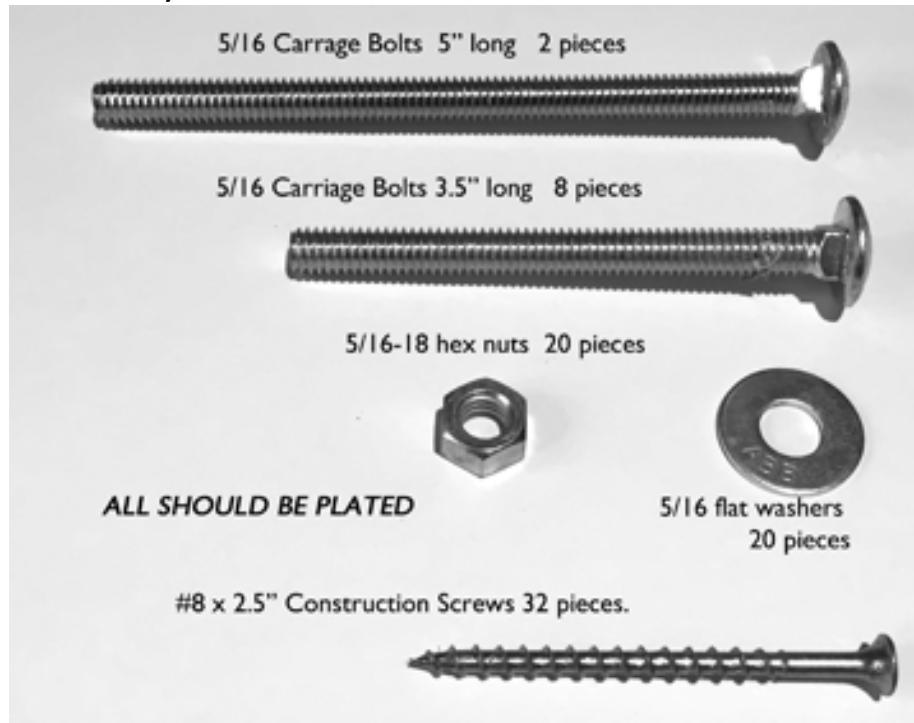


PLANS FOR THE PUBLIC BENCH BENCH

Material you will need:



Each bench requires about 7 ½ pieces of 2 x 4 x 8' lumber. I get kiln dried pine at Home Depot (Contractors division if you have one) for about \$2.50 a piece. These come with a generous chamfer on the edges that sits well and saves on sanding.

(NOTE: unless you are making just one bench you will probably want to make a set of templates for the braces A thru F. I use **good fur** for these and you will need 2 8 footers for this) Total cost for materials per bench is around \$23.

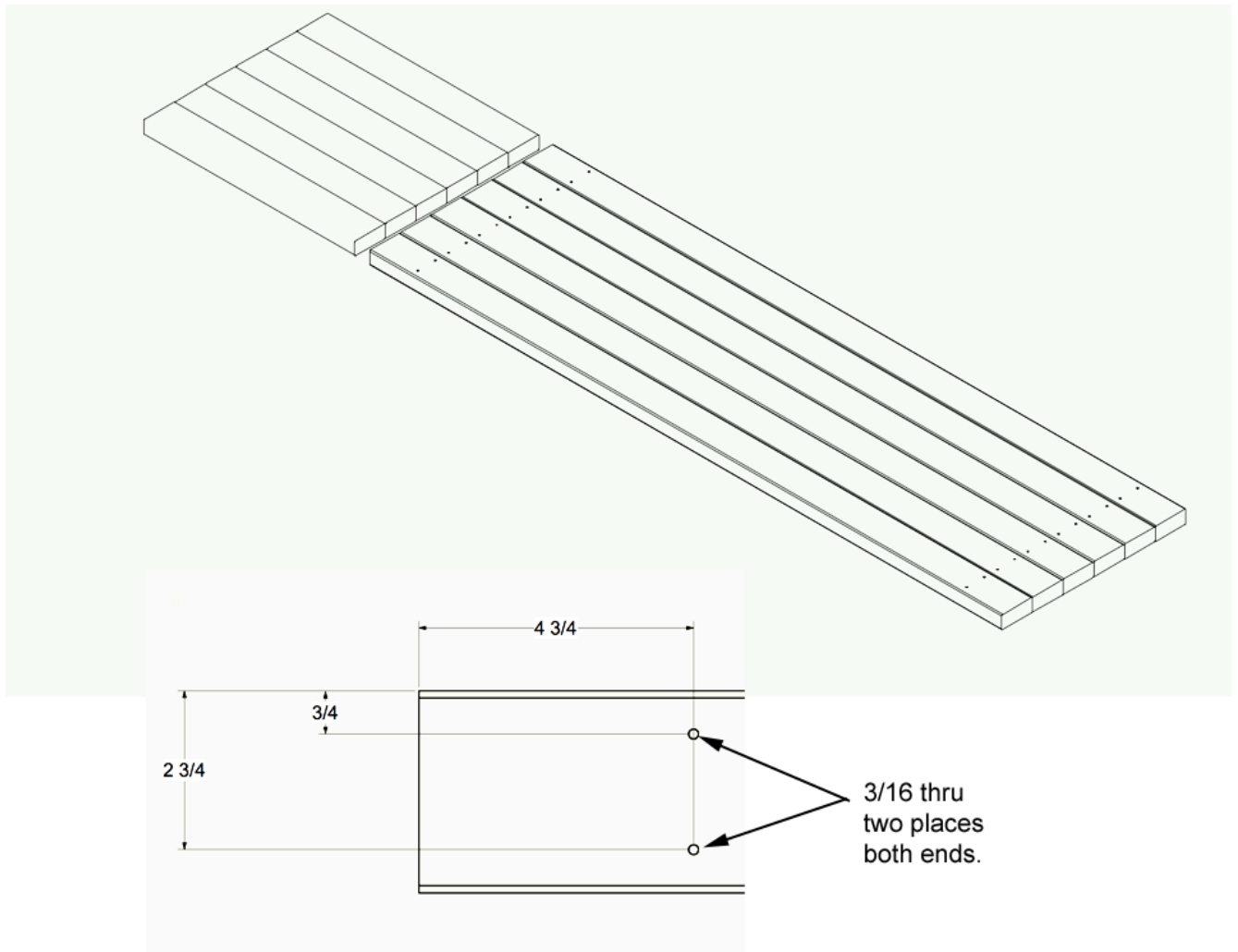
A NOTE ON PICKING LUMBER. Where ever you get your lumber you will need to pick through the pile. All 2 x 4's are not created equally. 1.5" x 3/5" is the supposed dimensions, but not always. Therefore the templates all reference from the top surface. Look for straightness, at lease 6 ft., and of course chips and splinters, and other flaws you won't want to sit on. The upper edge of the back and the leading edge of the seat are most susceptible to abuse and where you'll pickup splintering. When assembling pay particular attention to them.

