

New Zealand Compost Bins for the Desert

Drawings and notes by Bill Bailey, a Bernalillo County Extension Master Composter

These drawings are what I draw in order to think through a project before I start on it. They haven't been polished to the point where anyone else can take them and run. They are also constrained by the drawing program that I use – a 1997 version of QuickCAD. Consequently, a dimension of 1 1/8" comes out to 1.119" instead of 1.125".

Also, very important: these bins are designed for the desert climate of New Mexico and the Southwest. The dry air sucks moisture out of a compost pile and can make it inactive and lead to failure. We do what we can to seal out the dry air, letting enough in to feed the pile, but not so little that it becomes anaerobic.

Some things we've learned in the process:

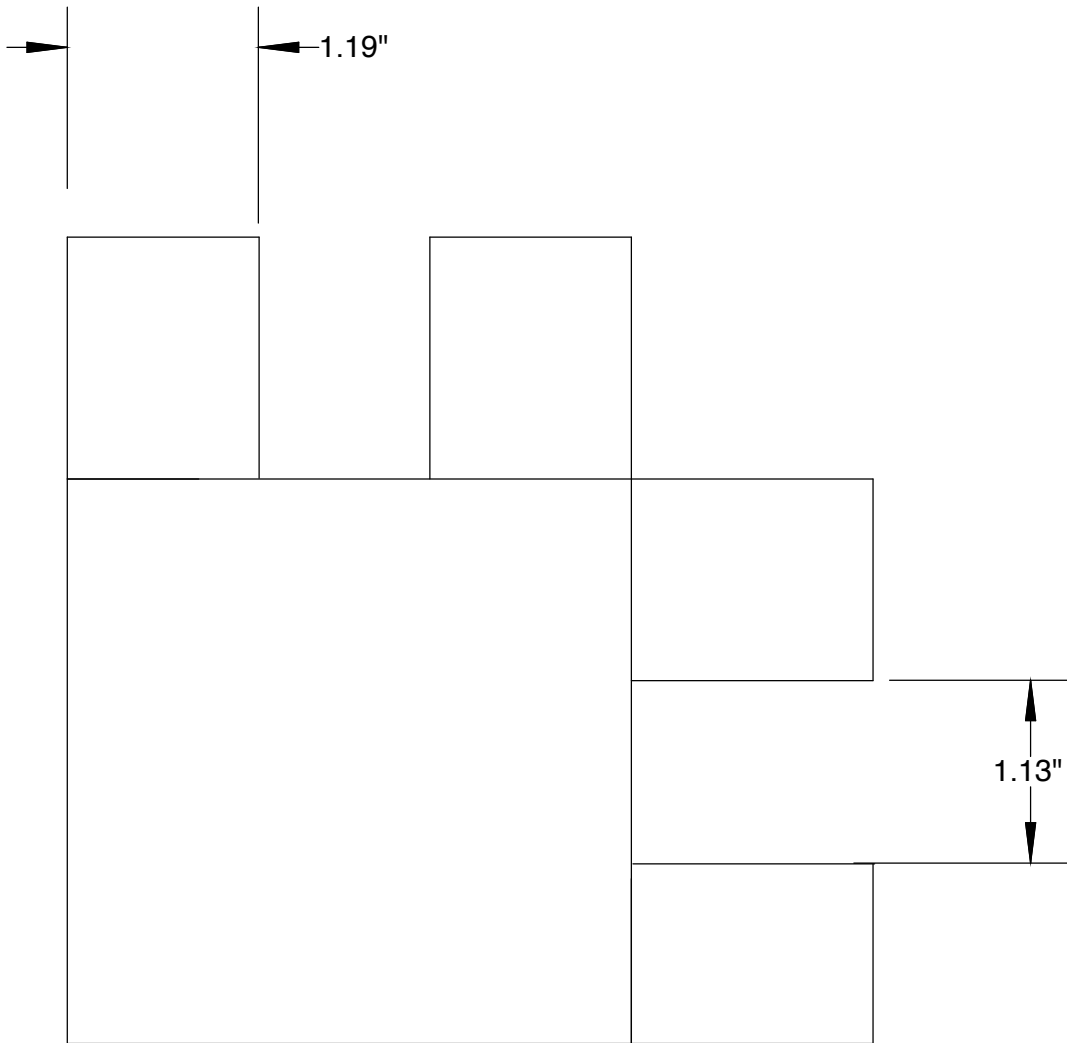
Previously we left an air gap at the bottom to allow air to flow through the composting material and supply air to the microbes in the compost. This has let the pile dry out too much. As a result, we now run the slats down to the ground. Plenty of air comes in through the gaps in the front slats and the occasional tears that occur in the plastic lining.

