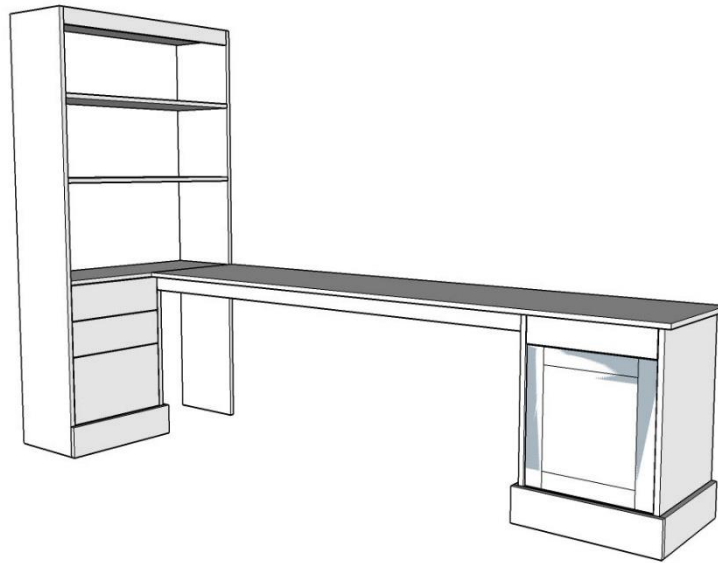


**Modern Farmhouse Murphy Bed  
Desk Modifications  
Addicted2DIY.com**



**\*Before beginning this project, please read through all of the plans for both the Murphy Bed and these modifications. Make sure to wear proper safety protection (eye protection, hearing protection, etc.) before beginning any project. Cut all pieces per the measurements in the plans, unless noted otherwise (ex. the moulding). The materials list for this project is based on already having the materials needed for the Murphy Bed project. Materials listed are in addition to the required materials.**

**\*All of the plywood edges that will be exposed on the finished project will have edge banding.**

## **Materials:**

### [Deluxe Queen Murphy Bed plans](#)

All materials listed in Deluxe Queen Murphy Bed plans

2 – additional 4x8 sheets ¾” PureBond veneer plywood

1 – additional 4x8 sheet ¼” PureBond veneer plywood

1 full sheet (rather than ½ sheet) of ½” PureBond veneer plywood

1 – 1x4x6’ pine board (ripped down to 1 ½” pieces for crown moulding)

1 – 1x6x8’ pine board (ripped down to 5 ¼” for top and base moulding)

3 – 1x3x8’ pine boards (front desk rail, rear desk cleat, cabinet frame)

