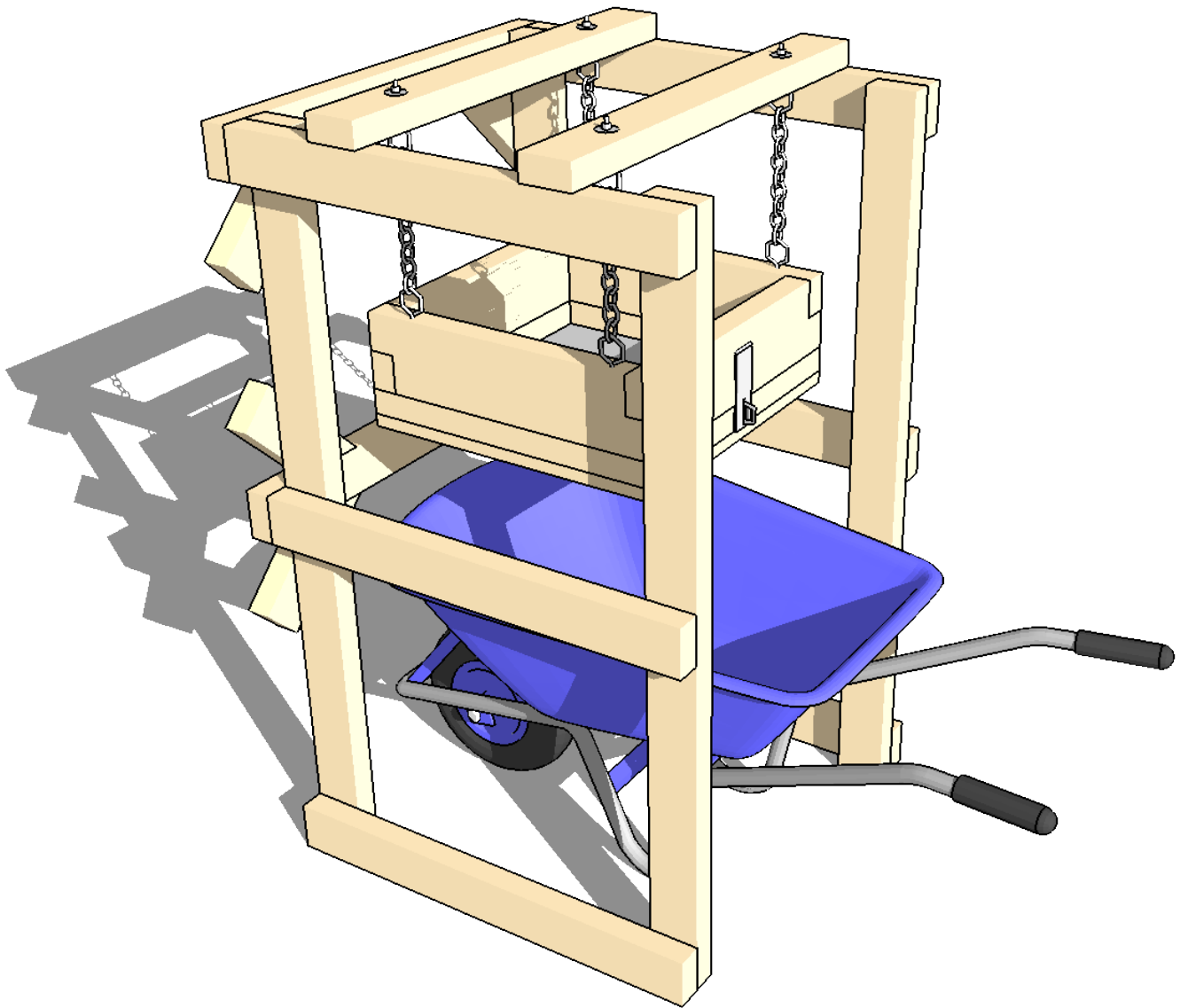


Compost Sifter Workshop Version 1

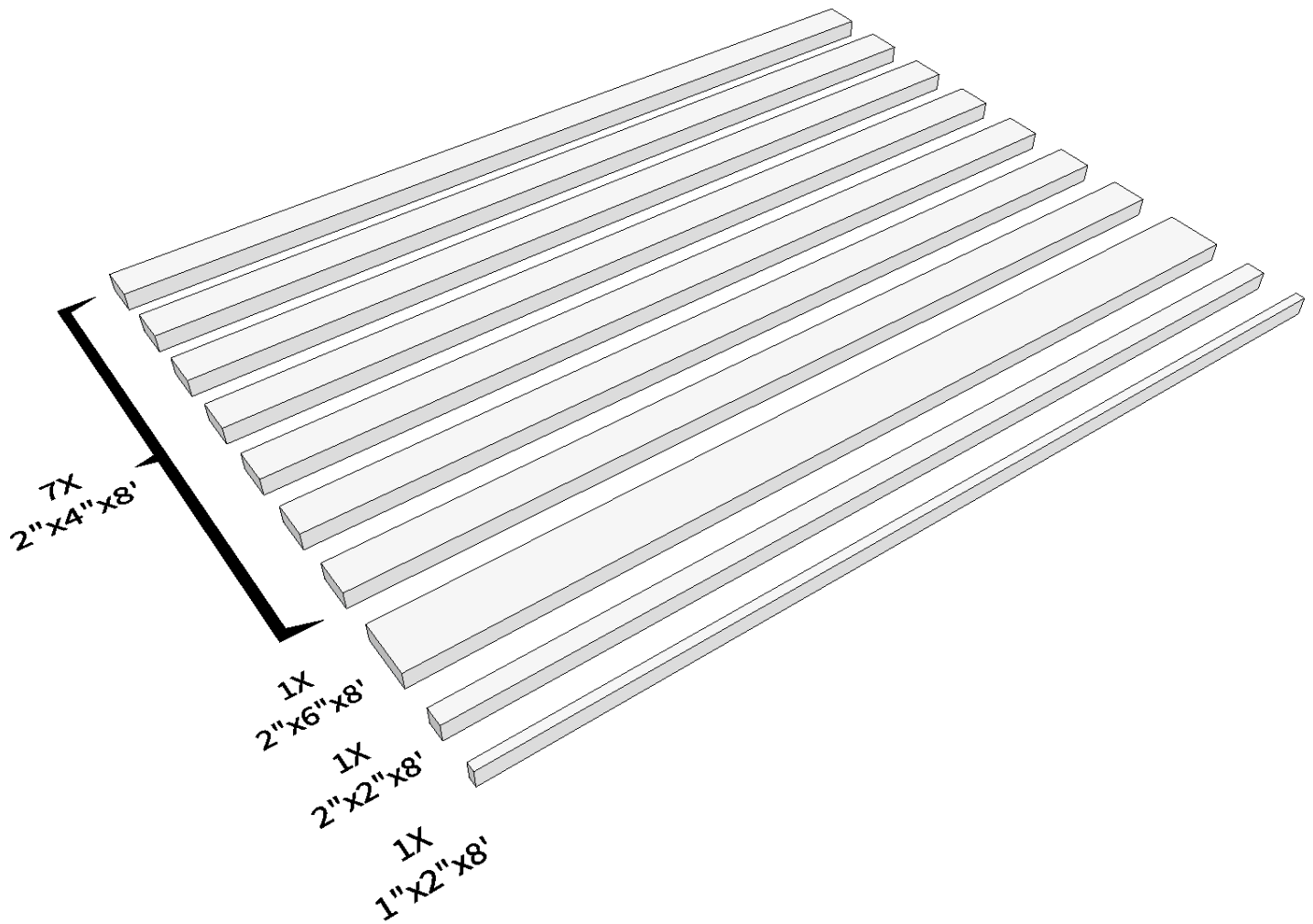


Program:

There are four parts to the workshop: practical demo, plans +Q&A, assembly & hands on.

