

## DESK &amp; STORAGE

# A Craft Desk Built Around Its Bins

*A sewing machine at one end, a Cricut at the other and 5 ft. 5 $\frac{1}{16}$  in. of butcher block between them. Three painted birch cabinets hold 25 salvaged craft-cart bins and 17 paper shelves on printed rails, and a 3D-printed hood sends the floor register's warm air under the desk, or shuts it off.*

DESIGNED FOR JESS · EVERY DIMENSION GENERATED FROM ONE PARAMETER FILE · OCTOBER 2026

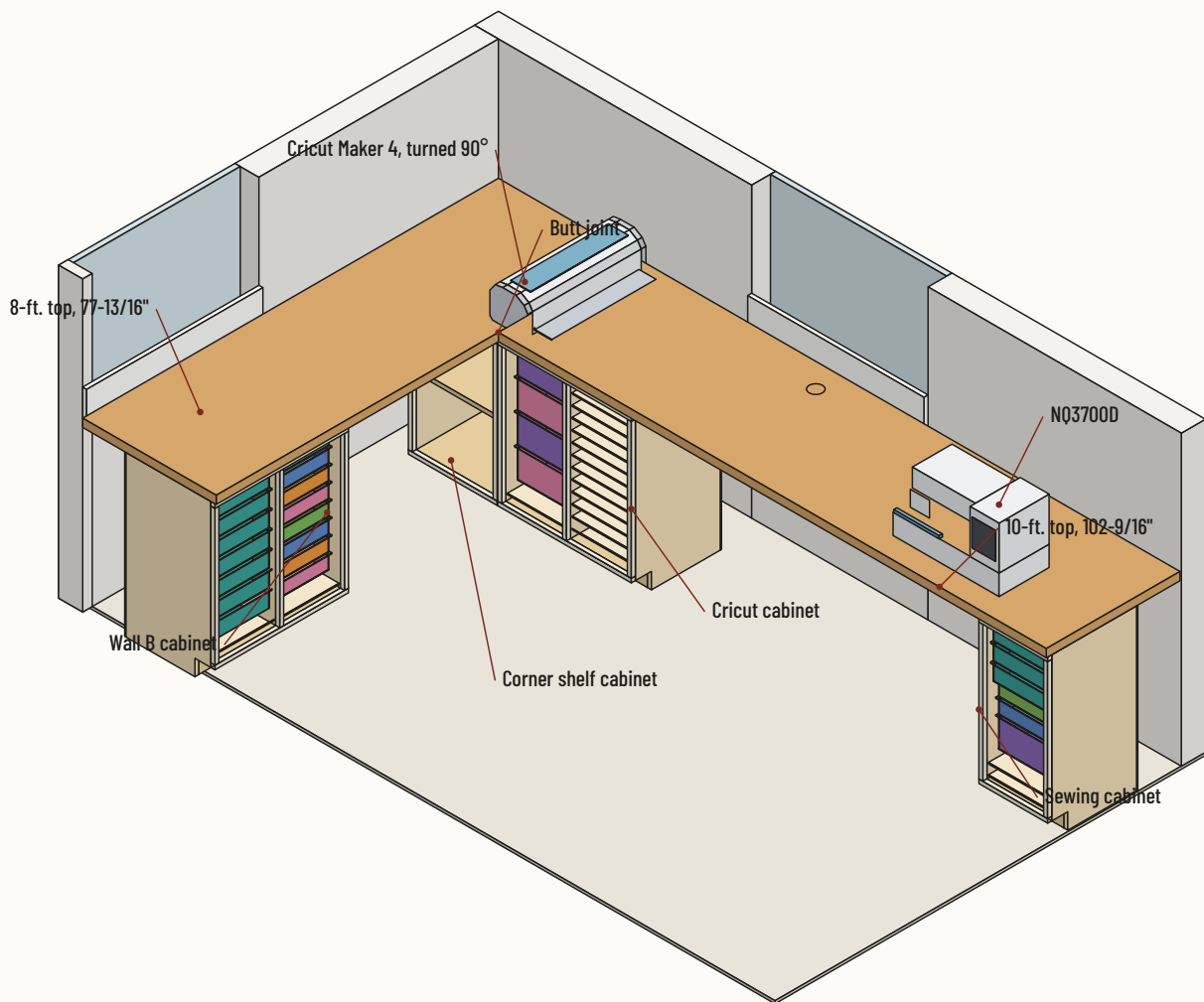


**FIG. 1** The desk wraps the inside corner of a 10 ft. 7 $\frac{13}{16}$  in. by 10 ft. 2 $\frac{5}{8}$  in. room. The long wall is the workshop; the short leg holds the computer.

The bins came first. Jess had 25 of them, pulled from rolling craft carts: 10 teal, 10 shallow colored ones and 5 deep ones. They hang by a lip instead of sliding on a bottom, so the cabinets that hold them need no drawers at all, just pairs of  $\frac{1}{2}$  in.-square rails, printed rather than ripped. Every bay is  $11\frac{3}{8}$  in. wide inside, which gives the teal bins  $\frac{7}{16}$  in. of lip on each rail and the colored ones  $\frac{3}{8}$  in.

The work surface sets everything else. Jess is about six feet tall and works seated, so the top of the butcher block lands at  $31\frac{7}{16}$  in., exactly the bottom of the window aprons. The trim stays put, the top slides under it, and the underside at  $29\frac{15}{16}$  in. leaves real knee room.

The long wall is where the work happens. The Cricut sits at the corner end, turned sideways so its 12×24 mat runs along the wall instead of into it: out the back over the open corner of the top, out the front over the work surface. The NQ3700D sits at the far end with knee room under it for sewing and its supplies in a one-bay cabinet at arm's reach. Between them is  $65\frac{1}{16}$  in. of open butcher block under the window. The short leg along Wall B is the computer desk, with the third cabinet at its end. Tucked into the corner under the 8-ft. top is a fourth, plain cabinet: one  $15\frac{1}{8}$  in. bay with a fixed shelf, for the laptop bag, spare laptops and keyboards that only come out for work trips. (Full-size keyboards are about 17-1/2 in. long; they go in on edge.)

The cabinets don't touch the wall. Their painted faces sit  $24\frac{3}{4}$  in. out,  $\frac{1}{4}$  in. behind the edge of the top, which leaves a  $6\frac{3}{8}$  in. chase behind each one for power strips and cables. The Wall B cabinet's chase hides the floor register, which is why the hood exists.

#### AT A GLANCE

|               |                                                                                                                                                                                |
|---------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| WORK SURFACE  | $31\frac{7}{16}$ in. high, 25 in. deep                                                                                                                                         |
| TOPS          | $1\frac{1}{2}$ in. butcher block: $77\frac{13}{16}$ in. from an 8-footer, $102\frac{9}{16}$ in. from a 10-footer                                                               |
| CABINETS      | Cricut and Wall B, 25 in. wide; sewing, $12\frac{7}{8}$ in. wide; corner shelf, $16\frac{5}{8}$ in. wide; $29\frac{15}{16}$ in. tall, $16\frac{5}{8}$ in. deep with the facing |
| STORAGE       | 25 bins, $\frac{3}{8}$ in. apart; 17 paper shelves                                                                                                                             |
| KNEE SPACES   | $65\frac{1}{16}$ in. for work and sewing on Wall A, $27\frac{13}{16}$ in. for the computer on Wall B                                                                           |
| SHEET GOODS   | One 4×8 birch, two 4×4 sanded ply, 2 4×8 of $\frac{1}{4}$ -in. ply                                                                                                             |
| LUMBER        | 2×4s: 1 eight-footers, nothing longer; 35 lin. ft. of pine 1× for the facing                                                                                                   |
| PRINTED PARTS | 84 rails, spacer blocks, register hood and cap                                                                                                                                 |

## BEFORE YOU CUT

- Measure the actual thickness of the birch ply. Every cabinet width derives from it, and the facing strips are ripped to match it.
- Print one bin rail and one paper rail. Hang a real bin on the first and slide a 1/4-in. offcut into the second.
- Find the studs. The blocks are drawn at 16 in. centers from the corner, which is a guess.
- Measure the register face and its flat rim; the hood is drawn for 12 in. × 4 in. with a 3/4 in. rim.
- Locate both outlets. They are drawn at 14 in. to center, from a sketch.
- Load a 12×24 mat in the Cricut and measure how far it sticks out each way. The plan allows 21<sup>15</sup>/<sub>16</sub> in..

