

3-Stall Wooden Compost Bin

Materials:

2x4 lumber	1x8 lumber	1x4 lumber	2x2 lumber	Wood screws
<ul style="list-style-type: none"> Six 120" lengths Four 37.25" lengths Eight 36" lengths 	<ul style="list-style-type: none"> Thirty-seven 48" lengths Eighteen 39.25" lengths 	<ul style="list-style-type: none"> Two 48" lengths 	<ul style="list-style-type: none"> Two 48" lengths Four 44.5" lengths 	<ul style="list-style-type: none"> 1.25" (or similar) 2.5" (or similar) 4" (or similar)

A note about lumber dimensions:

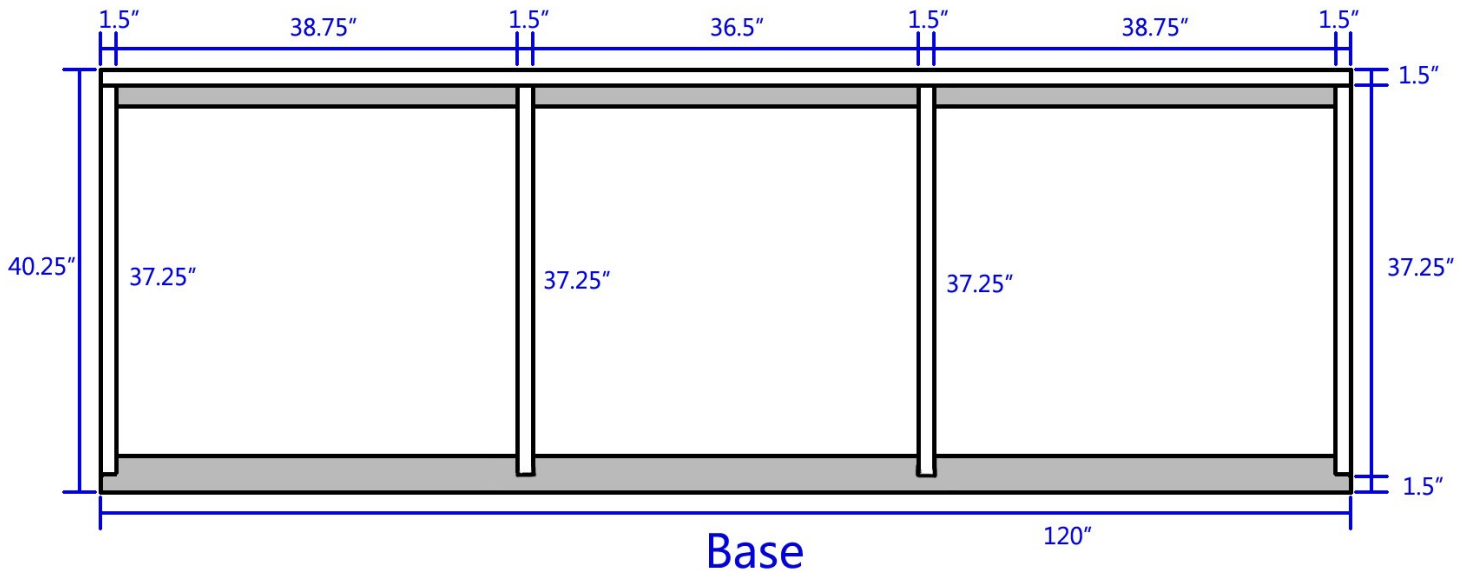
Lumber is commonly referred to by nominal names such as 2x4 or 1x8. However after drying and planing, the actual size of the boards is somewhat smaller. The table to the right shows the difference between the nominal and actual sizes of the lumber used in this project. The dimensions listed in the diagrams use the actual sizes, not nominal sizes.

Nominal size	Actual size
2x4	1.5" by 3.5"
1x8	0.75" by 7.25"
1x4	0.75" by 3.5"
2x2	1.5" by 1.5"

Procedure:

- Assemble the base, back, and four side pieces according to the following diagrams and photos.

