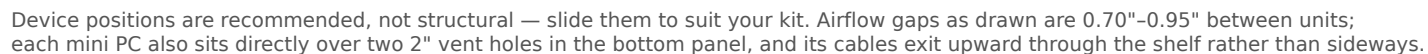
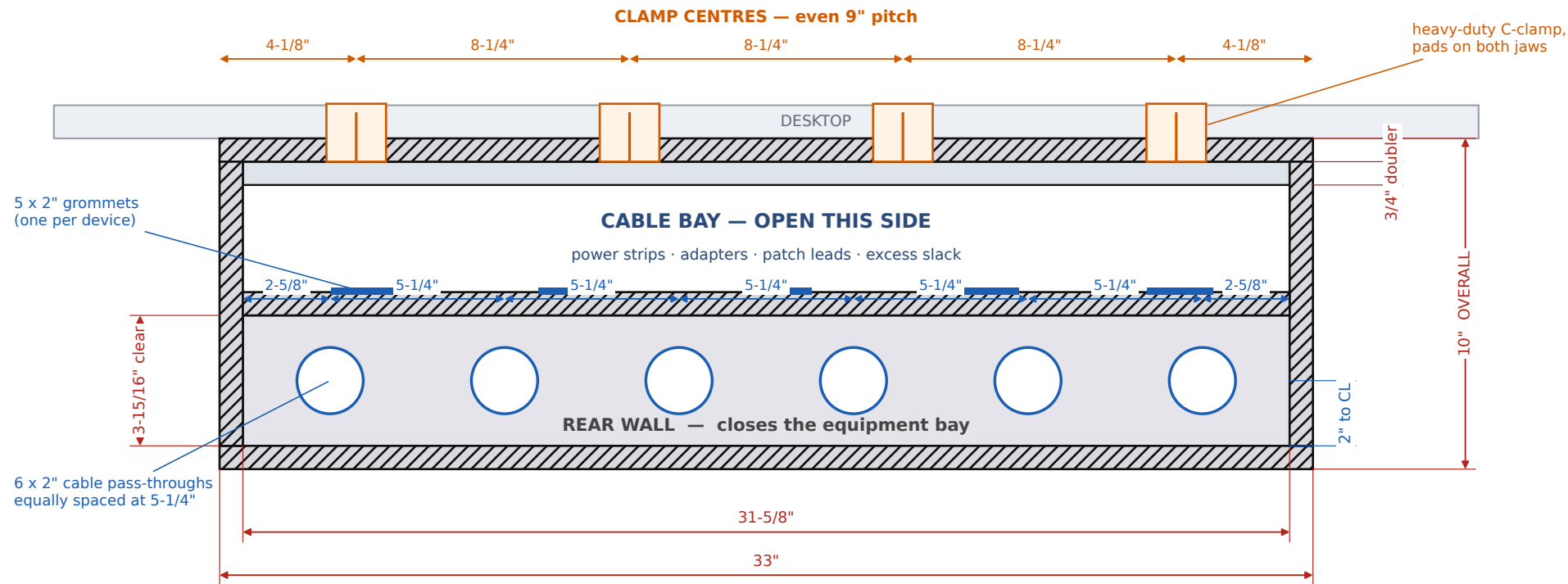


As seen from the chair. The equipment bay is the only opening you look into — all cabling is hidden behind the front wall above it.



