

# HART™



Mums Planter

## PROJECT PLAN

**Finished Dimensions:** 19-3/36"W x 24"H x 19-3/16"D

**Skill Level:** Intermediate

# Materials

| Item                                       | Qty |
|--|-----|
| 1" x 3' x 8' Board*                        | 3   |
| 1" x 2" x 8' Board*                        | 3   |
| 2" x 2" x 8' Board*                        | 1   |
| 8' Corrugated Galvanized Steel Roof Panel  | 1   |
| #8 x 1-1/4" Flat Head Phillips Wood Screws |     |
| #8 x 2-1/2" Flat Head Phillips Wood Screws |     |
| 4-1/2" Metal Cutting Grinder Wheel         |     |
| Sandpaper**: 150g, 220g & 320g             |     |
| Drill Bits: 1/8"                           |     |

\* Board Dimensions are "nominal". Actual dimensions are smaller due to lumber industry standards. Cuts are actual length.

\*\* Starting grit will depend on board surface condition, a rough surface will require starting with a coarse grit first.

Grit is measured in the coarseness of the particles on the sandpaper. The lower the grit number, the coarser the paper. Heavy sanding would require 60 to 80 grit, medium sanding would require 120 to 220 grit, and finish sanding would require 320 to 400 grit. Super fine sanding would be 600 grit and higher.

A select/premium board or plywood comes with a smoother surface finish. It is clear or has very few tight knots, and it will have straight and sharp edges. This grade of wood pairs well with other boards or panels better and requires less time to sand and finish.