1. Short & Sweet, for those who only need the basic info in **about 10 minutes**. A live demonstration of a sifter & explanation of rationale behind compost sifting.
2. A bit longer, for those who are experienced with construction and only want the plans but may have basic questions about them. Copies will be provided on demand, although resource cards are preferred (to save paper & ink). **20-30 minutes**.
3. In depth, for those who want to see the actual (yet abbreviated) assembly process. A partially deconstructed sifter will be put back together. **30-40 minutes**.
4. Bonus material, for the adventurous few interested in trying out a few of the techniques covered in section three. Sawing, drilling, gluing, joining, etc. **As long as it takes**.

Preparation for Building



Lumber:

The sifter design is specifically optimized to maximize strength and stability while minimizing material waste. Only material removed for joinery is discarded, so it's very important to select quality wood & ensure that all cuts are as precise as possible. If you make a mistake it will most likely mean buying another entire board. The benefit is that you pay only for what you build and your sifter should last for many years while needing virtually zero maintenance.

Please take a quick look through the entire document before proceeding any further.

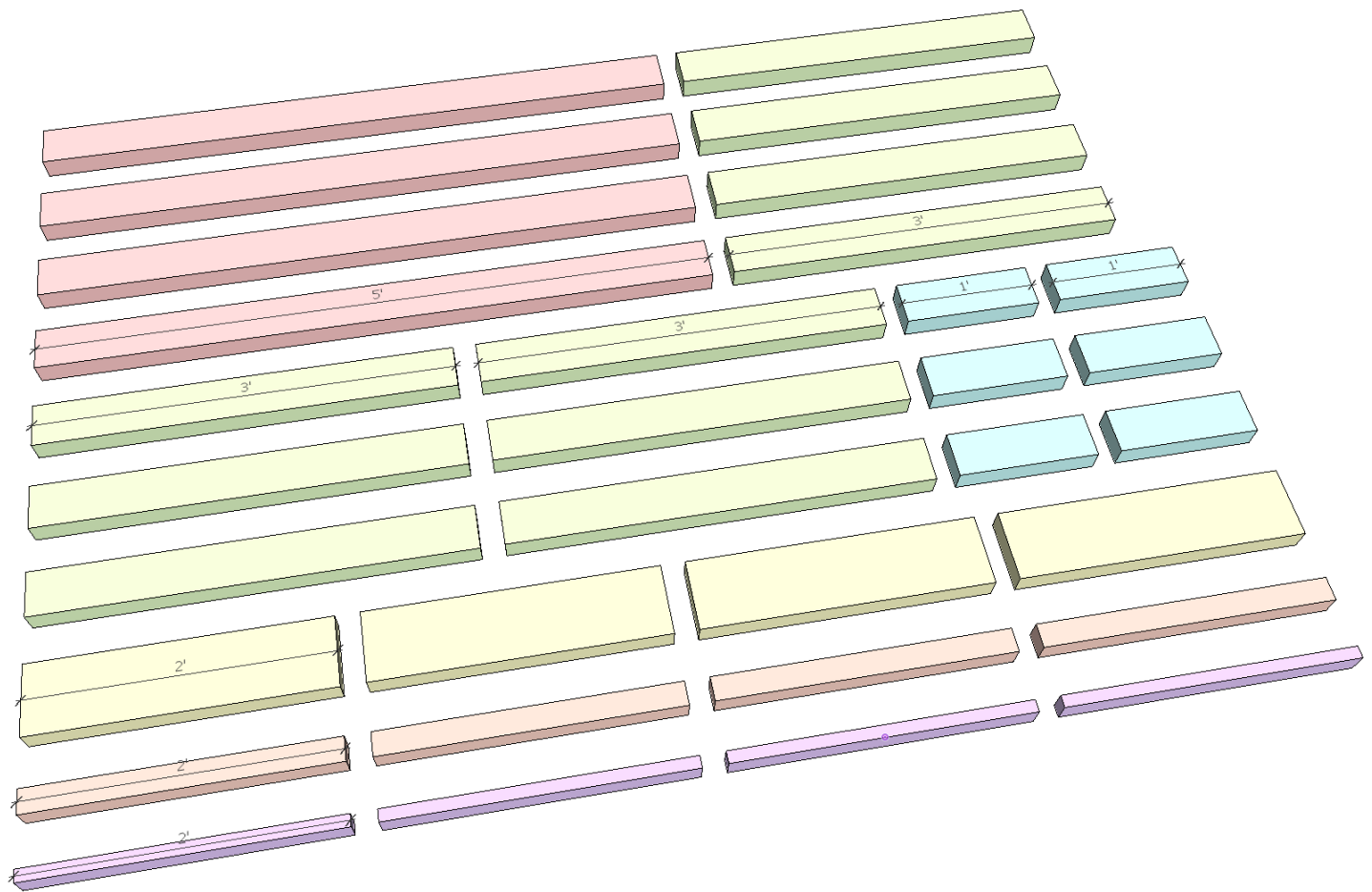
Tips:

Not all boards are created equal. When selecting lumber look through the stacks, try to avoid wood with excessive knots, cracks, & warp. If you have a bunch of scrap wood laying around, save yourself some money!

Required Essentials:

Douglas fir, pine & redwood will all work, pick the wood you prefer. Fir is most economical. All board lengths are 8 feet. 7X 2x4", 1X 2x6", 1X 2x2", 1X 1x2"

Making the First Cuts



Cutting the lumber:

Measure & Mark all lengths, then cut:

Four of the 2x4"s into two segments of 5' & 3' respectively.

Three of the 2x4"s into four segments of 3', 3', 1' & 1'.

The 2x6", 2x2" & 1x2" into four equal segments of 2'.

When all 22 cuts have been made the assorted pieces should match the image above.

Tips:

If you don't have a saw guide, use the edge of the square (pointing away) to make straighter cuts. If using a hand saw cut slowly for additional accuracy. Mark all four sides of each board for even more accuracy. 2x4"s have additional 1/4" length to compensate for material loss due to saw blade width, so cut consistently in the same direction, on the same side of your marks. Remove splinters & sand the edges of all cuts.

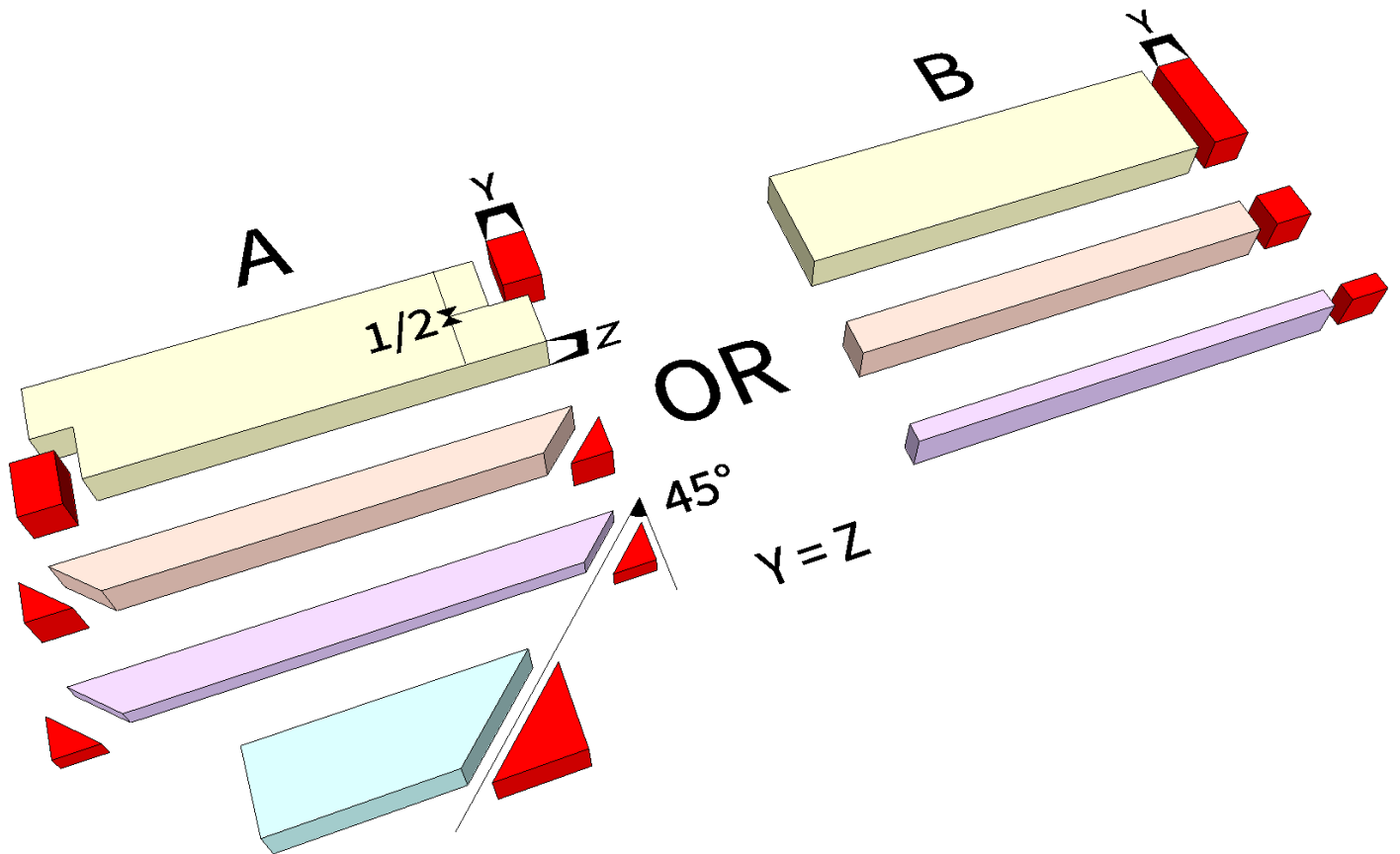
Required Essentials:

Measuring tape or Ruler, Square, Pencil or Pen, Saw

Optional but Recommended:

Saw guide, Razor, 100 Grit Sand Paper.

Second Cuts for the Sifting Box & Bracing



Options:

Depending on your level of carpentry experience there are two different ways to construct the sifting box. Method “A” is more sophisticated and features improved strength while method “B” is quicker and more tolerant of measurement errors. Both are fine. Choose the method that most closely matches your level of comfort with your tools and materials.

Use a measuring tape or ruler to measure the sections marked in red, use a pencil or pen to indicate the material to be removed. Use a hand saw or powered saw to remove the marked sections.

Tips:

Hatch sections to be removed to avoid confusion while cutting. Measure twice, cut once.

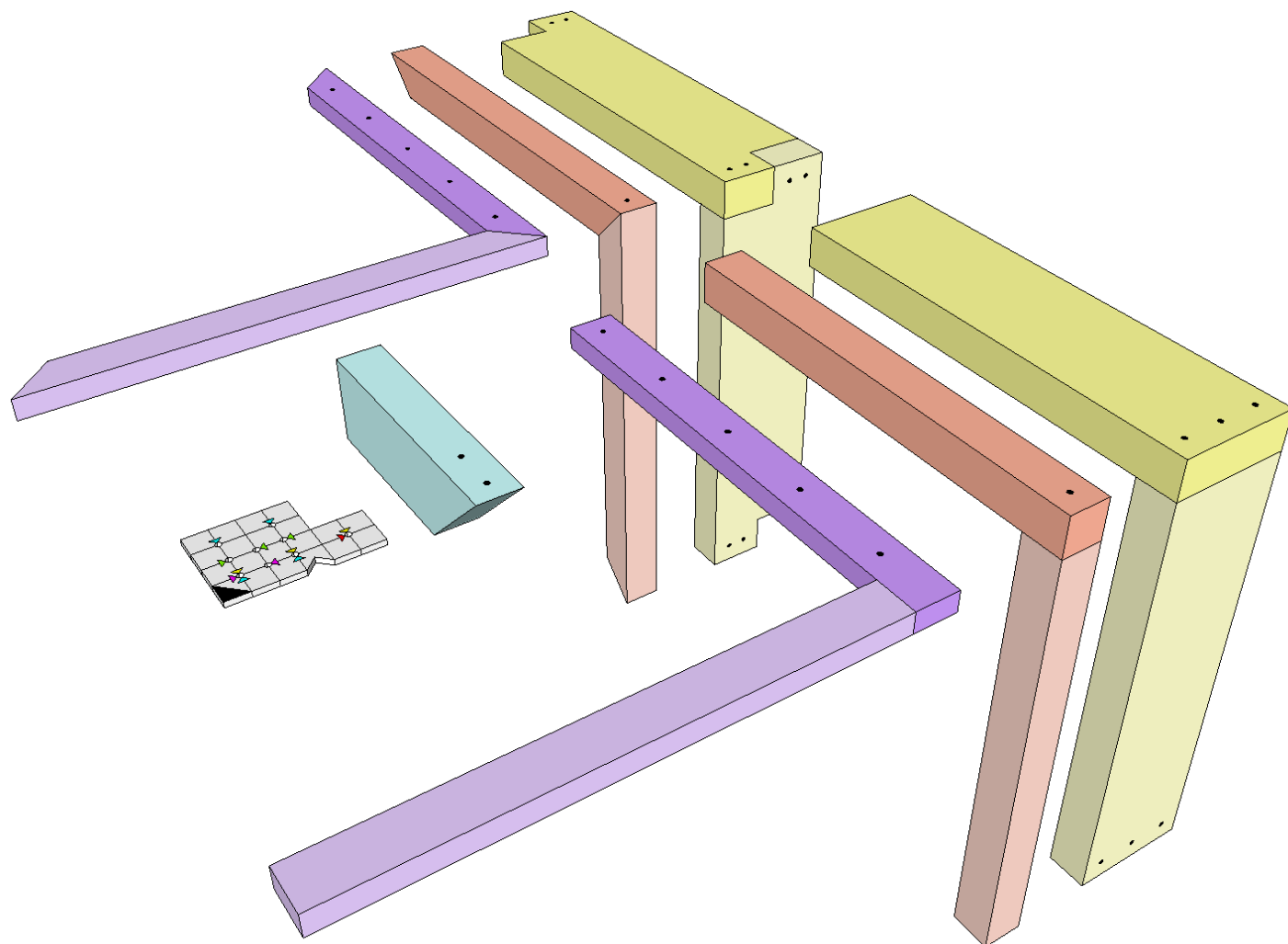
Required Essentials:

Measuring tape or Ruler, Square, Pencil or Pen, Saw

Optional but Recommended:

Saw guide, Marking template

Preparation for Joining the Sifting Box & Sifting Frame



Fitting & drilling:

Depicted above are both “A” & “B” joining methods for the sifting box. Place the pieces on a table or other flat surface for a ‘dry fitting’, use the square to check alignment. If they don’t fit right, now is the time to make adjustments. Pre-drill the holes as shown. Be sure to place at least two adjoining pieces together while drilling to ensure accuracy.

Tips:

Use the included marking template to save time. Use clamps to hold parts while drilling. Draw symbols on adjoining parts to minimize mix ups.