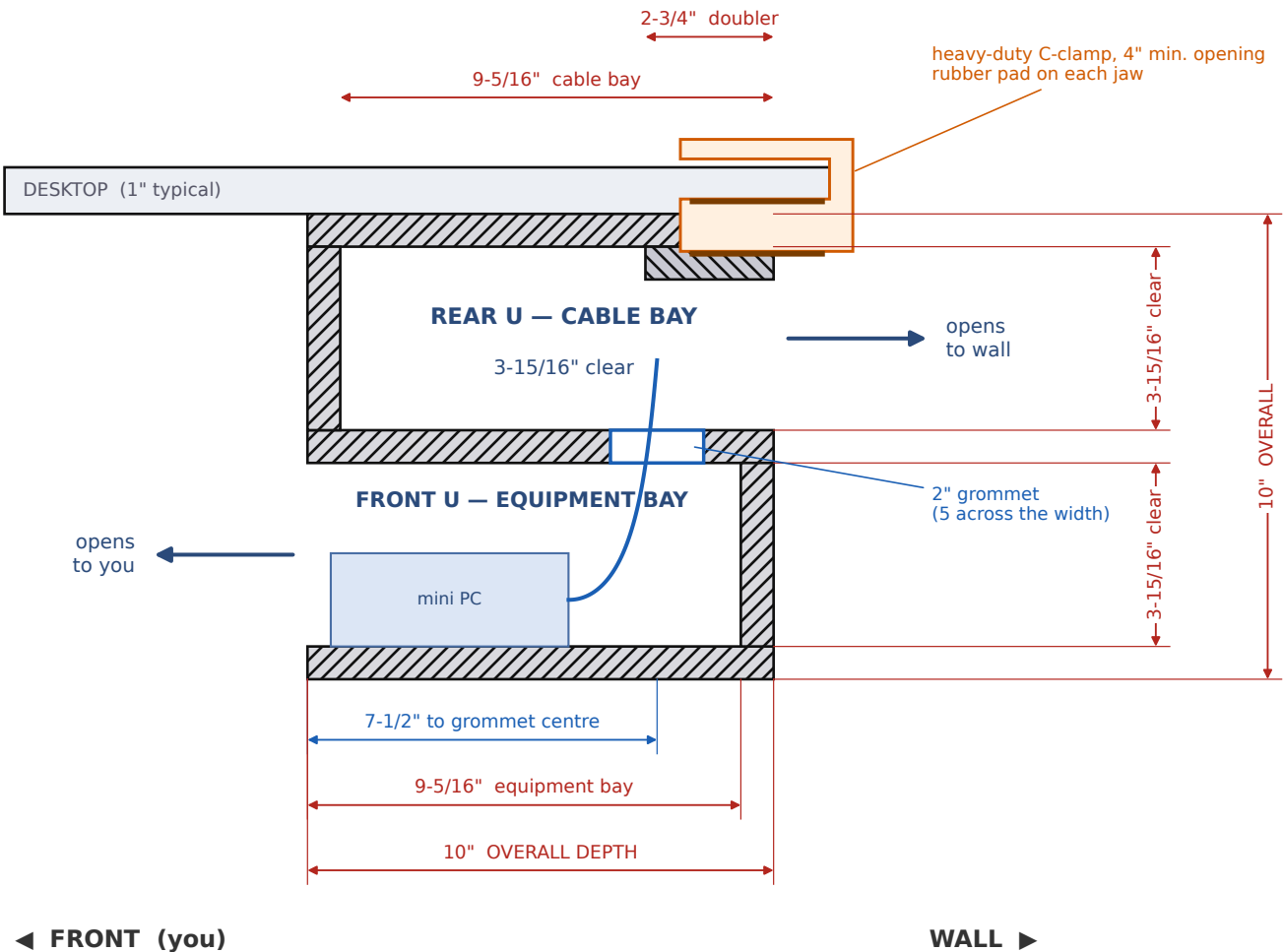
2 · REAR ELEVATION

As seen from the wall. This is the working side: the cable bay opens here and the clamps are fitted and released from here.



3 · SIDE CROSS-SECTION (section A-A, cut at mid-width)

The two opposite-facing U shapes. The upper U opens to the wall, the lower U opens to you, and they share the middle shelf.