# Tools Used



Miter Saw



or Circular Saw



Drill/Driver



Orbital Sander



Tape Measure



Aviation Snips



20V 1.5Ah Battery



20V 4.0Ah Battery



Charger



Safety Glasses



Phillips-Head SD



Drill Bits



Countersink Bit



Phillips Dr. Bit



Gloves



Fine Tip Marker

Also Needed:  
Clamps

**Battery Tip:** A 4.0 Ah battery is recommended to be paired with high amp draw tools for maximum efficiency.

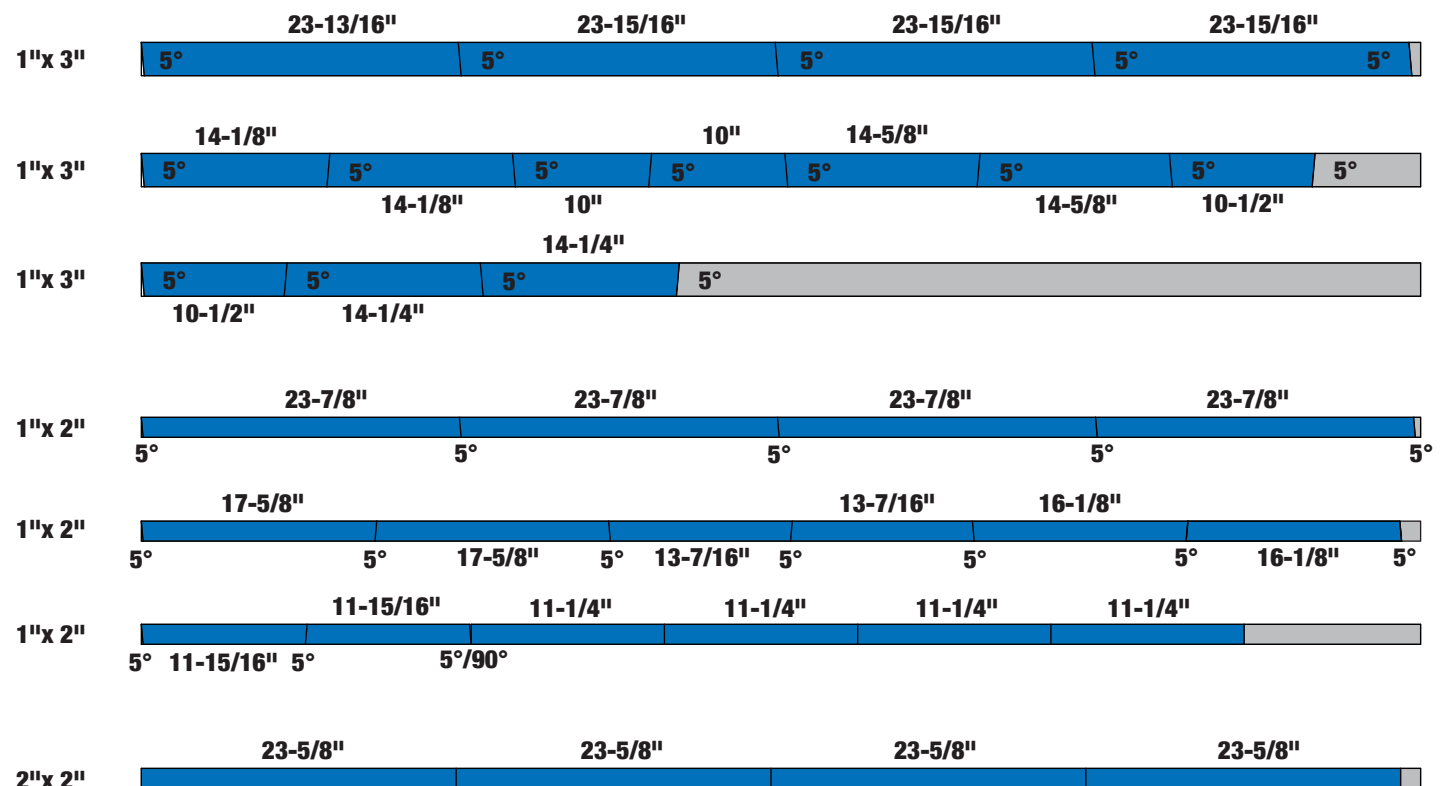
# Lumber Cut List

| Board*  | Description                     | Cut to         | Qty |
|---------|---------------------------------|----------------|-----|
| 1" x 3" | Front & Back Stiles             | 23-13/16"      | 4   |
| 1" x 3" | Front & Back Top Rails          | 14-1/8" (LD)** | 2   |
| 1" x 3" | Front & Back Bottom Rails       | 10" (SD)**     | 2   |
| 1" x 3" | Side Top Rails                  | 14-5/8" (LD)   | 2   |
| 1" x 3" | Side Bottom Rails               | 10-1/2" (SD)   | 2   |
| 1" x 3" | Shelf Supports                  | 14-1/4" (LD)   | 2   |
| 1" x 2" | Side Stiles                     | 23-7/8"        | 4   |
| 1" x 2" | Front & Back Inner Top Rails    | 17-5/8" (LD)   | 2   |
| 1" x 2" | Front & Back Inner Bottom Rails | 13-7/16" (SD)  | 2   |
| 1" x 2" | Side Inner Top Rails            | 16-1/8" (LD)   | 2   |
| 1" x 2" | Side Inner Bottom Rails         | 11-15/16" (SD) | 2   |
| 1" x 2" | Shelf Slats                     | 11-1/4"        | 4   |
| 2" x 2" | Inner Frame                     | 23-5/8"        | 4   |

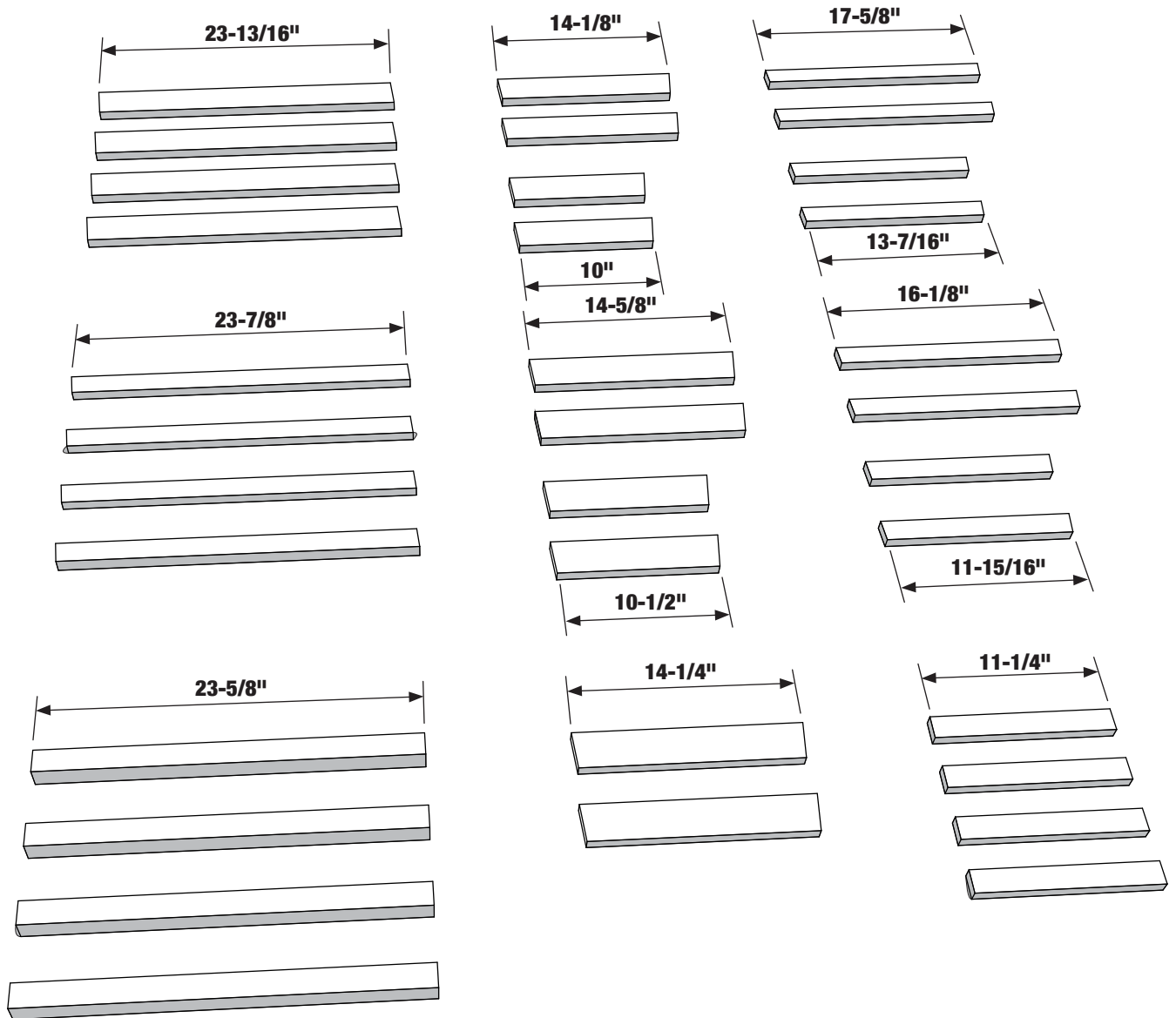
\* Board dimensions are "nominal." Actual dimensions are smaller due to lumber industry standards. Cuts are actual length.