A) Base:





i) Gather these pieces:
- three 120" 2x4s
- four 37.25" 2x4s



ii) Turn two of the 120" 2x4s on their narrow side and place the last 120" 2x4 horizontally on top.



iii) Screw the horizontal 120" 2x4 onto *one* of the bottom 2x4s. Flip this piece over, and space the last 120" 2x4 about 3' away from it.

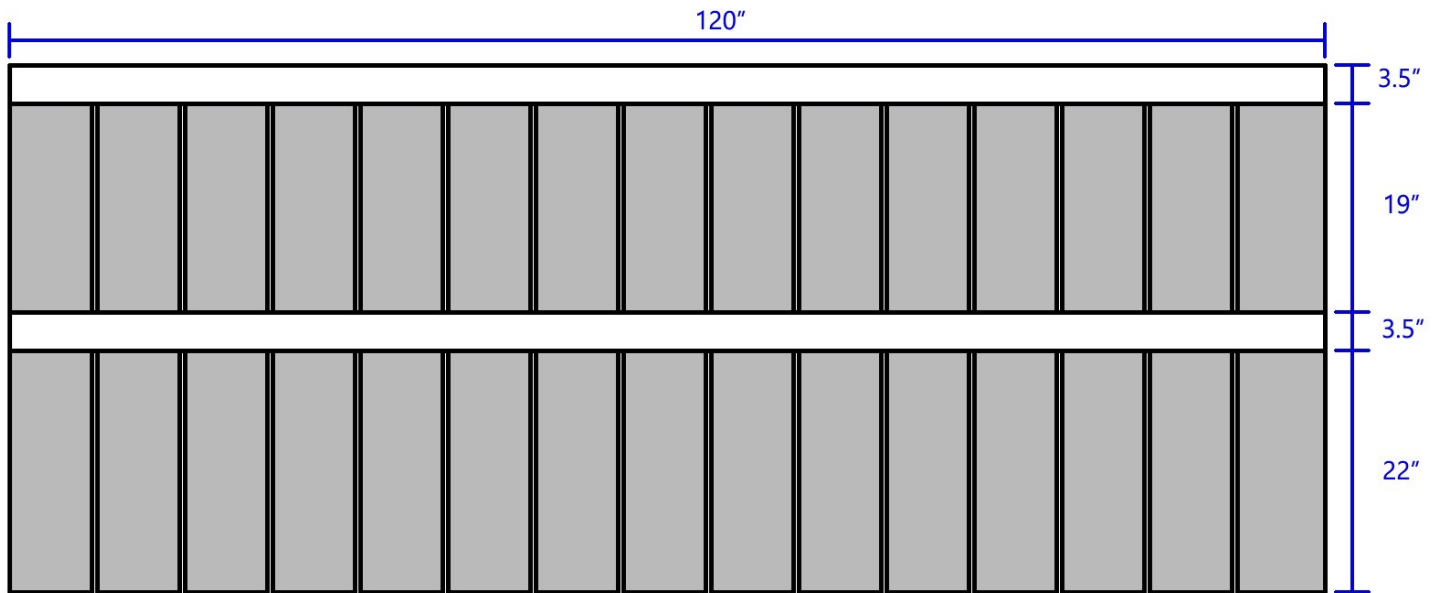


iv) Space the 37.25" 2x4s out on top of the longer boards. Attach these lightly to the two connected 120" 2x4s with one or two screws along the left side.



v) Gently flip the boards over and attach the shorter boards more firmly with more vertical screws. Then position the other ends of the short boards carefully against the single 120" 2x4, making sure to overhand the right amount. Attach with screws.