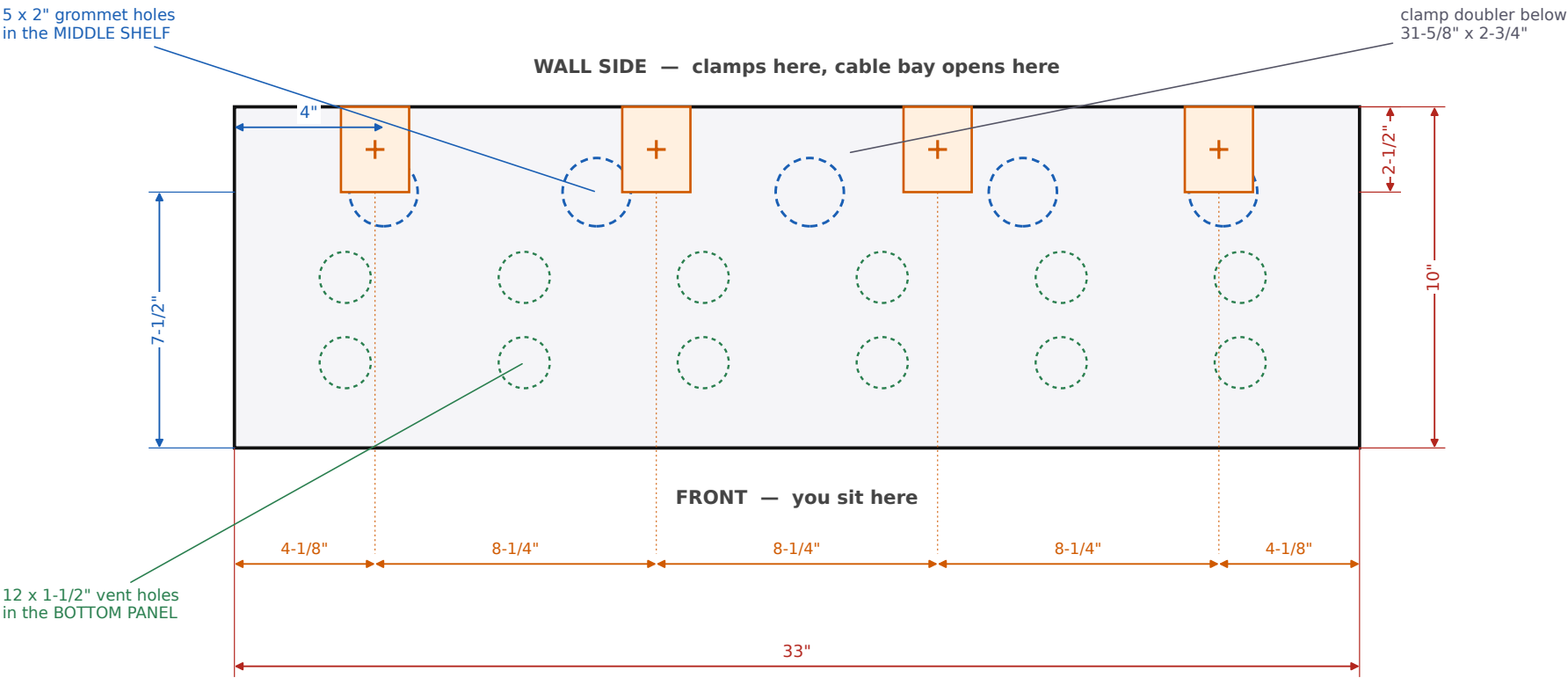


WHY THIS SECTION WORKS

- Each bay is 3-15/16" clear. Three 0.703" panels plus two 3-15/16" bays = 9.984" overall. That is the geometric minimum for this spec — nothing is wasted on structure.
- The front wall and the rear wall sit on opposite faces, so the section reads as two U's back to back: exactly your sketch.
- Because those two walls are staggered, the cross-section is a closed loop. That is what stops the box racking over a 33" span with no back panel and no front panel. A design with both walls on the same face would fold up like a parallelogram.
- The doubler under the top panel gives the clamp jaw 1.41" of plywood to bite on, so it cannot crush or split the top ply.
- Cable route: mini PC → up through the grommet → cable bay → out of the open rear to the power strip. Nothing ever crosses the equipment bay where you can see it.
- Airflow: the equipment bay is open at the front, vented through its floor, and vented again through each grommet. There is no sealed pocket anywhere in the assembly.

4 · TOP VIEW

Looking straight down with the desk removed. Solid outline = top panel. Dashed = everything below it.