\*\* (LD) stands for long dimension of both angles, (SD) stands for short dimension of both angles.

## Lumber & Sheet Layout Guide



# Lumber & Sheet Cut Layout Guide



# Assembly Instructions

## Step 1

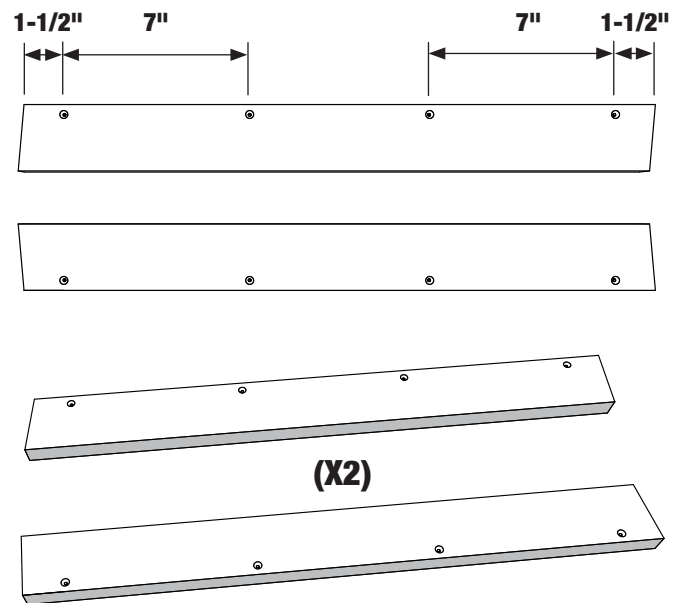
Cut out all material using the Lumber & Sheet Cut Layout Guide.



## Step 2

Take the (4) 1" x 3" x 23-13/16" front and back stiles and mark points for countersink holes. Follow the diagram for hole locations and be sure to drill holes on the correct edges (see diagram).

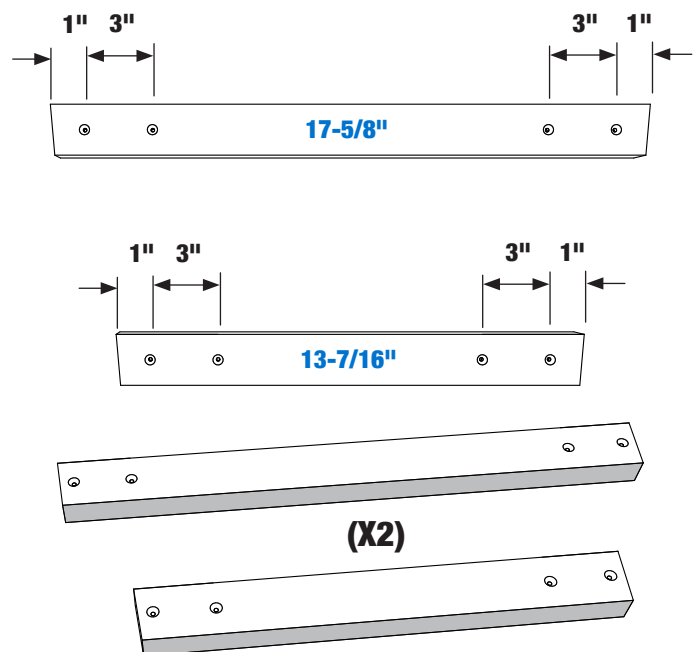
Drill countersink holes in boards so you have (2) sets of symmetrical stiles.



## Step 3

Mark points for the countersink holes on the (2) 1" x 2" x 17-5/8" inner top rails and the (2) 1" x 2" x 13-7/16" inner bottom rails. Follow diagram for measurements.

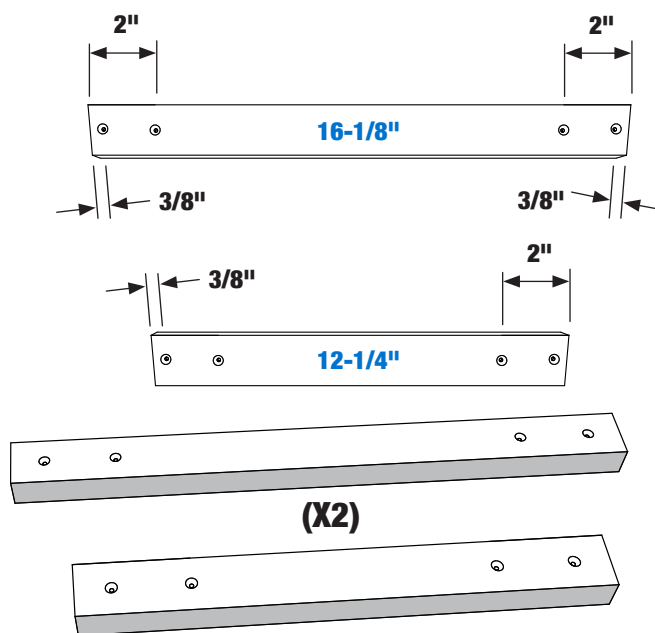
Drill countersink holes in both sets.



