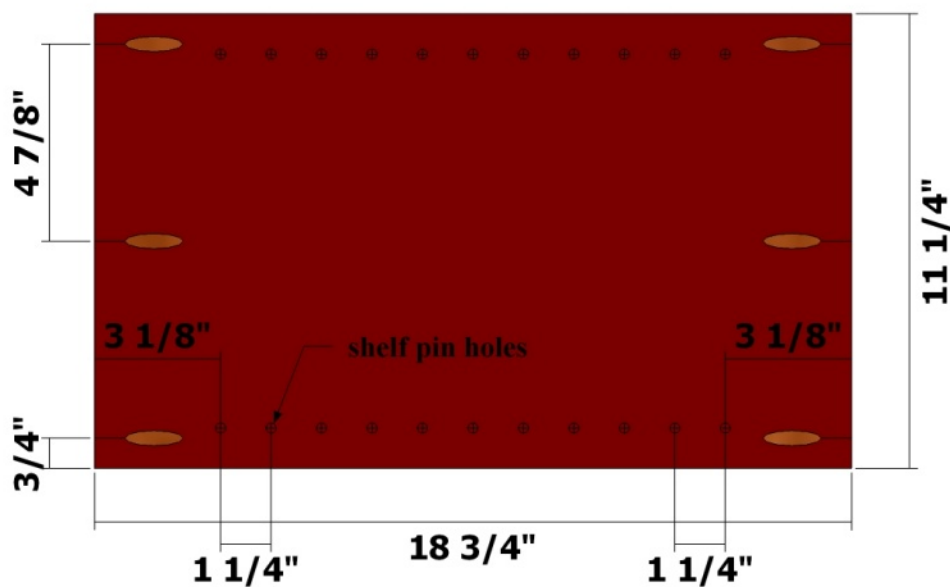
 NOTE

Use the layouts as guides for measuring, marking, cutting and drilling pocket holes in the **Panels**. Create four.

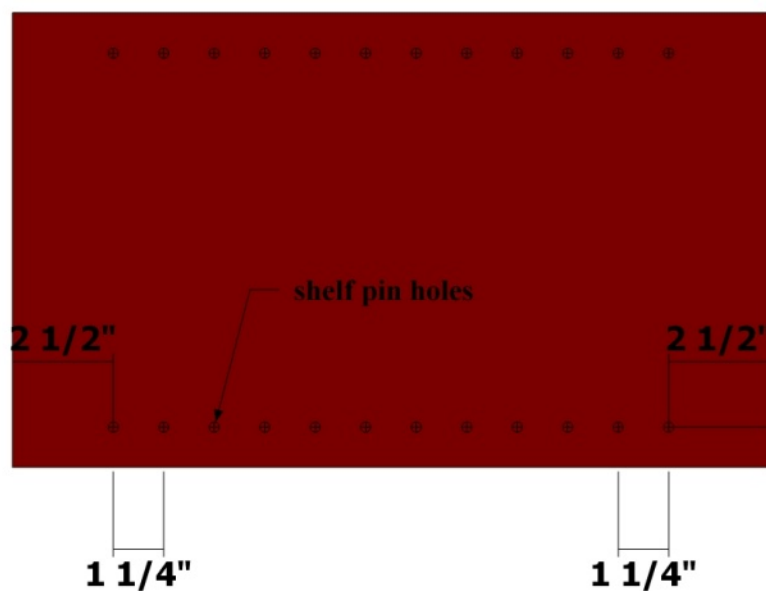
Be sure to set your pocket hole jig and drill bit for 3/4-inch stock.

 LAYOUT

Divider (right side)



Divider (left side)



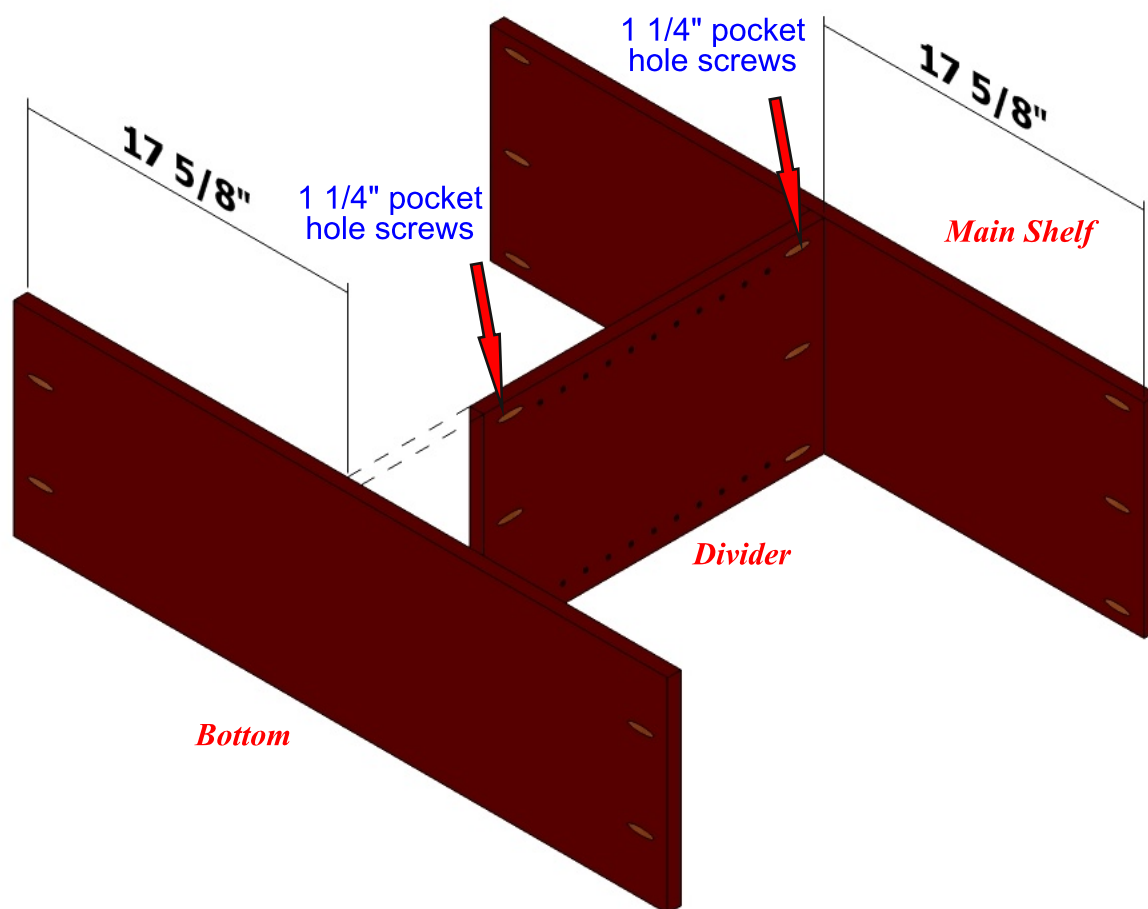
 NOTE

Use the layouts as guides for measuring, marking, cutting, drilling pocket holes, and drilling shelf pin holes in the **Divider**. Make sure you follow the layout closely for both sides of the part.

Be sure to set your pocket hole jig and drill bit for 3/4-inch stock.