## The work wall, to scale

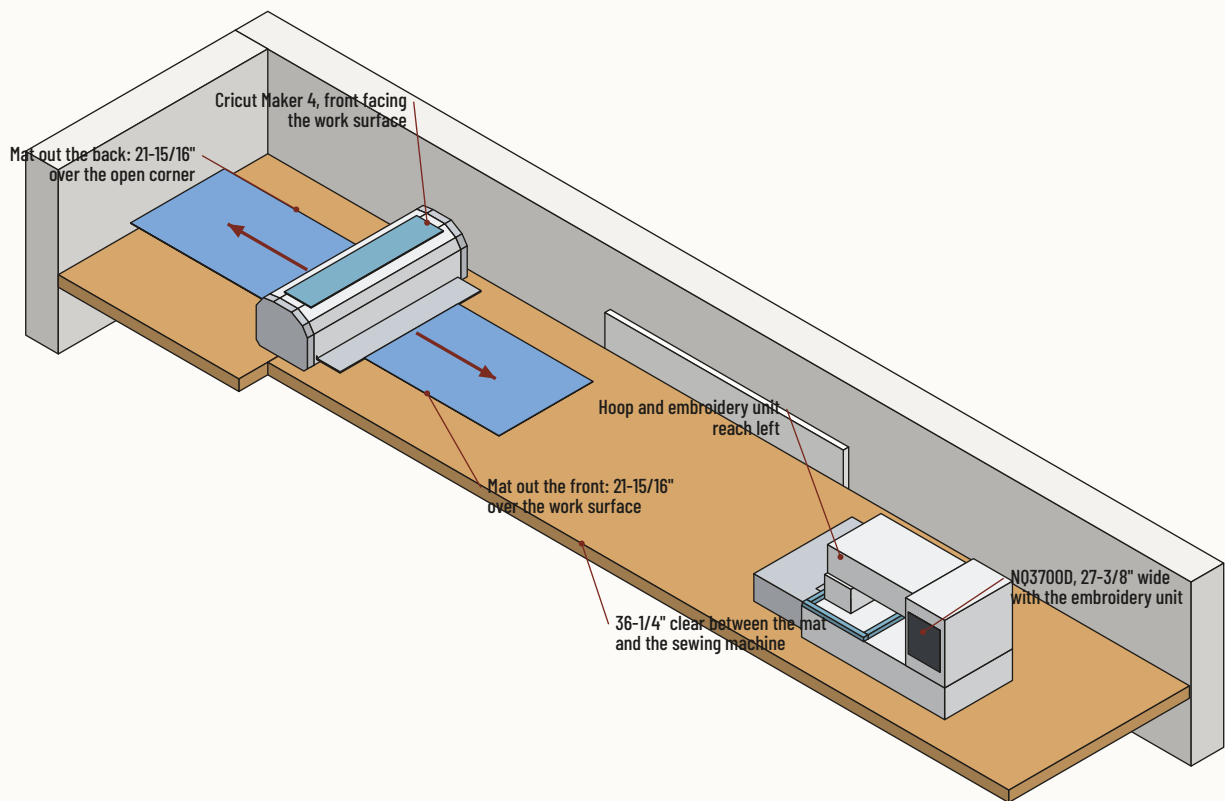


**FIG. 2** Both machines at their published sizes. The Cricut Maker 4 (22-1/8" long, 7-1/8" deep) faces the work surface, so a 12×24 mat runs 21-15/16" out each side along the wall. The NQ3700D with its embroidery unit is 27-3/8" wide; the hoop works on its left. Shapes are simplified; sizes are not.

---

## Hang the bins on printed rails

Each bin rides on its lip. The body drops between two rails with  $\frac{1}{16}$  in. to spare on each side for teal and  $\frac{3}{16}$  in. for the colored bins, and the lip rests on top. Every bin gets  $\frac{3}{8}$  in. of clear space under it. That is enough for a loaded bin's bottom to sag, for a rail set a hair off, and for the bin to dip a little as it comes out. More gap isn't better: a bin pulled past its middle tips until it touches the one below, and a bigger gap lets it tip further and catch on the way back in.

The rails are printed, 12 in. long, and screw on flush with the front of the ply. They don't need to run the full depth. A bin tips out when the front end of the rail passes its balance point, so the back few inches of a  $15\frac{1}{4}$  in. bin can hang free. Two  $\#6 \times \frac{1}{2}$  in. flat-head screws hold each one, seated  $\frac{1}{4}$  in. above the ply so that rails on both faces of a divider never meet in the middle.

Whatever height is left under the bins in any bay becomes paper shelves: grooved rails that take a  $10\frac{13}{16}$  in.  $\times$   $15\frac{1}{2}$  in. sheet of  $\frac{1}{4}$ -in. ply every 2 in. Bay 2, right beside the Cricut, is all paper: 12 shelves for cardstock and vinyl. The sewing cabinet takes the small bins for notions. The grooves are printed rather than routed because the painted facing would close off the front of a dado, and the sheet has to come out through it.

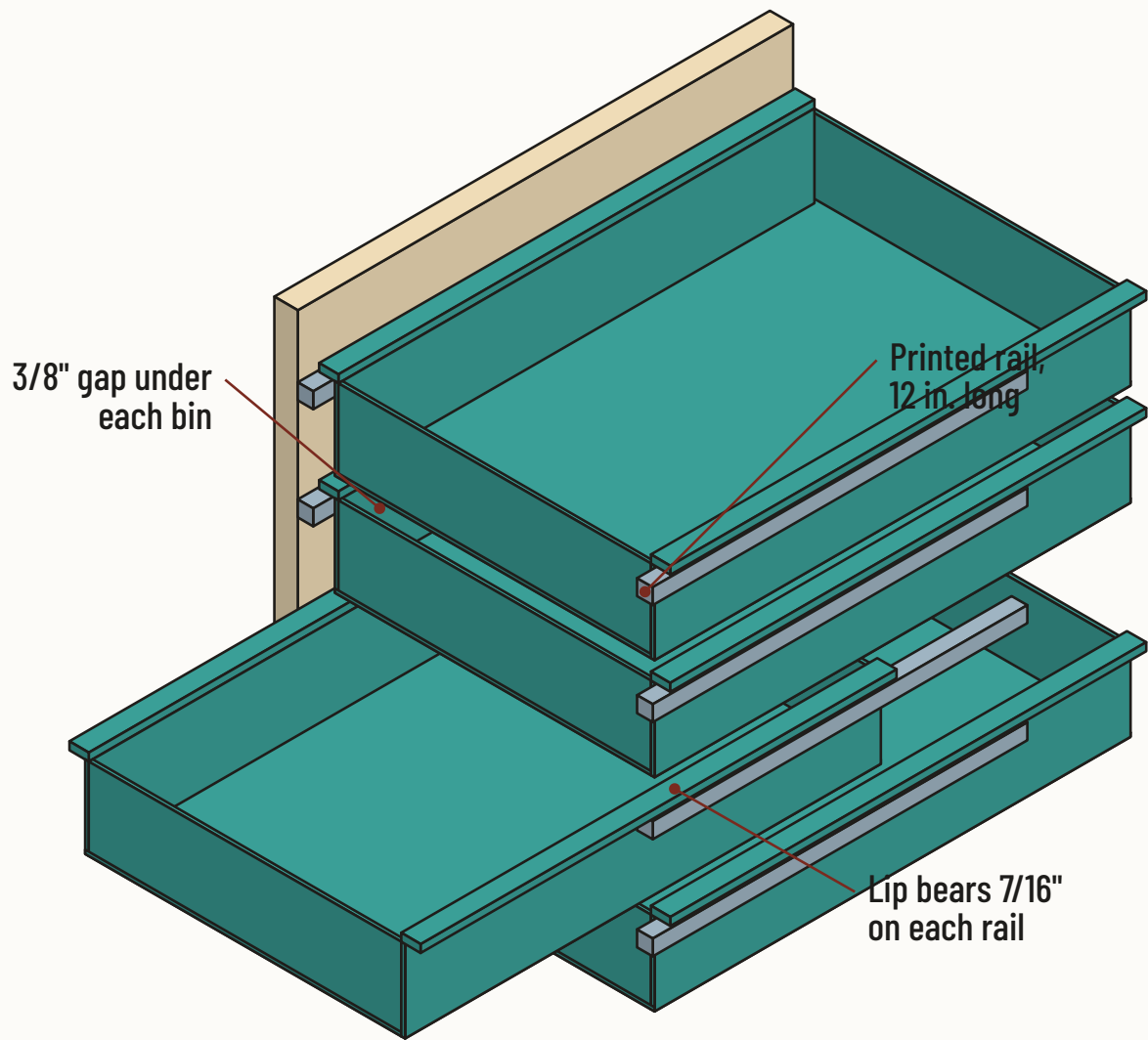


**FIG. 3** Pull a bin and it rides out on its lip. The 3/8" gap under each bin is the clearance that matters most.

**CLEARANCES, AS DRAWN**

| BIN     | UNDER BIN         | BODY TO RAIL       | LIP TO SIDE        | LIP BEARING        | BEHIND            |
|---------|-------------------|--------------------|--------------------|--------------------|-------------------|
| Teal    | $\frac{3}{8}$ in. | $\frac{1}{16}$ in. | $\frac{1}{16}$ in. | $\frac{7}{16}$ in. | $\frac{5}{8}$ in. |
| Shallow | $\frac{3}{8}$ in. | $\frac{3}{16}$ in. | $\frac{1}{8}$ in.  | $\frac{3}{8}$ in.  | 1½ in.            |
| Deep    | $\frac{3}{8}$ in. | $\frac{3}{16}$ in. | $\frac{1}{8}$ in.  | $\frac{3}{8}$ in.  | 1½ in.            |

### SHOP TIP: LET SPACER BLOCKS SET THE RAILS

Don't measure 84 rail heights. Print one spacer block of each size in the schedule below. Work from the top down: stand the first spacer against the stretcher, set the rail under it, screw it, then hang the next spacer from that rail. Each spacer is labeled with its height. If a real lip turns out thicker than the  $\frac{1}{4}$  in. the photos suggested, change it in the parameter file and every height below updates.