B) Back:



Back



- i) Gather these pieces:
- Two 120" 2x4s
 - Fifteen 48" 1x8s

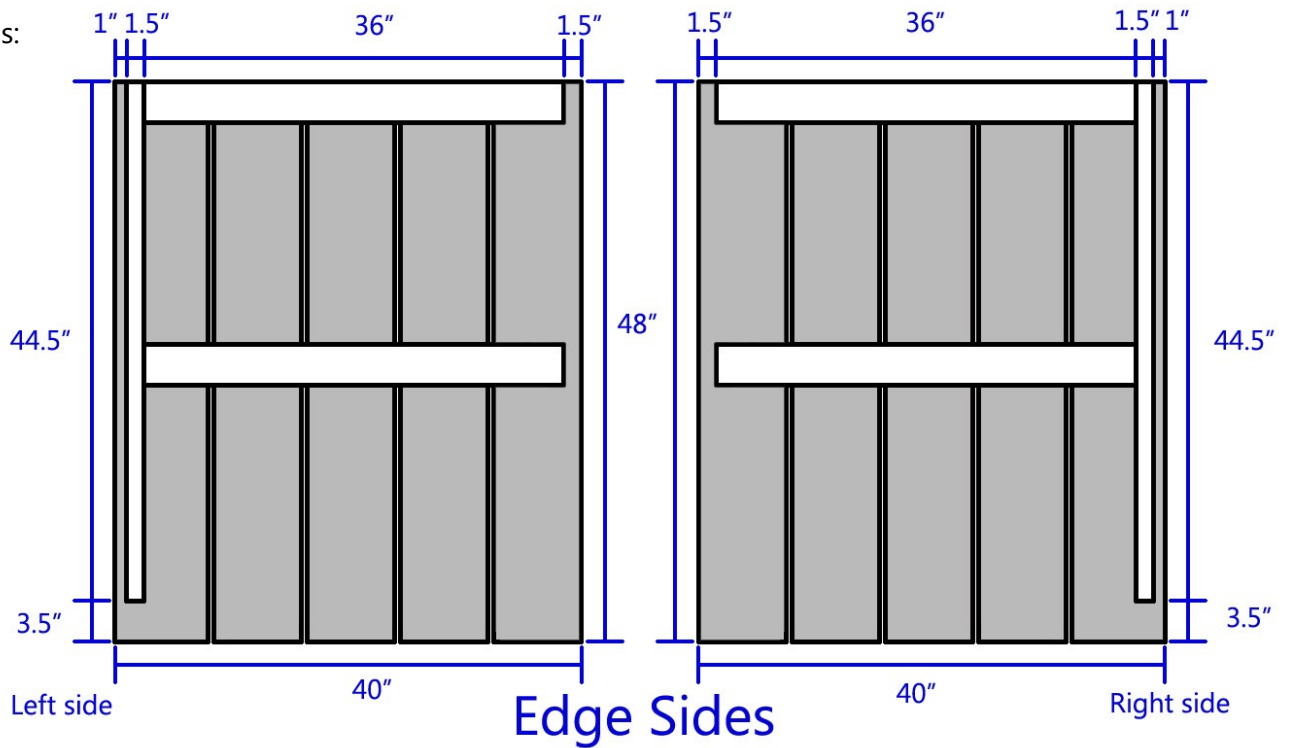


- ii) Space 120" 2x4s out 19" apart. Carefully position two 48" 1x8s on top, making sure they are square, and attach with screws.



- iii) Place the other 48" 1x8s along the length, spaced slightly apart. Attach with screws.

C) Outer sides:



i) Gather these pieces:

- Ten 48" 1x8s
- Four 36" 2x4s
- Two 44.5" 2x2s



ii) Place the 2x4s on the ground spaced 19" apart. Carefully position two 48" 1x8s on top of each set, making sure they are square and that they overhang the right amount. *Make sure they two sets are mirror images of each other.* Attach with screws.