## Step 4

Mark points for the countersink holes on the (2) 1" x 2" x 16-1/8" side inner top rails and (2) 1" x 2" x 12-1/4" side inner bottom rails. Follow diagram for measurements.

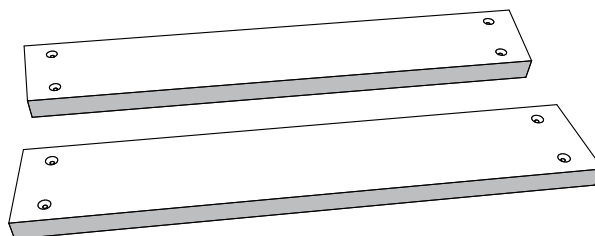
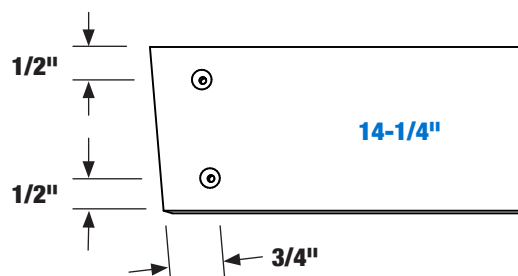
Drill countersink holes in both sets.



## Step 5

Take the (2) 1" x 3" x 14-1/4" shelf support boards and mark for countersink holes on both ends. Follow the diagram for measurements. The supports will be symmetrical.

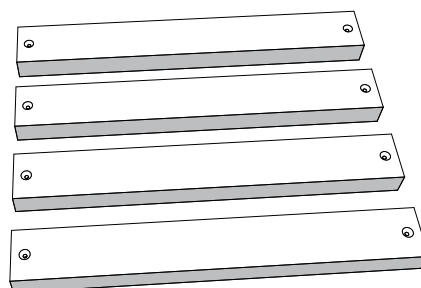
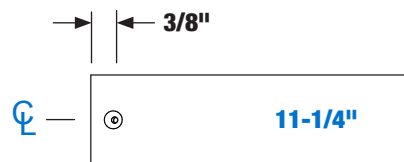
Drill countersink holes in both.



## Step 6

Take the (4) 1" x 2" x 11-1/4" shelf slats, find the center line, and mark a point 3/8" from each end.

Drill countersink holes at each point.

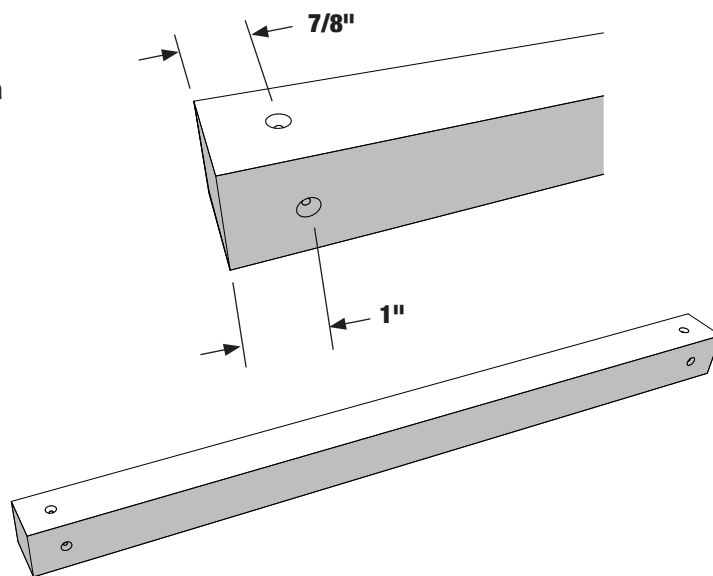


## Step 7

On the (4) 2" x 2" x 23-5/8" inner frame boards, mark a point 7/8" from each end on (1) surface. Then mark a point 1" from each end on (1) surface. Make sure the markings match the diagram.

Drill countersink holes.

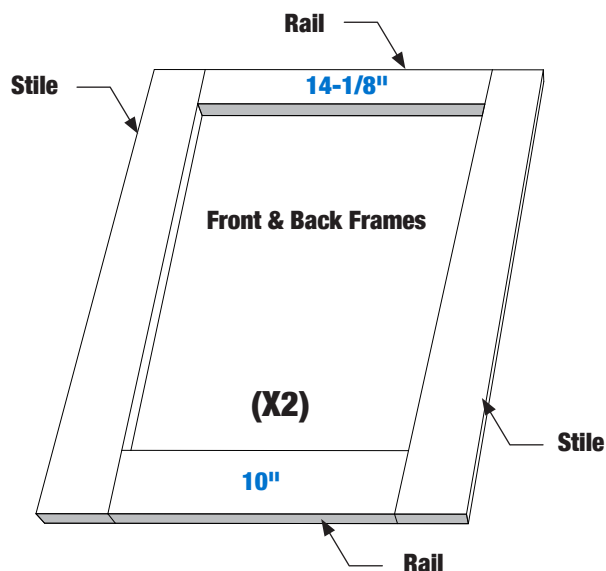
Then use a 1/8" drill bit and continue drilling holes through the board at each countersink hole.