### BAY SCHEDULE (RAIL TOPS ABOVE THE FLOOR)

| BAY | CABINET | BINS                      | BIN RAIL TOPS, TOP DOWN (IN.)                        | PAPER SHELVES                  | SPACERS, TOP DOWN                                       |
|-----|---------|---------------------------|------------------------------------------------------|--------------------------------|---------------------------------------------------------|
| 6   | Corner  | —                         | —                                                    | —                              |                                                         |
| 1   | Cricut  | 4 deep                    | 28-3/4" to 11-7/8" @ 5-5/8"                          | 1: 5-5/16"                     | 7/16", 3 x 5-1/8", 6-1/16"                              |
| 2   | Cricut  | —                         | —                                                    | 12: 27-11/16" to 5-11/16" @ 2" | 12 x 1-1/2"                                             |
| 3   | Sewing  | 3 teal, 2 shallow, 1 deep | 28-11/16", 25-7/16", 22-3/16", 19", 16-1/8", 13-1/4" | 2: 6-11/16", 4-11/16"          | 1/2", 2 x 2-3/4", 2-11/16", 2 x 2-3/8", 6-1/16", 1-1/2" |
| 4   | Wall B  | 7 teal                    | 28-11/16" to 9-3/16" @ 3-1/4"                        | 1: 5-1/16"                     | 1/2", 6 x 2-3/4", 3-5/8"                                |
| 5   | Wall B  | 8 shallow                 | 28-3/4" to 8-5/8" @ 2-7/8"                           | 1: 4-13/16"                    | 7/16", 7 x 2-3/8", 3-5/16"                              |

## Break down the plywood, then build two simple boxes

Every side and divider comes from one sheet of birch. Rip it into three  $15\frac{7}{8}$  in. strips with a track saw and crosscut the parts from the strips; the  $\frac{1}{8}$  in. kerfs still leave room. Bottoms, stretchers, the toe kicks and the rear base rails come from the two 4x4 sheets of sanded ply. The backers and the 17 paper sheets come from  $\frac{1}{4}$ -in. ply.

Grain direction only matters where the birch shows under oil: the outer sides, which keep their grain vertical. Everything else is hidden, painted or behind bins, so it can go either way.

The carcasses have no top panel and no back. Two 4 in. stretchers hold the sides square at the top, the bottom sits on the toe kick and a rear base rail, and the dividers stand on the bottom with their tops under the stretchers. The sides get a 3 in. by 3 in. notch at the front for toes.

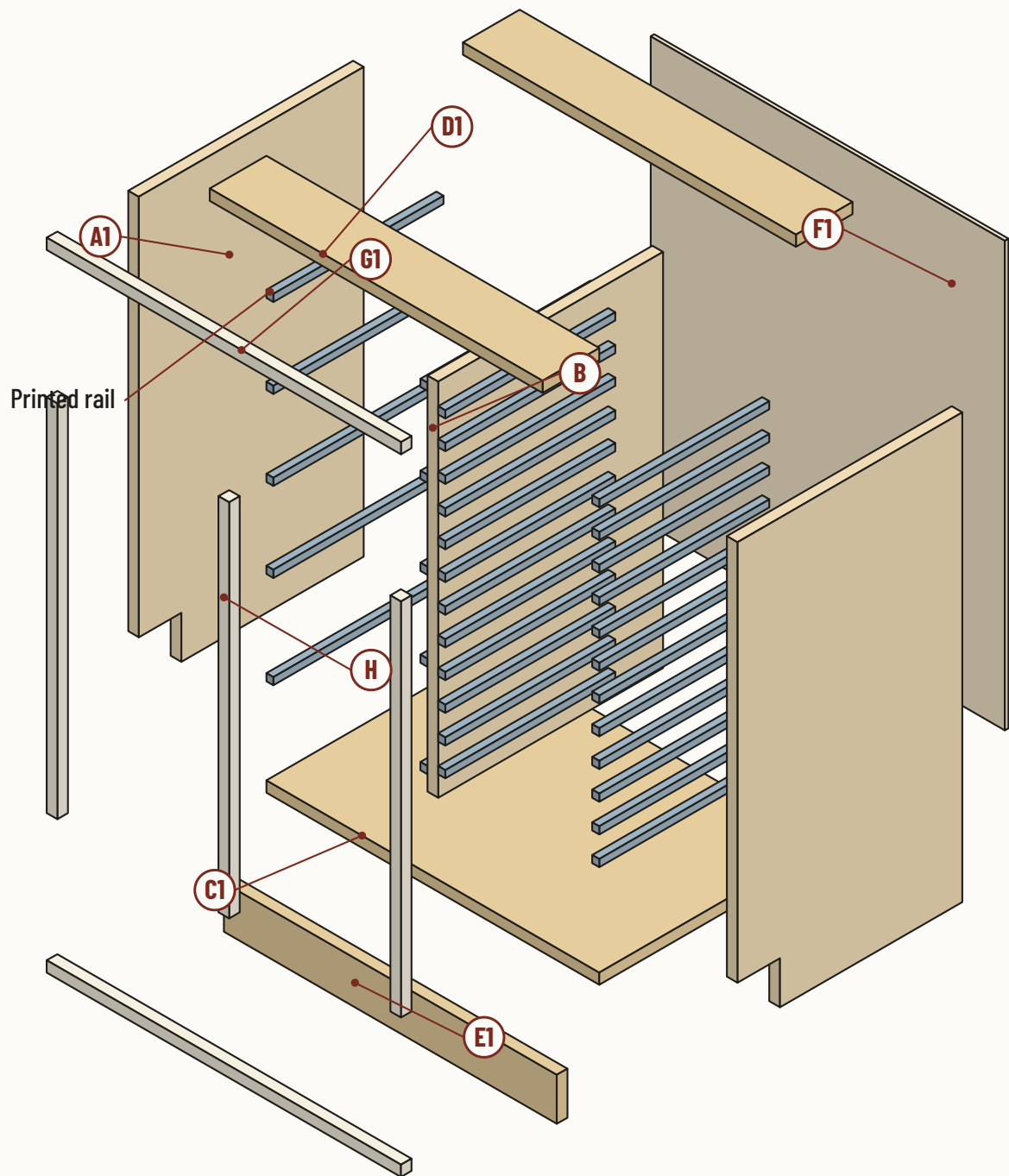


**FIG. 4** The Cricut cabinet, exploded. Letters match the cut list. The Wall B cabinet is identical; the sewing and corner cabinets are the same box one bay wide, the corner one with a shelf instead of rails.

#### FACE IT WITH PAINTED PINE

The facing is  $\frac{3}{4}$  in.-thick pine ripped to exactly the ply's thickness and glued over every front edge, flush on both faces. It can't be wider. Every bin lip has to pass between the stiles, and a teal lip has only  $\frac{1}{16}$  in.

to spare on each side. Full-width rails top and bottom, stiles between them. A 1×3 rips into three strips.

Paint the strips before they go on, or mask the birch. Paint won't stick well over Danish oil, and oil soaks into raw pine unevenly under paint. Try the oil on a birch offcut first; birch can blotch.