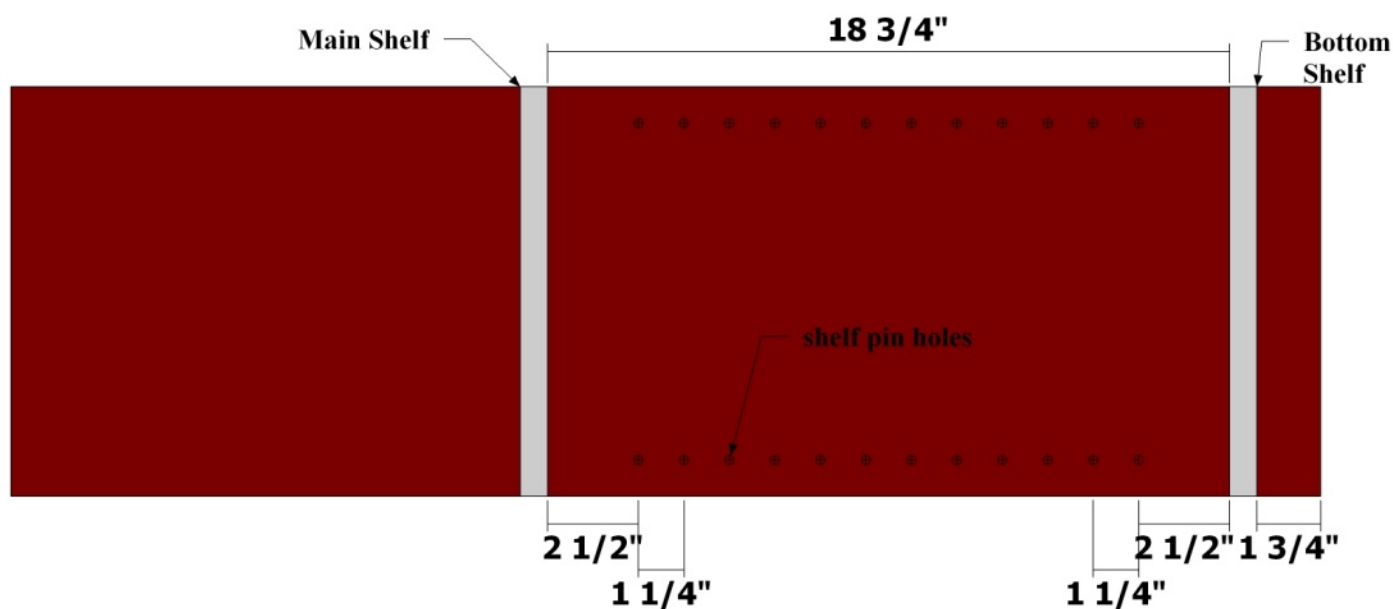
 NOTE

Position the **Divider** as shown (centered on the **Main Shelf** and **Bottom**), and attach using glue and 1 1/4-inch pocket hole screws. Make sure the faces of the parts are positioned as shown below, as this is crucial for a following steps.

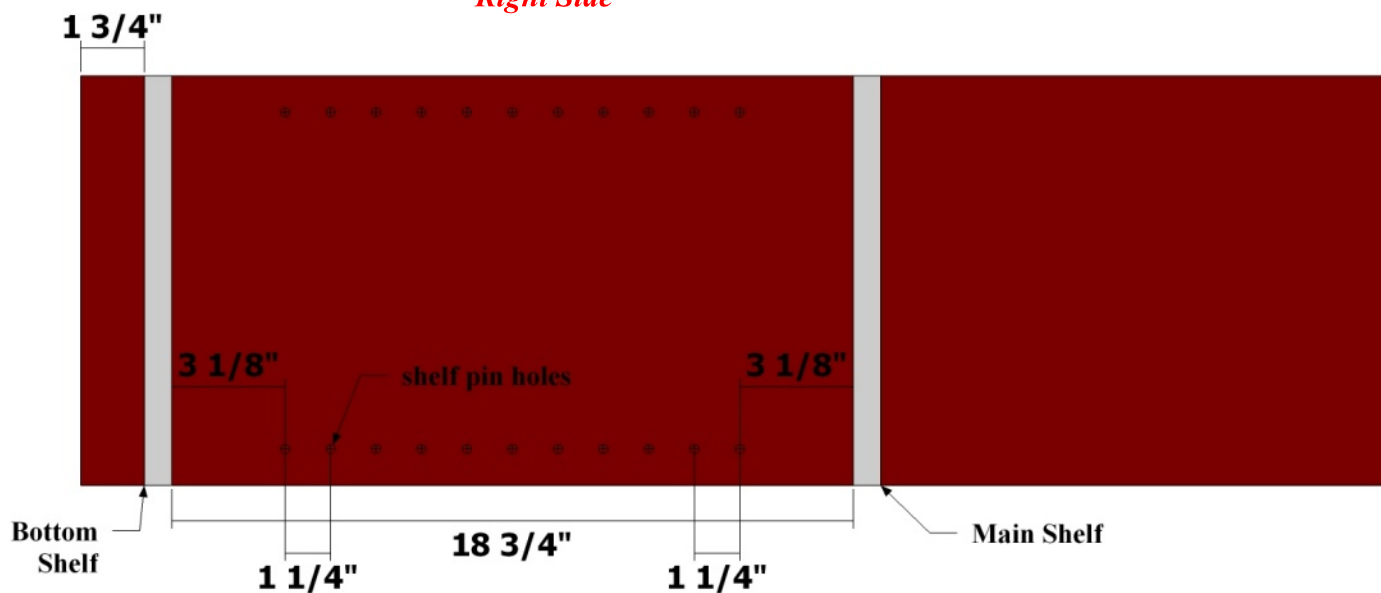


 LAYOUT

Left Side



Right Side

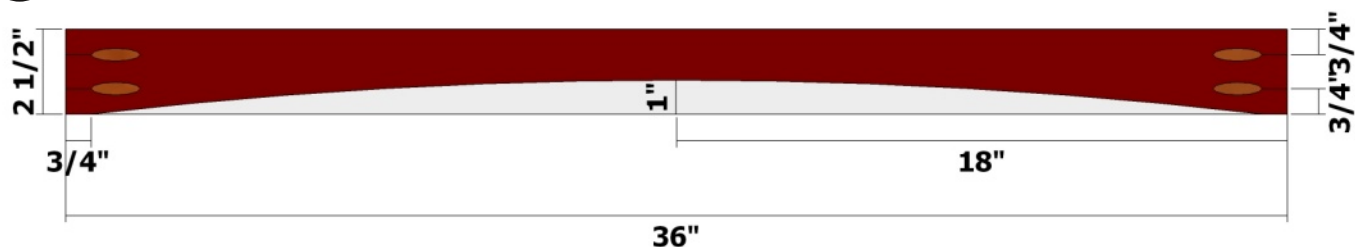


 NOTE

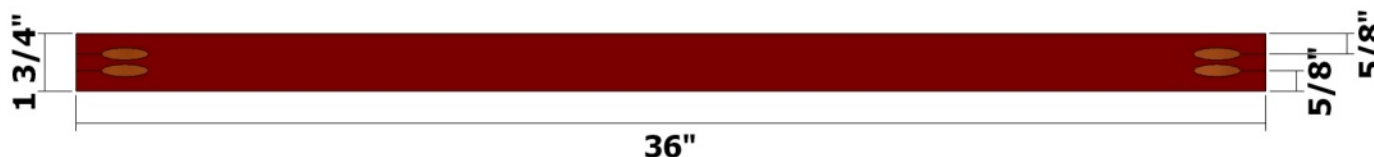
Use the layouts as guides for measuring, marking, cutting and drilling shelf pin holes in the **Sides**. Label these parts as left and right to avoid confusion in the following steps.