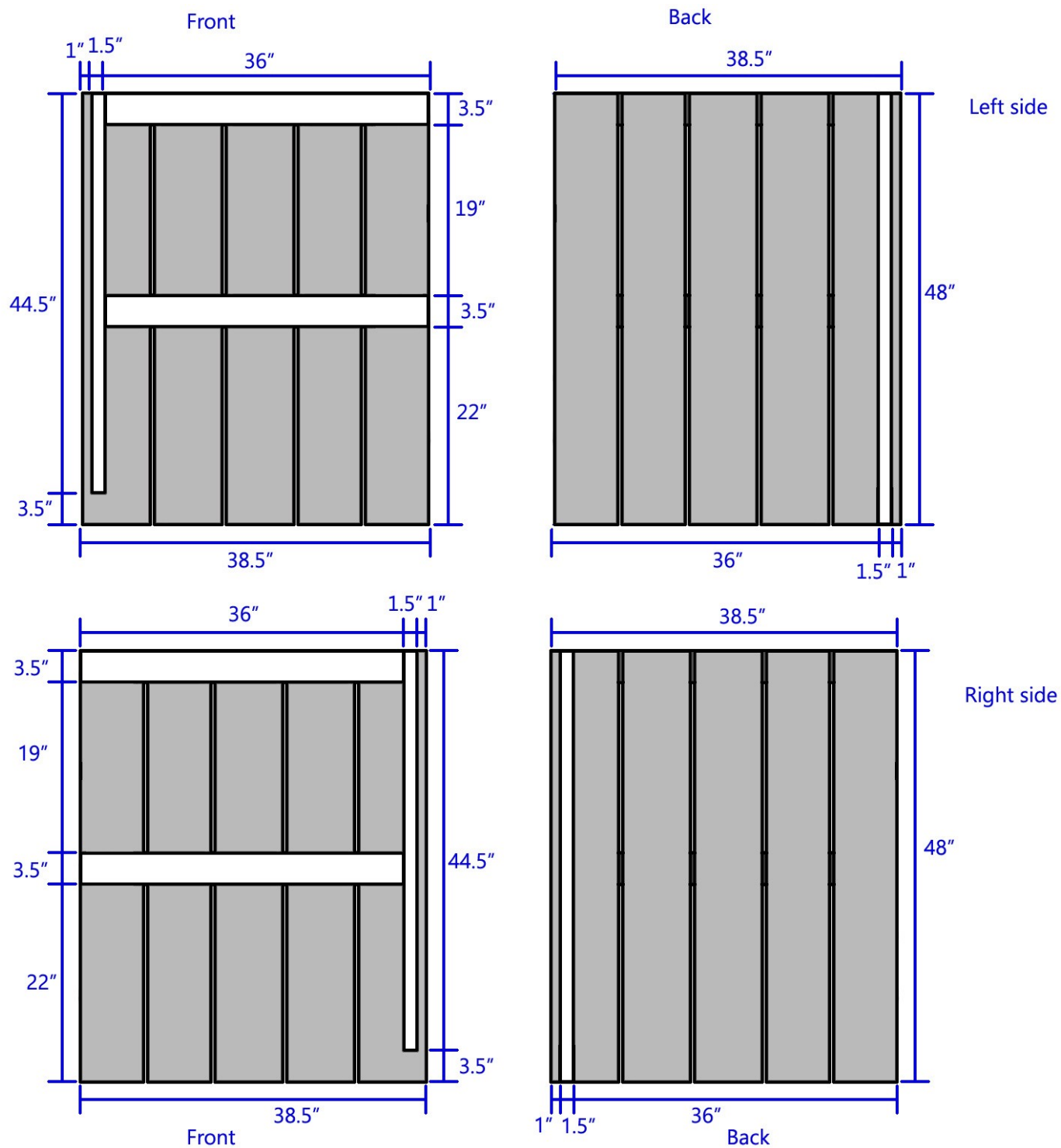


iii) Place three more 48" 1x8s on each side, spaced slightly apart. Attach with screws.



iv) Flip the sides over. Carefully position the 2x2s along the correct edge, *making sure the two sides are mirror images of each other.* Attach with screws.