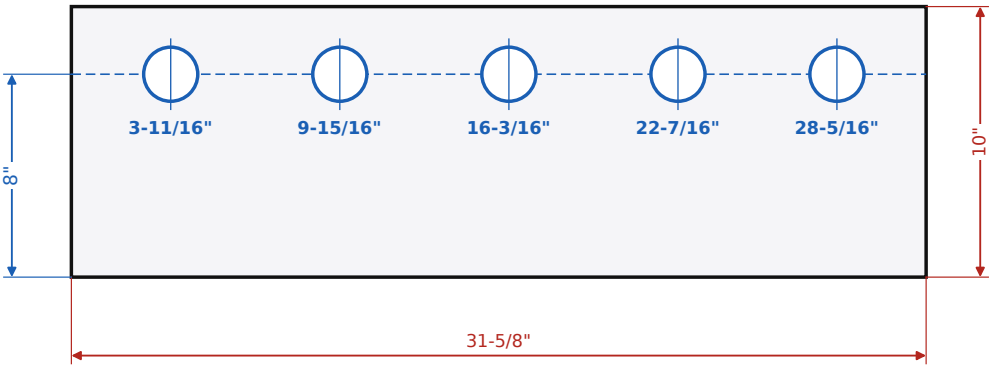


Clamp centres at X = 4-1/8", 12-3/8", 20-5/8", 28-7/8" — an even 8-1/4" pitch, no unsupported span over 9", and every clamp lands on the doubler. The clamp zone is the rearmost 2-1/2" of the top panel, so a clamp with a 2" throat depth reaches it comfortably from the desk's rear edge.

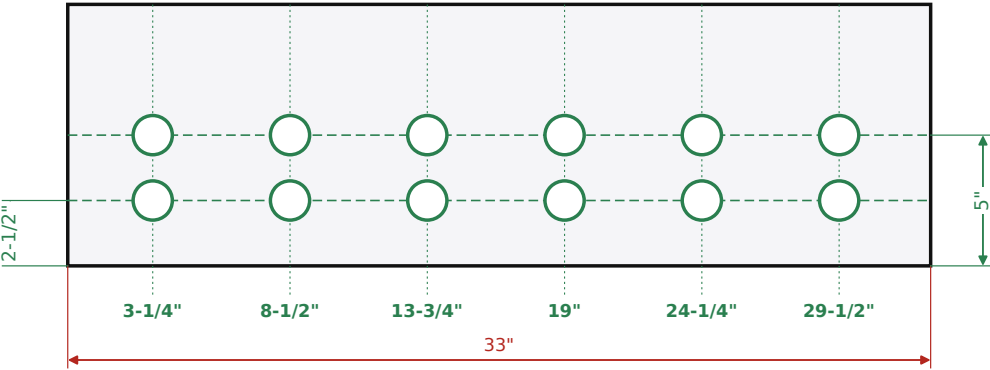
5 · HOLE SETTING-OUT — 23 holes in 3 panels

Mark from the LEFT end and the FRONT edge of each panel. The shelf and the floor share one set of six X marks.

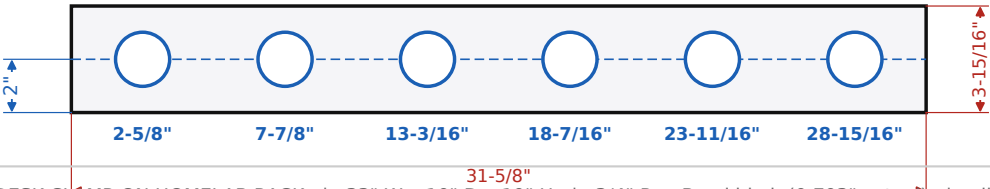
MIDDLE SHELF · 5 holes @ 2" dia



BOTTOM PANEL · 12 holes @ 1-1/2" dia



REAR WALL · 6 holes @ 2" dia, equally spaced



THE SIX X MARKS

The shelf holes and the floor holes line up vertically once the rack is together, but the shelf sits BETWEEN the sides, so its own left end starts 11/16" further in. Its marks are therefore 11/16" smaller than the bottom panel's.

Always measure from the LEFT END OF THE PIECE IN FRONT OF YOU using the row for that panel.

Panel	X marks from the left end	Y / Z	Dia
Middle shelf	3-11/16" · 9-15/16" · 16-3/16" · 22-7/16" · 28-5/16"	8" from the front	2"
Bottom panel	3-1/4" · 8-1/2" · 13-3/4" · 19" · 24-1/4" · 29-1/2"	2-1/2" and 5"	1-1/2"
Rear wall	2-5/8" · 7-7/8" · 13-3/16" · 18-7/16" · 23-11/16" · 28-15/16"	2" up (mid-height)	2"

WHAT EACH SET IS FOR

- SHELF (blue, 2") — each machine's cables go straight up into the hidden cable bay. Rubber grommets go in these six.
 - FLOOR (green, 1-1/2") — cool air in. Two under every device, and both rows sit inside each device's own footprint.
 - REAR WALL (blue, 2") — cables that need to leave sideways or straight back to the wall without going up through the shelf.
- Equal spacing on the rear wall puts every hole within 1-1/8" of a device centre anyway, so each one still lands fully behind its machine.

