CEDAR RAISED BED BOX CONSTRUCTION

All cedar raised bed are built using a simple 4’x 8’x 24.5” (Width x Length x Height) (24.5” Height = 7 – 2”x4” High), joined at the corners with 4”x 4” x 23.75” (Cedar) pieces, using 2.5 inch #9 Deck Screws, Two screws at the end of each board in a staggered pattern, countersunk into material for greater strength.

MATERIALS

22 - 2”x4”x8’ (Cedar)
- These include 14 (8-foot) boards for the sides (7 per side), 7 (8-foot) boards cut into 4-foot lengths for the ends, and one extra board for cutting 23.5 inch lengths (4) to attach to inner sides and ends at center (vertically).
- Preferable to have all exact lengths from lumberyard to reduce need for trimming cuts (customarily 8-footers measure 3/8 to ½ inch long)
- If possible request or pick out lumber without too much bow or twist

1 - 4”x4”x 8’ (Cedar)
This will be cut into 4 lengths of 23.75 inches for the corner braces.

168 - 2.5 inch #9 Deck Screws (Two Pounds)
- Check with hardware Guru to get approx. screw count per pound.
- Tan color screws blend nicely with cedar if available
- Square drive heads are preferable to Phillips-head, Combi-heads work too.
- Pick up #9 size drill bit – Using a rotatable drill-bit / drive-bit mechanism saves time
TOOLS:

- Some kind of saw – chop saw, radial arm saw, circular saw, to cut lumber to length
- Saw horses with a 4’x8’ sheet of plywood make a nice work table
- Drill – You’ll need a power drill. My 14-Volt Cordless works fine. Bring a power cord if needed
- As mentioned above, if you haven’t tried a quick release rotatable bit/drive set-up, you’re in for a treat. Get one, you won’t be sorry. You will be pre-drilling all holes as cedar has a tendency to split otherwise.
- Carpenters Square, 16” x 24” works well; A 6-inch square for 4x4 alignment.
- Rubber mallet for corner brace alignment (hammer will work)
- (Optional) Bar clamp (at least 24-inch) for Side Panel assembly
- Shovel(s) and 6-foot level for site prep. Wheelbarrow if moving soil. (Bobcat for large loads)
- Bring a tarp to lay over side of box while filling with soil to protect lumber
- Bring extra (4) 2x4 pieces (18-24 inches) to block corners during Panel assembly

Order of construction:

1. Assemble and Cut lumber.
   You should have 14 exact length 8-footers (cut them to exact length if they do not come that way) for the Side Panels
   14 – 48-inch length pieces for the End Panels
   4- 23.75-inch lengths of 4” x 4” for the Corner Braces.
   You will also need to cut the extra 2” x 4” into 4 – 23.5 inch lengths for Center Braces in the middle of each of Side Panel and End Panel in the box. Good idea to make a 45-degree bevel cut on one end of these 4 braces to face upward in the box, to reduce chances of injury on 90-degree cut.

2. Assemble and Construct Side Panels
   Take 7 of the 8-foot 2x4’s and arrange them on a flat surface, either on a floor, or as I have grown to appreciate, up on saw horses with an 8-foot piece of plywood making a work table.
   Sort through the 2x4’s and choose the best surface to face out, choosing one relatively knot-free board to place at the top. Take care to hide jagged or crappy looking edges toward the inside and bottom where it won’t show.
Once you have your seven boards in the order you want them, arrange them on top of (2) 4x4 Corner Braces placed 8 feet apart on your workbench (or floor). All 7 boards should be flush to the edge and centered over the 4x4, leaving approx. 3/8 inch overlap on the top and bottom of the 4x4. Use large carpenter’s square to check alignment along ends. Use a small square (6 inch) to check 2x4 ends have clearance of 4x4 – Getting this as close as possible will result in good joinery at the corners.

Mark your hole drilling locations using staggered pattern, measuring in from the end of each 2x4, ¾ inch and 2 ¾ inch respectively, taking care at top and bottom to cheat to accommodate 3/8\textsuperscript{th} inch clearances.

Once you have checked for square in both dimensions and for 3/8 inch clearances on either end of the 4x4, drill and set a screw in top and bottom boards to hold the rest in place while you pre-drill and insert the remaining screws. If you have trouble with warping, using a bar clamp can make this task easier.

3. Assemble and Construct End Panels

Take 7 of the 48 inch 2x4’s and arrange them on a flat surface, this time choosing your best surface and facing it downward, again choosing a top board clear of knots.

Once you have 7 boards arranged as desired, check for square, pencil mark a centering line for the 23.5 inch brace (measure 21 ¾ inches from either end to mark the edge of the brace). Carefully drill and drive one screw top and bottom, fill in the rest. (This brace is designed for purposes of prefabrication, not as structural support, and as such may be removed after completion of box if desired.)

Assembly at Box site goes more quickly if staggered drill-hole pattern is done in advance. Take care to measure in from each end of 2x4 in a 2 ¼ inch and 4 ¼ inch pattern (see illustration).

4. Join Side and End Panels to Complete Box

This assembly can be done alone, but is much simpler to have a second helper to brace materials.

Pre-set screws into pre-drilled End Panel holes approx. 1 ¼ inches deep.

On a relatively flat surface near where the Raised Bed will eventually reside, arrange one Side Panel and End Panel at a 90-degree angle, using a pair of 2x4 blocks under the corners to raise off the ground as needed. Use carpenter’s square to check, then drive screws into 4x4, making sure there is no gap twixt 2x4 and 4x4 – if necessary back screw out and re-set to snug up this gap.

Align opposite Side Panel, attach in same manner. Finish by attaching remaining End Panel.

With Box complete and in place, use 4 or 6-foot level to check if any additional leveling is necessary.
5. Fill that Puppy with Soil.

We’ve used 5 gallon buckets to haul soil by hand – ugh. A wheelbarrow up a plank or piece of plywood for a ramp can go quicker. Use a tarp to protect lumber from getting trashed. Get the neighbor to come over with the Bobcat?

Fill to rim; soil will settle 2-3 inches on average.