D) Inner sides:



Middle Sides



i) Gather these pieces:

- Ten 48" 1x8s
- Four 36" 2x4s
- Two 44.5" 2x2s
- Two 48" 2x2s



ii) Place the 2x4s on the ground spaced 19" apart. Carefully position two 48" 1x8s on top of each set, making sure they are square and that they overhang the right amount on one edge. *Make sure they two sets are mirror images of each other.* Attach with screws.

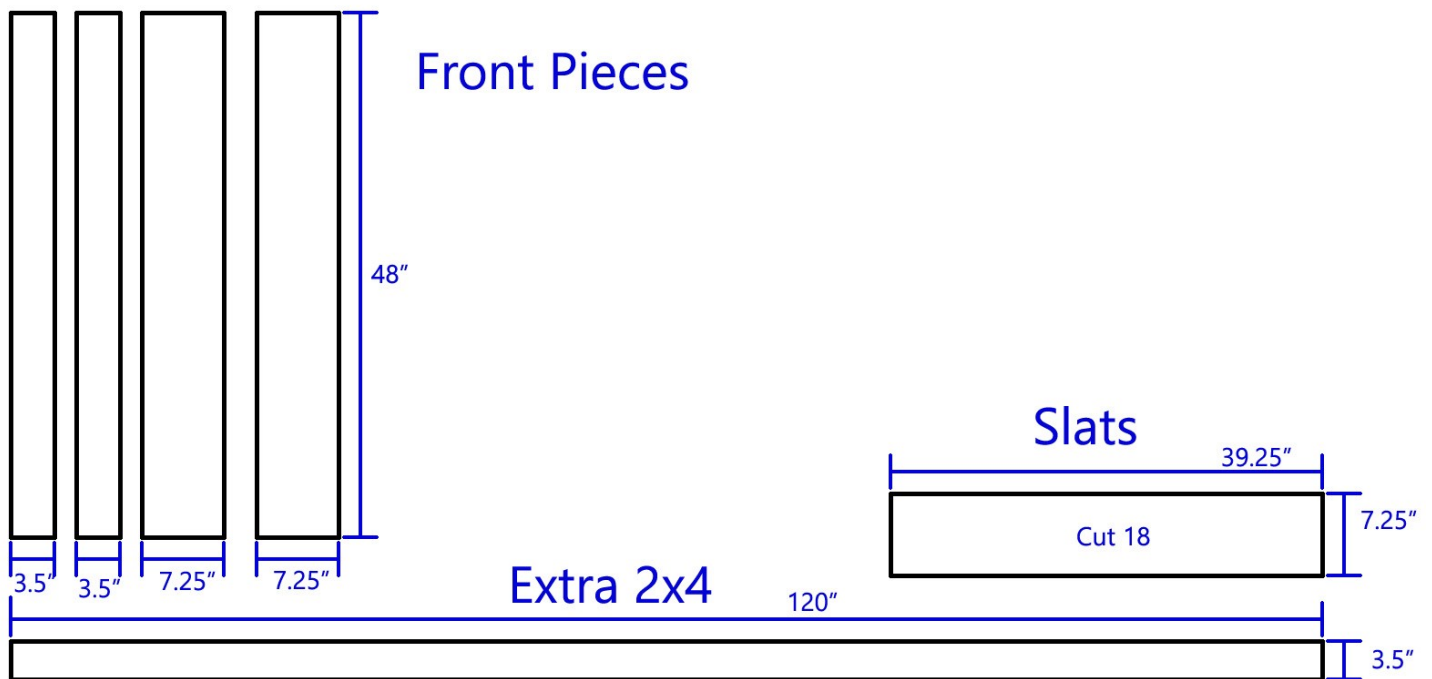


iii) Place three more 48" 1x8s on each side, spaced slightly apart. Attach with screws.



iv) Flip the sides over. Carefully position the 44.5" 2x2s along against the correct bottom edge, and the 48" 2x2s along the top, *making sure the two sides are mirror images of each other.* Attach with screws.