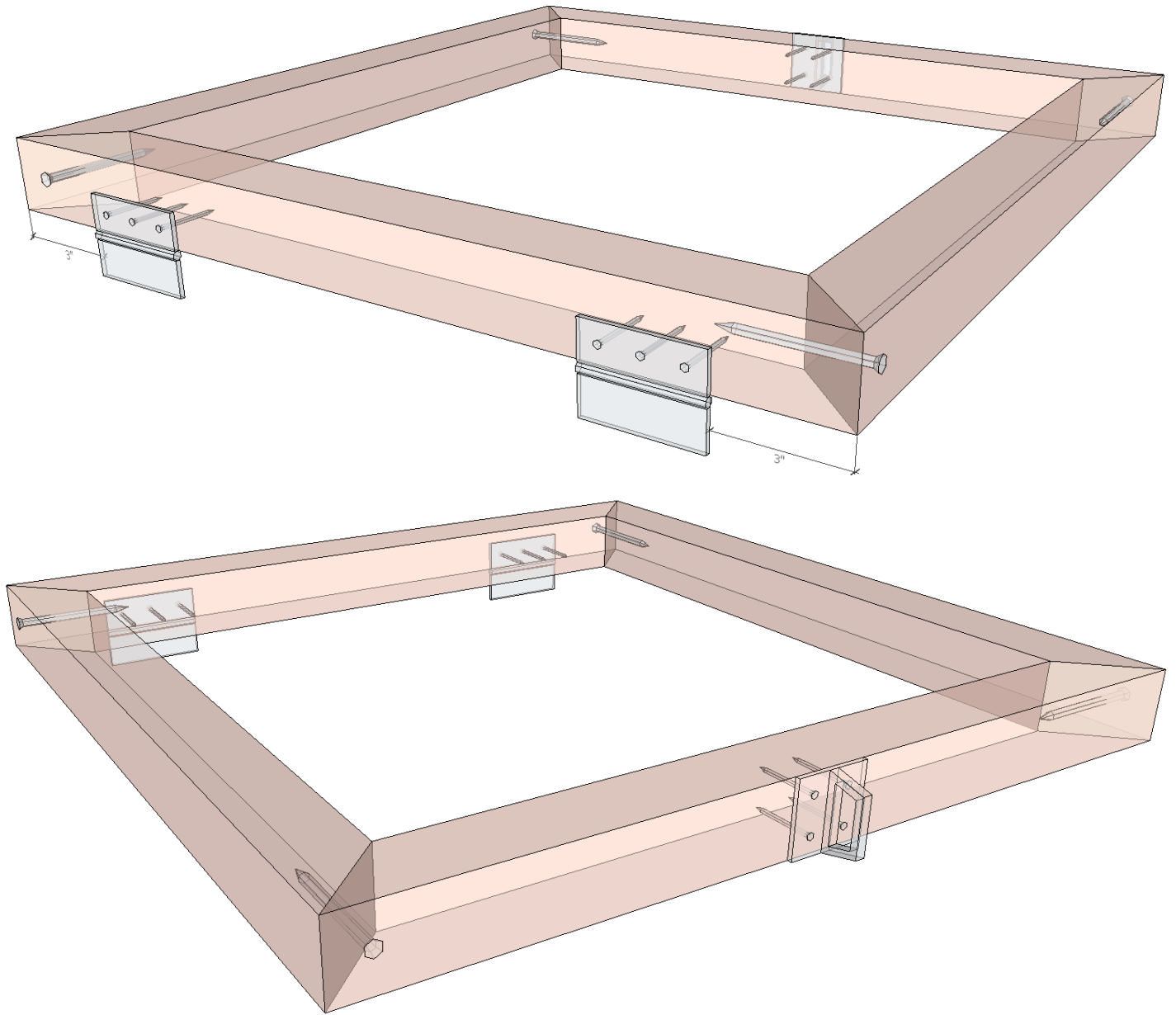
Required Essentials:

Measuring tape or Ruler, Square, Pencil or Pen, Driver/Drill, 1/8” pilot drill bit, driver bit.

Optional but Recommended:

Marking template, Clamps

Joining the Hinged Sifting Frame



Joining:

Join as shown. Use the square to verify angles. Hinges & latch can be added now or later.

Tips:

If you're confident that all measurements & cuts are good, apply a thin even coat of glue to adjoining surfaces before screwing them together.

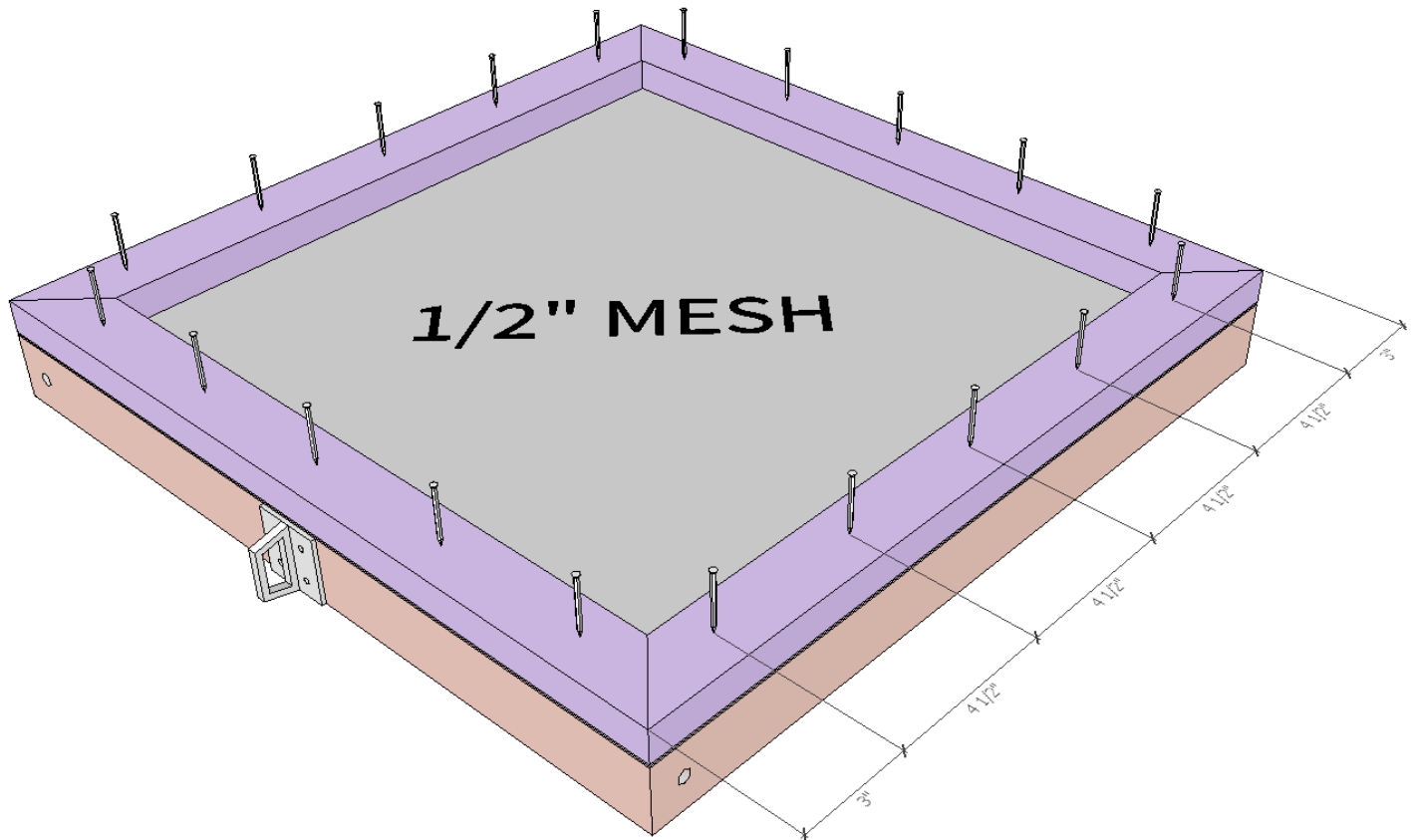
Required Essentials:

Square, Driver, Driver bit(s). 4X 2" wood screws. 10X 1-1/4" wood screws. 3" Narrow Hinge 2 pack. 3-1/4" Fixed Safety Hasp.

Optional but Recommended:

Waterproof wood glue.

Completing the Hinged Sifting Frame



Joining:

Cut and sandwich the mesh between two frame pieces. Align at least two edges to the bottom frame before driving the first screw through the top frame. Join as shown. Hinges & latch should be added now if not already done. If latch screw holes are too close to the frame edge on one side, only use the two bottom holes. Although not visible, hinges should be hanging down in the back.

Tips:

Use gloves while handling the galvanized mesh to avoid cuts and scrapes. Carefully snip off any remaining metal artifacts around all relevant outside edges before affixing the mesh.