**CUT LIST**

| ✓                        |           | QTY | PART                         | FOR                      | T              | W                 | L                 | STOCK         |
|--------------------------|-----------|-----|------------------------------|--------------------------|----------------|-------------------|-------------------|---------------|
| <input type="checkbox"/> | <b>A1</b> | 6   | Side                         | Cricut + Sewing + Wall B | $\frac{3}{4}$  | $15\frac{7}{8}$   | $29\frac{15}{16}$ | birch         |
| <input type="checkbox"/> | <b>A2</b> | 2   | Side                         | Corner                   | $\frac{3}{4}$  | $15\frac{7}{8}$   | $29\frac{15}{16}$ | sanded        |
| <input type="checkbox"/> | <b>B</b>  | 2   | Divider                      | Cricut + Wall B          | $\frac{3}{4}$  | $15\frac{7}{8}$   | $25\frac{7}{16}$  | birch         |
| <input type="checkbox"/> | <b>C1</b> | 2   | Bottom                       | Cricut + Wall B          | $\frac{3}{4}$  | $15\frac{7}{8}$   | $23\frac{1}{2}$   | sanded        |
| <input type="checkbox"/> | <b>C2</b> | 1   | Bottom                       | Corner                   | $\frac{3}{4}$  | $15\frac{7}{8}$   | $15\frac{1}{8}$   | sanded        |
| <input type="checkbox"/> | <b>C3</b> | 1   | Bottom                       | Sewing                   | $\frac{3}{4}$  | $15\frac{7}{8}$   | $11\frac{3}{8}$   | sanded        |
| <input type="checkbox"/> | <b>D1</b> | 4   | Top stretcher                | Cricut + Wall B          | $\frac{3}{4}$  | 4                 | $23\frac{1}{2}$   | sanded        |
| <input type="checkbox"/> | <b>D2</b> | 2   | Top stretcher                | Corner                   | $\frac{3}{4}$  | 4                 | $15\frac{1}{8}$   | sanded        |
| <input type="checkbox"/> | <b>D3</b> | 2   | Top stretcher                | Sewing                   | $\frac{3}{4}$  | 4                 | $11\frac{3}{8}$   | sanded        |
| <input type="checkbox"/> | <b>E1</b> | 4   | Toe kick / base rail         | Cricut + Wall B          | $\frac{3}{4}$  | 3                 | $23\frac{1}{2}$   | sanded        |
| <input type="checkbox"/> | <b>E2</b> | 2   | Toe kick / base rail         | Corner                   | $\frac{3}{4}$  | 3                 | $15\frac{1}{8}$   | sanded        |
| <input type="checkbox"/> | <b>E3</b> | 2   | Toe kick / base rail         | Sewing                   | $\frac{3}{4}$  | 3                 | $11\frac{3}{8}$   | sanded        |
| <input type="checkbox"/> | <b>F1</b> | 2   | Backer                       | Cricut + Wall B          | $\frac{1}{4}$  | $29\frac{15}{16}$ | 25                | backer        |
| <input type="checkbox"/> | <b>F2</b> | 1   | Backer                       | Corner                   | $\frac{1}{4}$  | $29\frac{15}{16}$ | $16\frac{5}{8}$   | backer        |
| <input type="checkbox"/> | <b>F3</b> | 1   | Backer                       | Sewing                   | $\frac{1}{4}$  | $29\frac{15}{16}$ | $12\frac{7}{8}$   | backer        |
| <input type="checkbox"/> | <b>G1</b> | 4   | Facing rail, top + bottom    | Cricut + Wall B          | $\frac{3}{4}$  | $\frac{3}{4}$     | 25                | pine          |
| <input type="checkbox"/> | <b>G2</b> | 2   | Facing rail, top + bottom    | Corner                   | $\frac{3}{4}$  | $\frac{3}{4}$     | $16\frac{5}{8}$   | pine          |
| <input type="checkbox"/> | <b>G3</b> | 2   | Facing rail, top + bottom    | Sewing                   | $\frac{3}{4}$  | $\frac{3}{4}$     | $12\frac{7}{8}$   | pine          |
| <input type="checkbox"/> | <b>H</b>  | 10  | Facing stile                 | all                      | $\frac{3}{4}$  | $\frac{3}{4}$     | $25\frac{7}{16}$  | pine          |
| <input type="checkbox"/> | <b>K</b>  | 1   | Shelf                        | Corner                   | $\frac{3}{4}$  | $15\frac{7}{8}$   | $15\frac{1}{8}$   | sanded        |
| <input type="checkbox"/> | <b>J</b>  | 17  | Paper sheet                  | all                      | $\frac{1}{4}$  | $10\frac{13}{16}$ | $15\frac{1}{2}$   | backer        |
| <input type="checkbox"/> | <b>T1</b> | 1   | Top along Wall B (8' board)  | top                      | $1\frac{1}{2}$ | 25                | $77\frac{13}{16}$ | butcher block |
| <input type="checkbox"/> | <b>T2</b> | 1   | Top along Wall A (10' board) | top                      | $1\frac{1}{2}$ | 25                | $102\frac{9}{16}$ | butcher block |
| <input type="checkbox"/> | <b>L1</b> | 9   | Wall block                   | framing                  | $1\frac{1}{2}$ | $3\frac{1}{2}$    | 6                 | 2x4           |
| <input type="checkbox"/> | <b>L2</b> | 1   | Spanning block               | framing                  | $1\frac{1}{2}$ | $3\frac{1}{2}$    | $19\frac{1}{2}$   | 2x4           |

Dimensions in inches, finished size. A letter that comes in several sizes is numbered largest first (C1, C2, C3). Facing: 35 lin. ft., longest piece  $25\frac{7}{16}$  in.

## BUYING GUIDE: HARDWARE & SUPPLIES

| ITEM                                       | QTY     | FOR                                             |
|--------------------------------------------|---------|-------------------------------------------------|
| Draw bolts (countertop / Tite-Joint style) | 2       | underside pockets at the corner joint           |
| #20 biscuits or 3/8" dowels                | 3       | front of the joint only                         |
| Structural screws, 3"                      | 22      | 2 per stud per block                            |
| Pan-head screws + fender washers           | 24      | 3 per stretcher, through oversize holes         |
| 1-1/4" pocket or wood screws               | 1 box   | carcase assembly                                |
| #6 x 1/2" flat-head screws                 | 168     | 2 per printed rail                              |
| 1-1/4" brads + wood glue                   | —       | facing, backers                                 |
| Cable grommet, 2-1/2"                      | 1       | back of the top over the Wall A outlet          |
| Disc magnets, 10 x 3 mm                    | 13      | hood: 6 on the rim, 3 frame + 1 parking; cap: 3 |
| ASA or ABS-GF filament                     | ~180 g  | hood, cap                                       |
| PETG filament                              | ~1.8 kg | 84 rails + spacer blocks                        |

## PRINT LIST

| PART                    | QTY | MATERIAL      | FILE                                                                                              |
|-------------------------|-----|---------------|---------------------------------------------------------------------------------------------------|
| Bin rail                | 50  | PETG          | 12" long; bin_rail.stl                                                                            |
| Paper rail<br>(grooved) | 34  | PETG          | 12" long; paper_rail.stl                                                                          |
| Spacer block            | 10  | PETG / PLA    | one of each size: 7/16", 1/2", 1-1/2", 2-3/8", 2-11/16", 2-3/4", 3-5/16", 3-5/8", 5-1/8", 6-1/16" |
| Register hood           | 1   | ASA or ABS-GF | deflector_hood.stl                                                                                |
| Hood cap (shut-off)     | 1   | ASA or ABS-GF | deflector_cap.stl                                                                                 |

BIRCH 4X8 · 48 × 96 IN.

FACE GRAIN →

|                        |                        |                        |  |
|------------------------|------------------------|------------------------|--|
| <b>B</b><br>25-7/16"   | <b>B</b><br>25-7/16"   |                        |  |
| <b>A1</b><br>29-15/16" | <b>A1</b><br>29-15/16" | <b>A1</b><br>29-15/16" |  |
| <b>A1</b><br>29-15/16" | <b>A1</b><br>29-15/16" | <b>A1</b><br>29-15/16" |  |

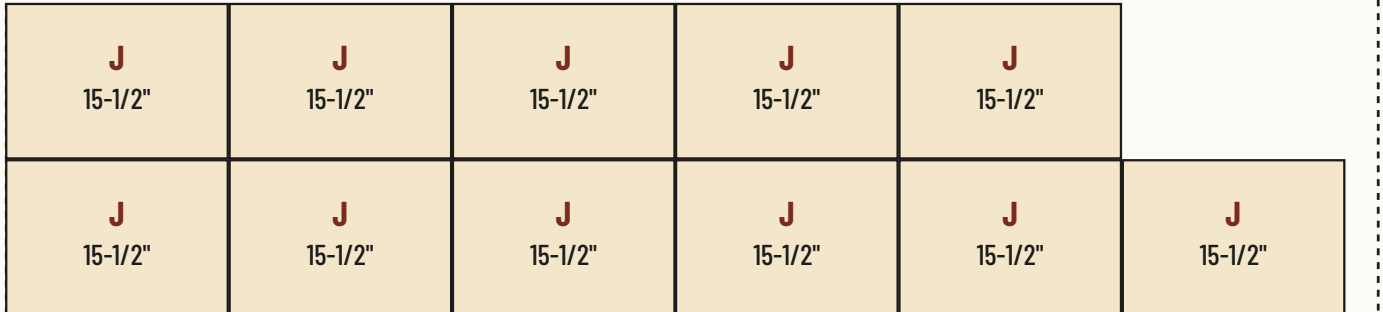
1/4 PLY 4X8 #1 · 48 × 96 IN.