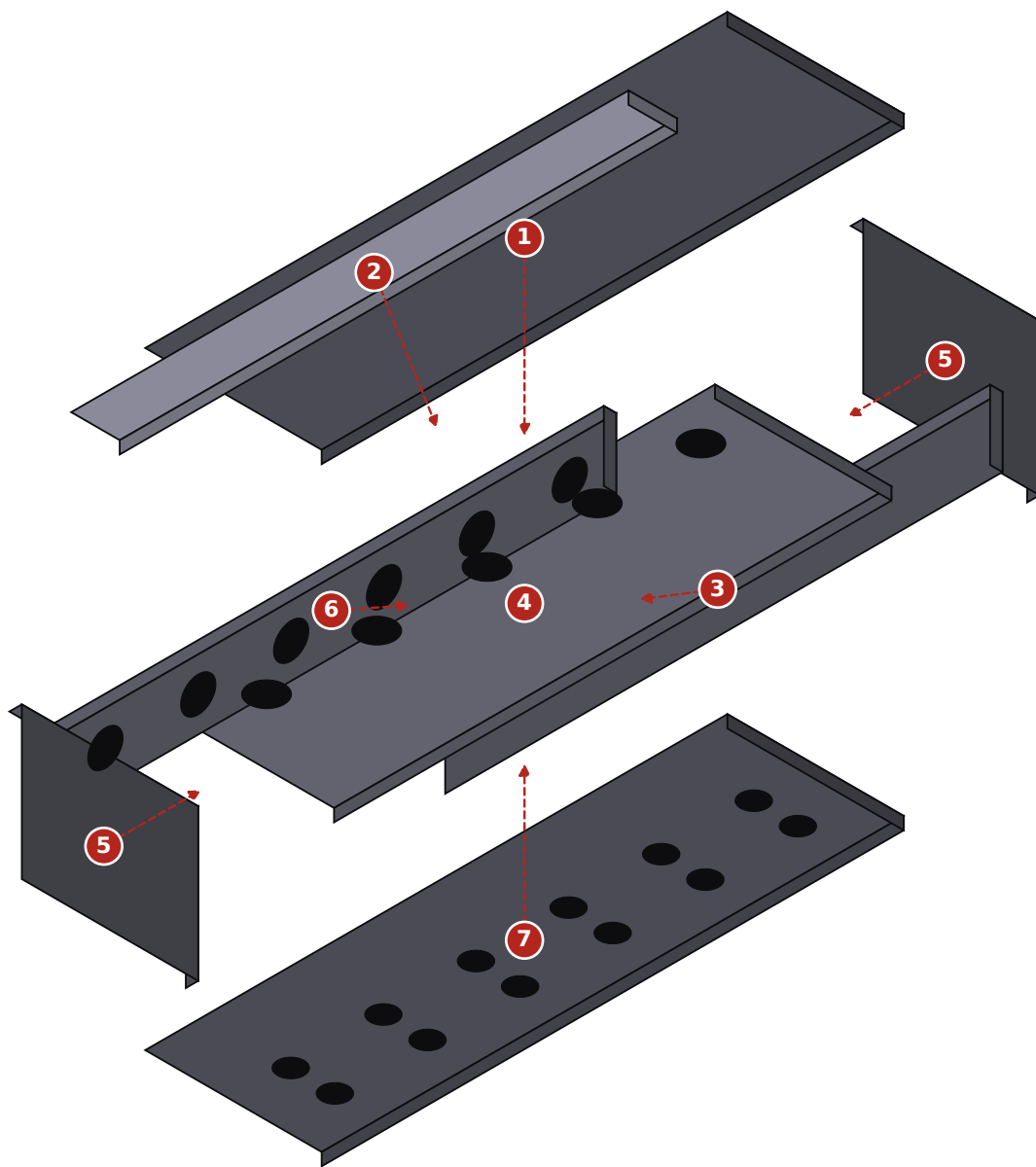
DRILLING

Two hole saws: 1-1/2" and 2". Drill everything BEFORE assembly, with the panel clamped over a sacrificial scrap so the saw cannot blow out the back veneer — PureBond's face veneer is only about 1/42" thick and tears easily. Score the circle with a knife first if you want a really clean edge.