We used a heavy mil black plastic sheeting to line the sides and back of the bins. This will deteriorate after a few years and at that point we will probably replace it with pond liner.

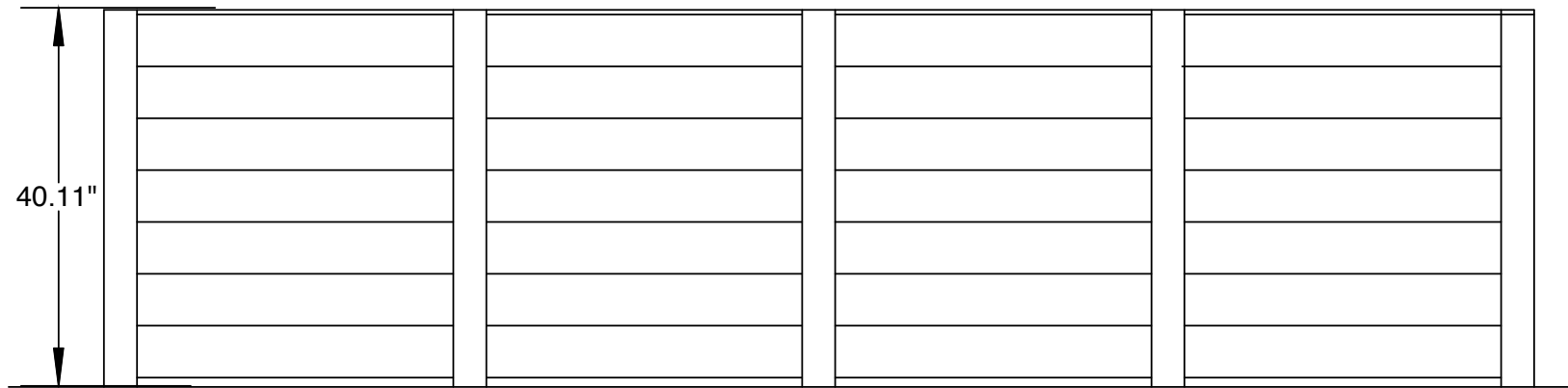
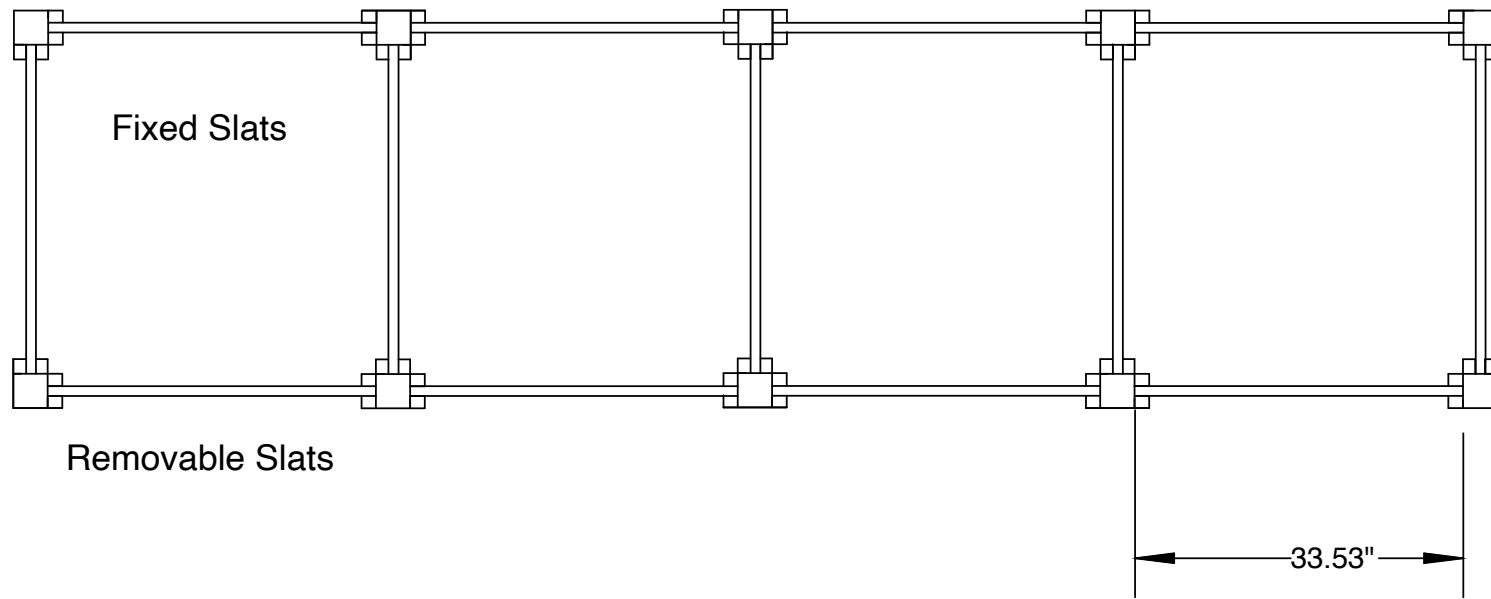
For the wood, we used what is available in pressure treated lumber. I have found that cedar, contrary to its reputation, is susceptible to rot, primarily from insects. Redwood fares a little better, but is much more expensive.