LAYOUT

Front Rail/Back Rail



Bottom Rail

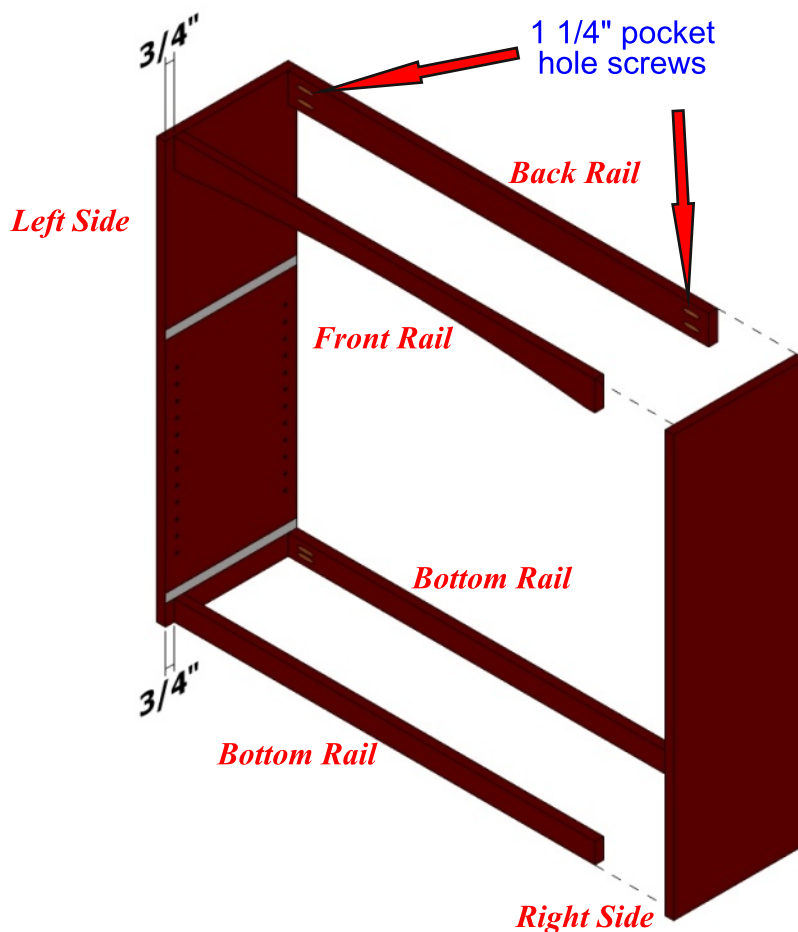


NOTE

Use the layouts as guides for measuring, marking, cutting and drilling pocket holes in the **Front Rail, Back Rail, and Bottom Rails**. Only cut the arc on the **Front Rail** and not the **Back Rail**. Be sure to set your pocket hole jig and drill bit for 3/4-inch stock.

NOTE

Position the parts as shown at right and attach using glue and 1 1/4-inch pocket hole screws. Do not tighten the screws attaching the assembly to the **Right Side** fully yet, allow some play in the joints. You may need to turn the assembly on a side or edge to make it easier to attach the parts. Be sure to clamp in place while attaching.



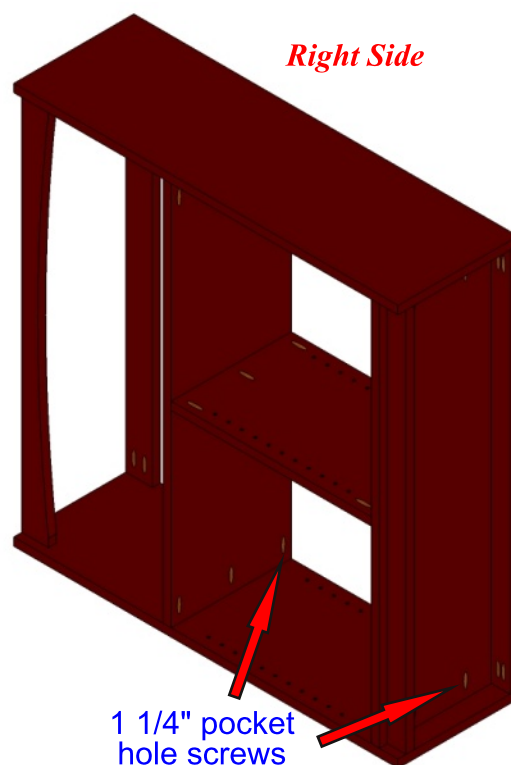
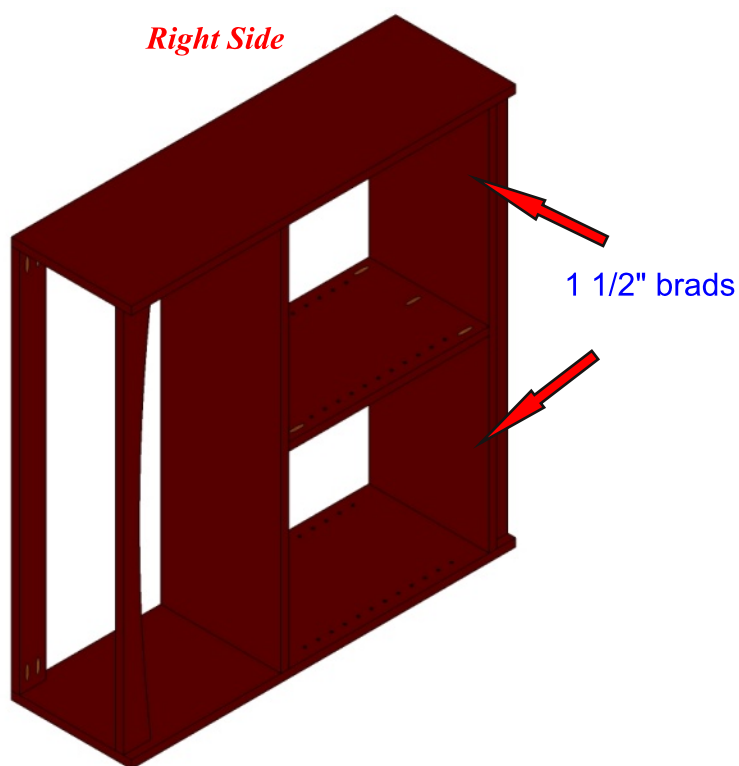
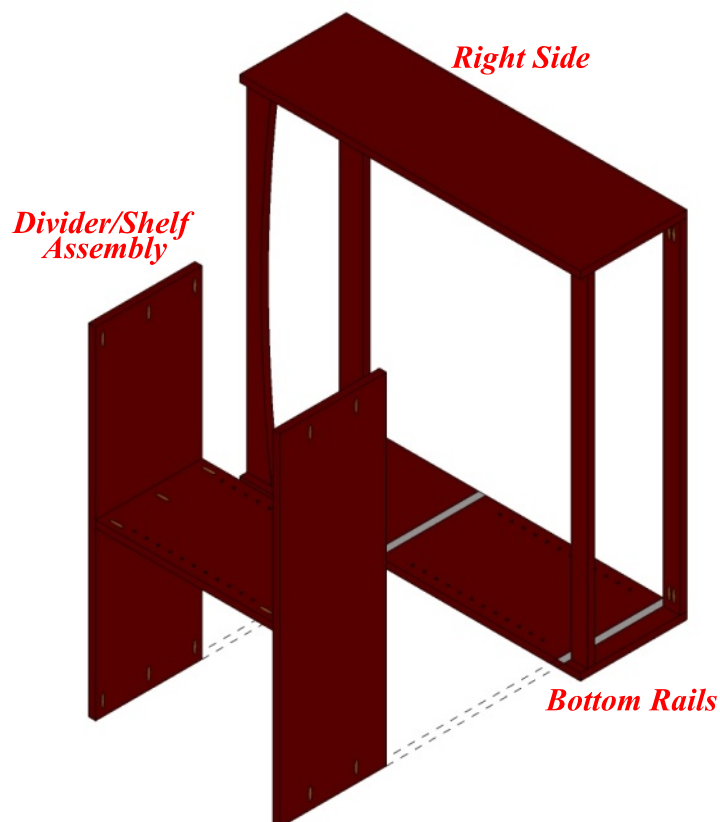


NOTE

Slide the **Divider/Shelf Assembly** in place (you may need to lightly sand the leading corner of the assembly to get it started), making sure it is flush with the edges of the **Left Side** and flush against the **Bottom Rails**.