The top panel, both sides, the front wall and the doubler have NO holes.

6 • EXPLODED ASSEMBLY

Eight pieces, seven unique cuts, 23 holes. Arrows show the direction each part drops into place.



PARTS

- 1 TOP PANEL**
33" x 10" qty 1
- 2 CLAMP DOUBLER**
31-9/16" x 2-3/4" qty 1
- 3 FRONT WALL**
31-9/16" x 3-15/16" qty 1
- 4 MIDDLE SHELF**
31-9/16" x 10" qty 1
- 5 SIDE PANEL (LEFT)**
10" x 8-9/16" qty 2
- 6 REAR WALL**
31-9/16" x 3-15/16" qty 1
- 7 BOTTOM PANEL**
33" x 10" qty 1

ASSEMBLY ORDER

- a Glue and screw part 2 to the underside of part 1, flush with the wall edge. Set aside.
- b Screw the two part 5 sides to part 7, driving up through the bottom into the side edges.
- c Drop part 6 in between the sides, sitting on the bottom panel, flush with the wall edge.
- d Drop part 4 on top of part 6; screw through the sides into its edges.
- e Drop part 3 in between the sides on top of the shelf, flush with the front edge.
- f Cap with the part 1 sub-assembly; screw down through it into the sides and both wall edges.
- g Sand, prime, two coats matte black. Fit the grommets last, once the paint is properly hard.

FASTENERS AT EVERY JOINT

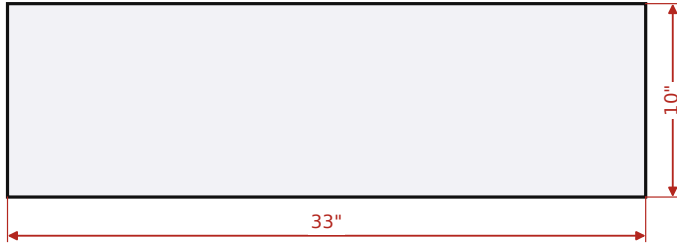
#8 x 1-1/2" wood screws at 6" centres, always into pre-drilled and countersunk holes (9/64" clearance through the outer panel, 3/32" pilot into the edge) plus a bead of Titebond II. Plywood edge grain splits very easily — do not skip the pilot holes. Keep every screw at least 3/8" back from a panel end. About 56 screws in total.

7 · PANEL DETAIL SHEET

Every unique piece drawn flat at the same scale. These are FINISHED sizes for 0.703" PureBond — cut to them exactly.