## Step 8

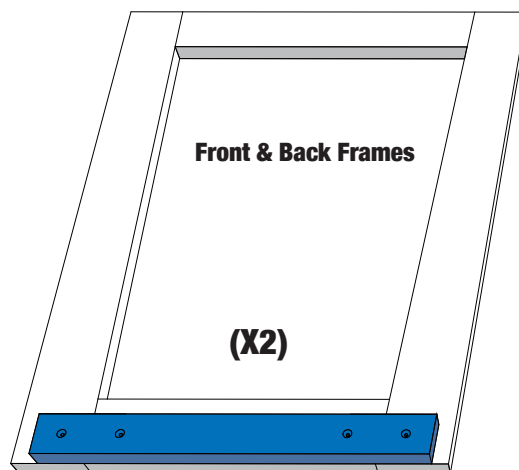
To build the front frame, take (2) of the 1" x 3" x 23-13/16" stiles, (1) of the 1" x 3" x 14-1/8" top rails, (1) of the 1" x 3" x 10" bottom rails and align them to match the diagram. Place a small amount of glue at each joint.

Repeat this step to create the back frame.



## Step 9

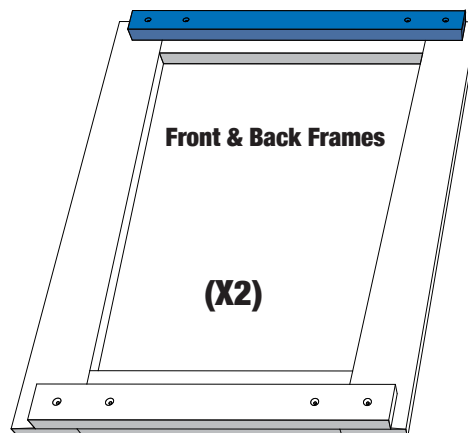
Align the 1" x 2" x 13-7/16" inner bottom rail to the center of the bottom frame rail. Apply glue to the joining surfaces and attach using #8 x 1-1/4" wood screws. Repeat on second frame.





## Step 10

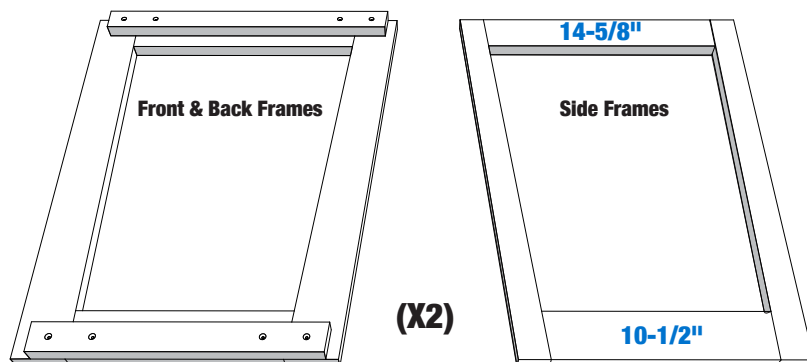
Align the 1" x 2" x 17-5/8" inner top rail to the center of the top frame rail. Apply glue to the joining surfaces and attach using #8 x 1-1/4" wood screws. Repeat on second frame.



## Step 11

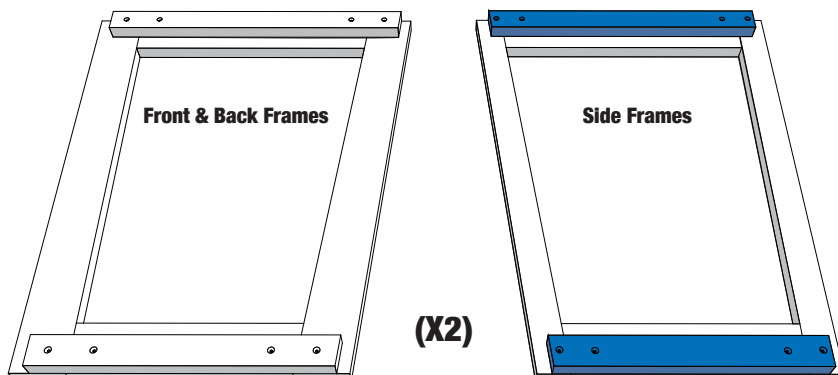
To build the side frames, take (2) of the 1" x 2" x 23-7/8" stiles, (1) of the 1" x 3" x 14-5/8" top rails, (1) of the 1" x 3" x 10-1/2" bottom rails and align them to match the diagram.

Place a small amount of glue and each joint. Repeat to build the second side.