Kreg Jig

Kreg Rip-Cut

Drill

Impact Driver

Orbital sander

1 ¼” pocket screws

1” pocket screws

2” brad nails

¾” brad nails

1 ¼” brad nails

1” screws

1 ¼” screws

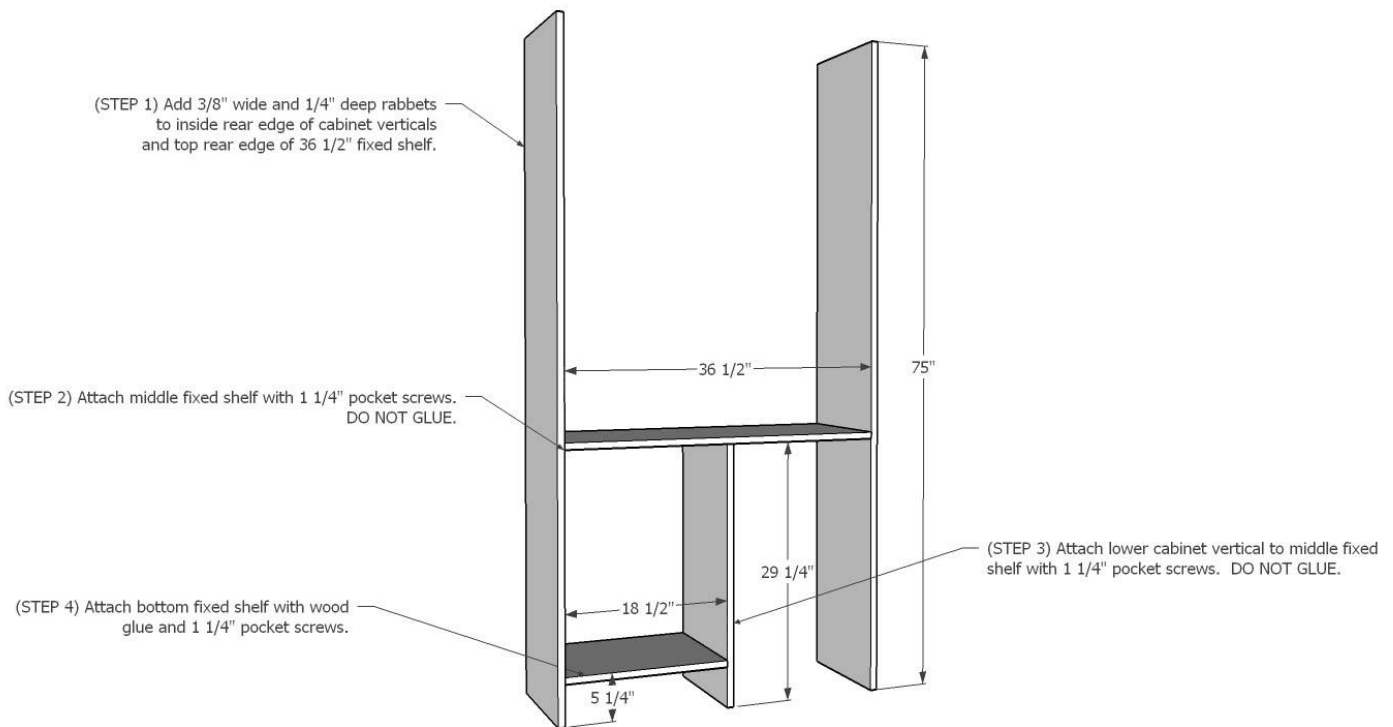
Edge banding

6 – 12” side mount drawer slides

1 – 14” side mount drawer slide

## Cut List:

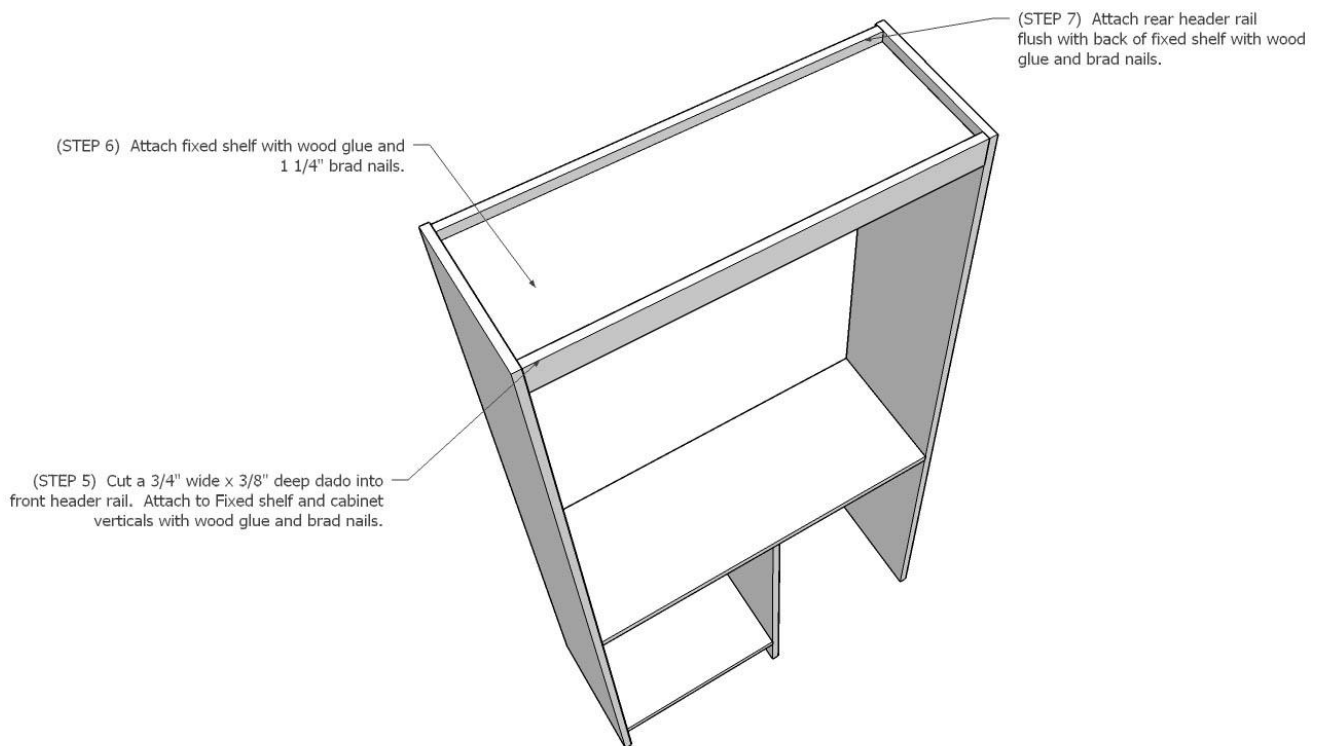
- 2 – ¾" plywood 75" x 14" (cabinet verticals)
- 1 – ¾" plywood 29 ¼" x 14" (short cabinet vertical)
- 1 – ¾" plywood 18 ½" x 14" (bottom drawer cabinet fixed shelf)
- 1 – ¾" plywood 36 ½" x 14" (middle fixed shelf)
- 2 – ¾" plywood 36 3/8" x 13 ¾" (adjustable shelves)
- 1 – ¾" plywood 36 ½" x 13 3/8" (cabinet top)
- 1 – ¾" plywood 36 ½" x 1" (rear header rail)
- 1 – ¾" plywood 36 ½" x 2 ¾" (front header rail)
- 2 – ¾" plywood 29 ¼" x 18 ¾" (desk cabinet sides)
- 1 – ¾" plywood 18 ½" x 18 ¾" (desk cabinet bottom)
- 1 – ¾" plywood 96" x 20" (desk top)
- 2 – 1x3 @ 74 ¾" long (front rail and rear desk cleat)
- 1 – 1x3 @ 17 ¼" long (under mount desk support)
- 4 – 1x8 ripped down to 6" wide and 18 ¼" long (drawer fronts)
- 2 – 1x6 ripped down to 4 ½" wide and 18 ¼" long (half of large drawer front)
- 2 – 1x8 ripped down to 7" wide and 18 ¼" long (half of large drawer front)
- 1 – 1x6 ripped down to 4" wide and 18 ¼" long (desk drawer)
- 2 – 1x3 @ 19 5/8" long (cabinet door stiles)
- 2 – 1x3 @ 13 ¼" long (cabinet door rails)
- 1 – ¼" plywood 15 ½" x 13 ½" (cabinet door face)
- 1 – ¼" plywood 19 ¼" x 24 3/8" (cabinet backing)
- 1 – ¼" plywood 44 ½" x 37 ¼" (book case backing)
- 8 – ½" plywood 5" x 17 ½" (drawer fronts and backs)
- 8 – ½" plywood 5" x 11" (drawer sides)
- 4 – ½" plywood 10 ½" x 17 ½" (tall drawer fronts/back)
- 4 – ½" plywood 10 ½" x 11" (tall drawer sides)
- 2 – ½" plywood 3" x 13" (desk drawer sides)
- 2 – ½" plywood 3" x 17 ½" (desk drawer front/back)