E) Extra pieces:



i) Gather these pieces:

- one 120" 2x4
- two 48" 1x8s
- two 48" 1x4s
- eighteen 39.25" 1x8s

2. Attach the base, back, outer sides, inner sides, and extra pieces.

- A) Place the base flat on the ground. Put the extra 120" 2x4 down behind the base, snug against the side with one horizontal and one vertical 2x4. Put the back piece on top of the extra 2x4 to line it up with the vertical 2x4 of the base piece, with its own 120" 2x4 braces pointed forward. Screw the base and back together along the bottom. *The back will be top-heavy for now, so make sure to hold it until at least one side piece is attached.*
- B) Attach the outer side pieces next, using the extra 2x4 as a prop in the same way. The 36" 2x4 braces on the side pieces should face inward, and the vertical 2x2 should be at the front of the bin. The bottom of the vertical 2x2 should sit on top of and line up with the end of the 36" 2x4 on the base piece.
- C) Attach the middle side pieces. The 36" 2x4s should again point in to the middle, and the shorter vertical 2x2s should point forward, sitting on top of and lined up with the end of the 36" 2x4 on the base piece. Make sure to measure the placement of the top corners against the back piece or the three stalls will be uneven.

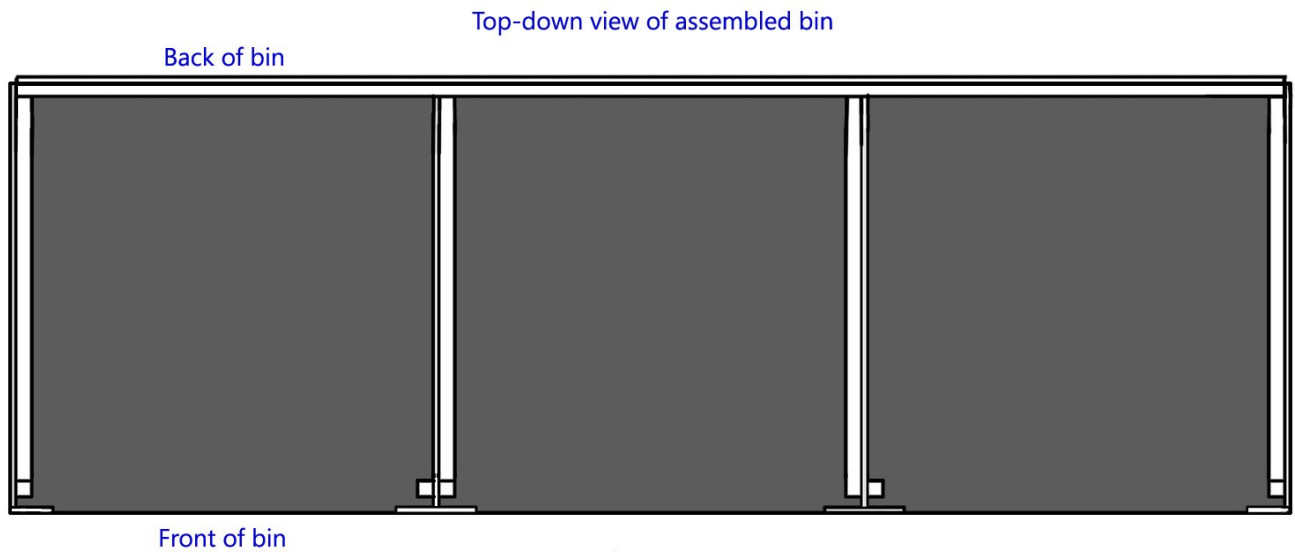
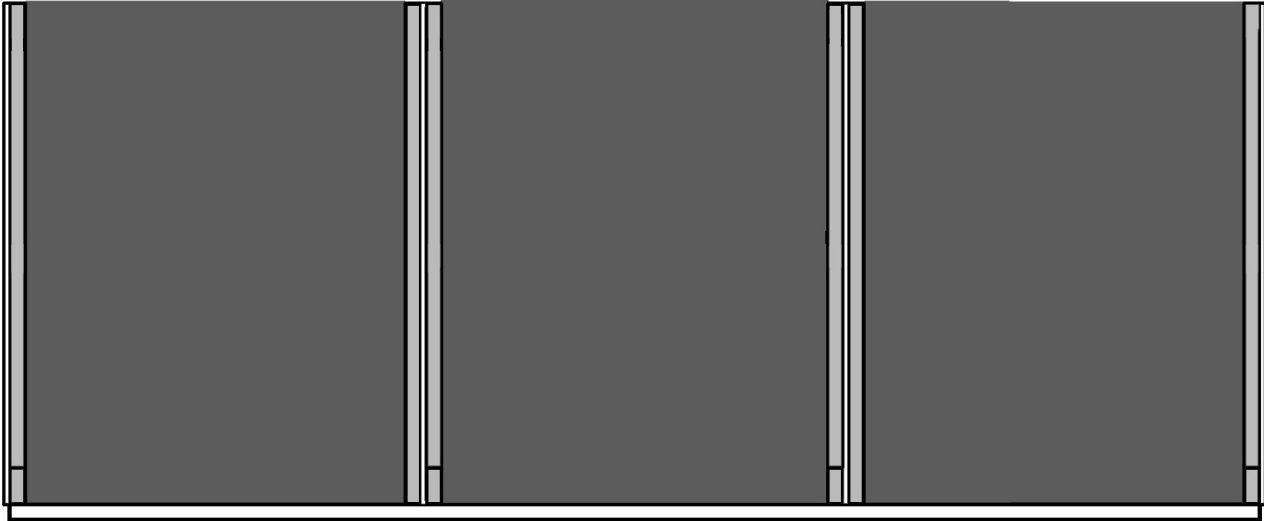