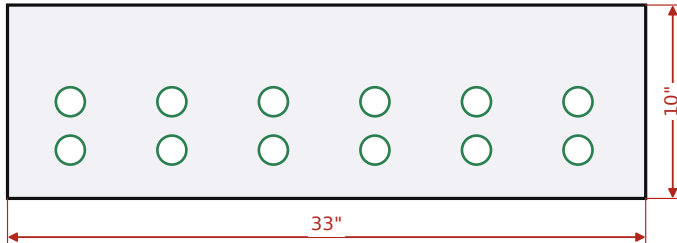
1. TOP PANEL x1

33" x 10" x 3/4" nom. — bears flat on the desk underside; clamps grip here



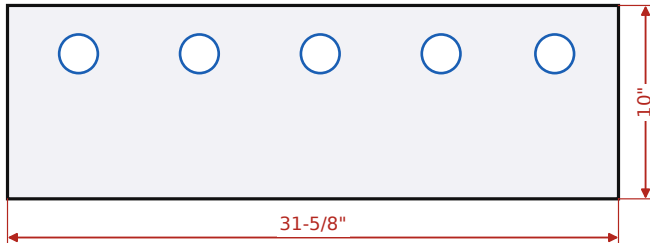
7. BOTTOM PANEL x1

33" x 10" x 3/4" nom. — 12 x 1-1/2" vent holes, 2 rows of 6



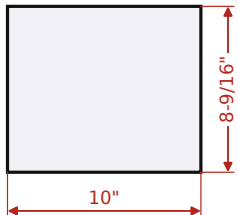
4. MIDDLE SHELF x1

31-9/16" x 10" x 3/4" nom. — 5 x 2" grommet holes, one per device



5. SIDE PANEL (LEFT) x2

10" x 8-9/16" x 3/4" nom. — fits between the top and bottom panels



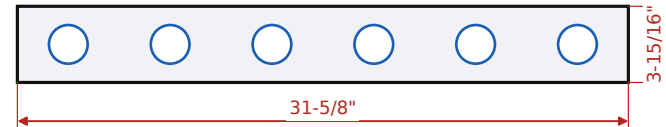
3. FRONT WALL x1

31-9/16" x 3-15/16" x 3/4" nom. — the clean face you see from the chair



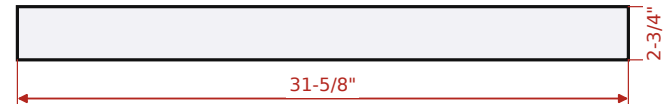
6. REAR WALL x1

31-9/16" x 3-15/16" x 3/4" nom. — 6 x 2" cable pass-throughs, equally spaced



2. CLAMP DOUBLER x1

31-9/16" x 2-3/4" x 3/4" nom. — doubles the top panel where the clamp jaws bite



TOTAL: 8 pieces from 7 unique cuts, 23 holes.

Every cut is a straight rectangle. No rabbets, dados, mitres, dowels or joinery of any kind anywhere in this design.

THE TWO NUMBERS THAT DEPEND ON THICKNESS:

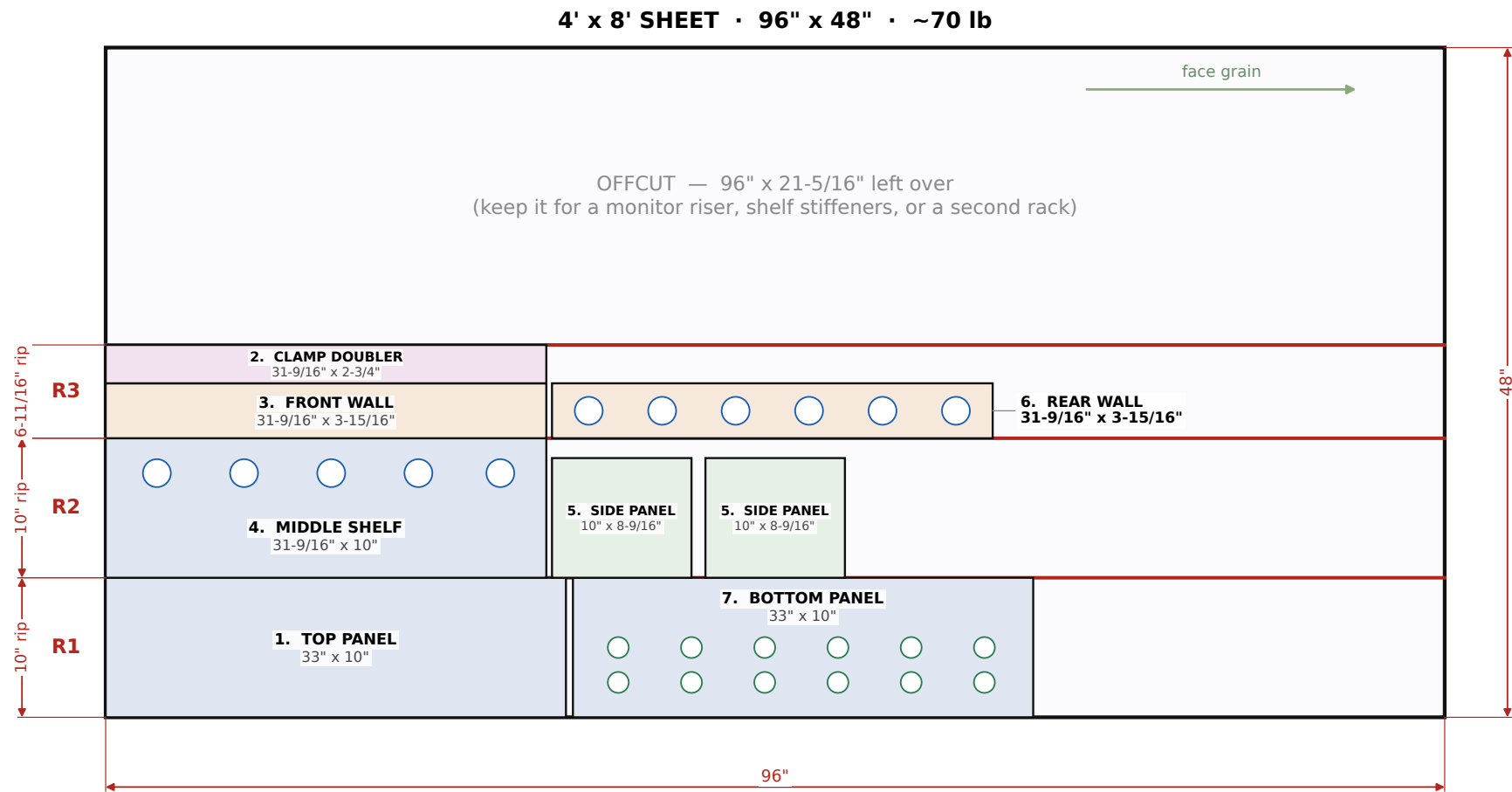
inner panel length = 33" - 2 x thickness = 31-9/16"