- 1) Add 3/8" wide and 1/4" deep rabbets to the inside back edge of the tall cabinet verticals as well as the top back edge of the middle fixed shelf. This will accept the 1/4" book case backing.
- 2) Lay the tall cabinet verticals on their edges, parallel on a flat surface and mark 29 1/4" up from the bottom of the cabinet verticals. Drill 3/4" pocket holes into each end of the 36 1/2" fixed shelf. Align what will be the bottom side of the fixed shelf with the mark at 29 1/4". Make sure the measurements are correct and clamp into place. The top side of the fixed shelf should be 30" from the bottom of the cabinet verticals. Attach with 1 1/4" pocket screws.

NOTE: If painting the cabinets and staining this fixed shelf is desired, DO NOT GLUE the fixed shelf in place. It will act as a stabilizer until the book case is ready to be painted. When ready to paint, remove the fixed shelf and paint the book case. Stain the fixed shelf as desired and reattach.

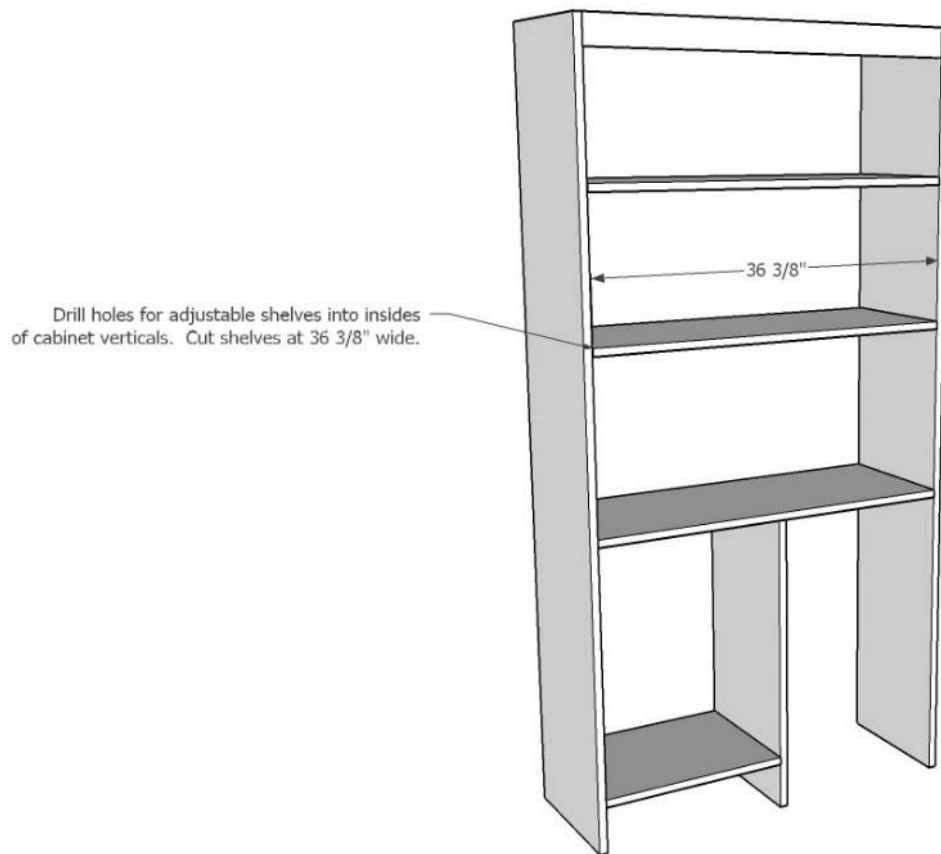
- 3) Drill 3/4" pocket holes into the top of the lower cabinet vertical and each side of the lower fixed shelf. Place the lower cabinet vertical and the lower fixed shelf. The fixed shelf should measure 5 1/4" from the bottom of the cabinet verticals to the top of the fixed shelf. The lower cabinet vertical can be glued into place. Check measurements, clamp the lower cabinet vertical and the fixed shelf into place. Check for square and then attach the lower cabinet vertical to the upper fixed shelf with 1 1/4" pocket screws.
- 4) Attach the lower fixed shelf with 1 1/4" pocket screws.