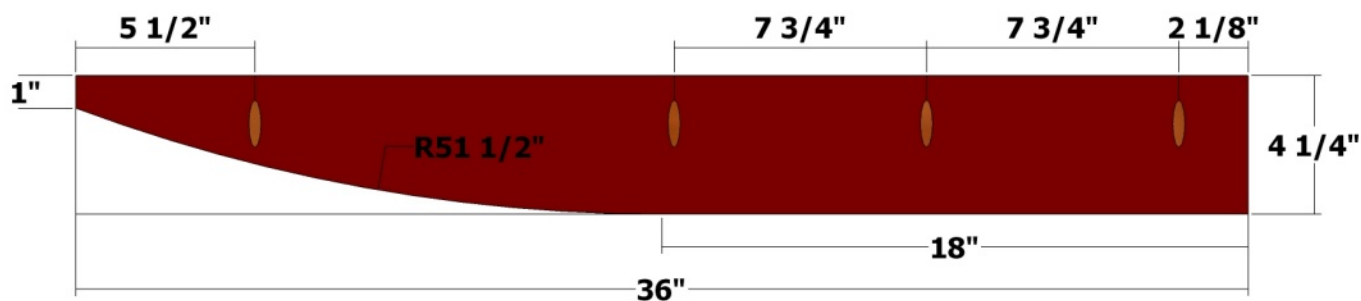
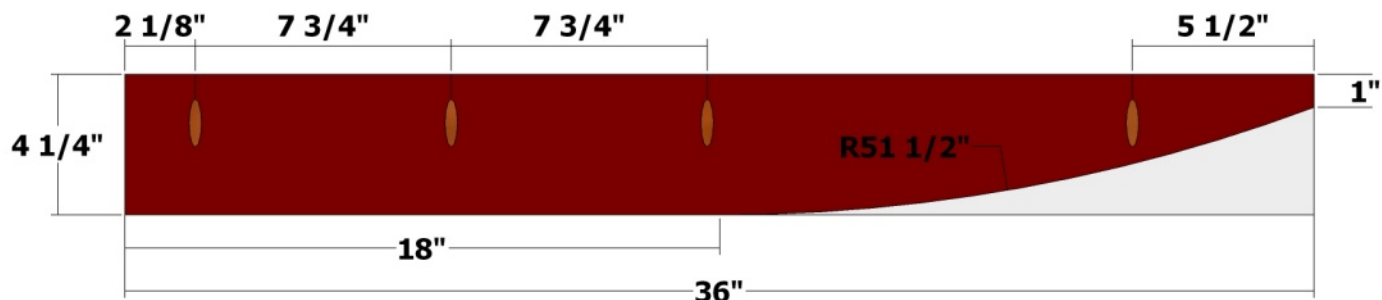
Attach the **Bottom Shelf** to the **Bottom Rails** first using 1 1/2-inch brads. Then attach the **Bottom Shelf** and **Main Shelf** to the **Left Side** using 1 1/4-inch pocket hole screws.

Tighten the screws attaching the rails to the **Right Side** (remember, they weren't fully tightened in the previous step), and attach the **Main Shelf** and **Bottom Shelf** to the **Right Side** using 1 1/4-inch pocket hole screws.



LAYOUT

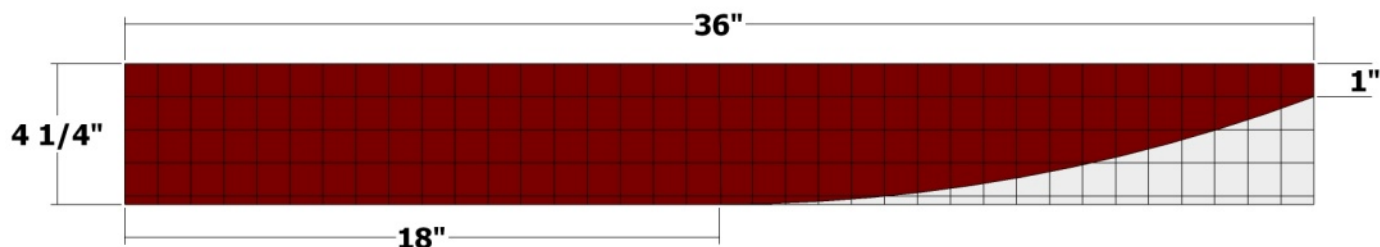
End Stiles



NOTE

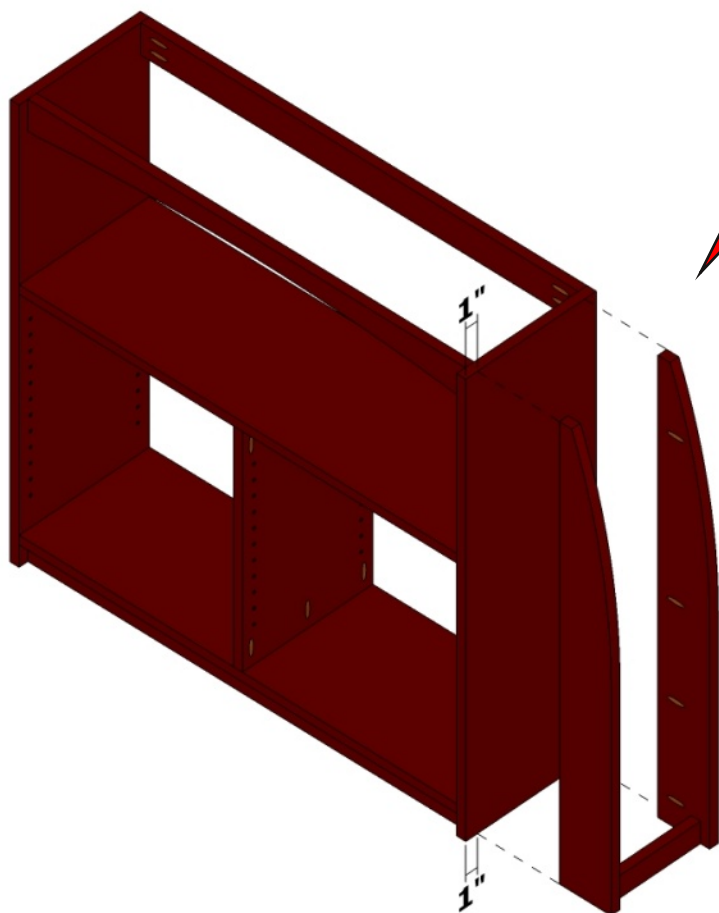
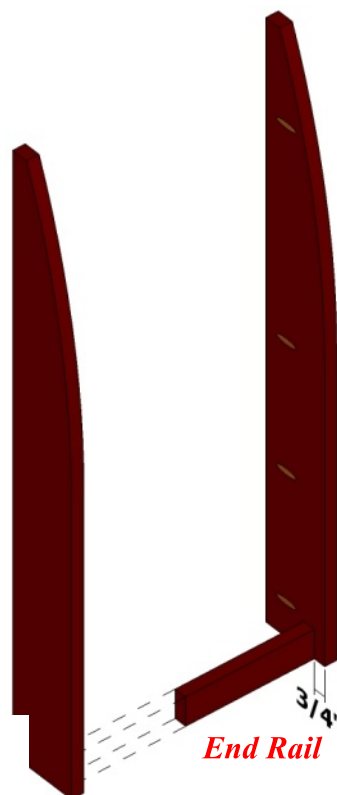
Use the layouts as guides for measuring, marking, cutting and drilling pocket holes in the **End Stiles**. Create two of each of the above. **Be sure to set your pocket hole jig and drill bit for 3/4-inch stock.**

If you prefer, you can use the grid layout below to mark the blank.



 NOTE

Position the **End Rail** as shown at right, clamp in place, and attach to the **End Stiles** using glue and 1 1/2-inch screws (countersunk) or 1 1/2-inch brads. Drive the fasteners through the **Stiles** and into the **Rail**.