## Step 12

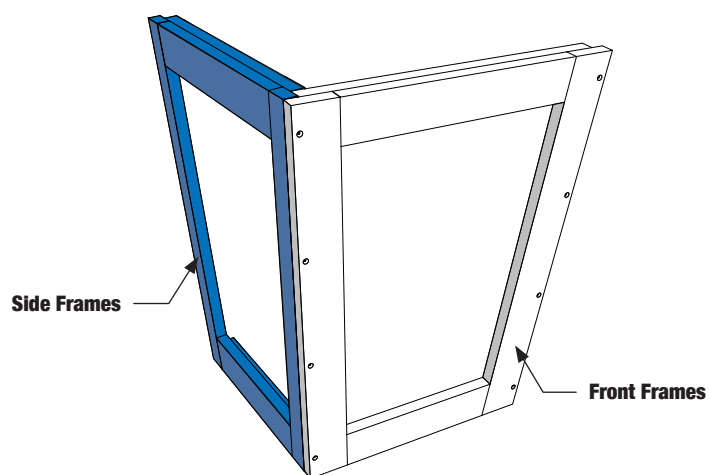
Add the 1" x 2" x 16-1/8" top and 1" x 2" x 11-15/16" bottom inner side rails in the center of the side frame. Apply glue to the joining surfaces and attach using #8 x 1-1/4" wood screws.





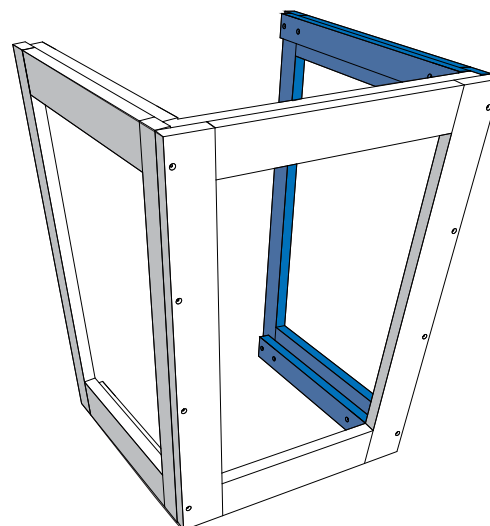
## Step 13

Attach the front frame to (1) of the side frames using #8 x 1-1/4 wood screws. These wood screws will be used to attach all frames.



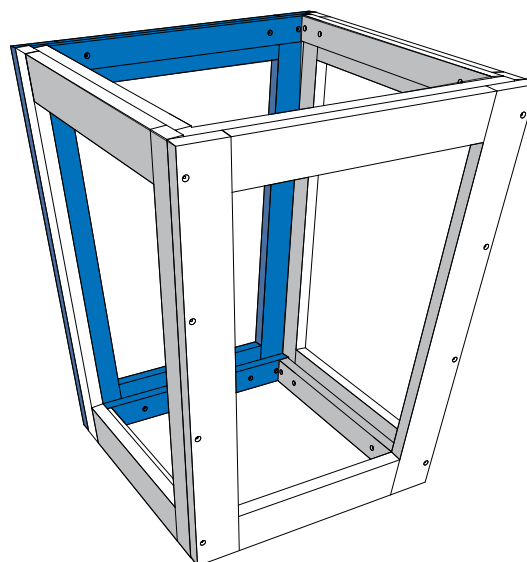
## Step 14

Attach the opposite side frame to the assembly.



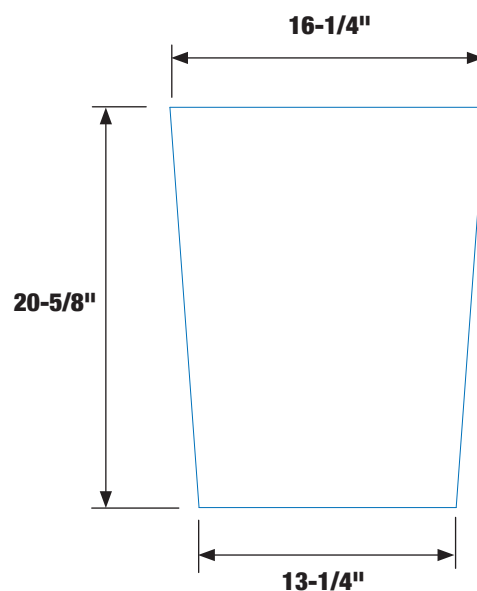
## Step 15

Attach the back frame to the assembly.



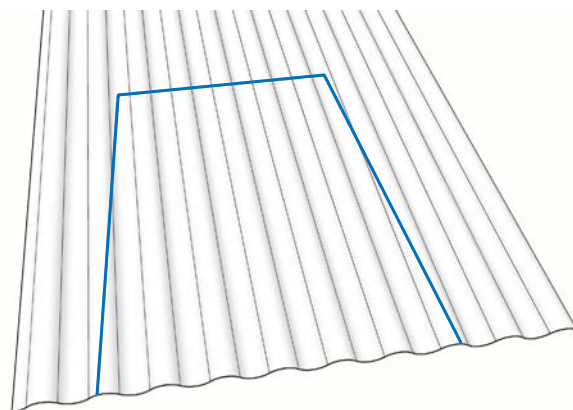
## Step 16

The dimensions for the metal insert (referred to in Step 17) are shown in the diagram.