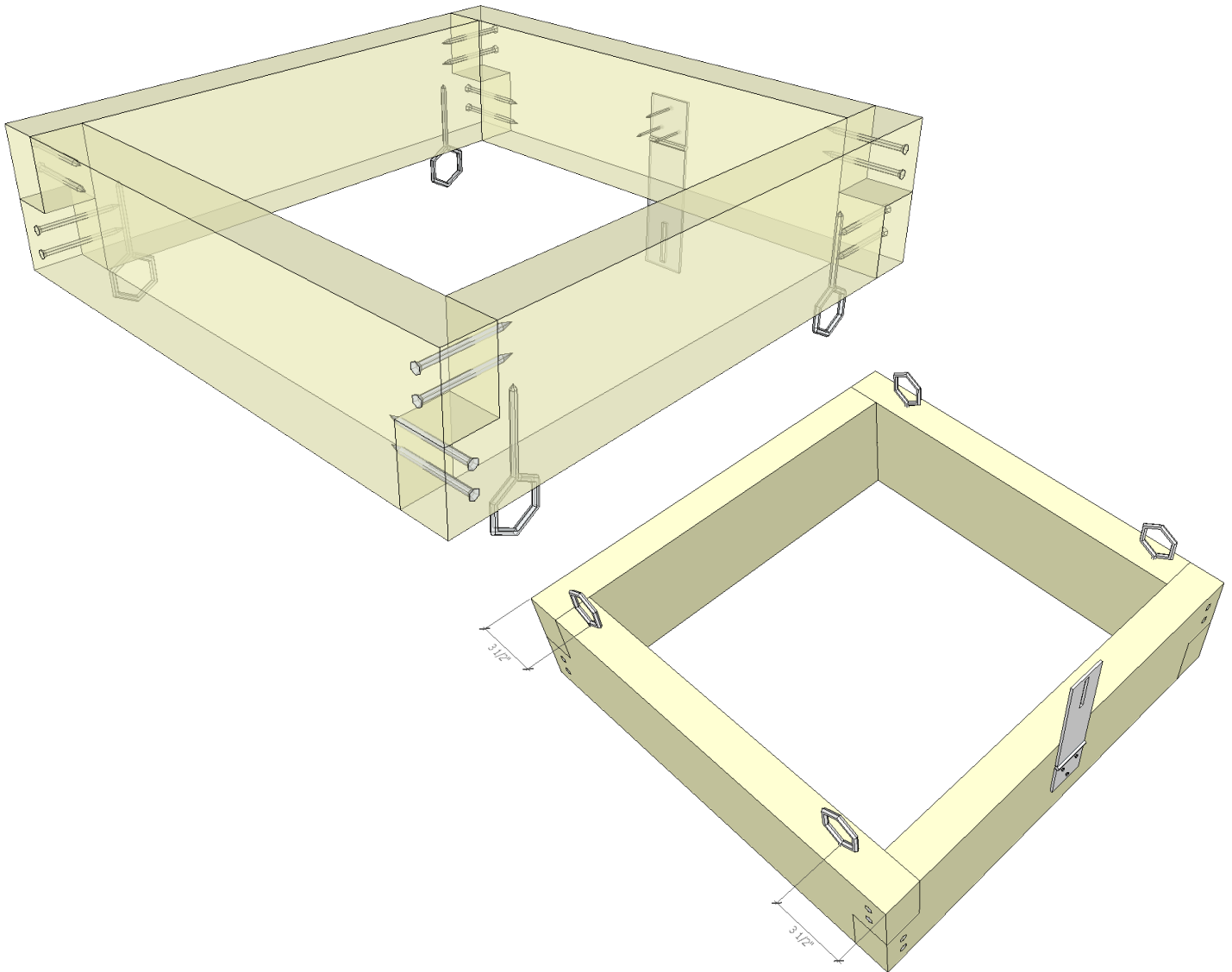
Required Essentials:

Driver, Driver bit. 20X 1-1/2" wood screws, Tin Snips, 2x2' Square of 1/2" galvanized mesh. Hinges, latch.

Optional but Recommended:

Gloves

Joining the Sifter Box



Joining:

Apply glue to adjoining faces. Join as shown. Use the square to check for any problems, small adjustments can sometimes be made by loosening or tightening screws. Lag eye bolts can be installed now or later. Flip over the box and use the 1/4" drill bit to make pilot holes for the bolts. Use the 'metal rod' to screw them into the box.

Tips:

After joining do a dry fitting with the sifting frame to position the latch hasp optimally so that it seats snugly over the staple.

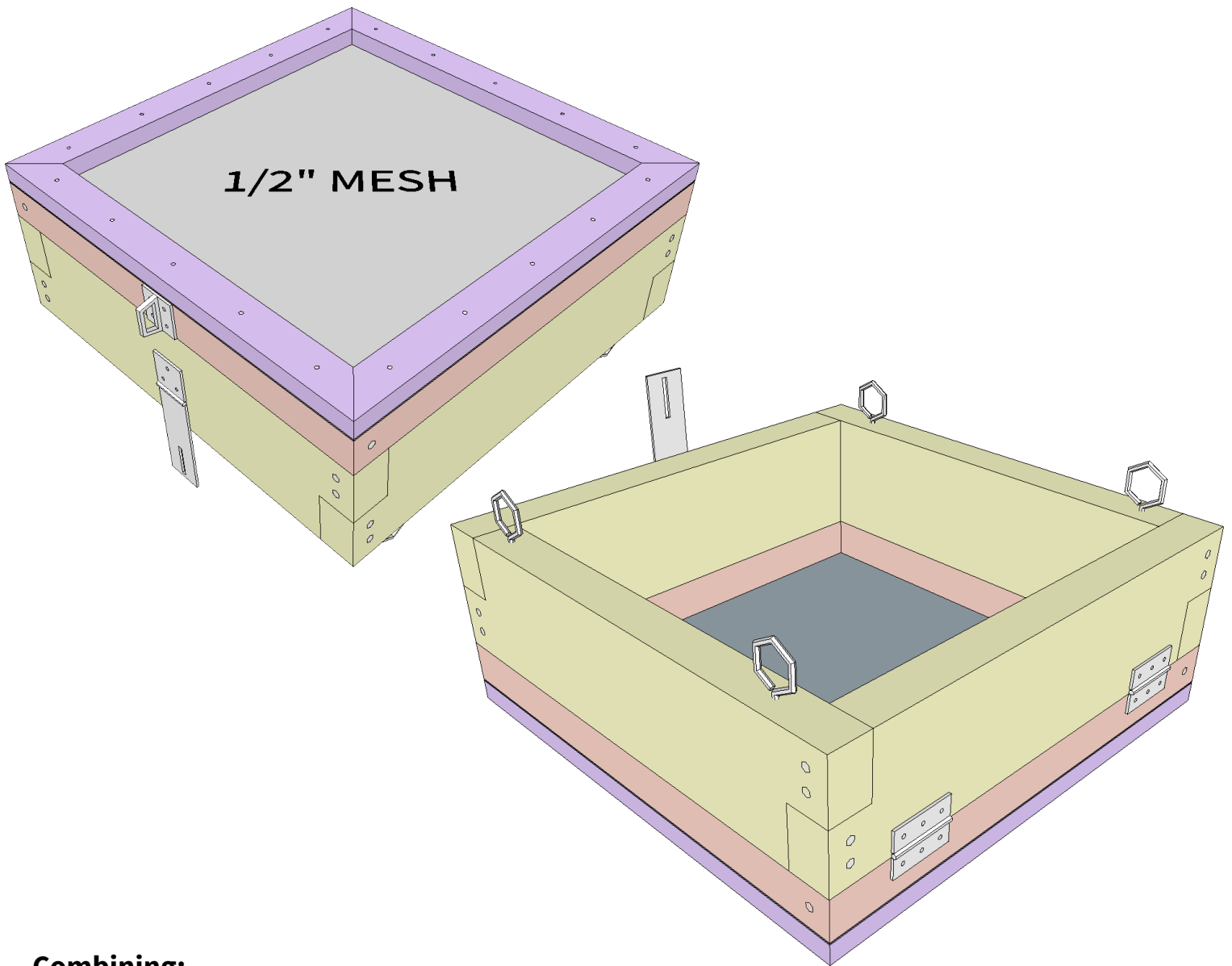
Required Essentials:

Square, Driver, Driver bit. 1/4" Drill bit. 16X 3" wood screws. 3X 1-1/4" wood screws. Latch hasp. 4X 5/16" Lag eye bolts.