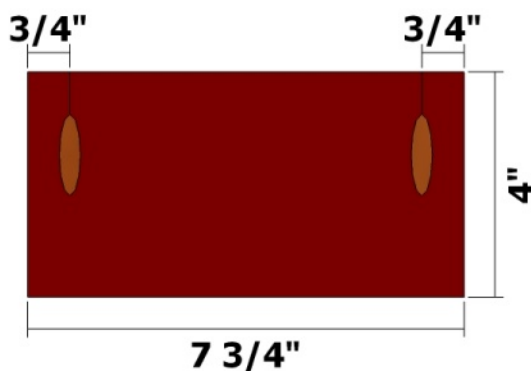


 NOTE

Position the **End Assembly** as shown at left, clamp in place, and attach to the **Right Side** using glue and 1 1/4-inch pocket hole screws.

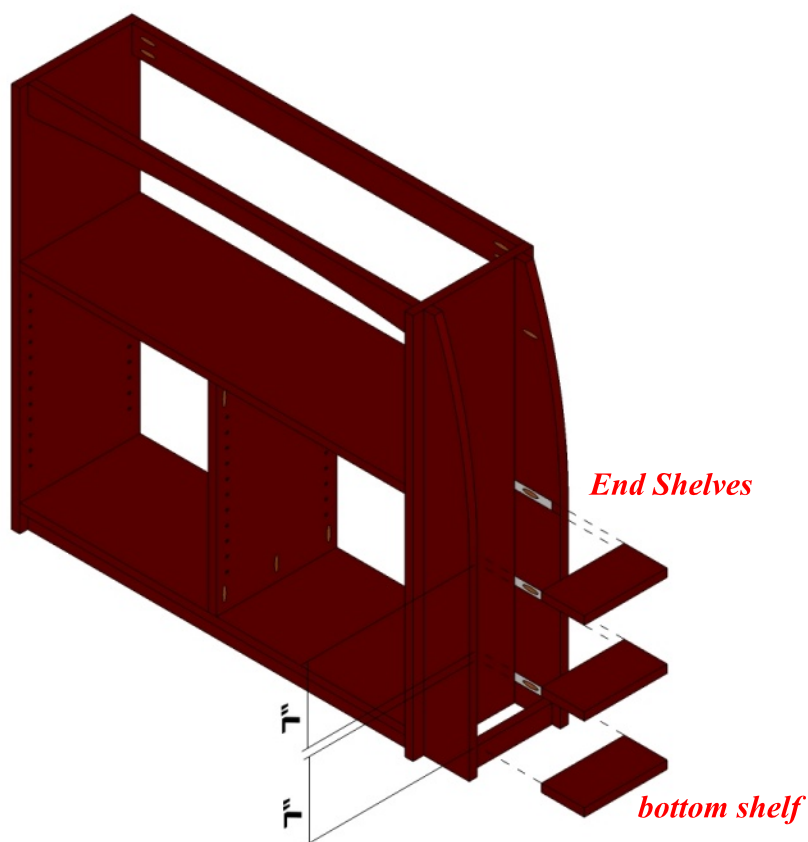
LAYOUT

End Shelf



NOTE

Use the layout as a guide for measuring, marking, cutting and drilling pocket holes in the **End Shelves**. Be sure to set your pocket hole jig and drill bit for 3/4-inch stock.



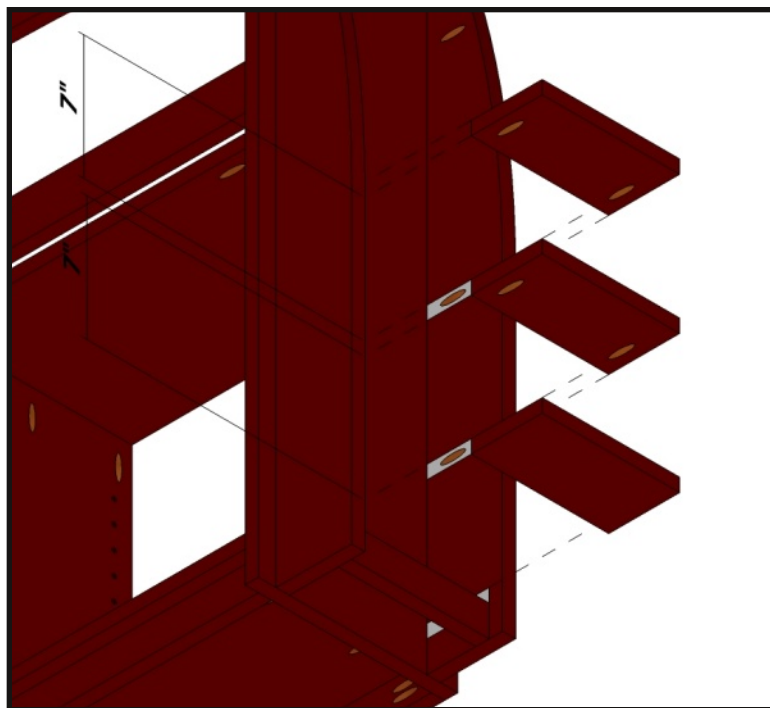
NOTE

Position the **End Shelves** as shown at left. Attach the bottom shelf to the **End Rail** and **End Stiles** using glue and 1 1/4-inch brads. Use a square to keep the shelf properly aligned.

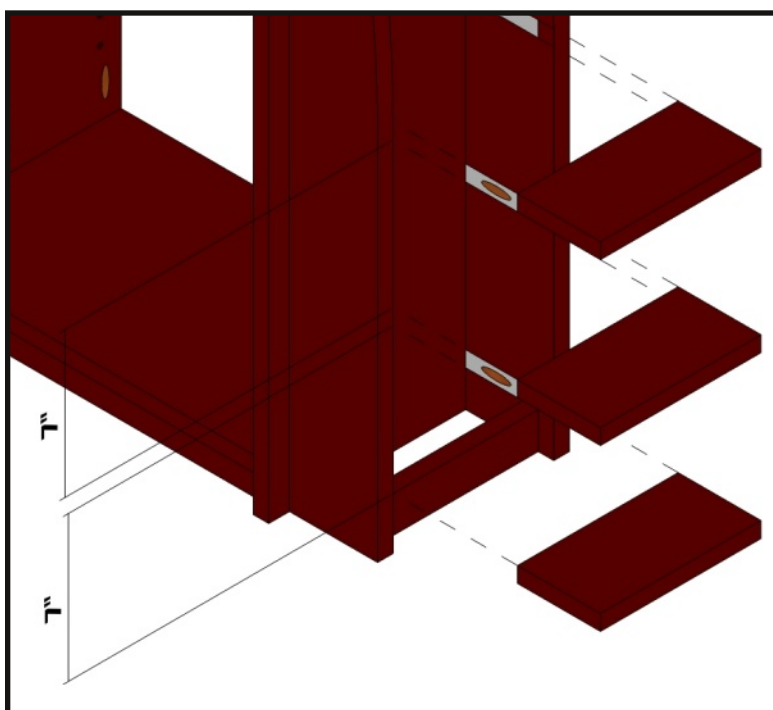
Position the remaining two shelves as shown.

NOTE

Position the remaining two shelves as shown, and attach them to the **Right Side** using glue and 1 1/4-inch pocket hole screws. Use a square to ensure proper alignment. Drive 1 1/4-inch brads through the **End Stiles** and into the shelves. Again, use a square to ensure proper alignment.

