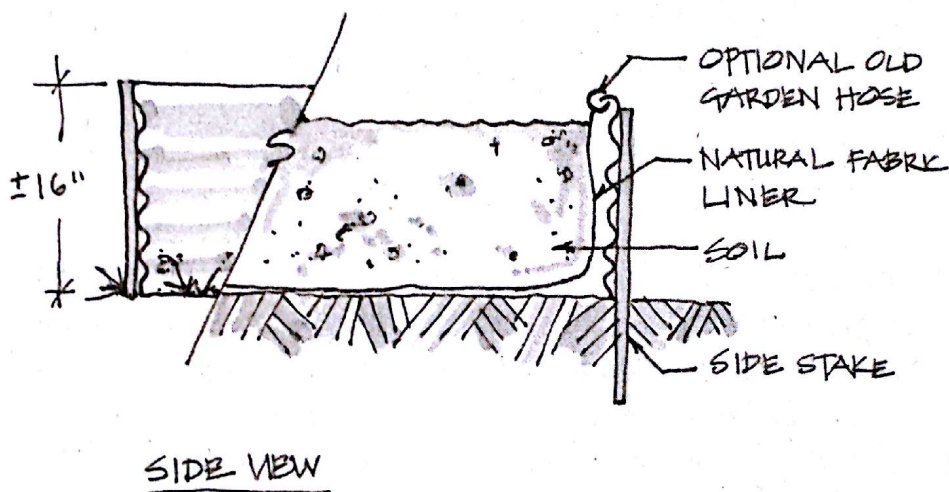
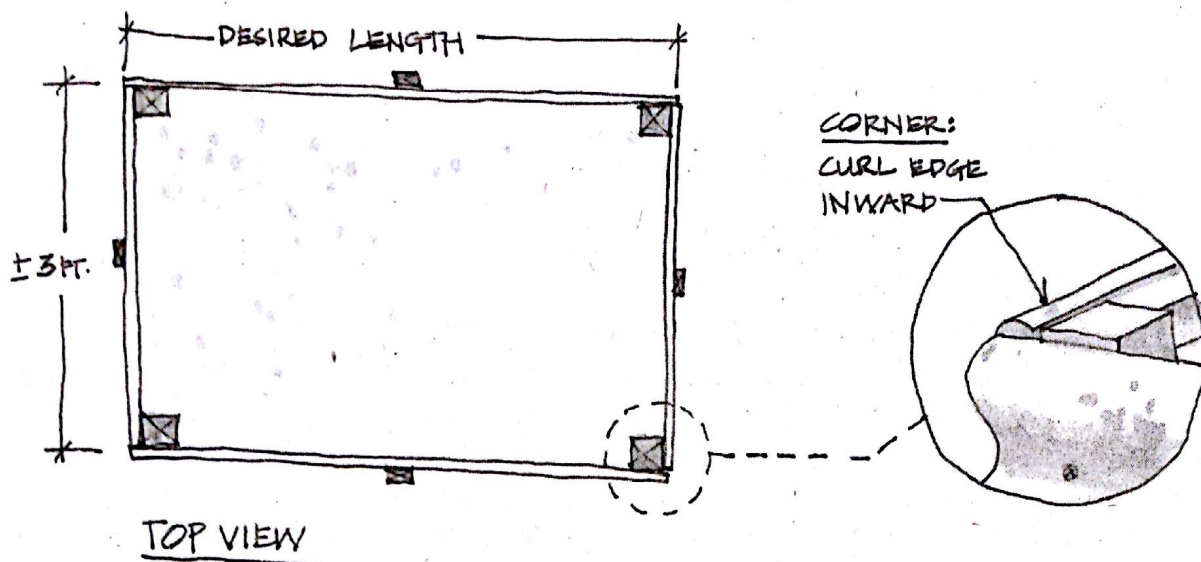


CORRUGATED IRON WICKING BED



Plan for a corrugated metal bed with the corrugations running horizontally

CONSTRUCTING WOODEN BOXED BEDS

Supplies you may need:

- ✦ lumber
- ✦ drill-and-bit set
- ✦ circular saw
- ✦ jigsaw (optional)
- ✦ chop saw (optional)
- ✦ hammer
- ✦ cat's claw

- ✦ chalk line
- ✦ speed square
- ✦ level
- ✦ large bar clamps
- ✦ shims
- ✦ pencils
- ✦ framers' square
- ✦ sawhorses
- ✦ three-prong extension cords and splitter
- ✦ eye protection, ear protection, gloves, protective clothing, and shoes
- ✦ compost, composted manure, and/or planting mix to fill the boxes (calculate the number of cubic feet needed and divide by 27 to find the number of yards or by 2 to find the number of bags). See page 130 for homemade planting mix recipes.

Building material no-nos:

- ✦ pressure-treated wood (usually but not always has a "stapled" look and a greenish tinge)
- ✦ plywood or other glued-together laminates (if you can see layers that are not wood grain, it's glued)
- ✦ wood painted with old, possibly leaded paint

Many community colleges offer classes on basic construction and cabinetry techniques, so if you are a novice, please consider taking one. At the least be sure to know and follow correct safety precautions for any tools you are not familiar with. Get in the habit of wearing safety glasses, using earplugs, and keeping your hair tied up tightly.

The best height for boxed beds is between 4 inches and 21 inches. Unless you have a soil toxicity problem or an ability issue (back problems, etc.) we recommend your boxes be no more than 12 inches high. For boxes 8 feet or longer, cross bracing must be added at any side joins (lumber isn't generally longer than 12 feet; see diagrams on page 106). Stapling gopher mesh to the bottom of the box is wise, whether you think you have gophers or not. Build it and they often come. Place staples close together on the bottom edges of your boards so the critters can't burrow through.

Wood comes in standard dimensions, but the name of the dimension is not actually the size of the wood, since it refers to the boards before they are surfaced in the factory. Following are the nominal and actual sizes of lumber to help you decide what to use for the box height you want. For example three rows (courses) of 2 inch by 8 inch lumber would yield a 21- $\frac{3}{4}$ -inch-high bed, not a 24-inch-high bed.

Nominal Size (inches x inches)	Actual Size (inches x inches)
1 x 1	$\frac{3}{4} \times \frac{3}{4}$
1 x 2	$\frac{3}{4} \times 1 \frac{1}{2}$
1 x 3	$\frac{3}{4} \times 2 \frac{1}{2}$
1 x 4	$\frac{3}{4} \times 3 \frac{1}{2}$
1 x 6	$\frac{3}{4} \times 5 \frac{1}{2}$
1 x 8	$\frac{3}{4} \times 7 \frac{1}{4}$
1 x 10	$\frac{3}{4} \times 9 \frac{1}{4}$
1 x 12	$\frac{3}{4} \times 11 \frac{1}{4}$
2 x 2	$1 \frac{1}{2} \times 1 \frac{1}{2}$
2 x 3	$1 \frac{1}{2} \times 2 \frac{1}{2}$
2 x 4	$1 \frac{1}{2} \times 3 \frac{1}{2}$
2 x 6	$1 \frac{1}{2} \times 5 \frac{1}{2}$
2 x 8	$1 \frac{1}{2} \times 7 \frac{1}{4}$
2 x 10	$1 \frac{1}{2} \times 9 \frac{1}{4}$
2 x 12	$1 \frac{1}{2} \times 11 \frac{1}{4}$
4 x 4	$3 \frac{1}{2} \times 3 \frac{1}{2}$

Salvaged wood tends to be quite hard. This is good because it is well seasoned and most likely has a tight grain, resulting in a longer life than fresh wood. If you are used to driving nails into fresh wood, you may end up with a pile of bent nails, split wood, and extremely frazzled nerves. To avoid this problem, always predrill the outside piece of wood of the two you are joining together (don't predrill your corner supports if using nails or screws). Wherever possible, join your projects with bolts, the largest washers you can find, and nuts. Water and soil contact degrade wood faster, making it likely that nails and screws will pull out. To drill for bolts, you will need to use a drill bit just slightly wider in diameter than the bolt. You will need an extra long drill bit to extend through the outside piece and the 4 inch by 4 inch corner support.