Figure 1

- D) Pre-drill screw holes in the four front pieces so that they don't crack, and attach them to the front edge of the four sides, as in Figure 2. This forms the slots for the slats.

Front view of assembled bin



Front view of assembled bin with attached front pieces

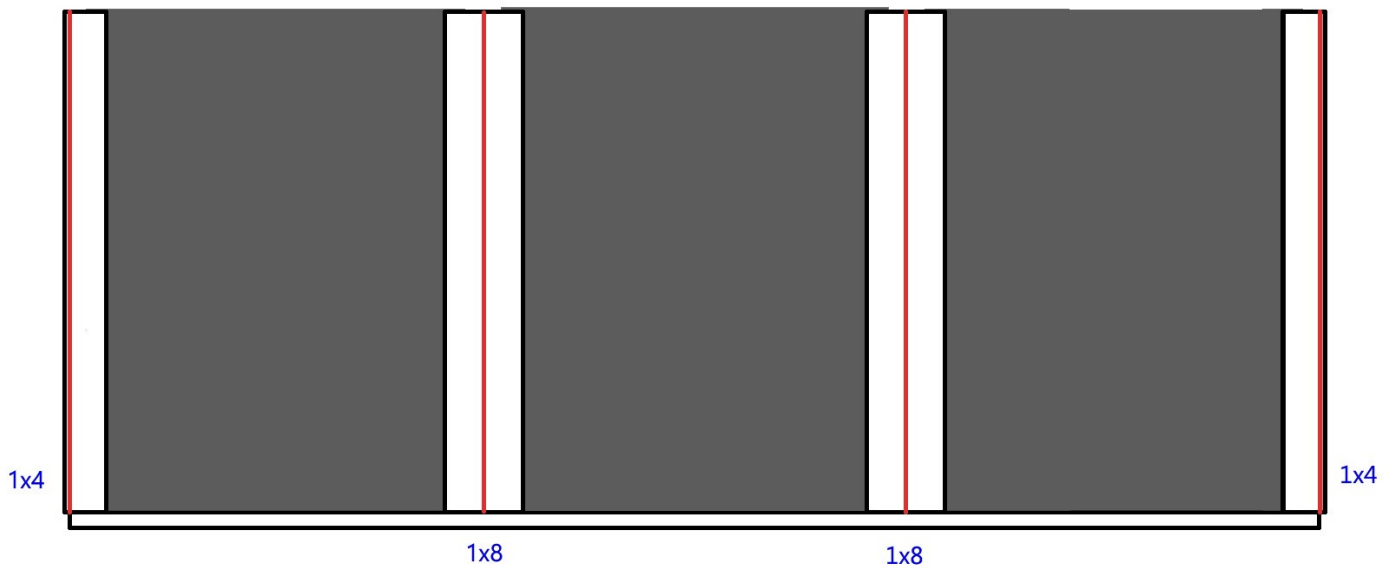


Figure 2

- E) Attach the extra 120" 2x4 horizontally on the top back edge of the bin, as in Figure 3. This will add