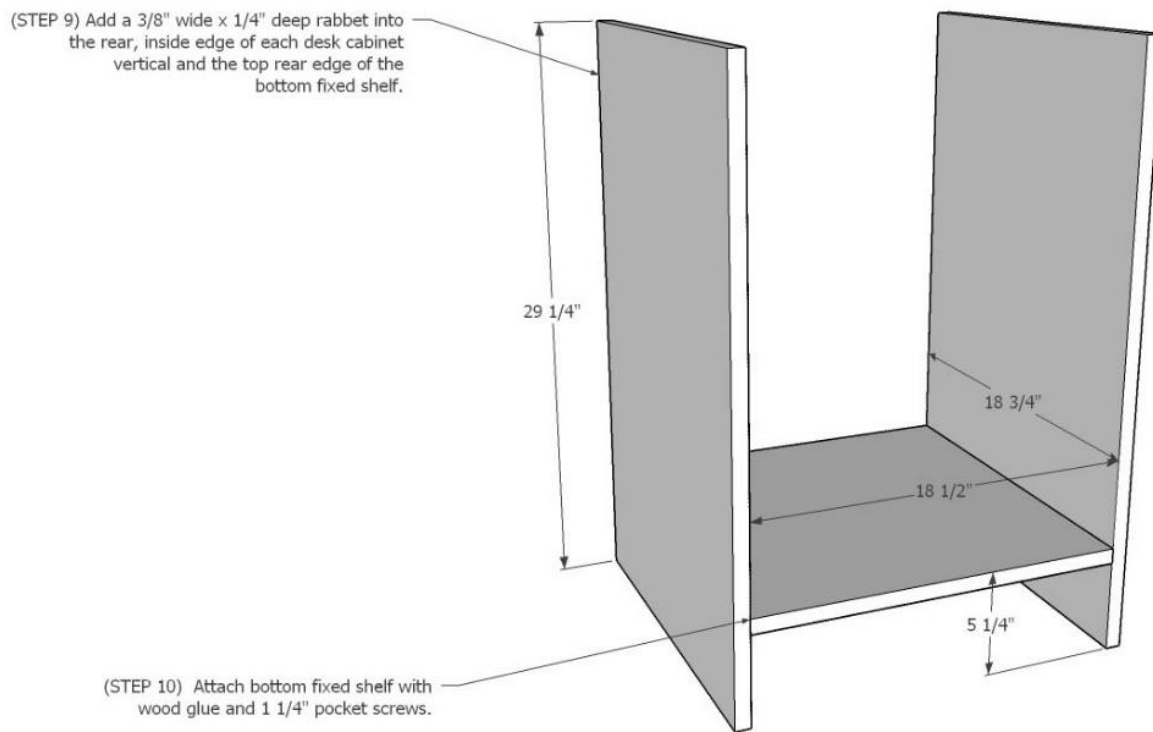
- 5) For the front header rail, mark 1" from the bottom or top of the rail. Cut a 3/4" wide x 3/8" deep dado into the inside face of the front header rail. This will accept the cabinet top. Attach flush with the front and top of the book case with wood glue and 2" finish nails.

NOTE: If you do not wish to cut a dado into the front header rail, cut the cabinet top at 13" wide. Drill 3/4" pocket holes into each end of the header rail and attach flush to the front and top of the cabinet verticals with wood glue and 1 1/4" pocket screws. Follow step 6 to finish attaching the top and headers.

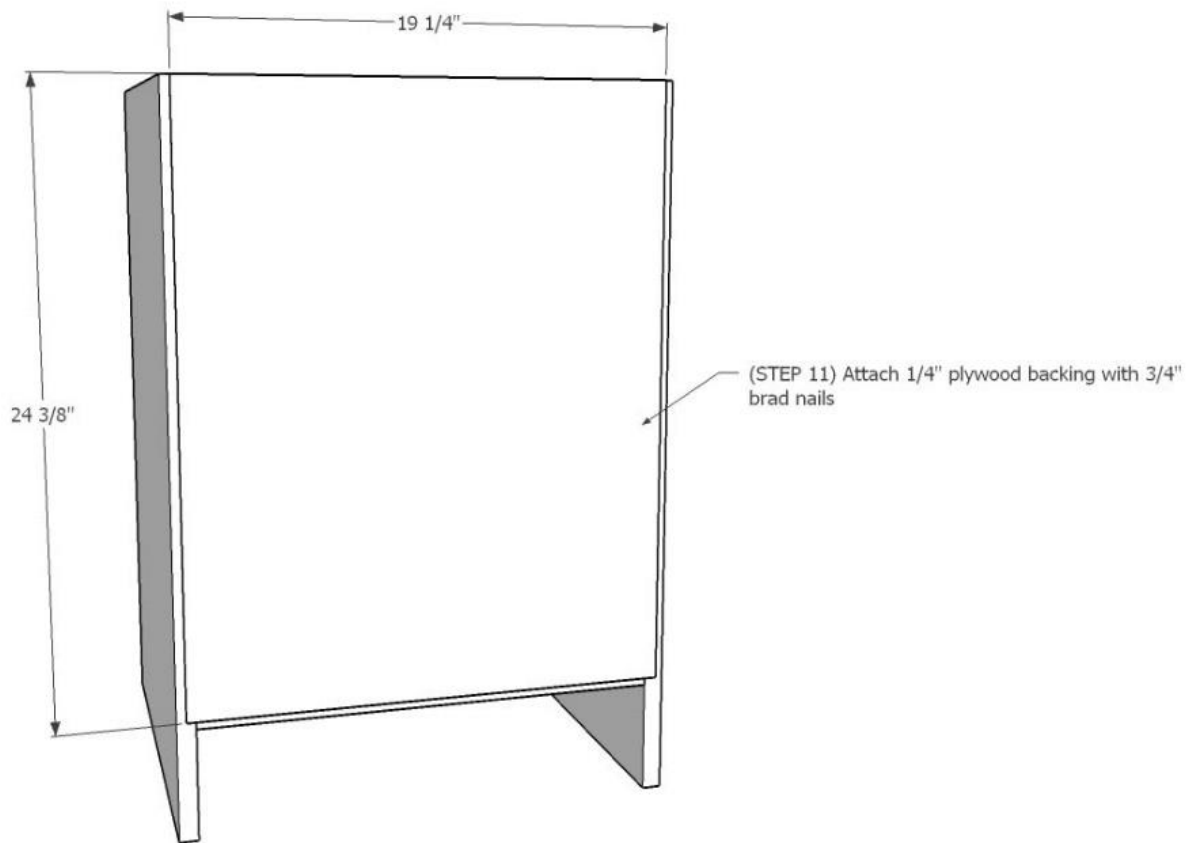
- 6) Drill 3/4" pocket holes into each end of the cabinet top. Set in place 1" from the top of the cabinet verticals and insert the front into the header rail dado or clamp into place flush against the header rail (if no dado was made). Attach with wood glue and 1 1/4" pocket screws.
- 7) Place the rear header rail on the top of the cabinet top, flush with the back. Attach with wood glue and 2" brad nails through the sides of the cabinets and into the ends of the rear header rail. Nail 2" brad nails into the face of the front header rail to secure it against the cabinet top.



