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FarmLIFE

Setting Up Shop: The Workbench

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Part of creating a great workshop that can fit your needs is adding a large surface where you can actually spread out and work. This project adds that ever-elusive workbench that's both sturdy and spacious. You can build it in roughly half a day with materials readily available, and you can make it portable by adding locking casters to the bottom, which will make your workshop adaptable over time.

Speaking of adaptability, let's say you need to do some welding. Simply cut thick-gauge steel sheets to fit the dimensions of the Worktop Assembly, attach using steel washer-head screws and shield the remainder of the workbench in welding blankets. Ideally, you'd want a welding bench in an open area, but if your workbench is positioned against a wall, be sure to cover the wall as well. Remove the screws and steel sheets and you're back to your original workbench.

Instructions

Be sure to read through the entire set of instructions prior to starting the project and purchasing lumber and supplies. The lumber used is available at most home centers. Use the **Project Parts List** and **Cutting Diagrams** (broken down by stock thickness) as a guide, and be sure to cut the parts as you need them, not all at once. Double-check your measurements at each step in the project, particularly when attaching a part between two fixed points.

Build the Worktop Assembly

Cut the **Worktop** parts using a table saw or circular saw with a straight edge guide.

Apply glue to one face of each **Worktop**, position the glued portions together with the edges and ends flush, and clamp in place. Allow the glue to set per the manufacturer's instructions, which can be as

little as 15 minutes or so.

Use the layout in **Figure 1** as a guide for cutting the **Worktop End Rails** and **Worktop Side Rails** to size and shape.

Apply glue to the edges of the **Worktop Assembly**. Position the **Worktop End Rails** and **Worktop Side Rails** flush against the **Worktop Assembly**-as shown in **Figure 2**. Clamp in place at the corners using corner clamps, drill pilot holes for 1 5/8-inch deck screws and attach using 1 5/8-inch deck screws.

Use the layout in **Figure 3** as a guide for drilling pocket holes and pilot holes for 2-inch deck screws in the **Worktop Support Rails**. Set your pocket hole jig and drill bit for drilling into 3/4-inch stock. This setting is because the mating stock is 3/4-inch thick.

Position the **Worktop Support Rails** as shown in **Figure 4**. Use a piece of the 2 x 2 stock as a spacer for placing the **Worktop Support Rails** near the **Worktop End Rails**. *(The spacers will allow room for placement of End Assemblies. See Figure 11.)* Attach the **Worktop Support Rails** to the **Worktop Side Rails** using 1 1/4-inch pocket hole screws. Attach the **Worktop Support Rails** to the bottom of the **Worktop Assembly** using 2-inch deck screws.

Build the End Assemblies

Use the layout in **Figure 5** as a guide for cutting to shape the **Inside Feet** and **Outside Feet**. Use a miter saw on the ends and a jigsaw for the top and bottom notches.

Use the layout in **Figure 6** as a guide for drilling pocket holes in the **Legs** on one end. Set the jig and

drill bit for drilling into 1 1/2-inch stock.

Apply glue to one side of each **Inside Foot**, position the glue sides together with the edges and ends flush, and clamp in place. Allow the glue to set.

Apply glue to the inside of the 1 1/2-inch wide notch in the **Inside Feet Assemblies**. Position the **Legs** in the notch as shown in **Figure 7** (with the pocket holes facing toward the center) and attach using 2 1/2-inch pocket hole screws.

Use the layout in **Figure 8** as a guide for drilling pocket holes in the **End Rails**. Set the jig and drill bit for drilling into 1 1/2-inch stock.

Apply glue to the ends of the **End Rails**, position them as shown in **Figure 9**, and attach to the **Legs** using 2 1/2-inch pocket hole screws.

Apply glue to one side of the **Outside Feet**, position them as shown in **Figure 10**, and attach to the **Inside Feet Assemblies** using 4d nails.

Attach the End Assemblies

Turn over the **Worktop Assembly** so the **Worktop Support Rails** are showing.

Turn over the **End Assemblies** and position them centered between the **Worktop End Rail** and **Worktop Support Rail** as shown in **Figure 11**.

Drill pilot holes for 2-inch deck screws in the **End Rail** as shown in **Figure 11**. Attach the **End**

Assembly to the **Worktop Assembly** using 2-inch deck screws.

Drill pilot holes for 3-inch deck screws in the **Worktop End Rail** as shown in **Figure 12** and attach the **End Assembly** to the **Worktop End Rail** and **Worktop Support Rail** using 3-inch deck screws.

Attach the Shelf Assembly

Use the layout in **Figure 13** as a guide for drilling pocket holes in the **Shelf Side Rails**. Set the jig and drill bit for drilling into 3/4-inch stock.

Apply glue to the ends of the **Shelf Side Rails**, position them as shown in **Figure 14** (flush against the inside edge of the **Legs** and top edge of the bottom **End Rail**), and attach using 1 1/4-inch pocket hole screws.

Use the layout in **Figure 15** as a guide for drilling pocket holes and pilot holes for 1 5/8-inch deck screws in the **Shelf Support Rails**. Set the pocket hole jig and drill bit for drilling into 3/4-inch stock.

Apply glue to the ends of the **Shelf Support Rails**, position them as shown in **Figure 16**, and attach to the **Shelf Side Rails** using 1 1/4-inch pocket hole screws.

Use the layout in **Figure 17** as a guide for cutting the **Shelf** to size and shape using a table saw or circular saw and a jigsaw (for the corner notches).

Position the **Shelf** on the **Shelf Side Rails**, **Shelf Support Rails** and the **End Rails** on the **End Assemblies** as shown in **Figure 18**. Attach to the **End Rails** and **Shelf Side Rails** using 4d nails.

Place the whole assembly on its side and attach the **Shelf Support Rails** to the **Shelf** using 1 5/8-inch deck screws as shown in **Figure 19**.

Finishing Touches

Apply glue to the long edges of the **Shelf**. Position the **Shelf Side Trim** flush with the top edge of the **Shelf** and the inside edges of the **Legs** as shown in **Figure 20**, and attach using 4d nails.

Use the layout in **Figure 21** as a guide to cutting the **Shelf End Trim** to shape.

Apply glue to the long face of the **Shelf End Trim** and position centered on and flush with the top edge of the end of the **Shelf** as shown in **Figure 22**. Attach using 4d nails.

Sand any rough edges and corners as desired.

Optional: Position the **Workbench** upside down and attach heavy-duty locking casters to the bottom of the **Feet Assemblies** using 1 5/8-inch deck screws.

PROJECT PARTS

Worktop - (2) 3/4 x 23 3/4 x 65

Worktop End Rails - (2) 3/4 x 3 1/2 x 25 1/4

Worktop Side Rails - (2) 3/4 x 3 1/2 x 66 1/2

Worktop Support Rails - (5) 1 1/2 x 1 1/2 x 23 3/4

Inside Feet - (4) 3/4 x 3 1/2 x 23 3/4

Outside Feet - (4) 3/4 x 3 1/2 x 23 3/4

Legs - (4) 1 1/2 x 1 1/2 x 28 7/8

End Rails - (4) 1 1/2 x 1 1/2 x 14

Shelf Side Rails - (2) 3/4 x 3 1/2 x 62

Shelf Support Rails - (3) 1 1/2 x 1 1/2 x 14

Shelf - (1) 3/4 x 14 3/4 x 65

Shelf Side Trim - (2) 3/4 x 1 1/2 x 62

Shelf End Trim - (2) 3/4 x 1 1/2 x 15 1/2

MATERIALS

Lumber

2 – 3/4-inch x 4- x 8-foot sheet of hardwood plywood

13 – 2 x 2 x 36 hardwood square

5 – 1 x 4 x 8, hardwood (maple, poplar or oak)