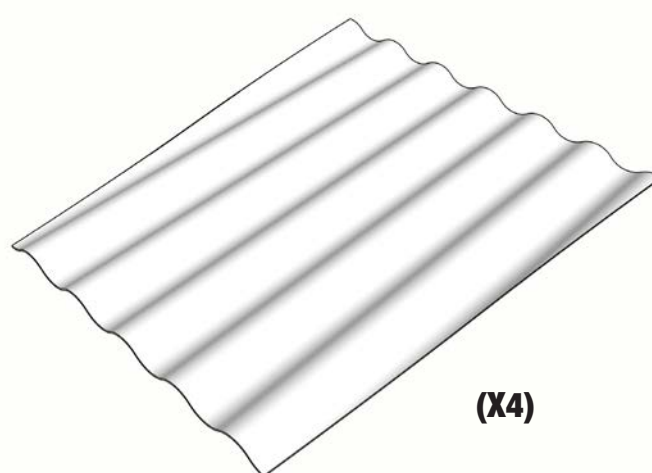
## Step 17

Mark the insert shape on the corrugated panel using a Hart Fine Tip Marker.



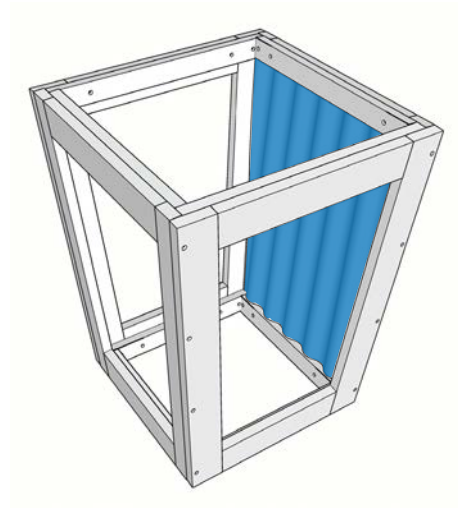
## Step 18

Use the Aviation Snips to cut along the line. A total of (4) panels will need to be cut.



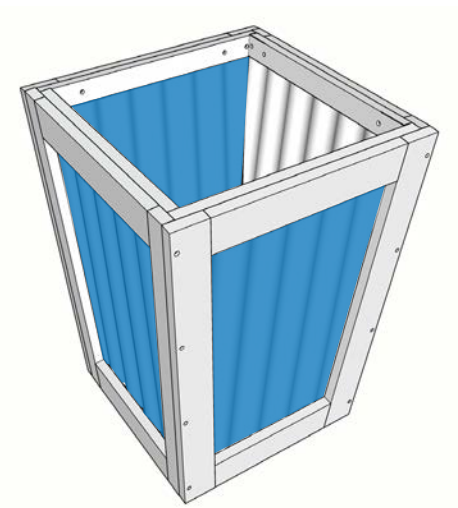
## Step 19

Place (1) metal insert into (1) side of the frame. It will rest between the inner rails



## Step 20

Add the other (3) inserts to each frame opening.

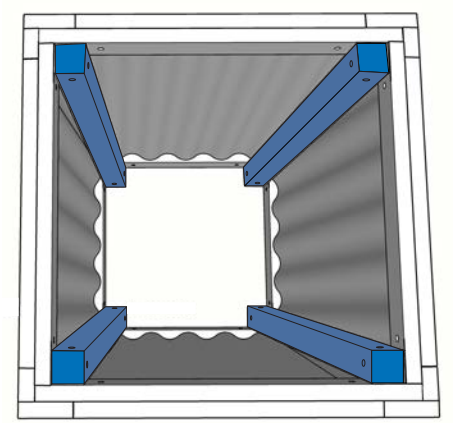


## Step 21

Place (4) 2" x 2" x 23-5/8" inner frame boards into the planter box. They should be even with the bottom edge. Make sure the countersink holes are facing outwards as shown in the diagram.

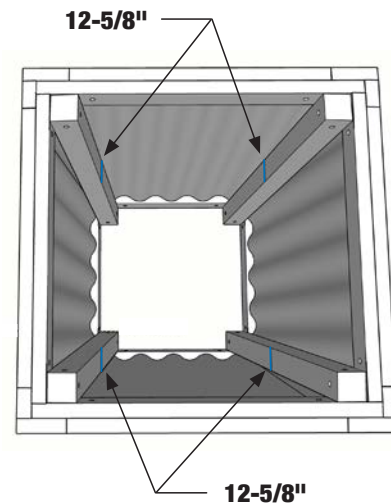
Attach using the #8 x 2-1/2" wood screws in the top and bottom.

These boards will hold the metal inserts in place.



## Step 22

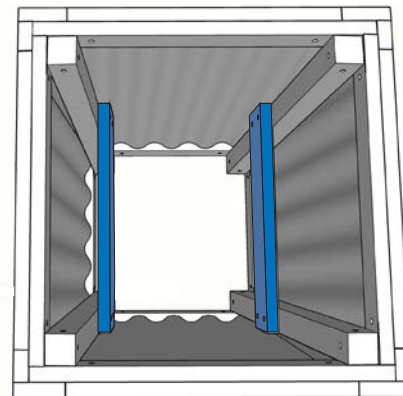
Mark a point 12-5/8" from the bottom on all (4) inner frame boards.