GRAIN: ANY

|                     |                     |                      |                      |                     |                     |
|---------------------|---------------------|----------------------|----------------------|---------------------|---------------------|
| <b>J</b><br>15-1/2" | <b>J</b><br>15-1/2" | <b>J</b><br>15-1/2"  | <b>J</b><br>15-1/2"  | <b>J</b><br>15-1/2" | <b>J</b><br>15-1/2" |
| <b>F1</b><br>25"    | <b>F1</b><br>25"    | <b>F2</b><br>16-5/8" | <b>F3</b><br>12-7/8" |                     |                     |

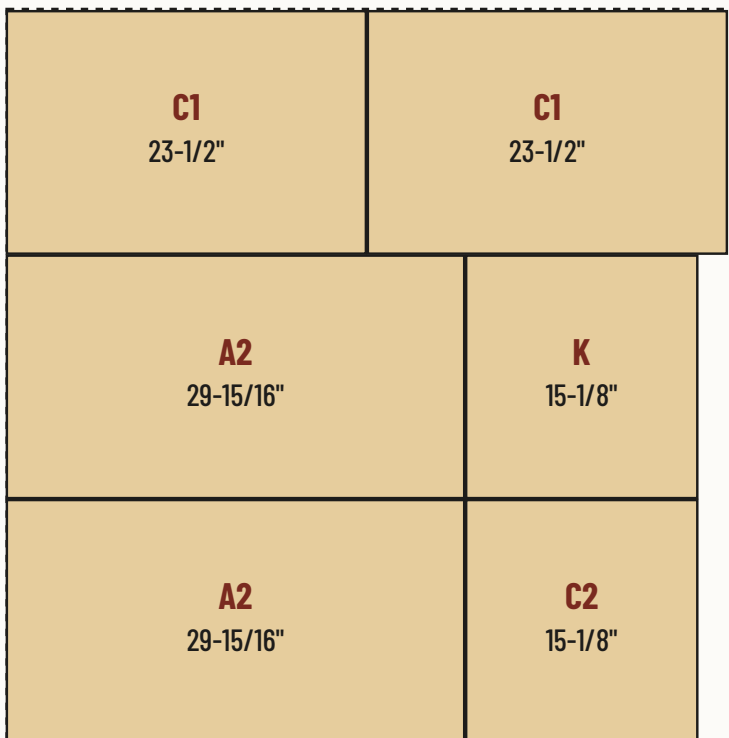
1/4 PLY 4X8 #2 · 48 × 96 IN.

GRAIN: ANY



SANDED 4X4 #1 · 48 × 48 IN.

GRAIN: ANY



SANDED 4X4 #2 · 48 × 48 IN.

GRAIN: ANY

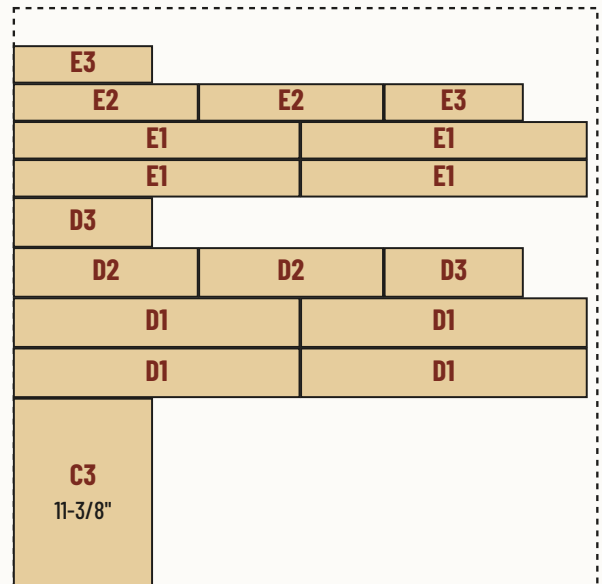


Fig. 5 · Cutting diagrams. Strips are rips; parts are crosscut along them. Sheet A-5 has the dimensioned CAD version.

## Blocks first, then cabinets, then the tops

- 1 Snap a level line at 29<sup>15</sup>/<sub>16</sub> in. on both walls and check that Wall A and Wall B agree. Screw a 6 in. 2×4

block flat to every stud with its top on the line, two screws each. Nothing is longer than 8 ft.

- 2 Where a load lands between studs, use one longer block that spans the stud on each side. Here that is only under the back of the butt joint on Wall A.
- 3 Set the Cricut cabinet with its left side centered under the joint line,  $24\frac{5}{8}$  in. along Wall A. That side carries the inside corner of the L, so no rail is needed there. Set the sewing cabinet with its right side  $\frac{1}{4}$  in. off the right wall, and the Wall B cabinet with its far end flush with the end of the 8-ft. top. Pull all three carcass fronts out to 24 in. from the wall; the facing adds  $\frac{3}{4}$  in.
- 4 Slide the corner cabinet in last: its left side  $7\frac{7}{8}$  in. off Wall B, the same chase every other cabinet keeps, and  $\frac{1}{8}$  in. short of the Cricut cabinet. Its sides are sanded ply since nobody sees them; screw its shelf in at  $16\frac{1}{8}$  in. to the underside.
- 5 Leave the backer off the knee-space end of the Wall B cabinet's chase. The floor register sits in that chase, and the open end is where its air comes out.

#### THE ONE SOFT SPOT

Between the Cricut cabinet and the sewing cabinet, the 10-ft. top's front edge is free for  $65\frac{1}{16}$  in., held only at the back. A rough estimate for  $1\frac{1}{2}$ -in. maple is about  $\frac{1}{8}$  in. of give at mid-span when someone leans hard on it. That's fine for a desk, but a little softer than a cabinet-supported top. If it bothers her, a 2×4 on edge under the front edge stiffens it, at the cost of some knee height.

#### JOIN THE TOPS WITH A PLAIN BUTT JOINT

The 8-ft. top runs along Wall B through the corner and stops at the far edge of window B's trim. The 10-ft. top butts into its front edge and runs to the right wall, stopping  $\frac{1}{4}$  in. short. That gap matters: the 8-ft. board moves across its width with the seasons, and that movement pushes the 10-ft. board along its length.

Biscuits or dowels keep the two faces flush. 2 draw bolts in pockets on the underside pull the joint tight. Glue only the front 15 in.; the rear 10 in. stays dry so the boards can move. Screw the tops down through the stretchers using oversize holes and fender washers for the same reason.

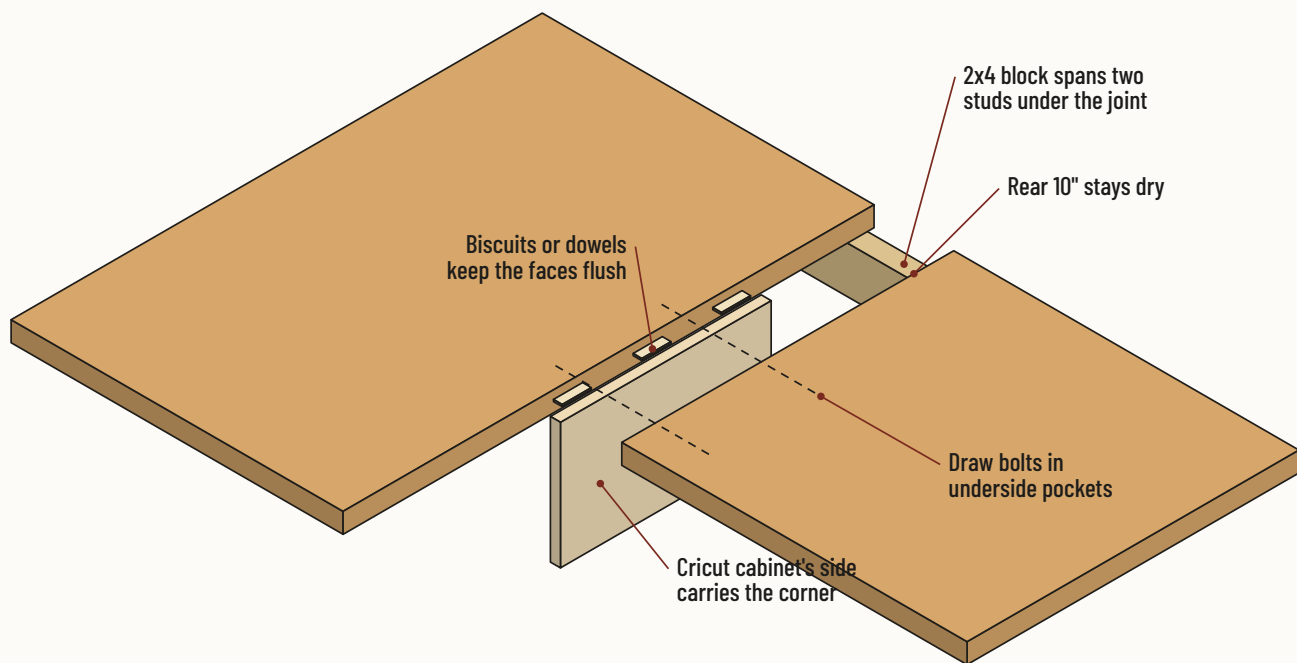


**FIG. 6** The 10-ft. top pulled back from the joint. A block spanning two studs carries the back; the Cricut cabinet's side carries the front.