1 – 1 x 4 x 4, hardwood

1 – 1 x 2 x 8, hardwood

1 – 1 x 2 x 6, hardwood

Hardware

12, 3-inch deck screws

24, 2 1/2-inch pocket hole screws

31, 2-inch deck screws

47, 1 5/8-inch deck screws

74, 4d nails

44, 1 1/4-inch pocket hole screws

(optional) 4 heavy-duty locking casters

Supplies

Wood glue

TOOLS

Table saw or circular saw with straightedge guide

Miter saw

Jigsaw

Power sander

Pneumatic nailer or hammer

Kreg Pocket Hole Jig and drill bit

Bar clamps and corner clamps

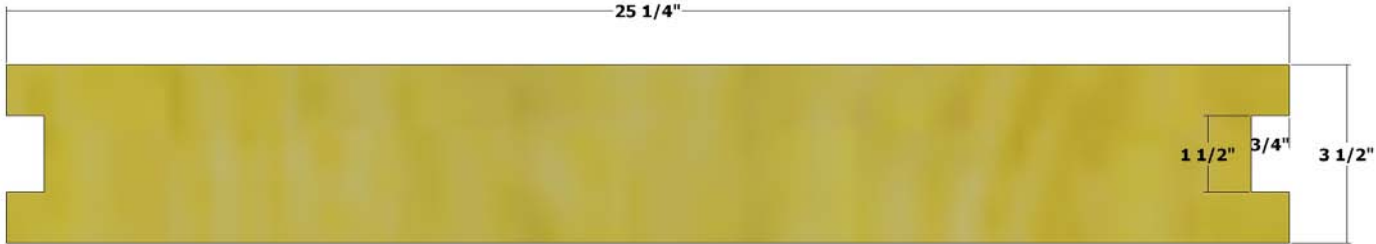
Square

Measuring tape



Figure 1

Worktop End Rail



Worktop Side Rail

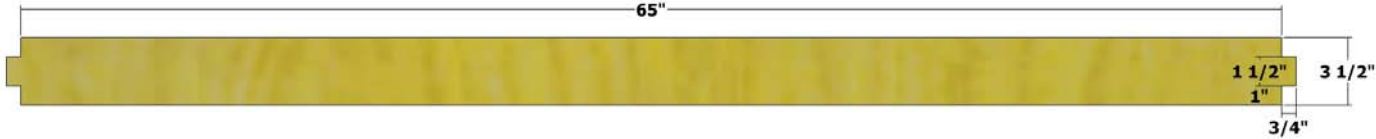


Figure 2

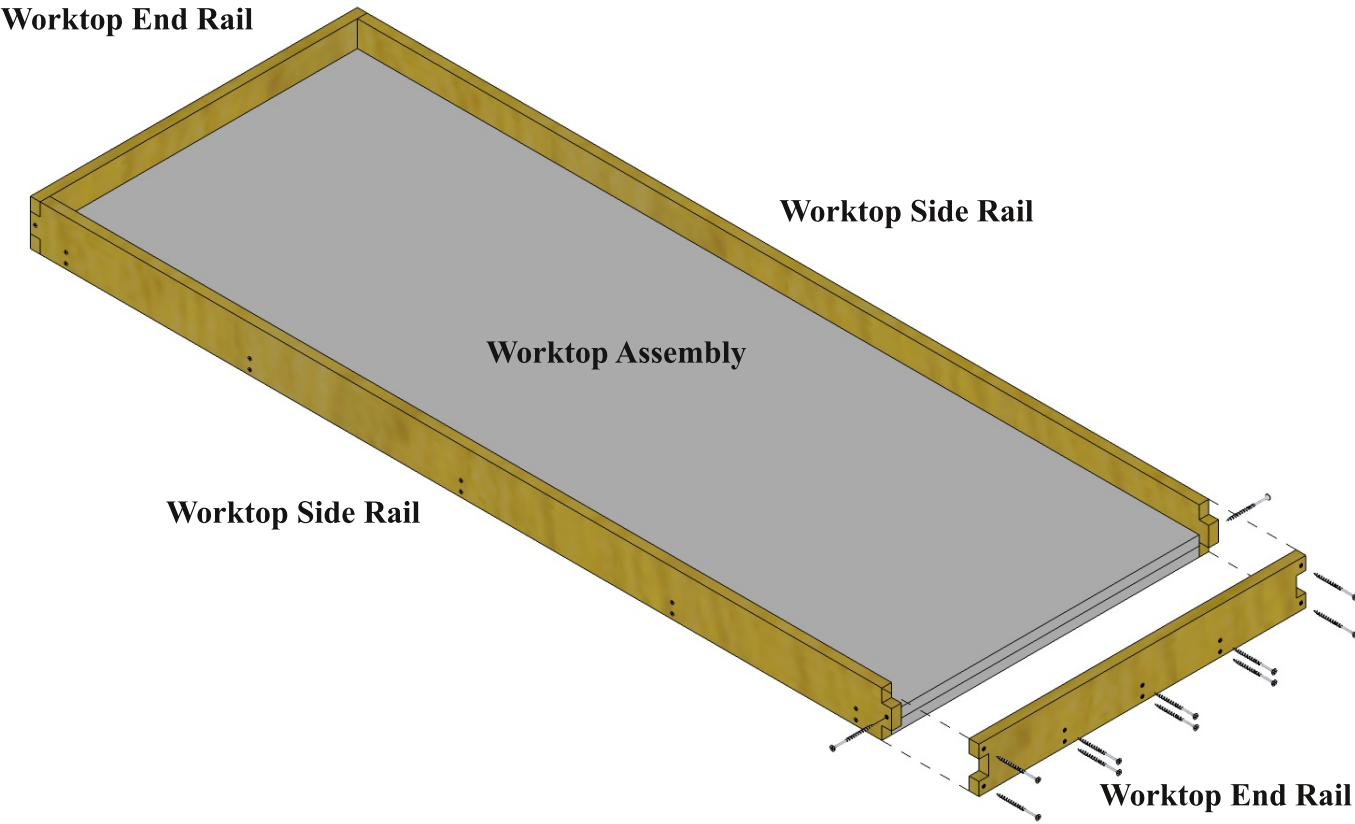


Figure 3

Worktop Support Rail

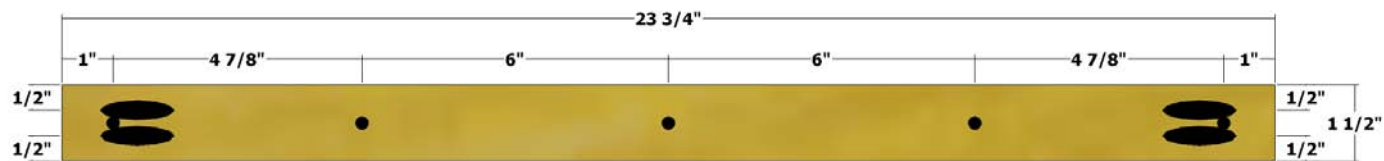


Figure 4

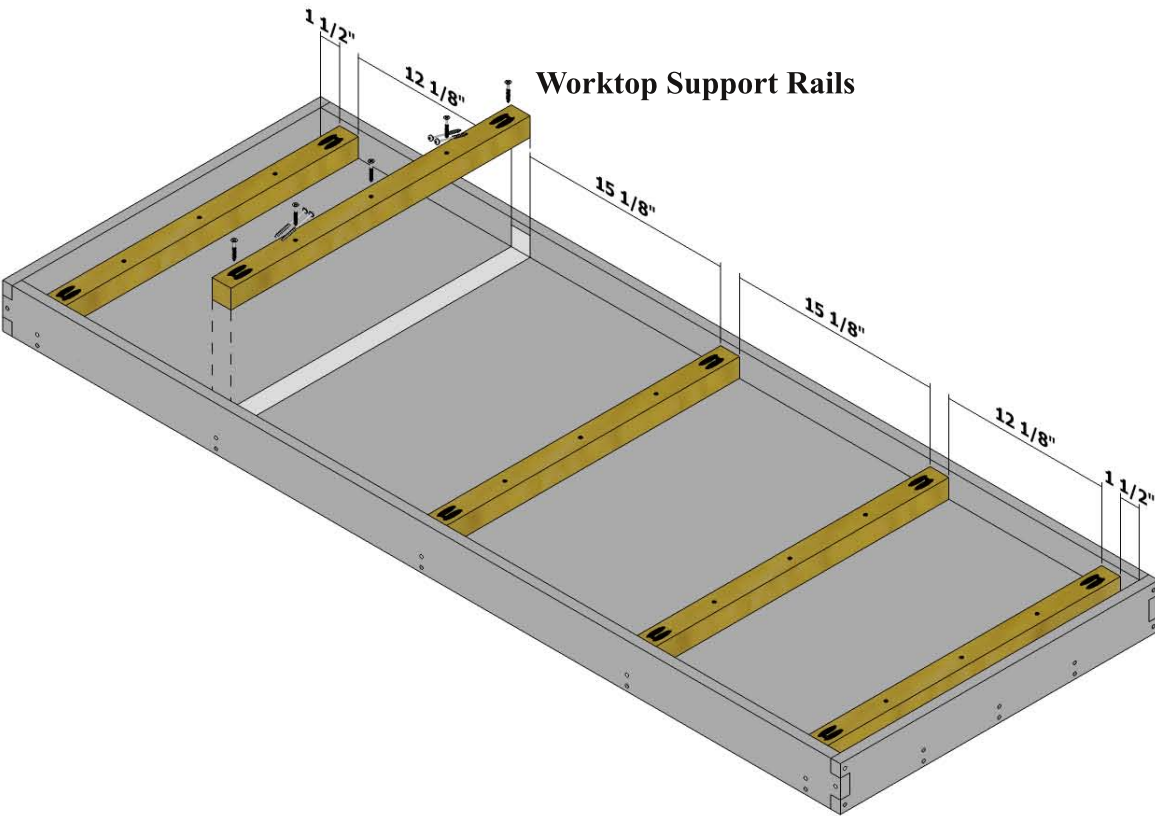
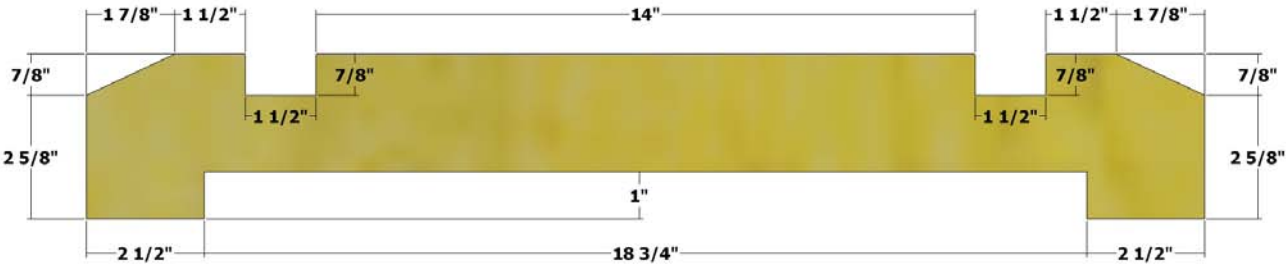