- 8) Using the shelf pin jig, drill holes into the sides of the cabinet verticals to accept the adjustable shelves. Apply edge banding to all of the exposed edges of the plywood on the book case and the adjustable shelves.



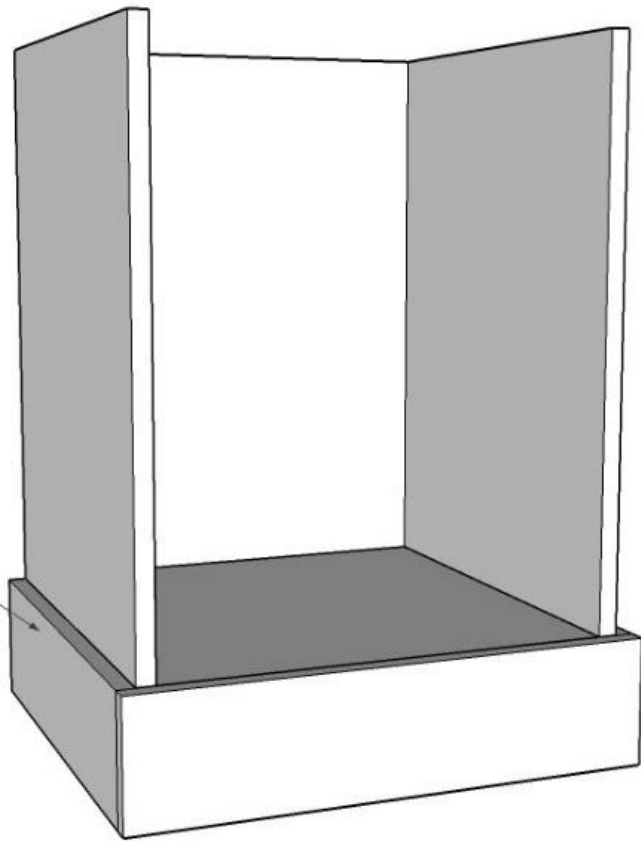
- 9) On the desk cabinet verticals, add a  $\frac{3}{8}$ " wide by  $\frac{1}{4}$ " deep rabbets to the back, inside edges to accept the  $\frac{1}{4}$ " backing. Add a  $\frac{3}{8}$ " wide by  $\frac{1}{4}$ " deep rabbet to the top rear edge of the cabinet bottom as well. Drill  $\frac{3}{4}$ " pocket holes into the top inside faces of the cabinet verticals to allow the desk top to be attached.
  
- 10) Drill  $\frac{3}{4}$ " pocket holes into each end of the fixed shelf. Set in place so that the fixed shelf will measure  $5\frac{1}{4}$ " from the bottom of the desk cabinet verticals and the top of the fixed shelf. Apply wood glue to the edges, check for square and clamp in place. Attach with  $1\frac{1}{4}$ " pocket screws. Apply edge banding to all exposed plywood edges on the front side of the cabinet.