Avoid using painted wood. Leaded paint was banned in the United States in 1978, but since we don't date wood, it's nearly impossible to know whether the paint contains lead or not. In addition, contemporary unleaded house paint can still contain toxic substances.

Work on a flat surface such as a driveway or sidewalk. The most efficient way to construct your beds is to first build each end as a unit. Then precut and drill the side boards and any necessary cross braces. The assembled ends are light enough to be carried to the bed location

PLANTER BOX PLAN AND ELEVATION

Wooden planter box plan

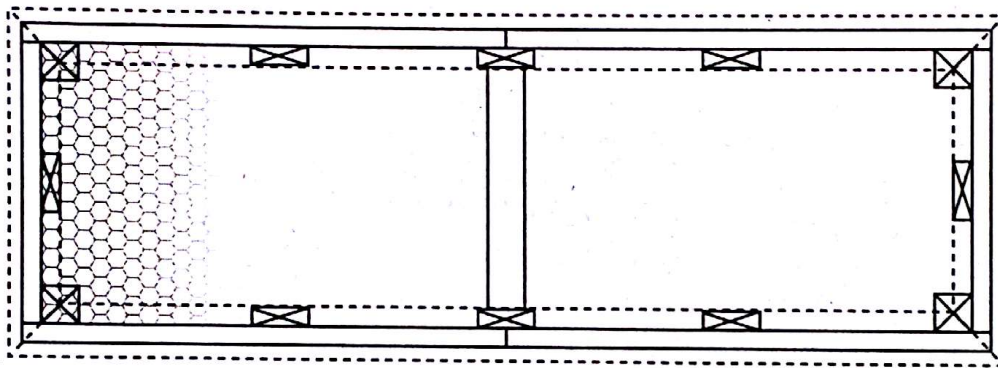
- Boxes are placed on dirt (no bottom boards are required)
- Seat frame is attached to the lip of the box
- Additional 2" x 4" or 2" x 6" seat supports are shown

42" wide planter box constructed of 2" x 6", 8", 10", or 12" lumber (depending on wood available and desired height), with 4" x 4" corner supports.

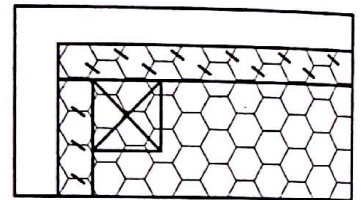
PLAN VIEW: If desired length is greater than length of lumber, use bracing made of 2" x 6" ends with a 2" x 4" cross brace where side pieces join.

MATERIALS

- 2" x 4"
- 2" x 6"
- 4" x 4"
- Laterals (sides) 2" x 4"
- Stucko wire mesh
- Bolts, screws, + staples

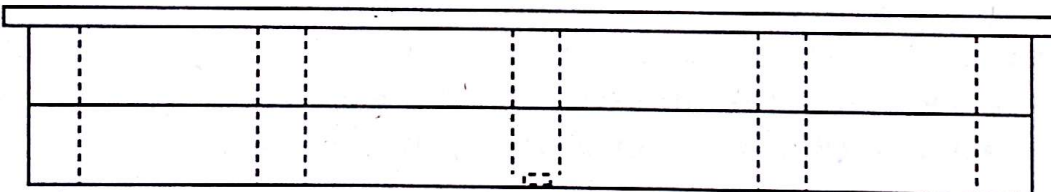


PLAN VIEW

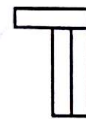


GOPHER WIRE APPLICATION DETAIL ON BOX BOTTOM

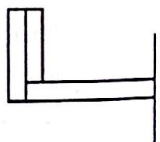
SIDE VIEW: Box is either one or multiple boards high, depending on wood available and desired height.