Figure 5

Inside Foot



Outside Foot

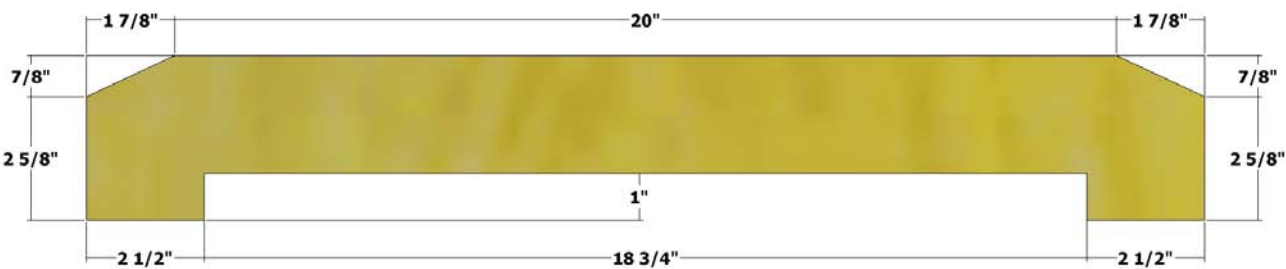


Figure 6

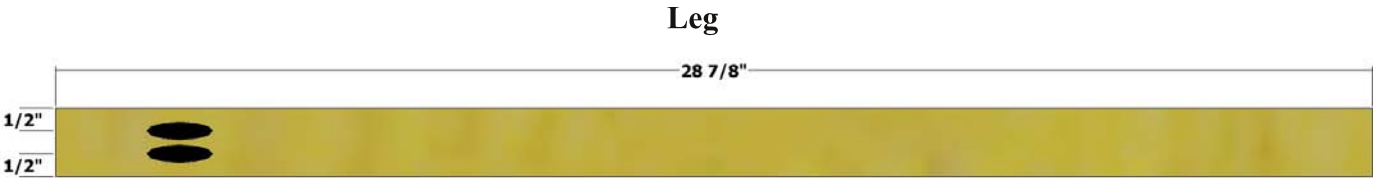


Figure 7

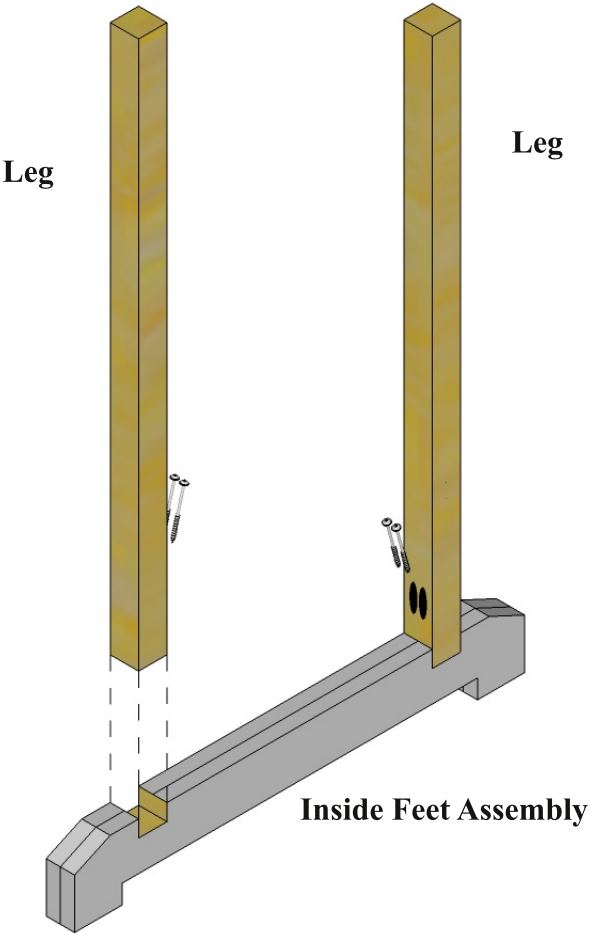


Figure 8

End Rail