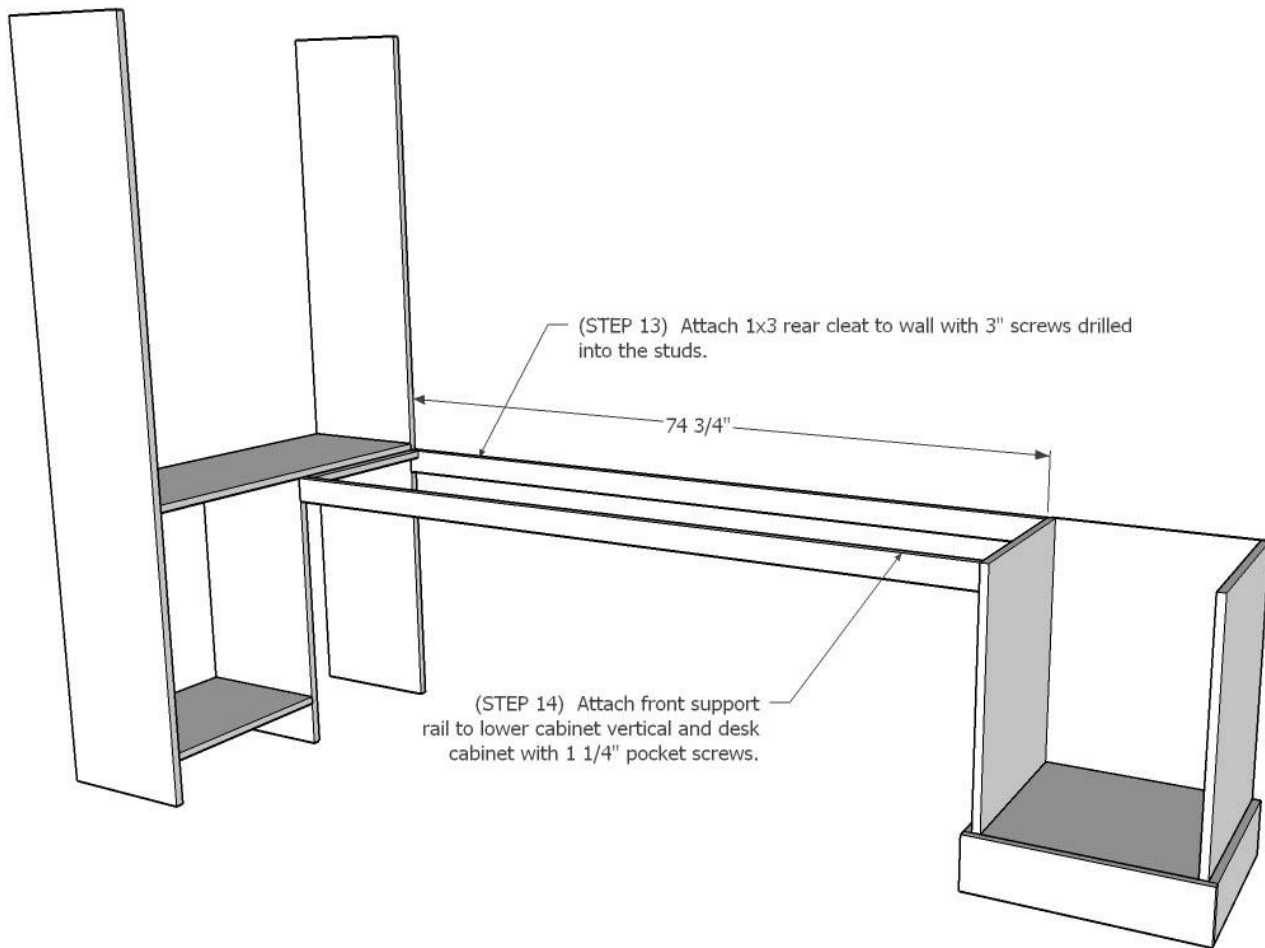
11) Attach the  $\frac{1}{4}$ " plywood backing with  $\frac{3}{4}$ " brad nails.



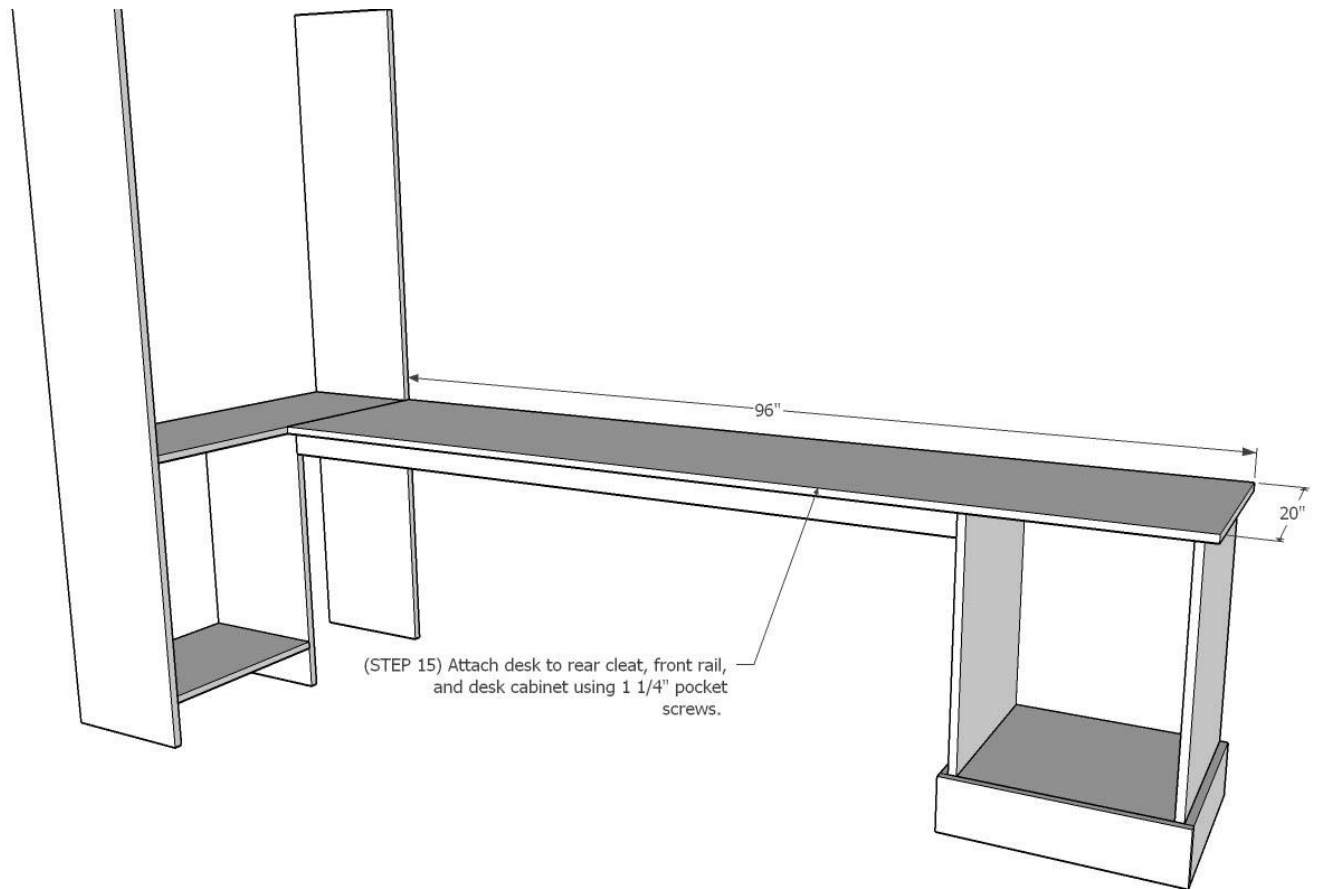
(STEP 12) Add the 5 1/4" moulding to the bottom of the desk cabinet.