strength and help keep the stalls from warping when full. *Note: to fully prevent warping it may be advisable to add a detachable chain to the front of the stalls as well, which can be fastened when the stalls are not being added to, stirred, or emptied.*

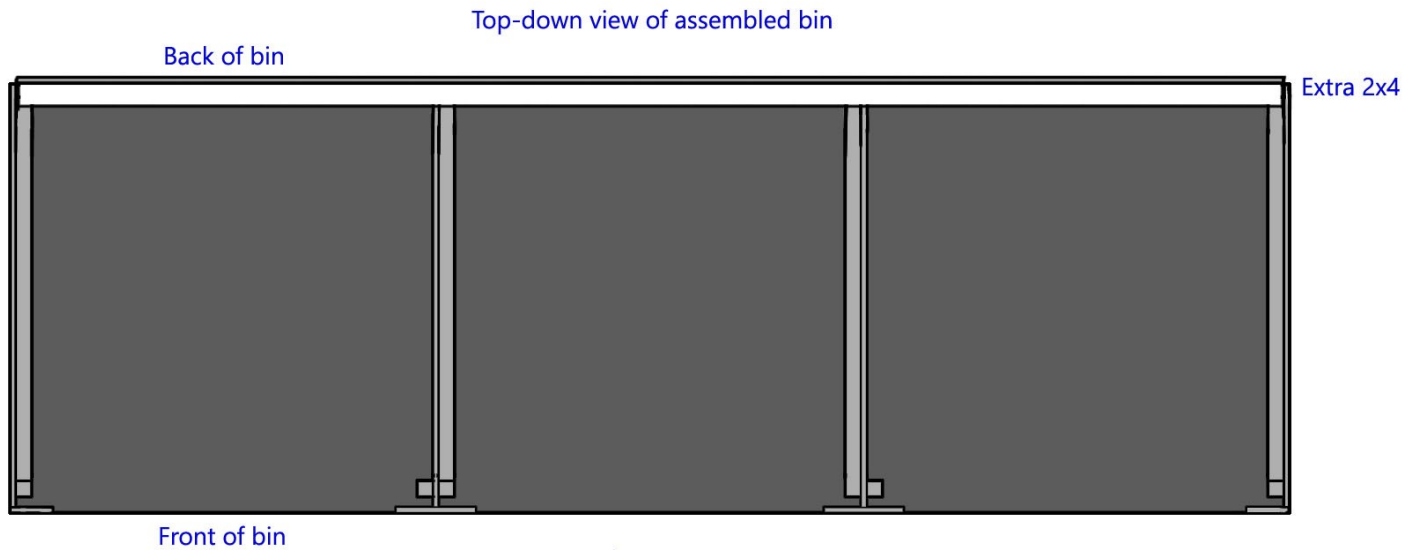


Figure 3

- F) Slot six 39.25" 1x8 slats into the front of each of the three stalls. These can be added and removed as needed during composting.