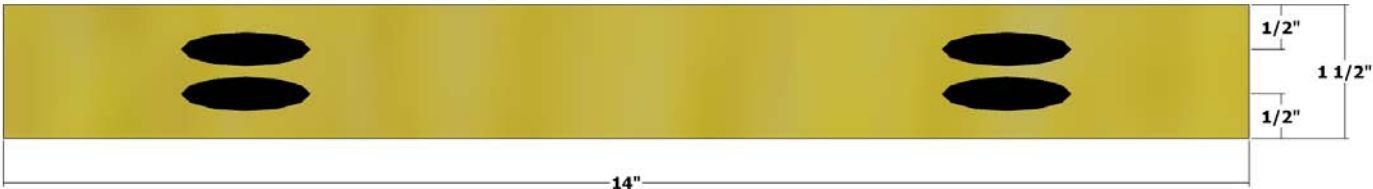


Figure 9

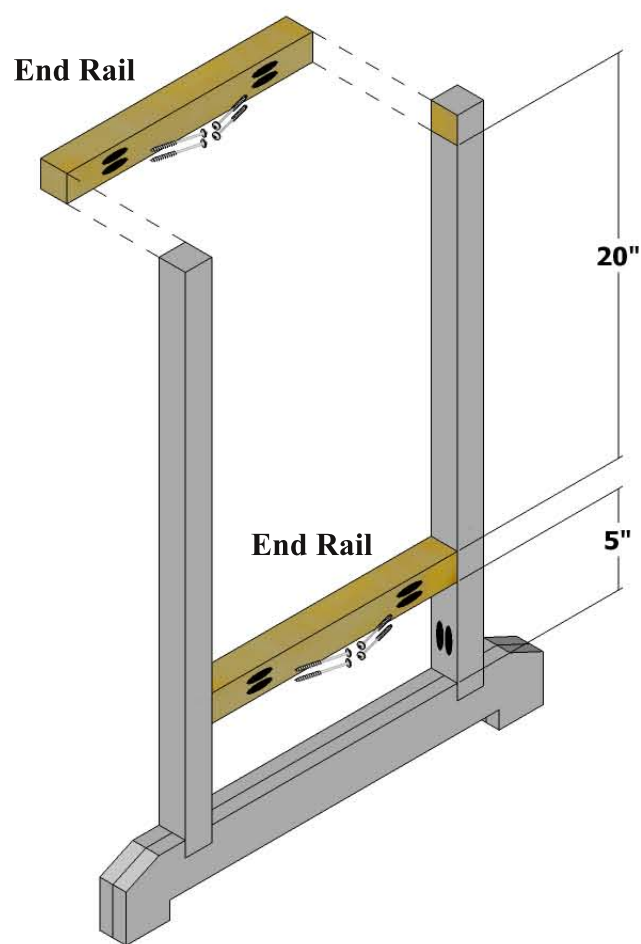


Figure 10

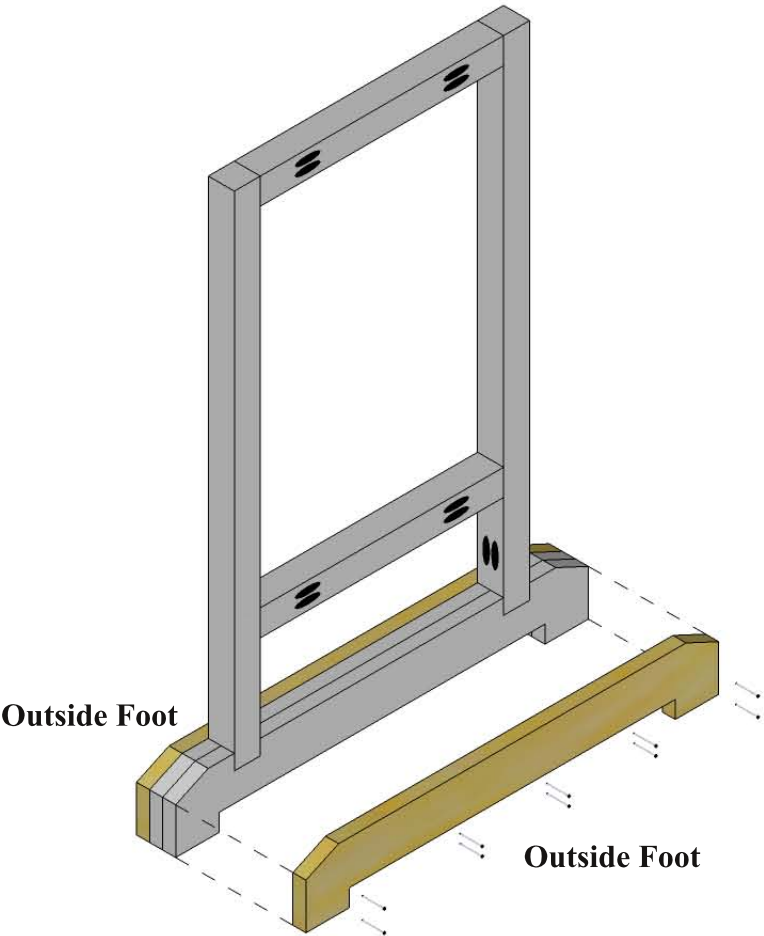


Figure 11

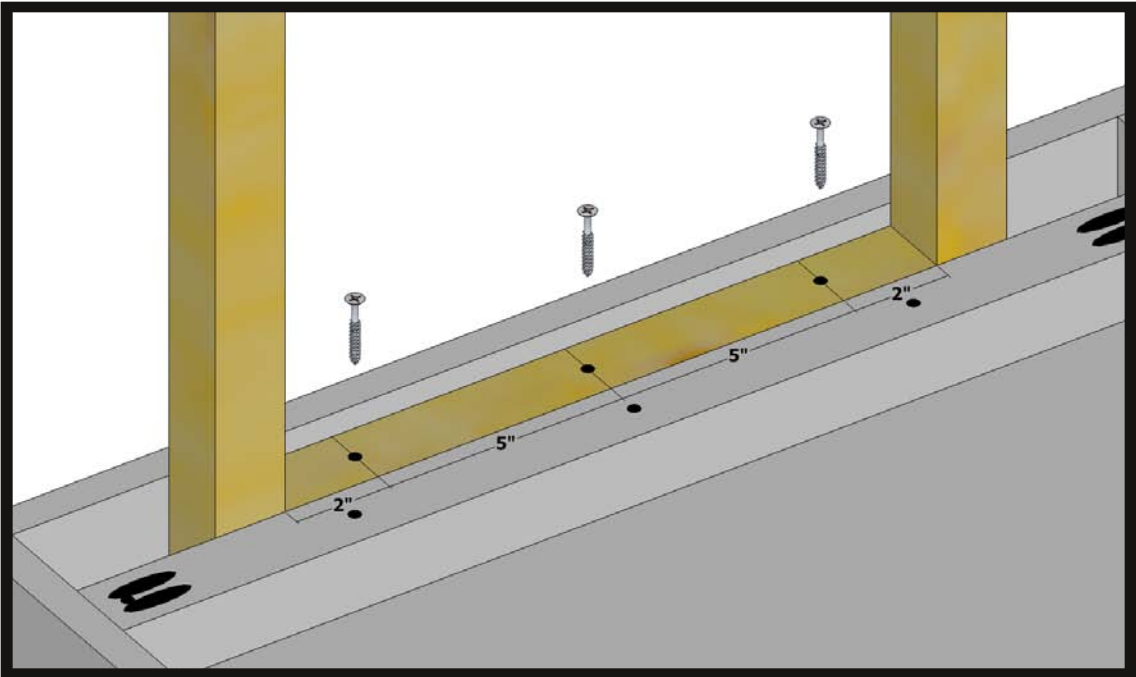
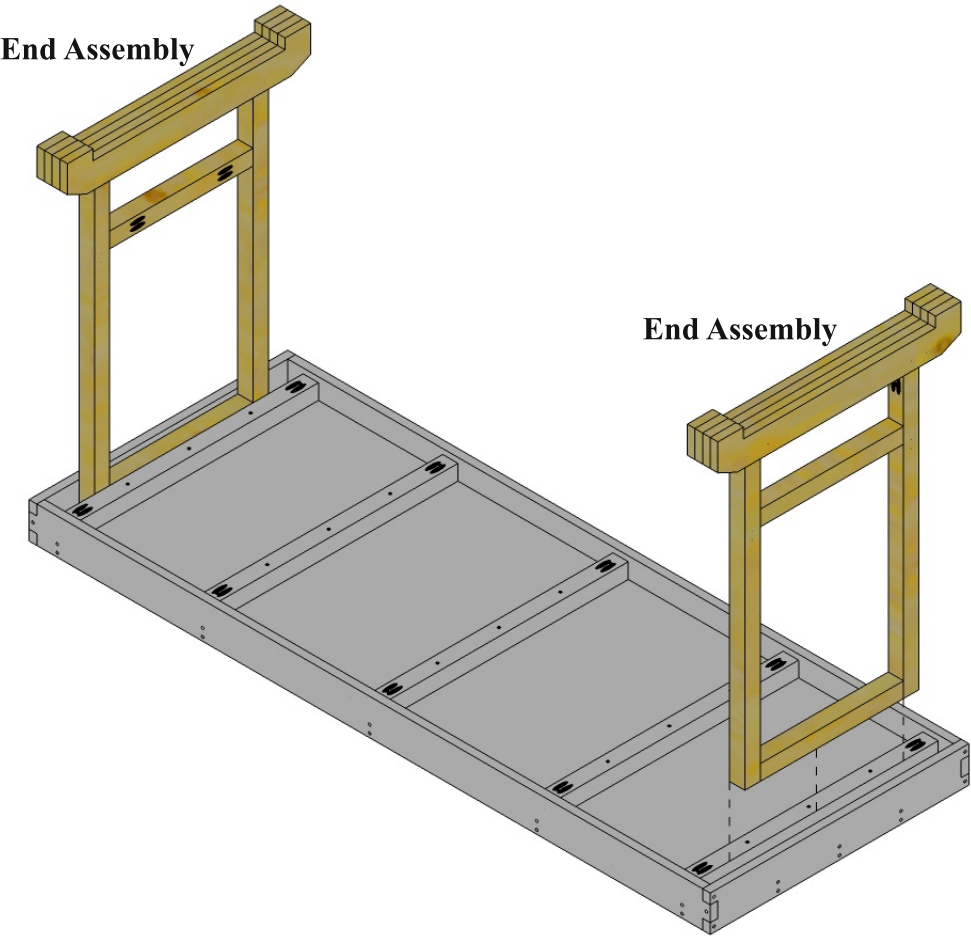