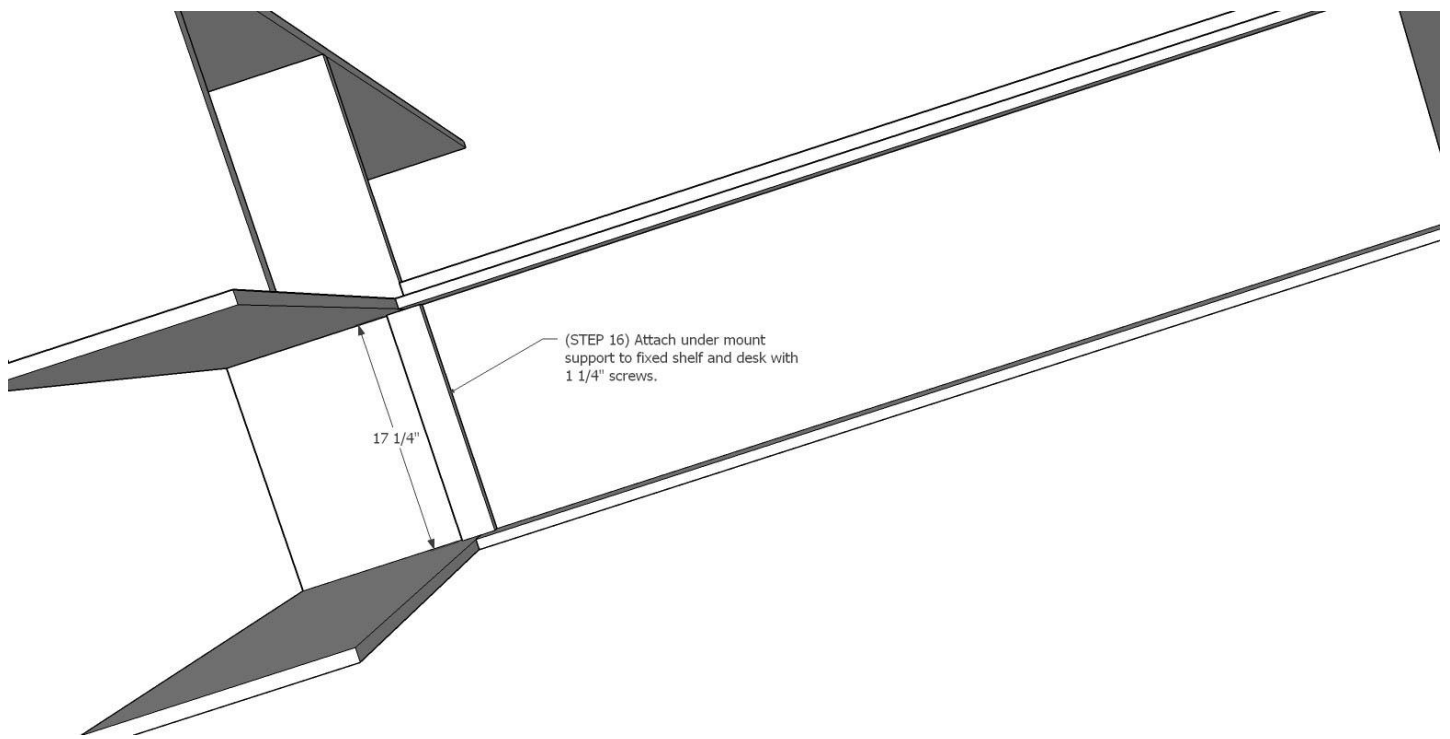
12) Measure and cut to size the 5 1/4" moulding for the desk cabinet. Attach with 1 1/4" brad nails.



- 13) When ready to install the bookcase and desk, place exactly where they will go on the walls. Mark the baseboards with a pencil where they will need to be cut out to allow the book case and cabinet to sit flush against the wall. Cut the baseboards out with a flush cut dovetail saw or similar saw. Slide the bookcase and cabinet into place, flush against the walls.
- 14) Drill  $\frac{3}{4}$ " pocket holes into each end of the wall cleat and front desk support rail. Drill vertical pocket holes into the cleat and rail to allow the desk top to be attached. Locate the studs in the wall and attach the rear desk cleat into the studs with 3" screws. The cleat should be flush with the top of the cabinet and the underside of the middle fixed shelf. Check for level prior to attaching to the wall. Attach to the tall cabinet vertical and the desk cabinet with 1  $\frac{1}{4}$ " pocket screws. Attach the front support rail with 1  $\frac{1}{4}$ " screws into the shorter book case vertical and the desk cabinet.