Optional but Recommended:

Minimum 5" long metal rod (a standard screwdriver works great), waterproof wood glue.

Completing the Sifter Box



Combining:

Fit the sifting frame onto the sifting box fasten the latch and screw the hinges in place. If you haven't already, now is the time to install the lag eye bolts.

Tips:

Rotate the frame to get the best matching fit. Ideally it fits the same at any rotation, but if not it's much easier to move the hinges & latch than to 'rebuild' the box or frame.

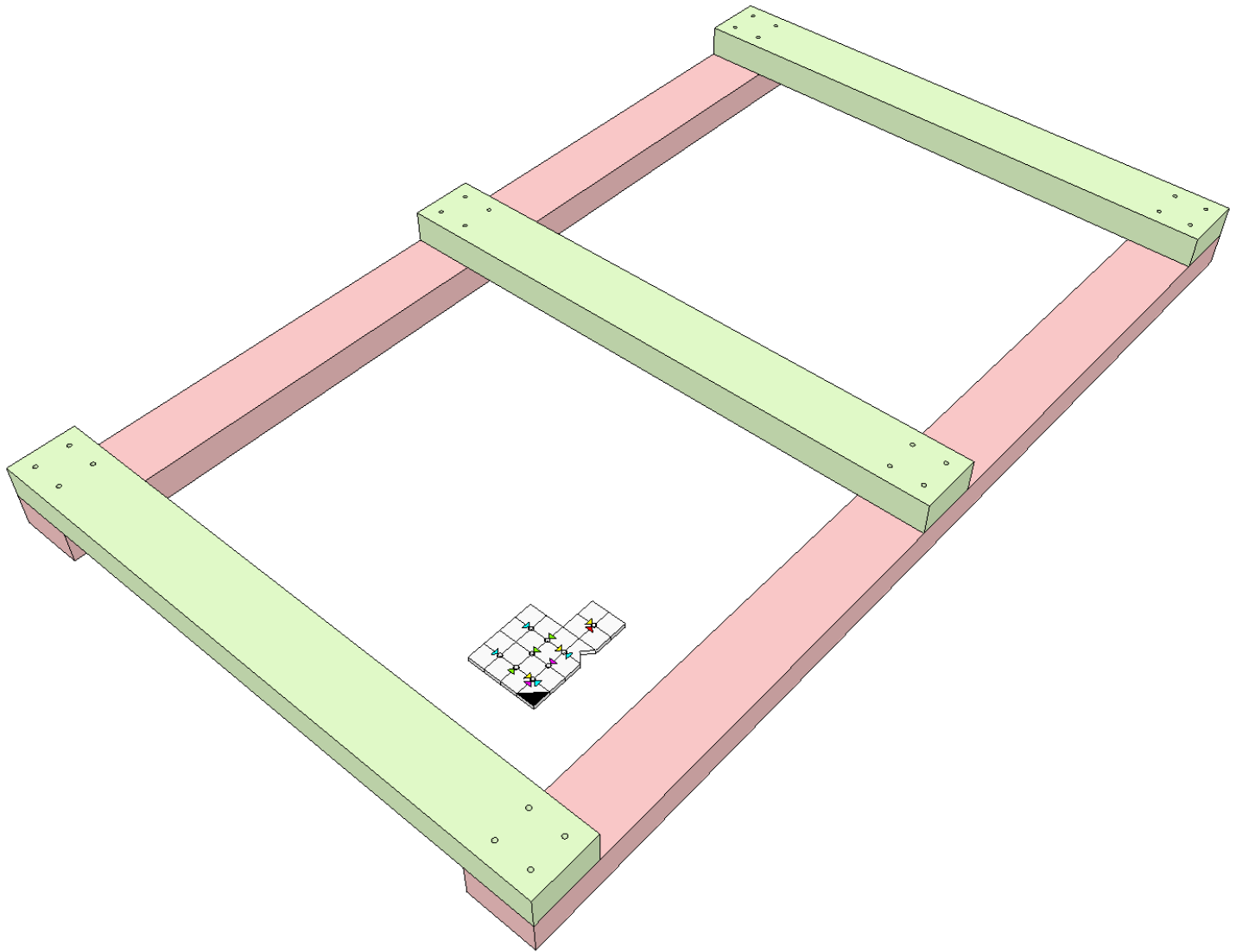
Required Essentials:

Driver, Driver bit. 1/4" Drill bit. 6X 1-1/4" wood screws. 4X 5/16" Lag eye bolts.

Optional but Recommended:

Minimum 5" long metal rod (a standard screwdriver works great).

Joining Sifter Frame Sides



Joining:

Lay the boards down on a flat surface. Use the square to verify symmetry. Join as shown. Two identical sides are required for the sifter frame so this process is repeated.

Tips:

Use the marking template to speed up the pre-drilling process. The second set of boards can be placed directly on top of the first, this will greatly speed up construction and minimize incongruity.

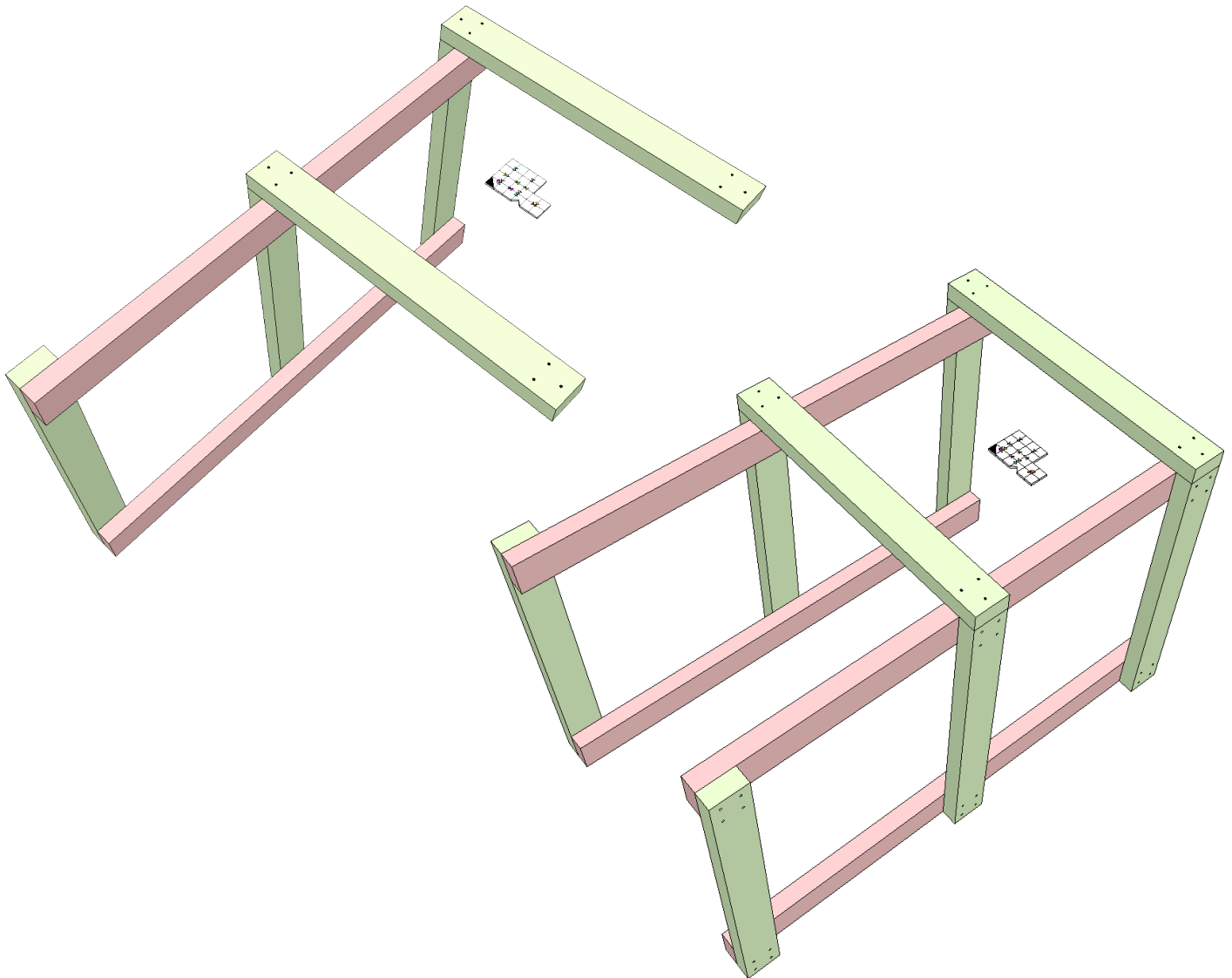
Required Essentials:

Driver, Driver bit. 1/8" Drill bit. 24X 3" wood screws.