Figure 12

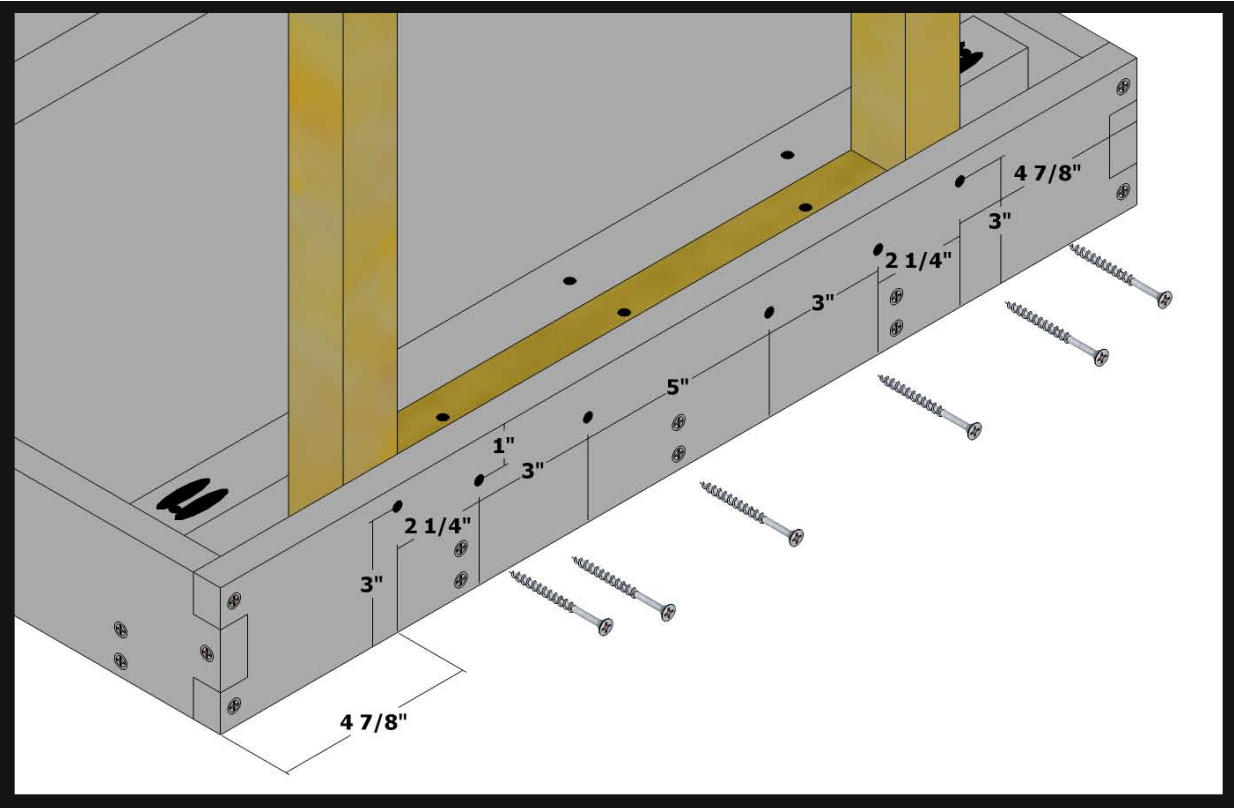


Figure 13

Shelf Side Rail



Figure 14

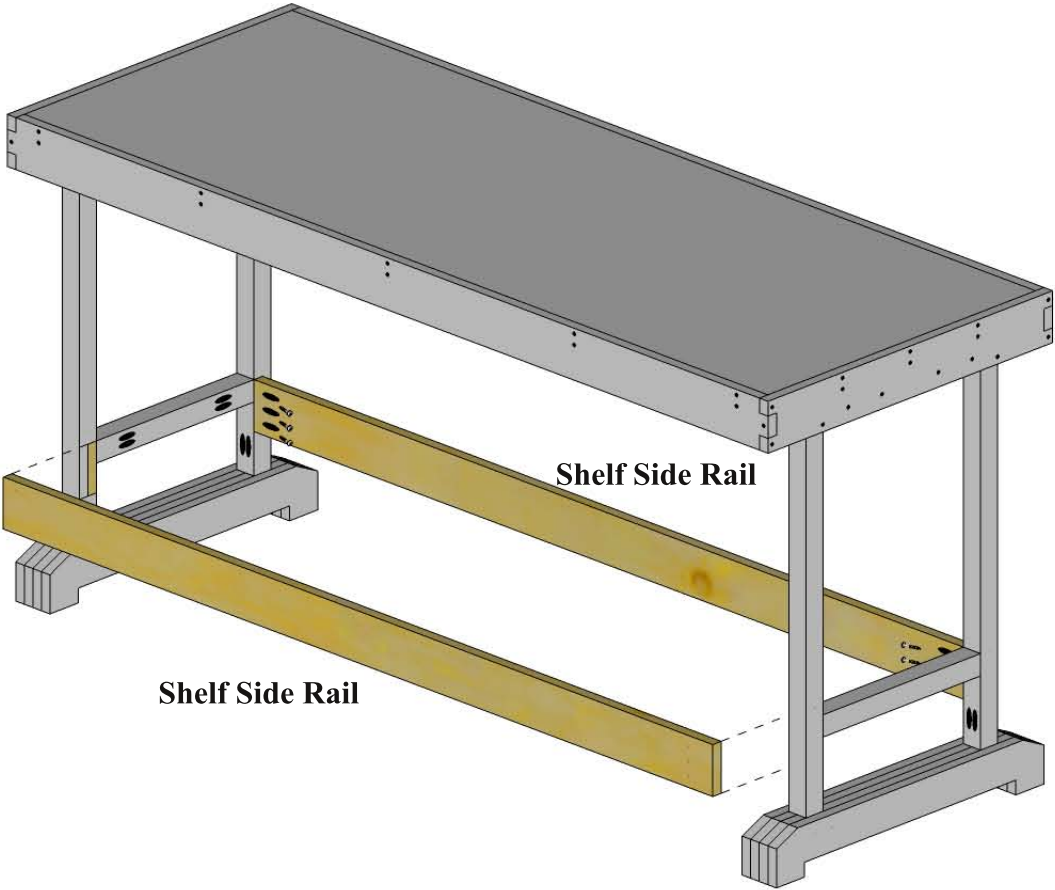


Figure 15

Shelf Support Rail