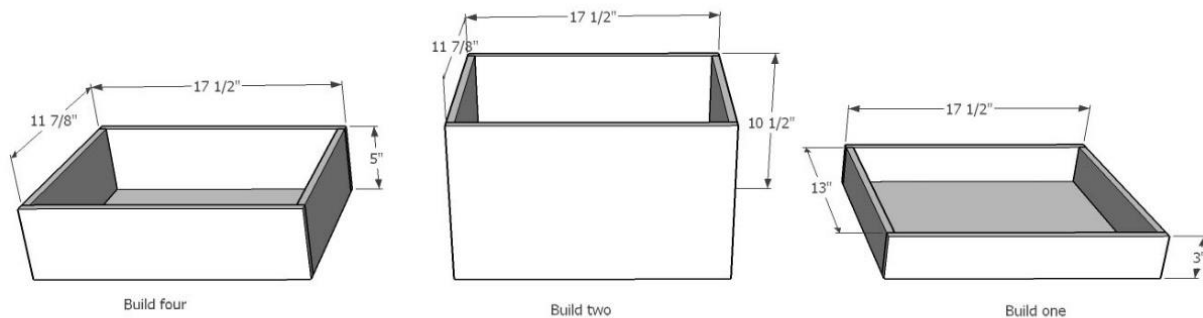
15) Attach the finished desk top to the rear cleat, front support rail, and the desk cabinet using 1 1/4" screws. The desk should sit flush against the wall.



16) Attach the under mount support brace so that it splits the difference on the underside of the desk and the fixed shelf. Attach with 1 1/4" screws.

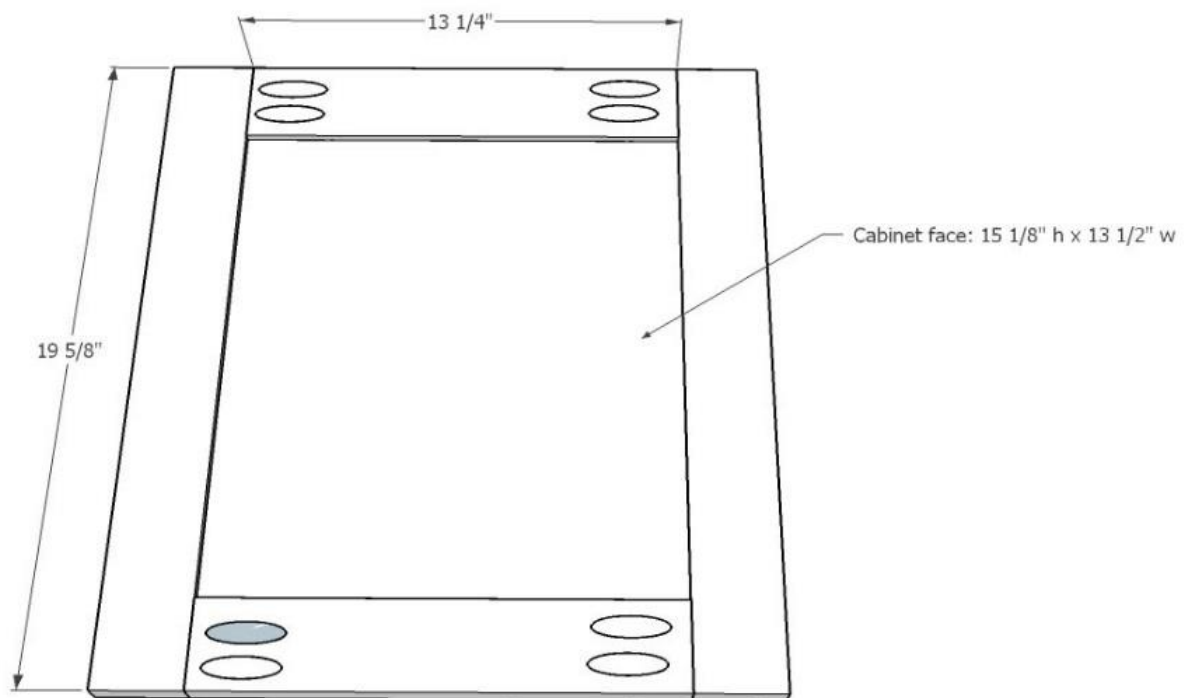


17) Measure and attach the moulding to the bottom and top of the book case cabinet.



18) Build the drawers. Drill  $\frac{1}{2}$ " pocket holes into the drawer sides. Cut a  $\frac{1}{4}$ " wide x  $\frac{1}{4}$ " deep dado  $\frac{1}{2}$ " up from the bottom of the drawer fronts and backs. Add a small amount of glue to all of the dados. Attach the drawer sides to the drawer back with 1" pocket screws. Slide the  $\frac{1}{4}$ " plywood bottom into the dado slots and then attach the drawer front, making sure to check for square.

If not using dados, build the drawers as above, but cut the drawer bottoms to equal the size of the drawer boxes. Attach to the bottom of the drawer boxes with wood glue and  $\frac{3}{4}$ " brad nails.



19) Using a  $\frac{1}{4}$ " straight router bit, add a  $\frac{1}{4}$ " wide x  $\frac{1}{4}$ " deep dado to the full length of the inside edges of the cabinet door rails. For the stiles, router the dado slots stopping approximately  $1\frac{1}{2}$ " short of each end of the stiles. Drill  $\frac{3}{4}$ " pocket holes into the cabinet rails. Attach one of the cabinet rails to the stiles with wood glue and  $1\frac{1}{4}$ " pocket screws. Apply a thin bead of wood glue into the dados and slide the  $\frac{1}{4}$ " plywood face into place. Attach the remaining cabinet rail with  $1\frac{1}{4}$ " pocket screws, making sure to check for square at all times.

20) Install the drawers to the book cases and the desk cabinet. Attach the drawer faces to the drawer boxes using 1" wood screws, leaving a  $\frac{1}{8}$ " gap around all sides. I used 2 pennies and a dime to achieve my gaps. Attach the desk cabinet door with European or mortised hinges.