## Step 23

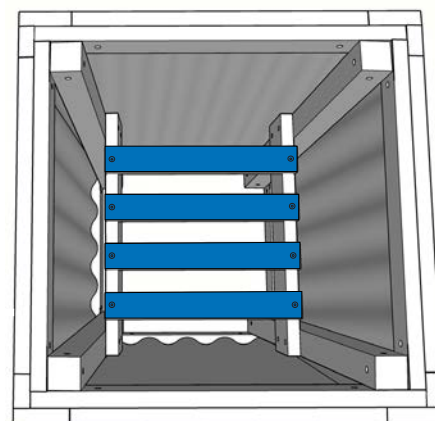
Align the top edge of the 1" x 3" x 14-1/4" shelf support boards to the 12-5/8" lines made in Step 22.

Attach using the #8 x 1-1/4" wood screws.



## Step 24

Equally space the (4) 1" x 2" x 11-1/4" shelf slats on the support boards and attach with #8 x 1-1/4" wood screws.



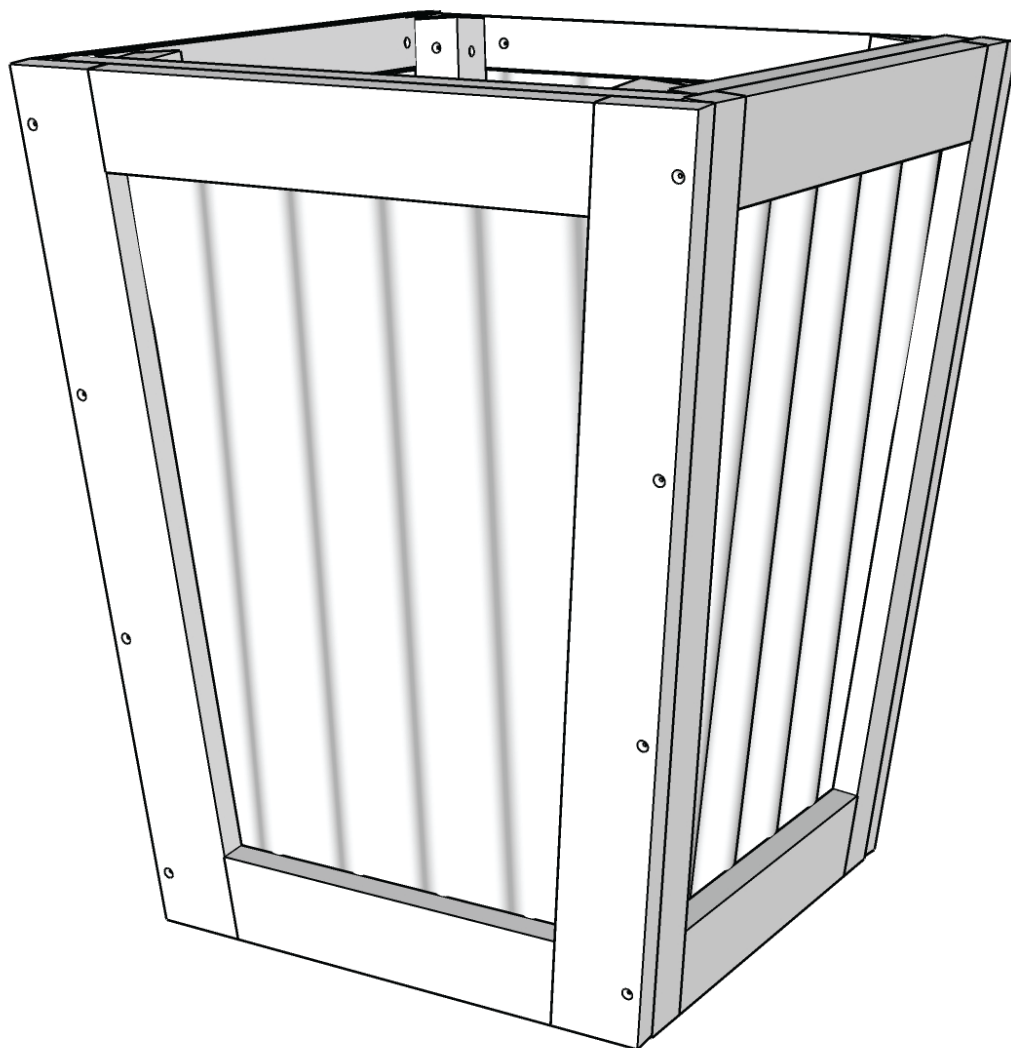
## Step 25

Sand and finish to your desire.

Because of the multiple angles, the end boards will have a slight mismatch. They can be sanded even at this point.

Add flowerpot to the planter.

Project complete!



**H** **Rougher finish** – Use 60-80 grit sandpaper to hand sand with the grain of the wood.

**Smoother finish** – Use 60-80 grit sandpaper to remove scratches & imperfections.

Followed by using 120-220 grit to smooth.

**Finish Sanding** – Use 320-400 grit sandpaper

**Super fine sanding** – Use 600+ grit sandpaper