## Print a hood for the floor register

The register ends up inside the Wall B cabinet's cable chase. Left alone it would heat the back of the cabinet. The hood sits on the register's steel face, closed at the far end, open toward the knee space. Its roof climbs from 1¼ in. at the closed end to 2¾ in. at the outlet, so the passage gets bigger as more air joins it, and a fillet in the closed end turns the air without a dead corner.

To shut it off, a flat cap snaps onto a flanged frame around the open end with three magnets. When the vent should run, the cap parks on a magnet on the hood's roof, so it doesn't wander off. A butterfly damper was the other option, but a blade at the mouth would sit in front of the first louvers, and those would keep blowing. The cap seals the whole outlet.

6 more magnets sit in pads that bear only on the register's flat rim, never on the louvers. Every magnet in the hood goes in with the same pole out, and the cap's with the opposite pole.

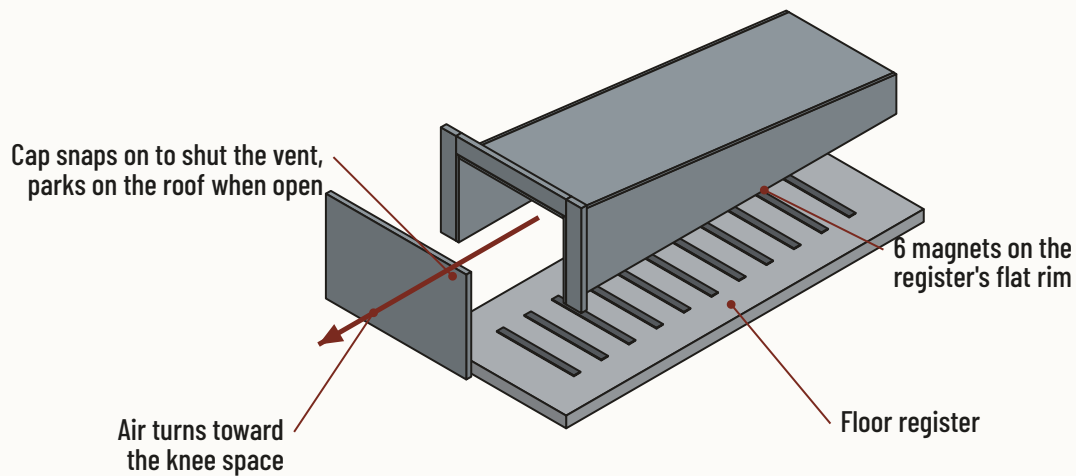


**FIG. 7** The hood on its register, cap off. The cap stores on the roof.

### PRINT SETTINGS

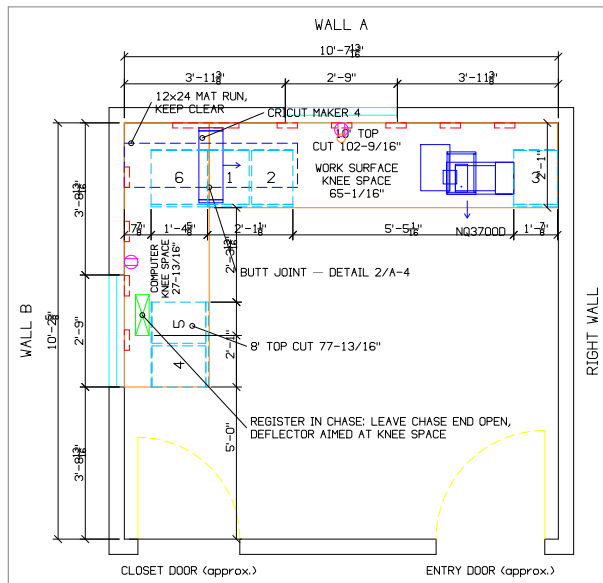
| SETTING     | VALUE                                                       |
|-------------|-------------------------------------------------------------|
| Models      | out/print/deflector_hood.stl, deflector_cap.stl             |
| Size        | 305 × 130 × 84 mm                                           |
| Orientation | Hood standing on its flanged open end; cap flat, pockets up |
| Supports    | None (pads are chamfered 45° toward the bed)                |
| Walls       | 6 perimeters at 0.4 mm (2.4 mm)                             |
| Material    | ASA or ABS-GF, enclosure closed; hardened nozzle for GF     |
| Adhesion    | The flange is the first layers; add a 5 mm brim for ASA     |
| Printer     | Fits a Bambu H2D (325 mm build height)                      |

### CHECK FIRST

Hold a magnet to the register. Aluminum registers won't hold it; use double-sided tape on the pads instead. Then measure the register face and its rim, put the numbers in the parameter file and regenerate the model.

## The drawings

These are the shop drawings from CADCraft, unchanged: ANSI B sheets with every view generated from the same parameter file as the illustrations above. Open any sheet for the full-size drawing.



1 FLOOR PLAN  
SCALE: 1/2" = 1'-0"

JESS CRAFT ROOM — BUILT-IN DESK & BIN CABINETS

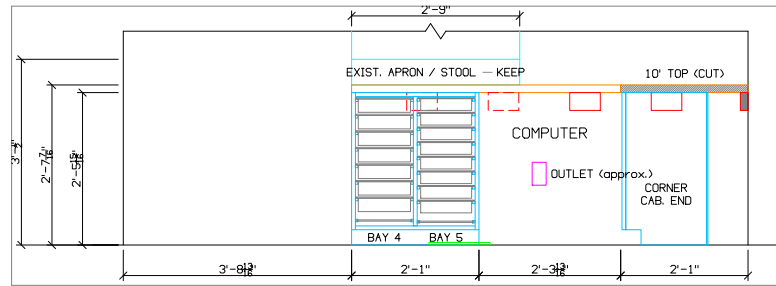
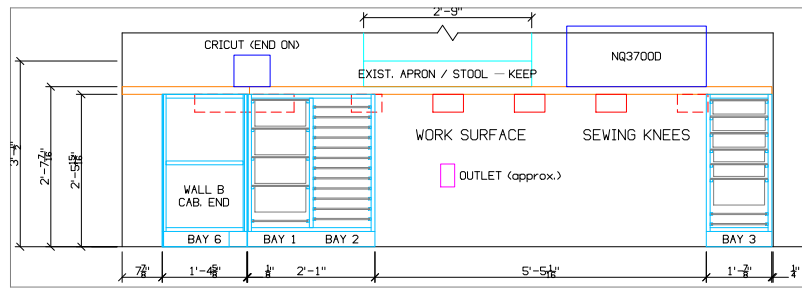
Generated from `craftroom/params.py` 2026-10-23

FLOOR PLAN

SCALE: 1/2" = 1'-0"

A-1

## A-1 Floor plan

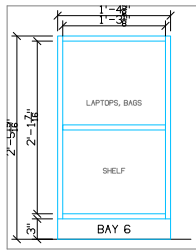


JESS CRAFT ROOM — BUILT-IN DESK & BIN CABINETS  
 Generated from craftroom/params.py 2026-10-23

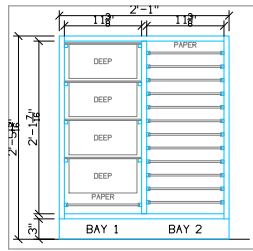
ELEVATIONS  
 SCALE: 3/4" = 1'-0"

A-2

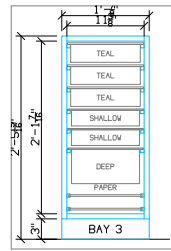
## A-2 Elevations, Wall A and Wall B



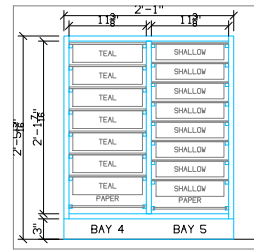
1 CORNER CABINET — FRONT  
SCALE: 1" = 1'-0"