SIDE VIEW



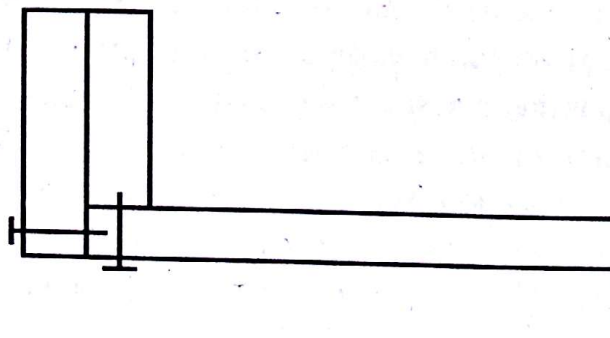
SEAT DETAIL



BRACING SIDE VIEW DETAIL

BRACING SIDE VIEW DETAIL

How to correctly attach bracing boards



for assembly with precut and drilled side boards, corner supports, and brace pieces.

Construct your ends as follows:

Cut your pieces on sawhorses with a circular saw. For efficiency you can line up three or four boards side by side, mark them with a speed square and chalk line, and cut them all in one go. You may want to use a bar clamp to keep them squarely together, as if they were one piece of wood. To cut your 4 inch by 4 inch corner braces, use the speed square to mark a line, turning your board and "carrying the line over" to each side with the speed square. Even at the deepest setting your circular saw blade won't be wide enough to cut through a 4 inch by 4 inch, so cut on one side and then flip the piece over to cut through.

After cutting out all your pieces, set up a predrilling assembly line, making sure to place scrap wood under your work pieces so the drill doesn't hit the cement or dirt. The location of fasteners on the end boards should be offset from those on the side boards so the fasteners don't hit each other when you fasten your boards to the corner supports. Mark the locations of drill holes with a measuring tape. To be speedy, use a chalk line to snap a line and then use a small board the width of your lumber with drill holes where you need to put them on your pieces as a guide. Just mark through the holes on your guide. Remember when measuring that most lumber is not the full dimension listed.

If your box is longer than the length of your boards—say you have 12-foot-long boards but you want your box to be 18 feet long—you will need to brace it at the joins as shown in the diagram on page 109.

PROTECTING WOOD FROM MOISTURE AND SOIL CONTACT

There are a few safe methods to slow the rotting of wood. With all the ambient moisture outside, water needs to be able to escape from wood so it doesn't rot, so completely sealing it is not wise. Wood sealers you can buy at the hardware store are also probably toxic in the garden—they're bound to peel eventually, and you don't want that stuff in your soil.

Protecting Wood with Fabric

While it is nearly impossible to keep planter box wood dry, you can keep it from making contact with soil and the teeming organisms just waiting to munch on it.

One option is to staple flaxseed oil-soaked burlap, canvas, or second-hand blue jeans to the inside of your container. Linseed oil, a great wood sealant and waterproofing agent, is commonly made of flaxseed oil, toxic solvents, and even heavy metals. While plain flax oil is very thick, it's important to skip the toxins in linseed oil. Fill a container with the oil and submerge the fabric. After the oil has penetrated, wring it out over the container and let it dry as much as possible. This may take a few days. Be sure to spread the fabric out in a breezy, shady area so it won't self-combust.

If this seems too complicated for you, another option is to simply cut up old blue jeans or another durable cloth and staple it to the wood. This provides good protection and lasts quite a while before decomposing.

Another option is to seal the inside of your planter box either with the flaxseed oil itself or with wax. To use flaxseed oil just paint it on the inside surface of the wood, letting it dry as per the fabric instructions above. To use wax, rub some wax, either old candle stubs or bar wax, over the inside surface of the wood.

CONSTRUCTING GARDEN TRELLISES

We have found that constructing vertical trellises down the length of about a third of our beds really increases yields. Portable trellis cages that can be placed over vining plants are also very useful. For the highest yields, plan to install trellises in about one third of your growing beds.

Good crops to trellis include beans, peas, cucumbers, squash, melons, tomatoes—anything that vines.

If you've already constructed wooden planter boxes, building a simple wood trellis frame will be a cinch.

Placing your trellis 1½ feet from the north side of the box, rather than in the center, will make for more efficient use of bed space and an easier reach for the farmer. When building your frame, allow 3 inches to