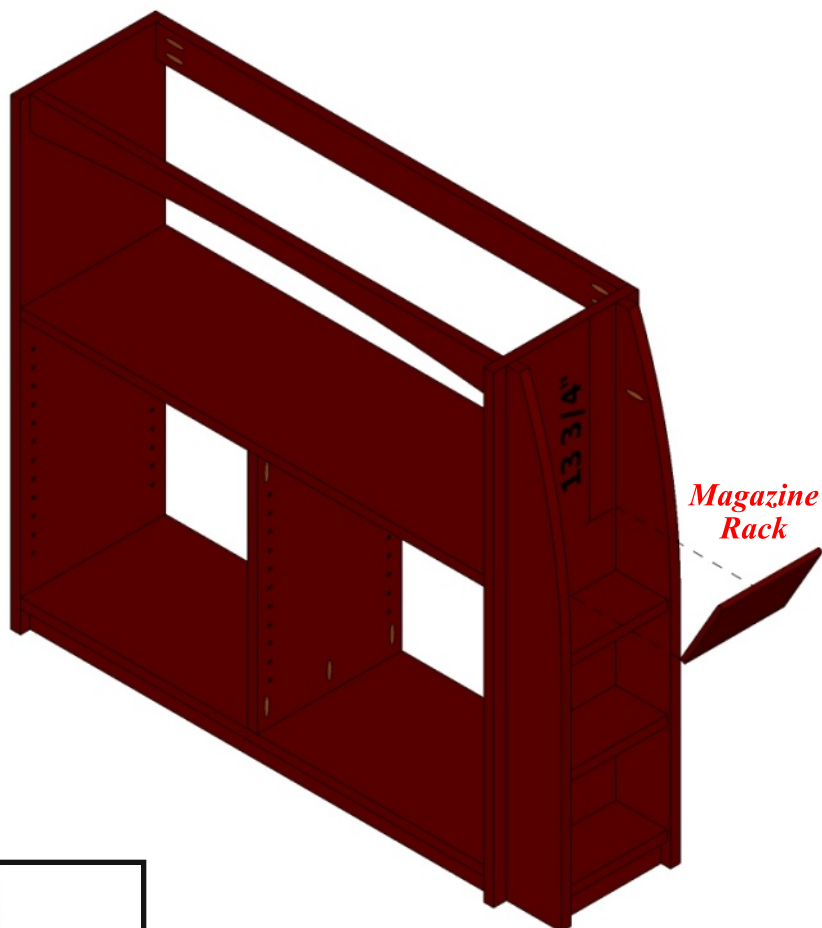


(bottom view)



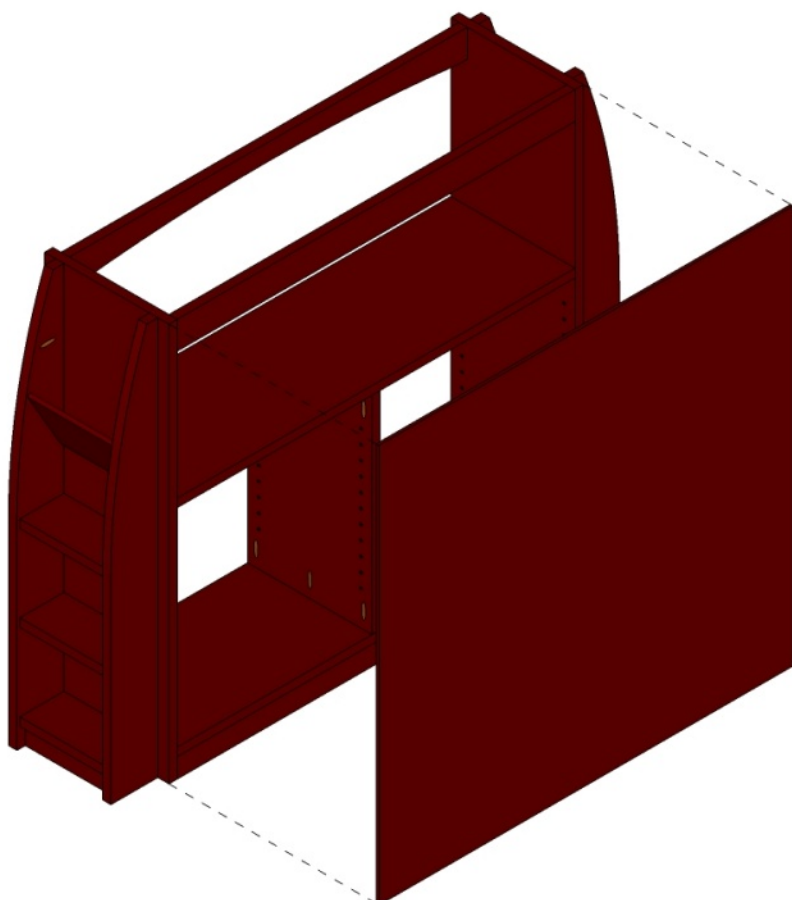
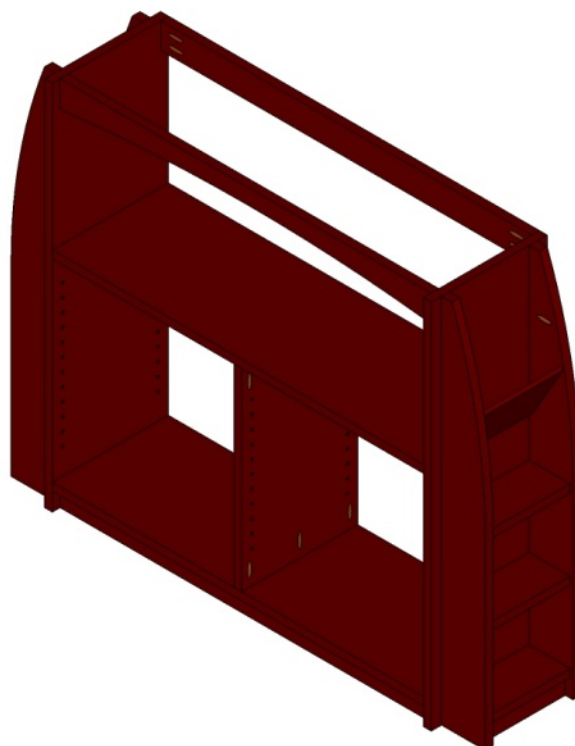
NOTE

Sand a slight roundover on one edge of the **Magazine Rack**. Position one corner of the unsanded edge as shown at right and tilt it to the desired angle, so that it's roughly 1/8- to 1/4-inch from the edge of the **End Stiles**. Attach using 1 1/2-inch brads. Be careful to mark your nail line properly to avoid blowing out the brad on the **Magazine Rack**.



NOTE

Repeat the steps from Pages 8-12 to attach the **End Shelf Assembly** to the **Left Side**. Now is a good time to fill any pocket holes, screw holes, or brad holes, apply edge banding on plywood (if desired), and apply a finish to all but the back edges of the **sides, shelves, and Divider**, the back faces of the **Back Rail** and back **Bottom Rail**, and the top edges of the entire assembly.

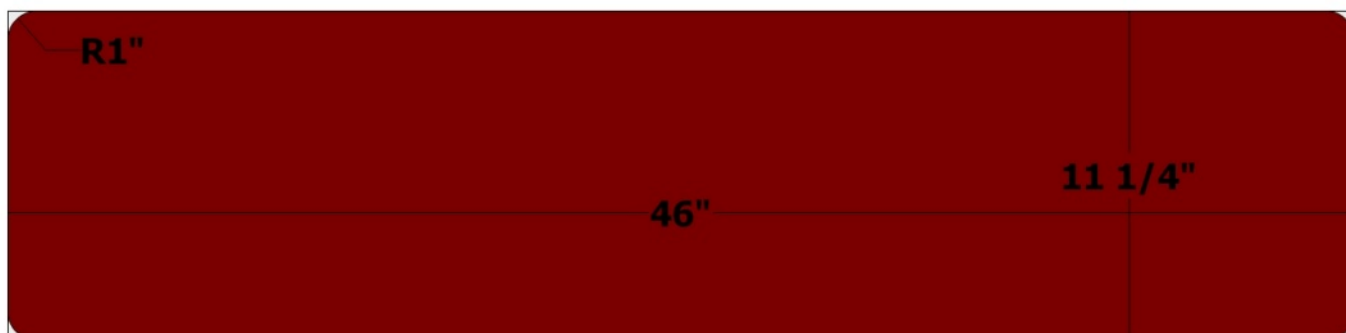


NOTE

Position the **Back** as shown, clamp in place, and mark the position of the assembly (reaching through the front and marking on the face of the **Back**). Apply a finish to the edges, ends, and faces of the **Back**, making sure to not apply a finish to the marked areas.

