



Building Raised Bed Garden Frames

GP has streamlined the process of building 8'x4' frames used in our raised beds. The current process can accommodate four teams of volunteers each making frames under the guidance of a GP instructor who provides a hands-on tutorial at the beginning of the building session walking everyone through the "how-to" of frame construction. What follows is a description of what volunteers will do during their building session.

All tools and materials needed to build frames are provided at the GP warehouse where the construction takes places. These include:

Materials:

- (4) A Z35 Angles
- (2) 2"x8"x8' boards
- (2) 2"x8"x4' boards
- (4) NS2 Nail Stoppers
- (20) #8x1¼" wood screws

Tools:

- (2) 5' pipe clamps
- (2) DeWalt 12v cordless power drills
- (1) 3/32 drill bit
- (1) Phillips head screwdriver bit
- (1) 12' tape measure
- (1) black magic marker
- (1) hammer
- (1) mallet

A step by step description of the process is as follows.

1. Take two 8' planks and two 4' planks to a construction area. The 8' planks are each marked with "Top" on one side for orientation and already have A35Z Angles mounted on each end.
2. Set the two 8' planks on edge with "Top" up and the planks facing each other. Now place one 4' board between the ends of the 8' footers fitting them up against the installed A35Z Angles. Use the 5' pipe clamp to hold the boards together by placing it across the outside of the ends and tightening the clamp.
3. Now place the other 4' board in a similar fashion at the other end of the 8' footers. Place another 5' pipe clamp on each corner and tighten to hold the ends securely. You now have a rectangular box.
4. Starting at one end, look to see if the ends are squared up with one another and, if not, adjust them with the hammer. In one corner, drill three holes in the 4' board using the A35Z Angle for a guide. Starting at the top hole, attach the bracket to the 4' board using the screws provided. Do the same for the other corner of the frame. [Note, if it appears that the boards are not snug after putting in the top two screws, loosen the pipe clamp and move it to the bottom of the 8' boards

and tighten again. This will draw in the warped boards. Now screw in the final screw to secure the ends]

5. At the other end of the frame, start at one corner and drill three holes. Again, using the screws provided attach the corner bracket to the 4' board. Now do the same for the last corner of the frame. [Again watching for a snug fit and using the pipe clamp if needed.]
6. Place a NS2 nail stopper tie on top of the adjoining corners making sure the edges of the nail stopper tie do not stick out anywhere over the edge of the board. This is to prevent gardeners from getting cut on the edge of the tie. Hammer the tie into the wood to secure it and then using the power drill put in screws in each of the holes at the ends of the tie. You will not usually need to pre-drill these two holes. Do the same for each of the remaining three corners.
7. Finally, using a magic marker and a tape measure mark off 1' lengths on each of the four sides of the frame. Make sure to start measuring in the same place for each side so that marks will align with one another. These marks will be used at the time of the installation of the garden to add nails and string to designate areas for square foot planting.
8. Congratulations! You have now completed an 8' x 4' frame which is ready to be taken to one of the sites where a garden will be installed.

Appendix: Frame Building

A: List of materials

2"x8"x8' Boards [Some will be cut into 2"x8"x4' before construction]

A35 Angles 12-8dx1½ [Simpson Strong Tie ESR-2523; #44315-39360]

NS2 Nail Stoppers [Simpson Strong Tie #44315-76010]

#8x1¼wood screws; head #2 [Simpson Strong Tie #44315-08821]

B: Preparing 8' boards with A35Z Angles installed:

- (1) Examine the wood for flaws and damage. The goal is to have solid square ends for corners.
- (2) Look at the wood grain. If there are growth rings showing, have the open end of the ring arc facing inward when the frame is constricted. However, if this will result in a damaged top edge on any corner omit this step.
- (3) Mark the board with "Top" to indicate the correct orientation.
- (4) Using the pre-fabricated L & R patterns for A35Z Angles, mark and drill three holes which will be used to attach one A35Z Angle to each end.
- (5) Attach an A35Z to each end and you are done! [Note: using the pre-fabricated L & R patterns assures that the Angle has the open end down. This allows for any adjustment that may be needed when putting the frames together if the boards are warped.]