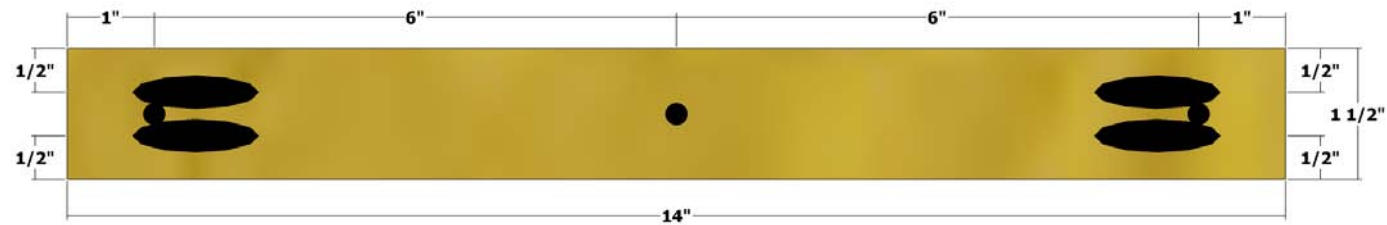


Figure 16

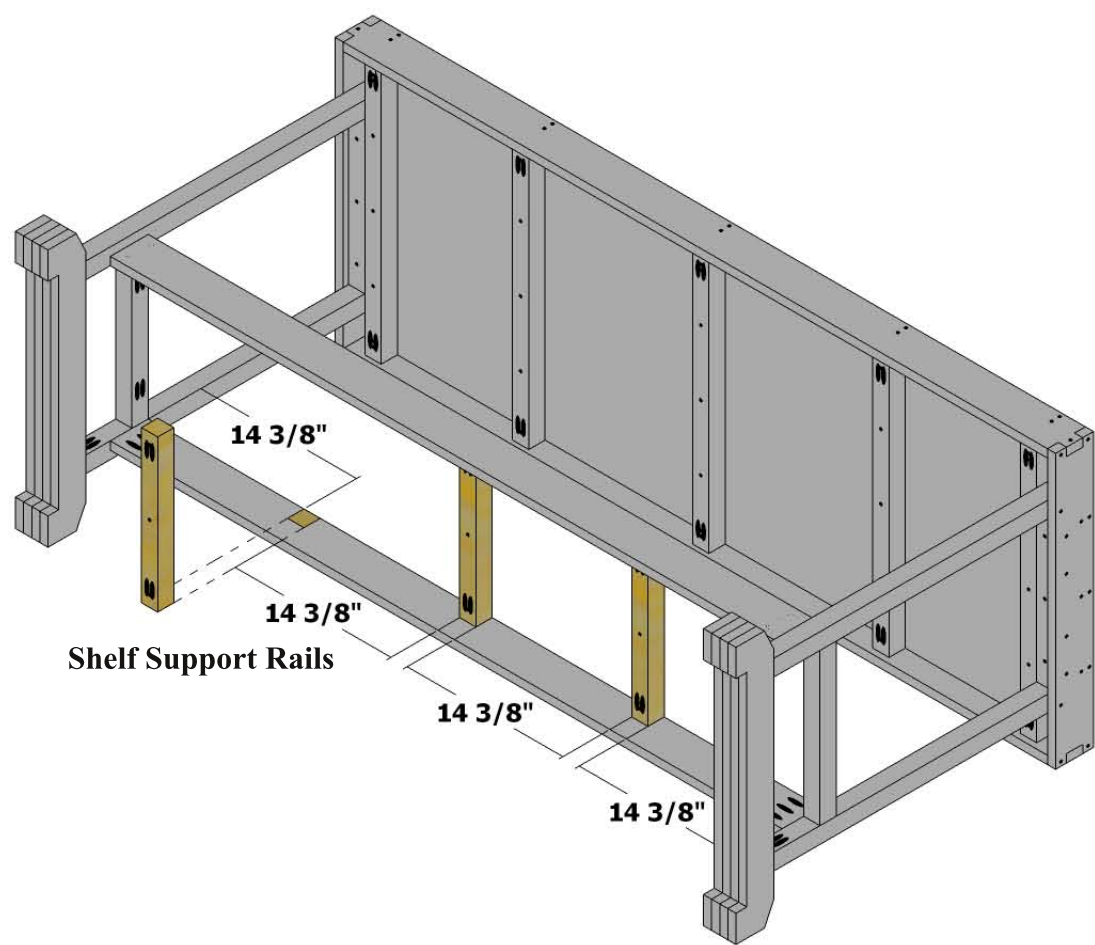


Figure 17

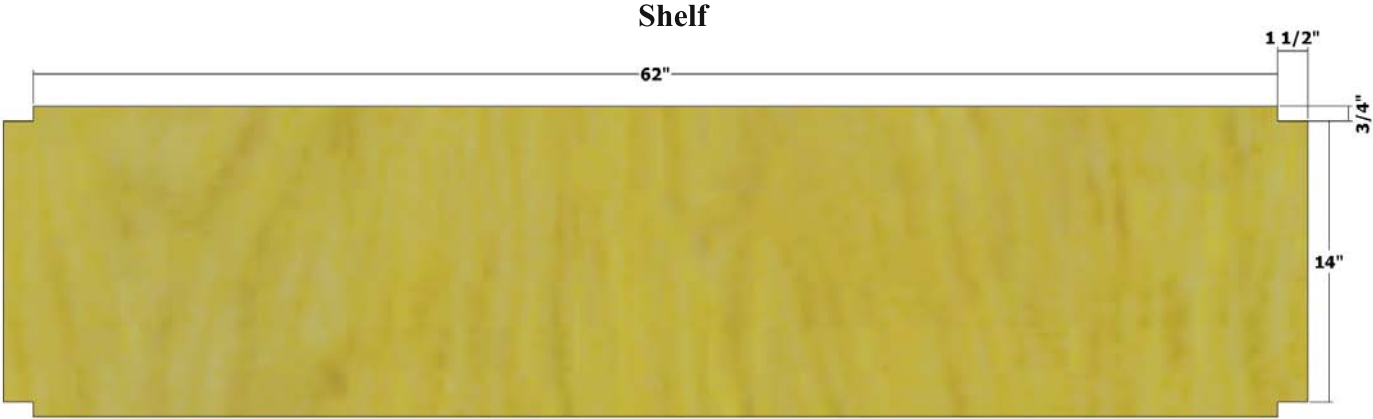


Figure 18