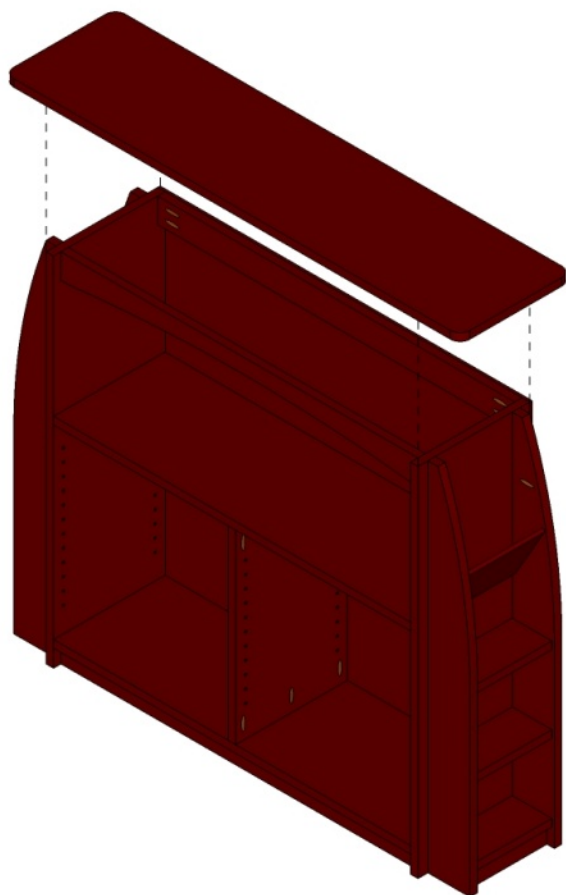
Attach the **Back** to the assembly using glue and 3/4-inch brads. Touch up the finish on the **Back** as needed now.

LAYOUT



NOTE

Use the layout as a guide for measuring, marking, and cutting **Top**.



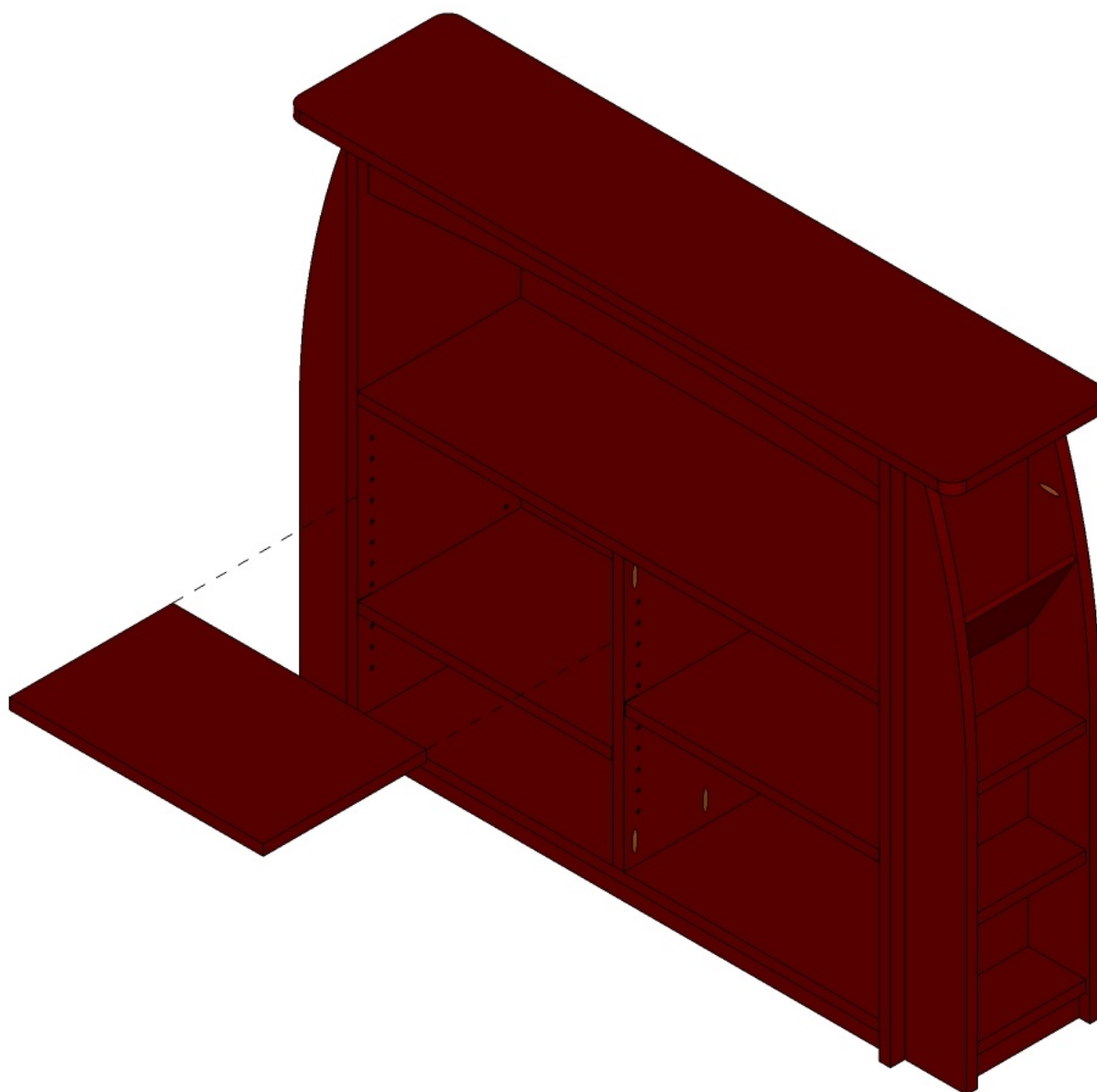
NOTE

Position the **Top** centered on the assembly and mark the outline of the assembly on the underside of the **Top**. Apply edge banding to the **Top** (if using plywood), and apply a finish to the entire part, except for the areas marked.

Apply glue to the top edges of the assembly, reposition the **Top**, and attach using 1 1/2-inch brads. Fill in any holes and touch up the finish as needed.