2 CRICUT CABINET — FRONT  
SCALE: 1" = 1'-0"



3 SEWING CABINET — FRONT  
SCALE: 1" = 1'-0"



4 WALL B CABINET — FRONT  
SCALE: 1" = 1'-0"

BAY SCHEDULE — RAIL TOPS ABOVE FLOOR, TOP TO BOTTOM; 3/8" UNDER EVERY BIN

| BAY | CABINET | BINS                      | BIN RAIL TOPS (AFF)                                  | PAPER RAIL TOPS (AFF)      | SPACERS, TOP DOWN                                       |
|-----|---------|---------------------------|------------------------------------------------------|----------------------------|---------------------------------------------------------|
| 6   | Corner  | shelf at 16-1/8"          | —                                                    | —                          | —                                                       |
| 1   | Cricut  | 4 deep                    | 28-3/4" to 11-7/8" @ 5-5/8"                          | 5-5/16"                    | 7/16", 3 x 5-1/8", 6-1/16"                              |
| 2   | Cricut  | —                         | —                                                    | 27-11/16" to 5-11/16" @ 2" | 12 x 1-1/2"                                             |
| 3   | Sewing  | 3 teal, 2 shallow, 1 deep | 28-11/16", 25-7/16", 22-3/16", 19", 16-1/8", 13-1/4" | 6-11/16", 4-11/16"         | 1/2", 2 x 2-3/4", 2-11/16", 2 x 2-3/8", 6-1/16", 1-1/2" |
| 4   | Wall B  | 7 teal                    | 28-11/16" to 9-3/16" @ 3-1/4"                        | 5-1/16"                    | 1/2", 6 x 2-3/4", 3-5/8"                                |
| 5   | Wall B  | 8 shallow                 | 28-3/4" to 8-5/8" @ 2-7/8"                           | 4-13/16"                   | 7/16", 7 x 2-3/8", 3-5/16"                              |

JESS CRAFT ROOM — BUILT-IN DESK & BIN CABINETS

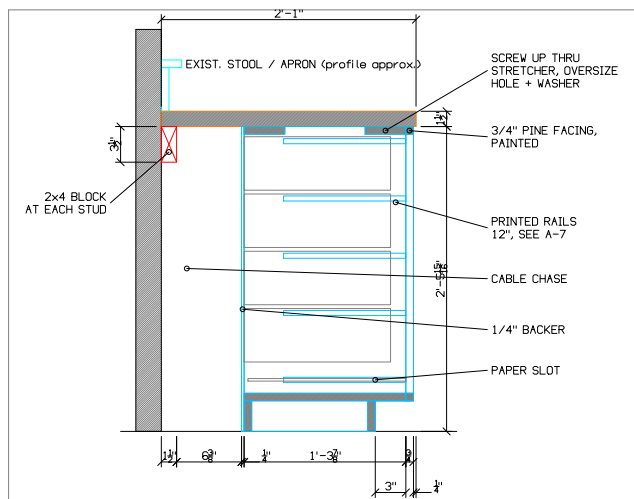
Generated from [craftroom/params.py](#) 2026-10-23

CABINETS

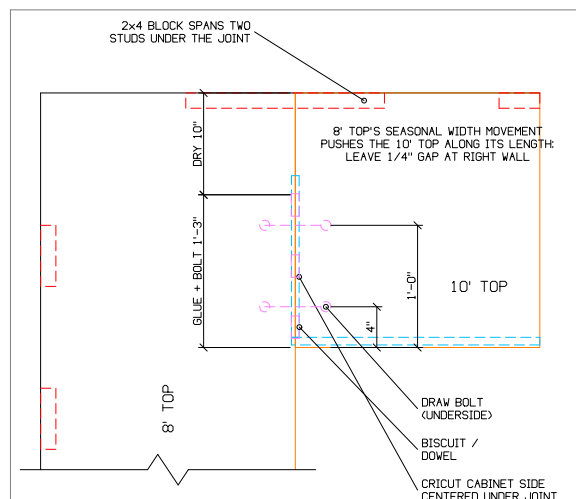
SCALE: 1" = 1'-0"

A-3

## A-3 Cabinet fronts and bay schedule



① SECTION — TYPICAL BAY (BAY 1)  
SCALE: 1-1/2" = 1'-0"



② CORNER BUTT JOINT — PLAN  
SCALE: 1-1/2" = 1'-0"

ASSEMBLY — CORNER JOINT

1. PLAIN BUTT JOINT (NO MASON'S MITER).
2. SET BOTH TOPS ON THE WALL BLOCKS AND CABINETS; CHECK FLUSH.
3. BISCUITS/DOWELS + GLUE IN FRONT 15" ONLY; REAR OF JOINT DRY.
4. DRAW BOLTS IN UNDERSIDE POCKETS; SNUG IN SEQUENCE FRONT TO BACK.
5. THE CRICUT CABINET'S LEFT SIDE STANDS CENTERED UNDER THE JOINT AND CARRIES BOTH BOARDS THERE; SCREW BOTH TOPS DOWN THROUGH ITS STRETCHERS. A 2x4 BLOCK SPANNING TWO STUDS CARRIES THE BACK.
6. 1/4" GAP AT RIGHT WALL; THE SEWING CABINET CARRIES THE 10' TOP'S END.
7. THE 10' TOP'S FRONT EDGE IS FREE FOR 65-1/16" BETWEEN CABINETS; EXPECT ~1/8" GIVE UNDER A HARD LEAN.

JESS CRAFT ROOM — BUILT-IN DESK & BIN CABINETS

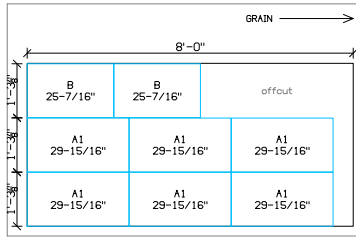
Generated from craftroom/params.py 2026-10-23

SECTION & CORNER JOINT

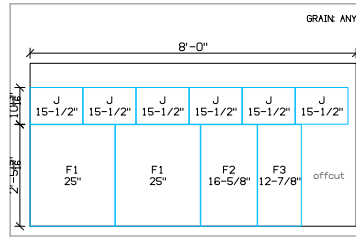
SCALE: 1-1/2" = 1'-0"

A-4

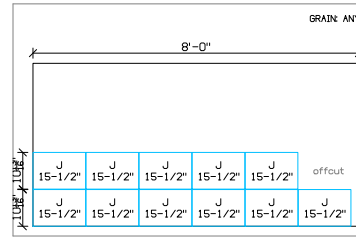
## A-4 Typical section and corner joint



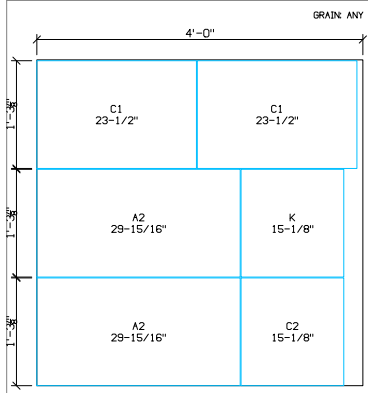
1 BIRCH 4X8  
SCALE: 1/2" = 1'-0"



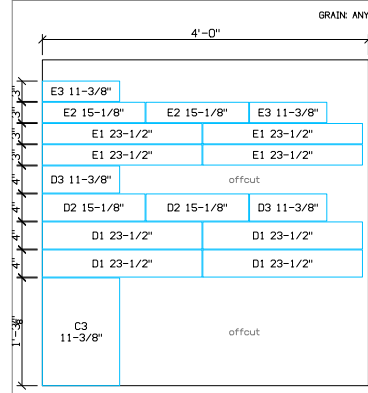
2 1/4 PLY 4X8 #1  
SCALE: 1/2" = 1'-0"



3 1/4 PLY 4X8 #2  
SCALE: 1/2" = 1'-0"



4 SANDED 4X4 #1  
SCALE: 1" = 1'-0"



5 SANDED 4X4 #2  
SCALE: 1" = 1'-0"

SOLID STOCK  
PINE FACING (G, H): 35 LIN. FT. of 3/4" x 3/4",  
LONGEST 25-7/16", A 1x3 RIPS INTO THREE, A 1x2 INTO ONE.  
2x4 (ALL 8"): L2 + L1 + L1 + L1 + L1 + L1 + L1 + L1 + L1  
BUTCHER BLOCK: 8" -> T1 77-13/16"; 10" -> T2 102-9/16"

RIPS: TRACK SAW, 1/8" KERF ALLOWED. PART KEYS PER CUT LIST (A-6).