Optional but Recommended:

Marking template. Waterproof wood glue.

Joining Both Sifter Frame Sides Together



Joining:

Lean one side up against a solid object, use the square to align the connecting boards, pre-drill as shown, fasten with screws. Once one side is secure, balance the second side underneath the connecting boards. Repeat the joining process.

Tips:

Use the marking template to speed up pre-drilling. Use glue on points of contact for added strength.

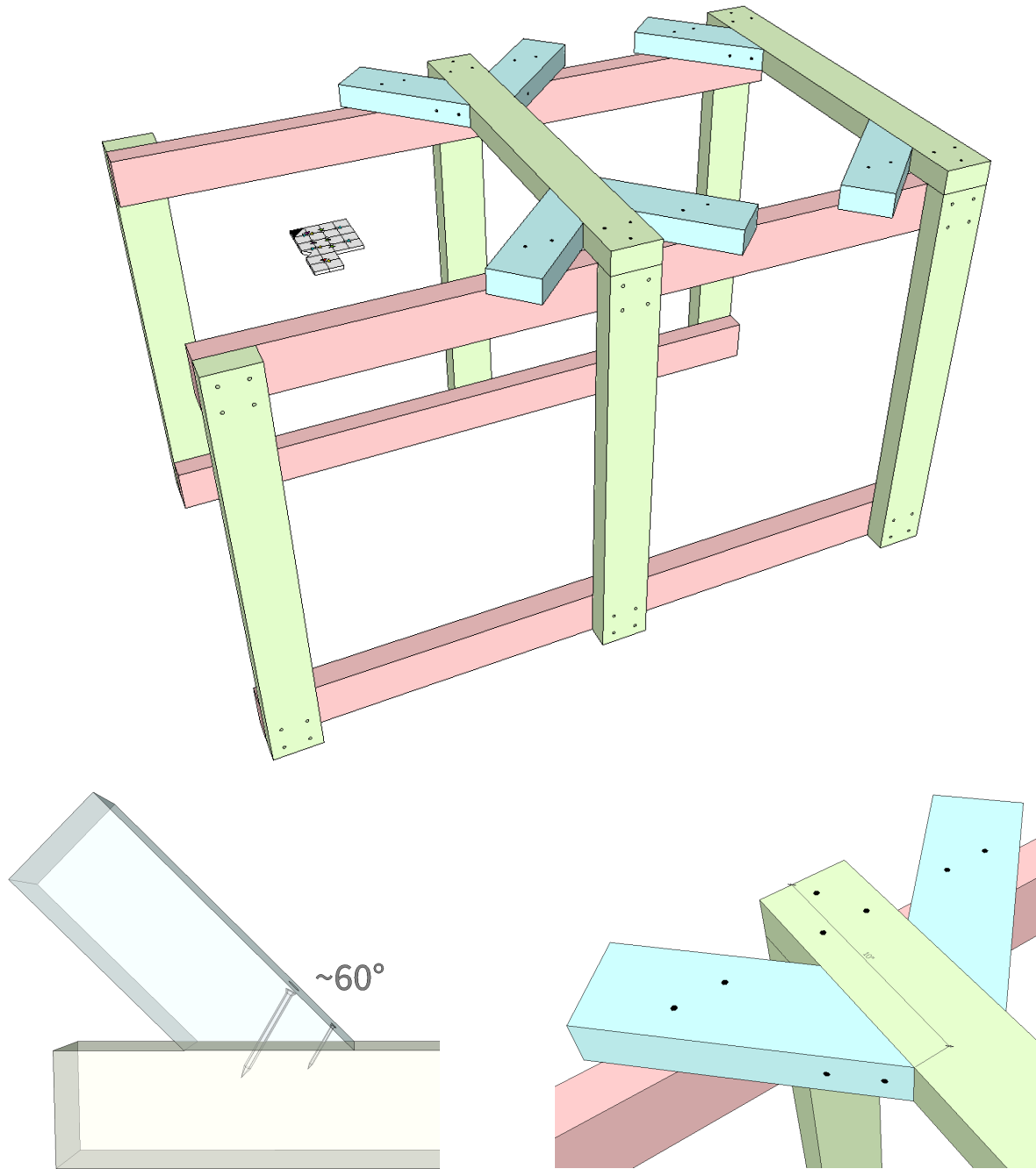
Required Essentials:

Driver, Driver bit. 1/8" Drill bit. 12X 3" wood screws.

Optional but Recommended:

Marking template. Waterproof wood glue.

Reenforcing the Sifter Frame



Joining:

Pre-drill & affix the bracing as shown. Glue if desired.

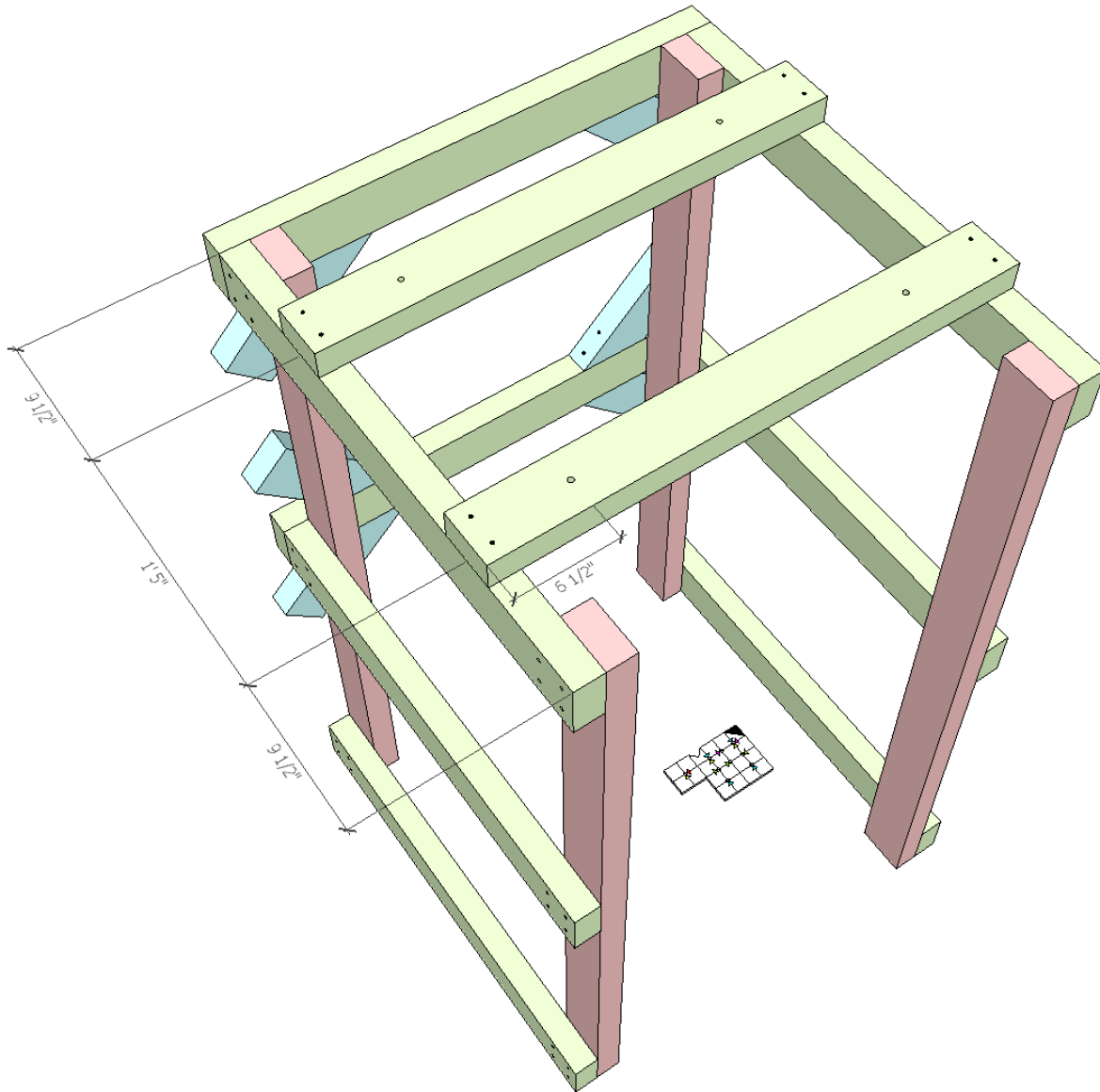
Required Essentials:

Driver, Driver bit. 1/8" Drill bit. 6X 3-1/2 wood screws. 18X 2" wood screws.

Optional but Recommended:

Marking template. Waterproof wood glue.

Completing the Sifter Frame



Joining:

Tip the sifter upright, place the final two pieces on top. Pre-drill and fasten. Glue if desired. Once secure use the 5/6 bit to drill the holes for the eye bolts. These holes will go all the way through the board.

Tips:

Use the marking template to speed up pre-drilling. Use glue on points of contact for added strength. When marking for alignment make center marks rather than edge marks.

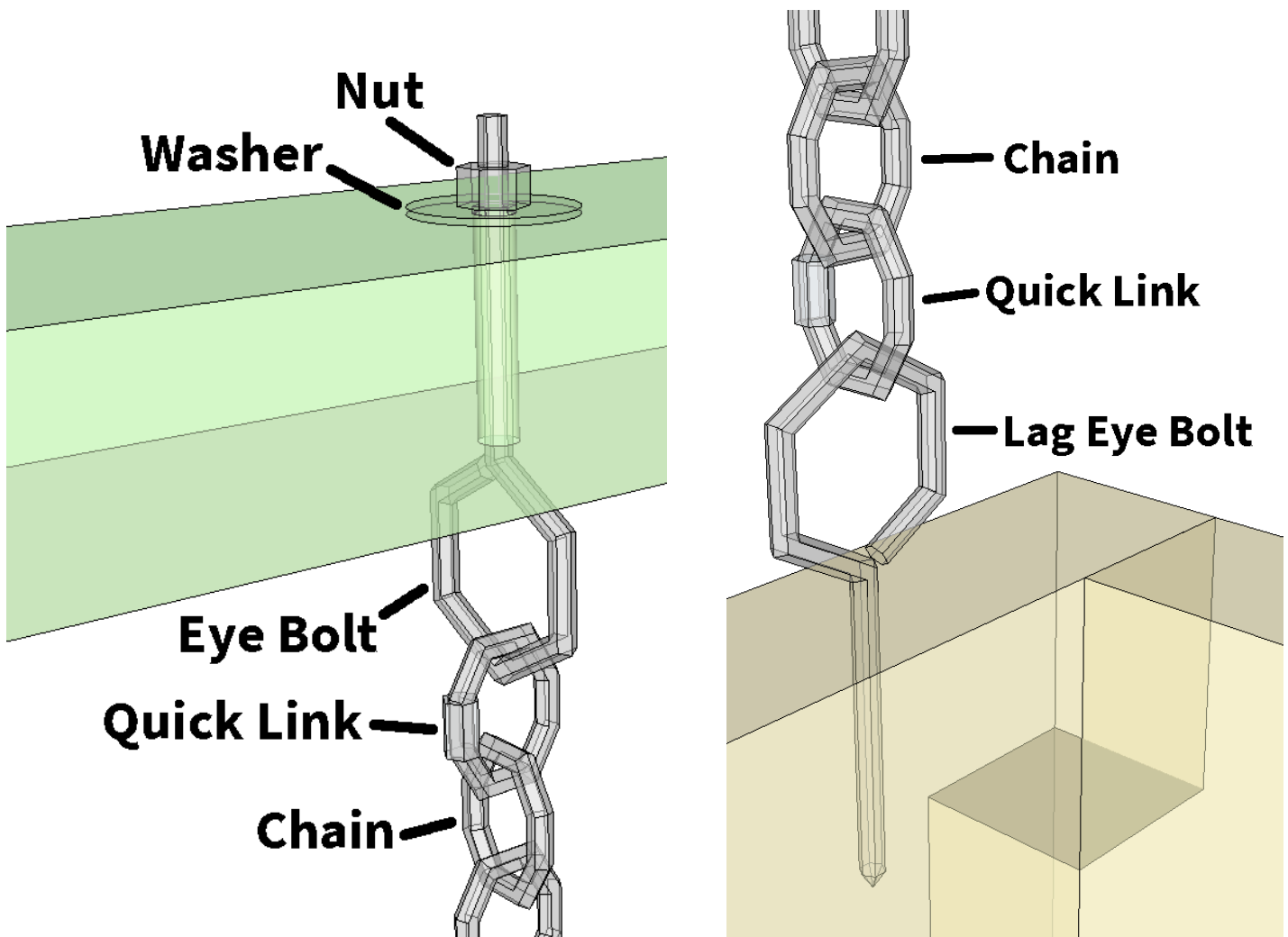
Required Essentials:

Driver, Driver bit. 1/8" Drill bit. 5/16" Drill bit. 8X 3" wood screws. 4X 5/16 Eye Bolt.

Optional but Recommended:

Marking template. Waterproof wood glue.

Linking the Sifter to the Frame



Linking:

Rope is perfectly acceptable, however chain has distinct advantages. Chain is far more durable, and can be cut in uniform lengths. This sifter design uses 31 links of standard chain. Three links are cut which produces four equal lengths each consisting of 7 links. Depending on your needs & equipment you may want to use more or less chain. The only crucial aspect is that the two end links share a common orientation.

Tips:

Get the chain cut into segments when you purchase, save a few cents. If you choose to cut it yourself it's a good idea to wear safety glasses and angle the cutters so the links break away from your body as you cut. Eye bolts include the necessary nuts, make sure they do! If some of the chains are loose, fine tune them by incrementally tightening the eye bolts.

Required Essentials:

31 Links of standard chain. 8X 1/4" Quick Links. 4X 1-1/2" Washer.

Optional but Recommended:

Bolt cutters (if you intend to cut the chain yourself).

Materials List & Marking Template

Tools:

Saw
Driver/Drill
Square
Pencil
Measuring Tape
1/8" Drill Bit
1/4" Drill Bit
5/16" Drill bit
Driver Bits
Tin Snips

Optional:
Marking Template
Clamps
Razor
Saw Guide
100 Grit Sand Paper
Wood Glue
Gloves
Bolt Cutters

Hardware:

8X 1/4" Quick Links
4X 5/16" Eye Bolts
4X 5/16" Lag Eye Bolts
3" Narrow Hinge 2 Pack
3-1/4" Fixed Safety Hasp
4X 1-1/2" Washers

Fasteners:

6X 3-1/2" Wood Screws
60X 3" Wood Screws
22X 2" Wood Screws
19X 1-1/4" Wood Screws
20X 1-1/2" Wood Screws

Lumber:

7X 2x4"
1X 2x6"
1X 2x2"
1X 1x2"