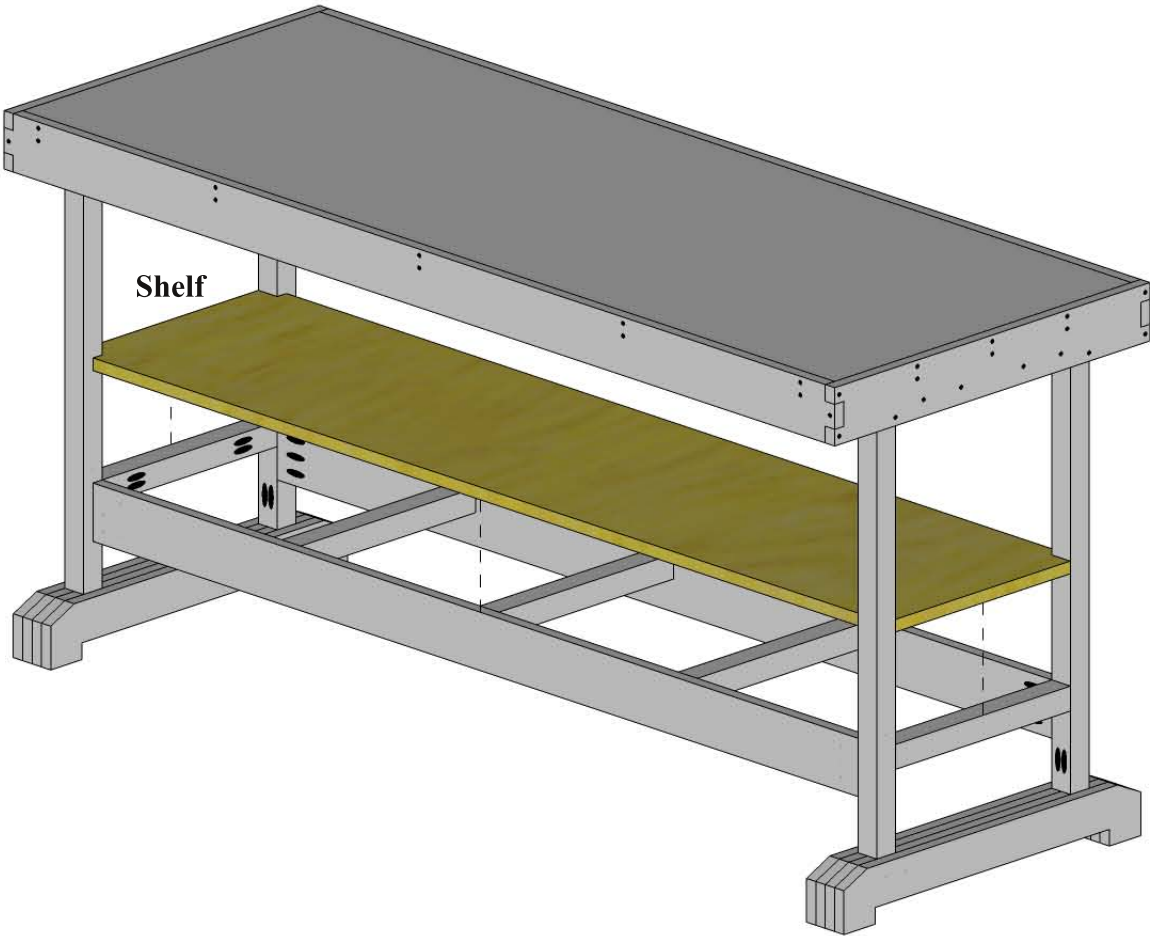


Figure 19

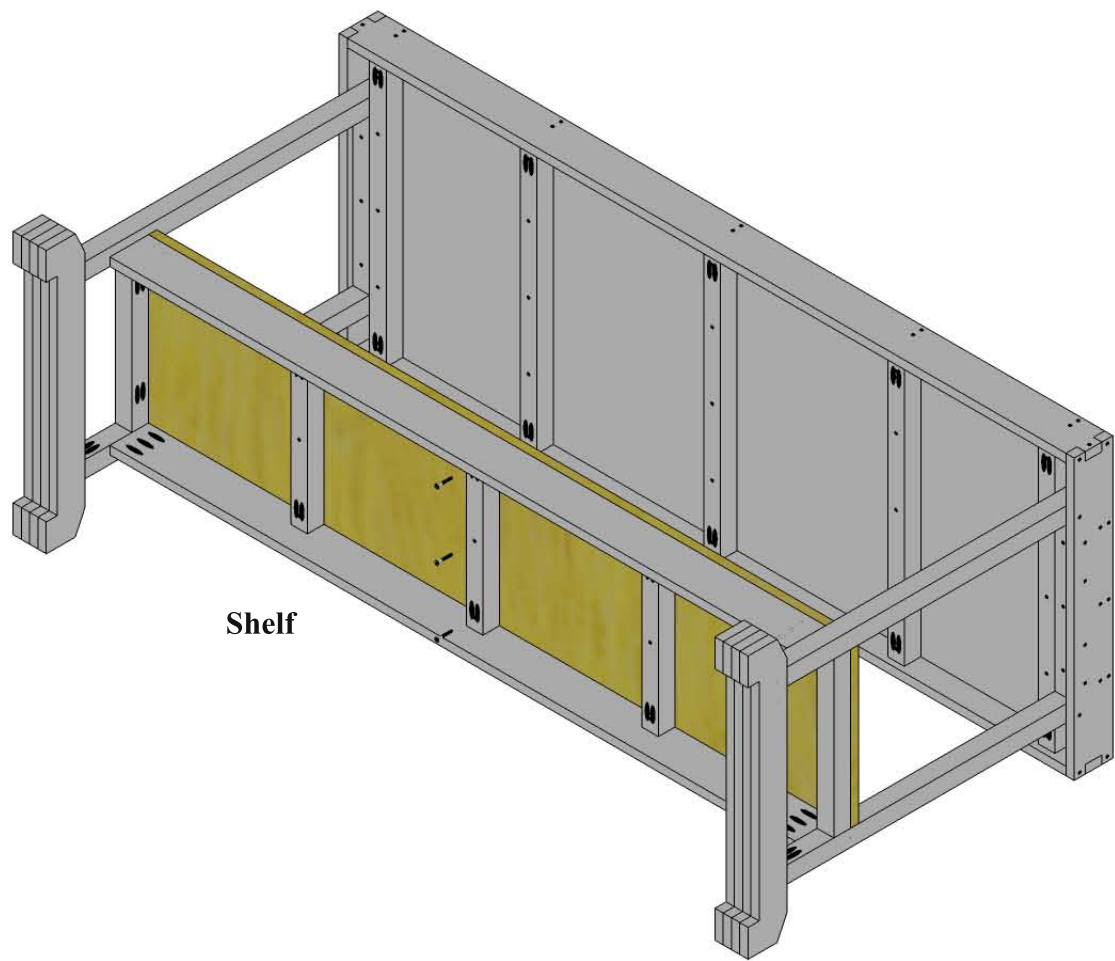


Figure 20

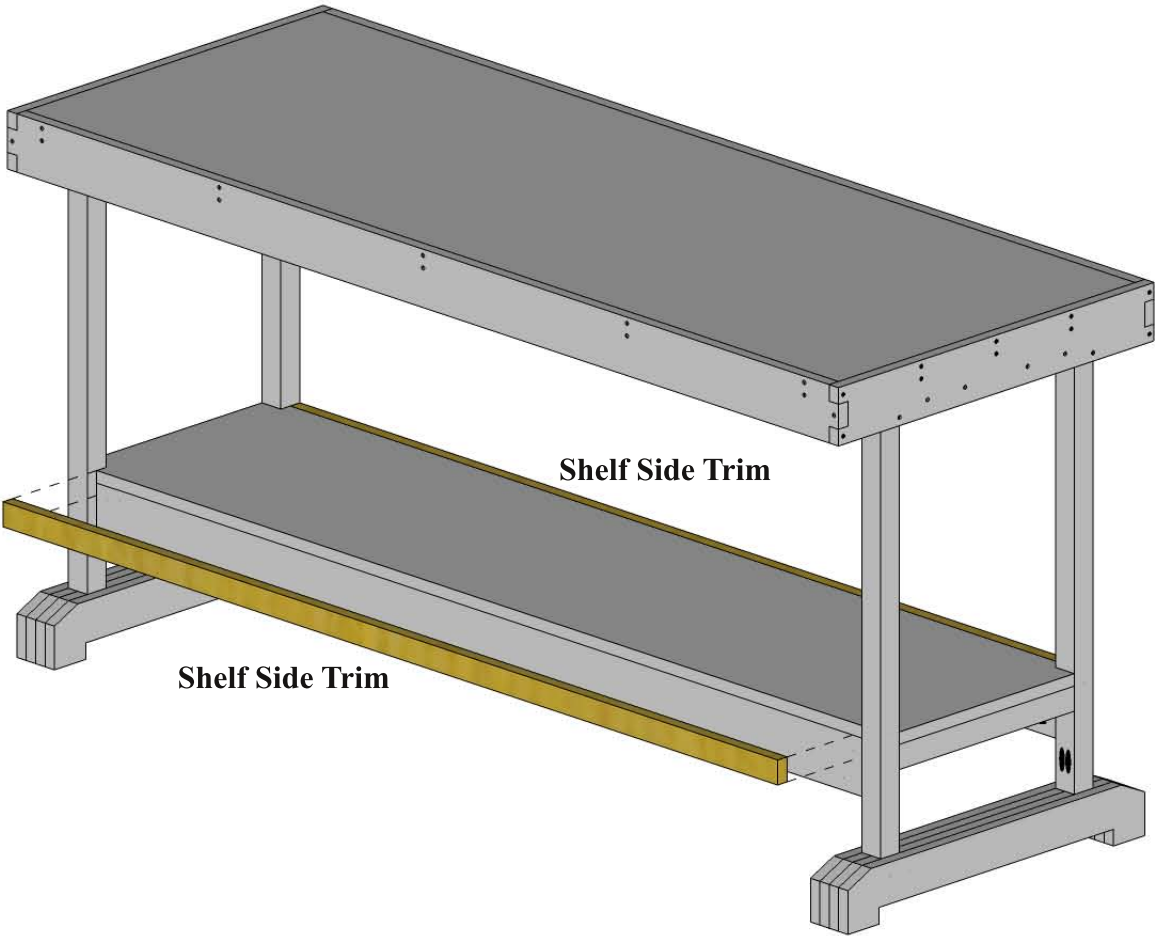
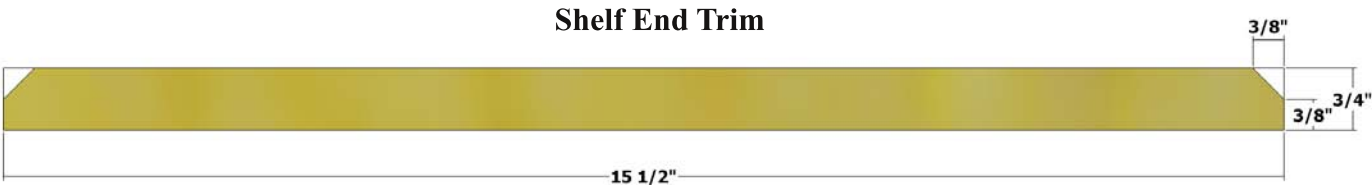