JESS CRAFT ROOM — BUILT-IN DESK & BIN CABINETS

Generated from craftroom/params.py 2026-10-23

SHEET LAYOUTS

SCALE: 1/2" = 1'-0"

A-5

## A-5 Sheet layouts

## CUT LIST

| KEY | QTY | PART                         | FOR                      | T      | W         | L         | STOCK         | NOTE                                                                    |
|-----|-----|------------------------------|--------------------------|--------|-----------|-----------|---------------|-------------------------------------------------------------------------|
| A1  | 6   | Side                         | Cricut + Sewing + Wall B | 3/4"   | 15-7/8"   | 29-15/16" | birch         | 3" x 3" toe-kick notch, front bottom; grain vertical                    |
| A2  | 2   | Side                         | Corner                   | 3/4"   | 15-7/8"   | 29-15/16" | sanded        | 3" x 3" toe-kick notch, front bottom                                    |
| B   | 2   | Divider                      | Cricut + Wall B          | 3/4"   | 15-7/8"   | 25-7/16"  | birch         | site on the bottom, under the stretchers                                |
| C1  | 2   | Bottom                       | Cricut + Wall B          | 3/4"   | 15-7/8"   | 23-1/2"   | sanded        |                                                                         |
| C2  | 1   | Bottom                       | Corner                   | 3/4"   | 15-7/8"   | 15-1/8"   | sanded        |                                                                         |
| C3  | 1   | Bottom                       | Sewing                   | 3/4"   | 15-7/8"   | 11-3/8"   | sanded        |                                                                         |
| D1  | 4   | Top stretcher                | Cricut + Wall B          | 3/4"   | 4"        | 23-1/2"   | sanded        | front + back; oversize holes for top screws                             |
| D2  | 2   | Top stretcher                | Corner                   | 3/4"   | 4"        | 15-1/8"   | sanded        | front + back; oversize holes for top screws                             |
| D3  | 2   | Top stretcher                | Sewing                   | 3/4"   | 4"        | 11-3/8"   | sanded        | front + back; oversize holes for top screws                             |
| E1  | 4   | Toe kick / base rail         | Cricut + Wall B          | 3/4"   | 3"        | 23-1/2"   | sanded        | kick set back 3"; rail flush at back                                    |
| E2  | 2   | Toe kick / base rail         | Corner                   | 3/4"   | 3"        | 15-1/8"   | sanded        | kick set back 3"; rail flush at back                                    |
| E3  | 2   | Toe kick / base rail         | Sewing                   | 3/4"   | 3"        | 11-3/8"   | sanded        | kick set back 3"; rail flush at back                                    |
| F1  | 2   | Backer                       | Cricut + Wall B          | 1/4"   | 29-15/16" | 25"       | backer        | chase end over the register stays open                                  |
| F2  | 1   | Backer                       | Corner                   | 1/4"   | 29-15/16" | 16-5/8"   | backer        | chase end over the register stays open                                  |
| F3  | 1   | Backer                       | Sewing                   | 1/4"   | 29-15/16" | 12-7/8"   | backer        | chase end over the register stays open                                  |
| G1  | 4   | Facing rail, top + bottom    | Cricut + Wall B          | 3/4"   | 3/4"      | 25"       | pine          | full width; covers stretcher / bottom edges                             |
| G2  | 2   | Facing rail, top + bottom    | Corner                   | 3/4"   | 3/4"      | 16-5/8"   | pine          | full width; covers stretcher / bottom edges                             |
| G3  | 2   | Facing rail, top + bottom    | Sewing                   | 3/4"   | 3/4"      | 12-7/8"   | pine          | full width; covers stretcher / bottom edges                             |
| H   | 10  | Facing stile                 | all                      | 3/4"   | 3/4"      | 25-7/16"  | pine          | between the rails, over each side and divider                           |
| K   | 1   | Shelf                        | Corner                   | 3/4"   | 15-7/8"   | 15-1/8"   | sanded        | fixed, underside 16-1/8" AFF; screw through the sides                   |
| J   | 17  | Paper sheet                  | all                      | 1/4"   | 10-13/16" | 15-1/2"   | backer        | slides in the grooved rails; ease the front corners                     |
| T1  | 1   | Top along Wall B (8' board)  | top                      | 1-1/2" | 25"       | 77-13/16" | butcher block | from 96"; offcut 18-3/16" -> shelves                                    |
| T2  | 1   | Top along Wall A (10' board) | top                      | 1-1/2" | 25"       | 102-9/16" | butcher block | from 120"; offcut 17-7/16" -> shelves                                   |
| L1  | 9   | Wall block                   | framing                  | 1-1/2" | 3-1/2"    | 6"        | 2x4           | flat, 2 screws into one stud; top at the top's underside                |
| L2  | 1   | Spanning block               | framing                  | 1-1/2" | 3-1/2"    | 19-1/2"   | 2x4           | flat, 2 screws into each of two studs, under the back of the butt joint |

## HARDWARE &amp; SUPPLIES

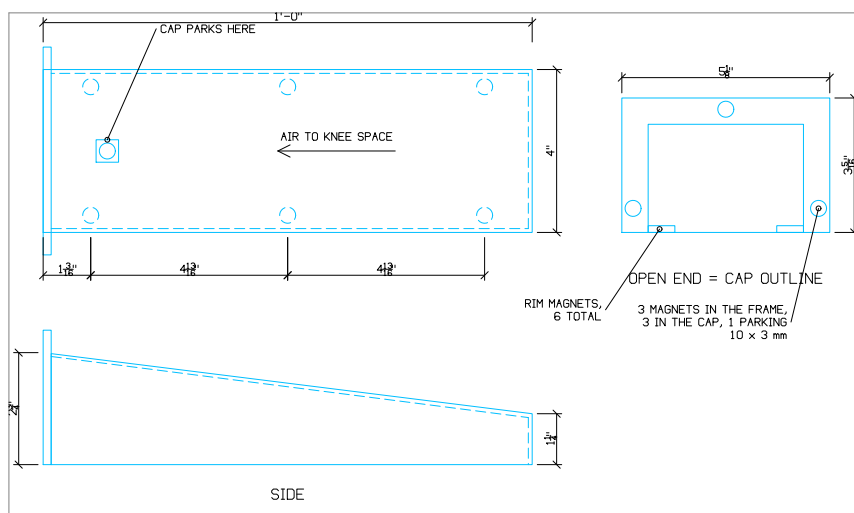
| ITEM                                           | QTY    | FOR                                             |
|------------------------------------------------|--------|-------------------------------------------------|
| Draw bolts (countertop / Tite-Joint style)     | 2      | underside pockets at the corner joint           |
| #20 biscuits or 3/8" dowels                    | 3      | front of the joint only                         |
| Structural screws, 3"                          | 22     | 2 per stud per block                            |
| Pan-head screws + fender washers               | 24     | 3 per stretcher, through oversize holes         |
| 1-1/4" pocket or wood screws                   | 1 box  | carcase assembly                                |
| #6 x 1/2" flat-head screws                     | 160    | 2 per printed rail                              |
| SS: GRAB ROOM - BUILT-IN DESK & BIN CABINETS   |        |                                                 |
| General note: 2-1/2" cable channel, 2026-10-23 | 1      | back of the top over the Wall A outlet          |
| Disc magnets, 10 x 3 mm                        | 13     | hood, 6 on the rim, 3 frame + 1 parking; cap: 3 |
| ASA or ABS-GF filament                         | ~180 g | hood, cap                                       |

## CUT LIST

NO SCALE

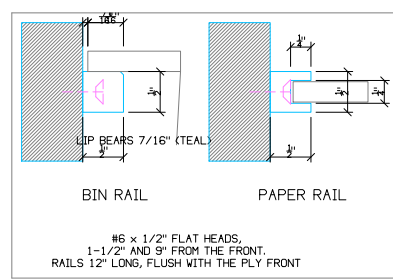
A-6

## A-6 Cut list



1 REGISTER HOOD + CAP  
SCALE: 6" = 1'-0"

PRINTED PARTS — STL FILES IN out/print/ (python3 -m craftroom.prints)  
 1. HOOD: ASA OR ABS-GF (HARDENED NOZZLE FOR GF). STAND IT ON THE FLANGED OPEN END; NO SUPPORTS; ENCLOSURE CLOSED, 5 mm BRIM. THE FLANGE IS THE FIRST LAYERS, SO IT ALSO HOLDS THE PRINT DOWN.  
 2. CAP: SAME MATERIAL, FLAT, POCKETS UP. CAP ON = VENT SHUT. CAP OFF, PARKED ON THE ROOF = OPEN.  
 3. MAGNETS: PRESS IN WITH A DAB OF CA. EVERY HOOD MAGNET SAME POLE OUT; CAP MAGNETS THE OPPOSITE.  
 4. MEASURE THE REGISTER FACE AND ITS FLAT RIM FIRST (VENT\_W, VENT\_DEPTH, REGISTER\_RIM); A MAGNET MUST STICK.  
 5. RAILS: PETG, MOUNTING FACE DOWN, 3 WALLS, 15% INFILL. PRINT ONE OF EACH AND HANG A REAL BIN AND A SHEET BEFORE PRINTING THE REST. SPACER BLOCKS: ONE PER SIZE IN THE BAY SCHEDULE (A-3).



2 RAIL SECTIONS  
SCALE: FULL SIZE

JESS CRAFT ROOM — BUILT-IN DESK & BIN CABINETS

Generated from craftroom/params.py 2026-10-23

PRINTED PARTS

AS NOTED

A-7

## A-7 Printed parts: register hood and rails