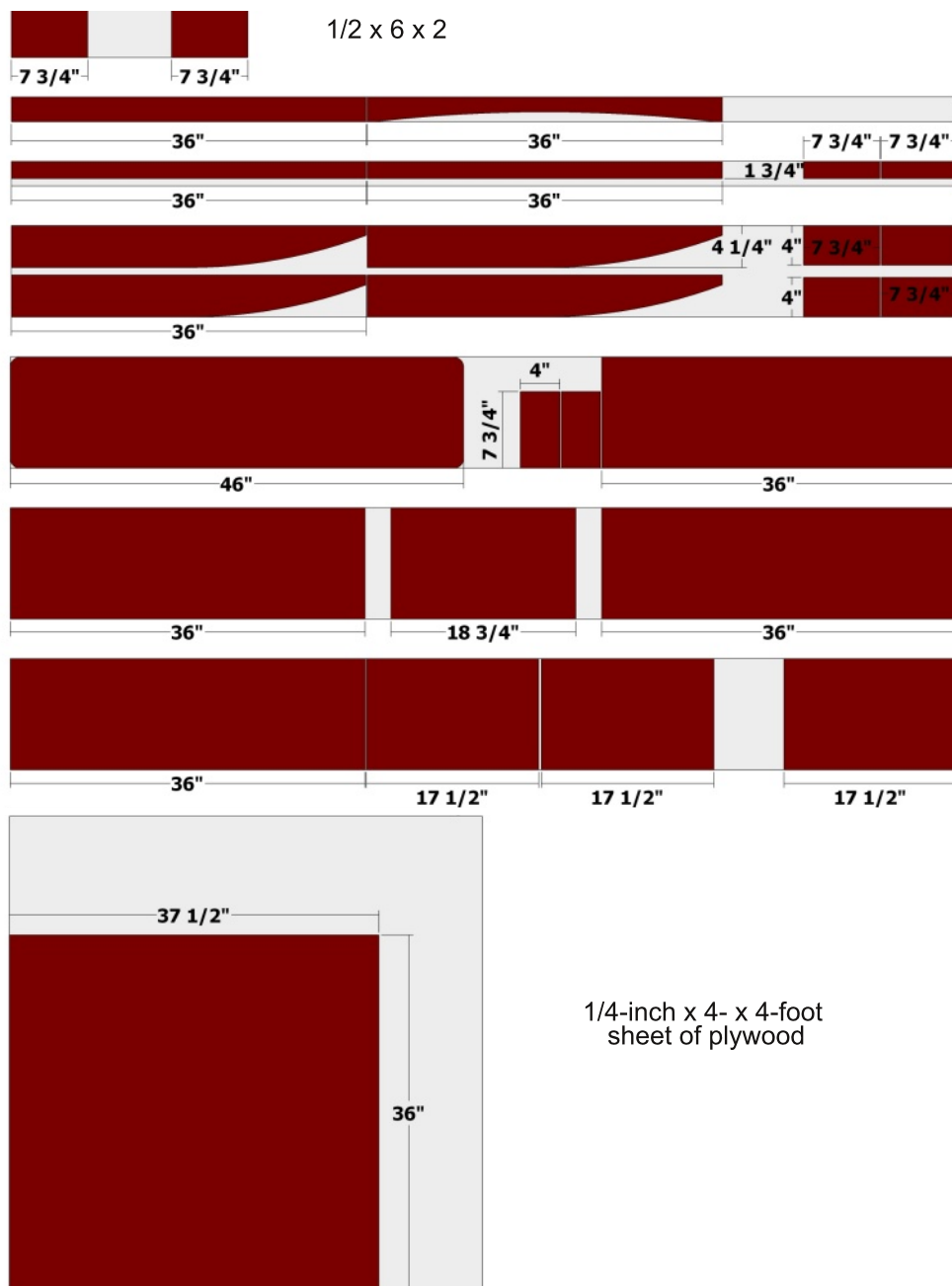
 NOTE

Position the shelf pins in place (make sure the finish has dried properly) and cut the **Shelves** to fit. Remove the **Shelves**, apply edge banding to the front edge (if using plywood), and apply a finish. Be sure to allow the **Shelves** to dry properly before reinserting them. Attach furniture glides or felt pads to the bottom of the assembly if placing the **Bookcase** on wood flooring.





CUTTING DIAGRAM



1 x 3 x 8

1 x 10 x 8

1 x 12 x 8

Estimated Lumber Cost Solid Lumber

White Pine: \$81

Clear Pine: \$160



Bottom Shelf (1) - 3/4 x 11 1/4 x 36
Main Shelf (1) - 3/4 x 11 1/4 x 36
Divider (1) - 3/4 x 11 1/4 x 18 3/4
Sides (2) - 3/4 x 11 1/4 x 36
Front Rail (1) - 3/4 x 2 1/2 x 36
Back Rail (1) - 3/4 x 2 1/2 x 36
Bottom Rails (2) - 3/4 x 1 3/4 x 36
End Stiles (4) - 3/4 x 4 1/4 x 36
End Rails (2) - 3/4 x 1 3/4 x 7 3/4
End Shelves (6) - 3/4 x 4 x 7 3/4
Magazine Rack (2) - 1/2 x 5 1/2 x 7 3/4
Back (1) - 1/4 x 36 x 37 1/2
Top (1) - 3/4 x 11 1/4 x 46
Shelves (3) - 3/4 x 11 1/4 x 17 1/2*

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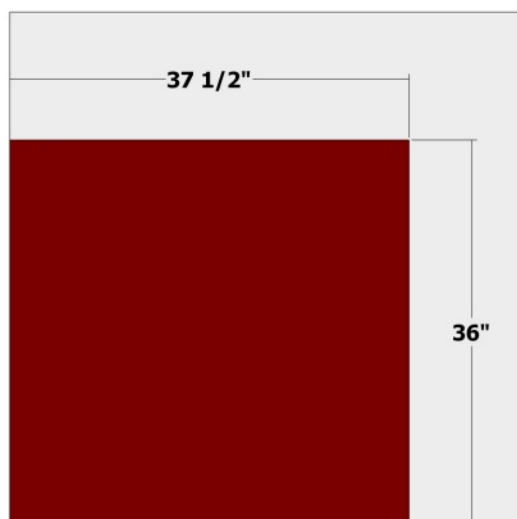
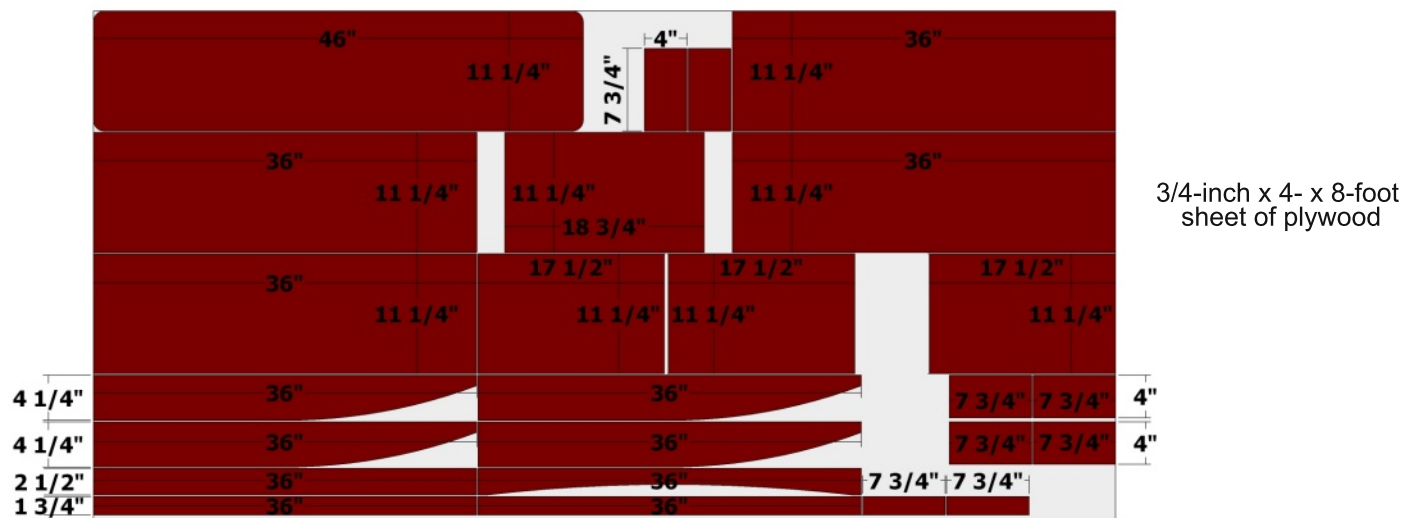


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CUTTING DIAGRAM



Estimated Lumber Cost Plywood

Pine Plywood: \$50

Birch Plywood: \$66



Bottom Shelf (1) - 3/4 x 11 1/4 x 36
Main Shelf (1) - 3/4 x 11 1/4 x 36
Divider (1) - 3/4 x 11 1/4 x 18 3/4
Sides (2) - 3/4 x 11 1/4 x 36
Front Rail (1) - 3/4 x 2 1/2 x 36
Back Rail (1) - 3/4 x 2 1/2 x 36
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End Stiles (4) - 3/4 x 4 1/4 x 36
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