side panel height = 2 x bay + thickness = 8-9/16"

Those assume 0.703". Measure your actual sheet with calipers before cutting and recompute if it differs — everything else on this page is independent of thickness.

8 · CUT DIAGRAM — one 4' x 8' sheet of PureBond birch

Three rip cuts (R1-R3) down the length first, then crosscut the pieces off each strip. Grain runs the 96" length.



Allow 1/8" for each saw kerf — the layout leaves 21-5/16" of spare width, so kerf loss never affects a finished dimension.
Cut the three rips first: every panel that has to match another comes off the same strip, so their common dimension is identical by construction.
Drill all 23 holes while the pieces are still large and easy to clamp, then make the final crosscuts.

9 · WHAT TO ASK HOME DEPOT FOR

Hand this sheet to the associate at the panel saw. They can do the straight cuts. They cannot drill the holes.

CUT REQUEST

Sheet: 3/4 in. x 4 ft. x 8 ft. PureBond Birch Plywood
Internet #100077837 · Model #165921

Cut	Result
1 Rip 10" off the 48" width	strip R1, 10" x 96"
2 Rip another 10"	strip R2, 10" x 96"
3 Rip 6-11/16"	strip R3, 6-11/16" x 96"
4 Crosscut R1 at 33" and again at 33"	TOP and BOTTOM panels
5 Crosscut R2 at 31-9/16"	MIDDLE SHELF
6 Crosscut R2 at 10", twice	two SIDE blanks
7 Rip R3 lengthwise at 3-15/16"	a 3-15/16" strip and a 2-3/4" strip
8 Crosscut the 3-15/16" strip at 31-9/16", twice	FRONT WALL and REAR WALL
9 Crosscut the 2-3/4" strip at 31-9/16"	CLAMP DOUBLER

FINISH THE SIDE PANELS AT HOME

Leave the two side blanks at 10" x 10" and trim them to 8-9/16" yourself once you have measured your actual sheet thickness. Side height = 2 x bay + thickness. At the listed 0.703" that is 8-9/16".

WHAT THEY WILL AND WON'T DO

CUTS — yes. Every store has a panel saw and will break down a sheet for you. Policy varies: many stores give you the first one or two cuts free and charge roughly a dollar a cut after that, and some cap the total number. Call your store first and ask, because nine cuts is on the high side.

TOLERANCE — treat the panel saw as plus or minus 1/16", not a cabinet shop. That is why the rips come first: any two panels that must match are cut from the same strip, so they end up identical whatever the saw actually did.

SMALL PIECES — they will usually refuse anything under about 12". Nothing in step 1-9 is smaller than 10", and if they balk at the side blanks just take the whole strip home and crosscut it yourself.

HOLES — no. Home Depot does not drill, bore or cut circles as a service, at any store. All 24 holes are yours to do with a drill and two hole saws (1-1/2" and 2"). It is about twenty minutes of work.

SQUARE — do not assume the factory edges are square or that the sheet is exactly 48" x 96". Ask them to trim a thin strip off one long edge first if it looks rough, then measure the rips from that clean reference edge.

IF YOU WOULD RATHER NOT HAUL A FULL SHEET

A 4x8 sheet of 3/4" birch is about 70 lb and will not fit in most cars. Options: have the store do the three rips so you leave with three manageable strips, use Home Depot's truck rental, or buy two 2 ft x 4 ft project panels instead — though you will need a third for the long pieces and it works out more expensive.