Any wood you can get today has not been dried to the point that it is stable. It will warp, twist and bend as if weathers. Try to take this into account in building a bin system. The slats seem flat enough when you first build the bin and set the slats in place, but after a few weeks, they will either warp or cup. Make the slot where the slats go wide enough to accommodate this. A 1" board should have 1 ¼" to allow for this (the drawing shows 1.19" where 1 ¼" is preferable in the long run.). There is also a good chance the posts will warp or bend. There is not much you can do to correct this ahead of time. You might have to "adjust" a leaning post with a few hard taps of a hammer at some point. Also, the wood will shrink over time. It is important not to screw the slats in place. After a while the slats that were sitting tightly on top of one another will have ¼" gaps between them.

I have set the post in two different ways, one is to plant them in the ground using a post hole digger (about 16" into the ground). The other is to use deck blocks, slightly pyramidal concrete blocks that are made for 4" x 4" posts. I now prefer the deck blocks because they are easier to align and level. I set the top of the block level with the grade. The block also acts as the resting point for the bottom slat. Doing it this way, however, it does require screwing the top slat in place or at a minimum screwing another piece of wood between posts to stabilize them. On the last set bins that I built using deck blocks, I also installed a diagonal brace at the back, top of each inside corner to help keep the bins square.



Typical Post



New Zealand Compost Bins at Sunshine Rd.

Table 1

New Zealand Compost Bin Parts List

	Materials are for a 3 bin set of Compost Boxes					
Corner Posts	4 x 4 Pressure Treated	Treated Spruce/Pine/Fir	8	40" Long		
Side Slats	5/4 x 6 Deck Boards	Southern Yellow Pine	70	33 1/2" Long	7 Slats per side	10 Sides
Slat Guides	1 1/2 x 1 1/2	Treated Spruce/Pine/Fir	40	40" Long		
Deck Blocks		Concrete	8			
Corner Posts	Get 3 per 10' Post		3	Lengths 10' each		
Side Slats	Get 4 per 12' Length		18	Lengths 12' each		
Slat Guides	Get 9 per 10' Post	Use 2 x 6 material and rip to 1 1/2 x 1 1/2	5	Lengths 10' each		
Deck Blocks			8			
	Where you need fasteners, use deck screws - 2 1/2" long					
	Drill a clearance hole in the first layer of wood.					