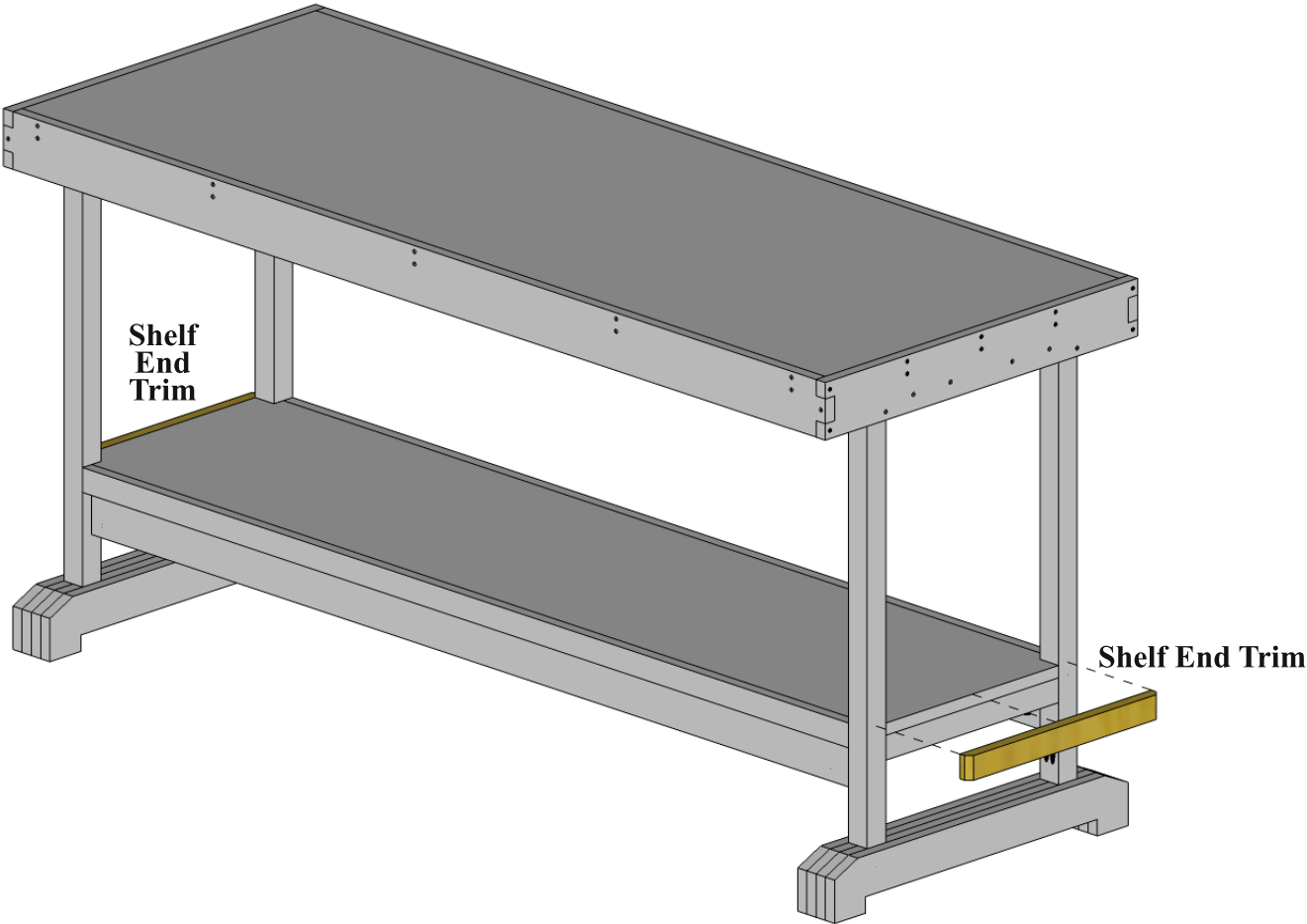
Figure 21



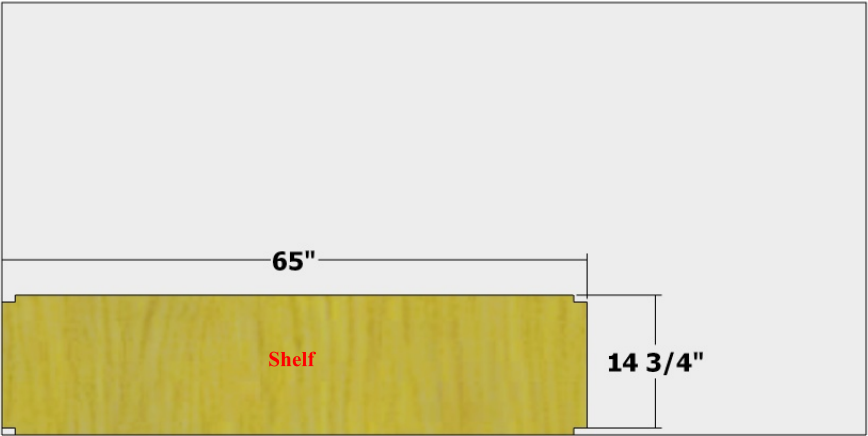
Top View

Corners are 45-degree bevels cut across the face.

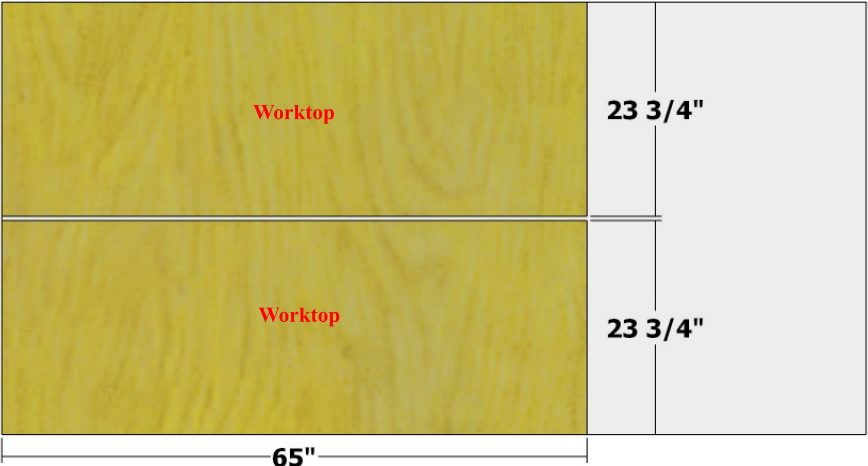
Figure 22



Cutting Diagram - Plywood

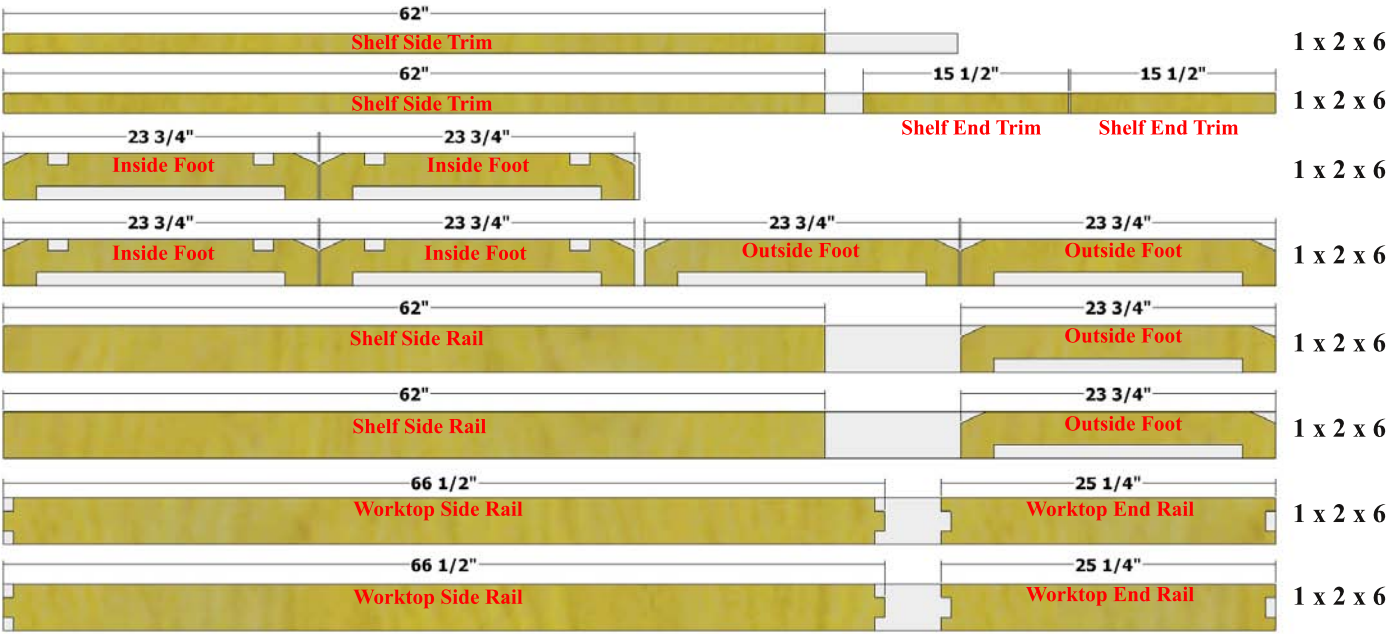


3/4-inch x 4- x 8-foot sheet of plywood



3/4-inch x 4- x 8-foot sheet of plywood

Cutting Diagram - 1x Stock



Cutting Diagram - 2x Stock



2 x 2 x 36