REQUIRED TOOLS: a **reciprocating saw**, with a **flat face** (not a saborsaw) 2 sawhorses. **A hand drill**. Phillips head bit. A tape measure with 1/32 inch gradations. A ½" wrench. Hammer. Contractors square. 5/16 and 3/16" dia drill bits. Sandpaper. 120 grit.

NICE TO HAVE: an impact screwdriver/nut driver with ½" socket. Small bubble level. An orbital sander with 120 grit disks.

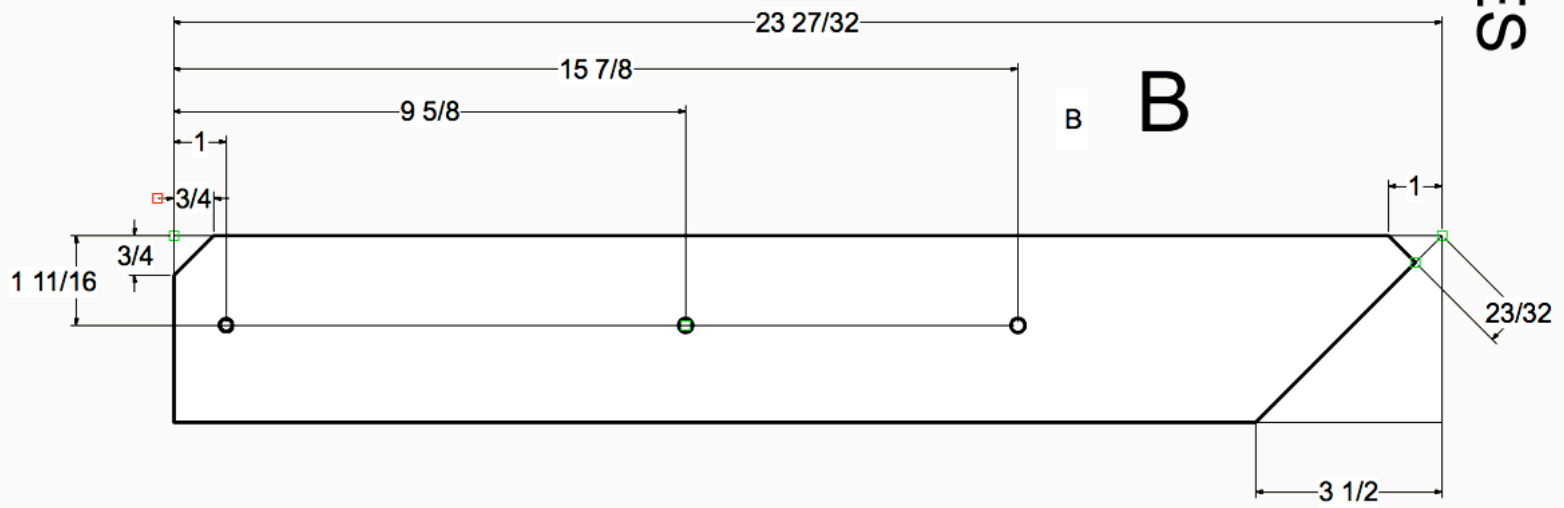
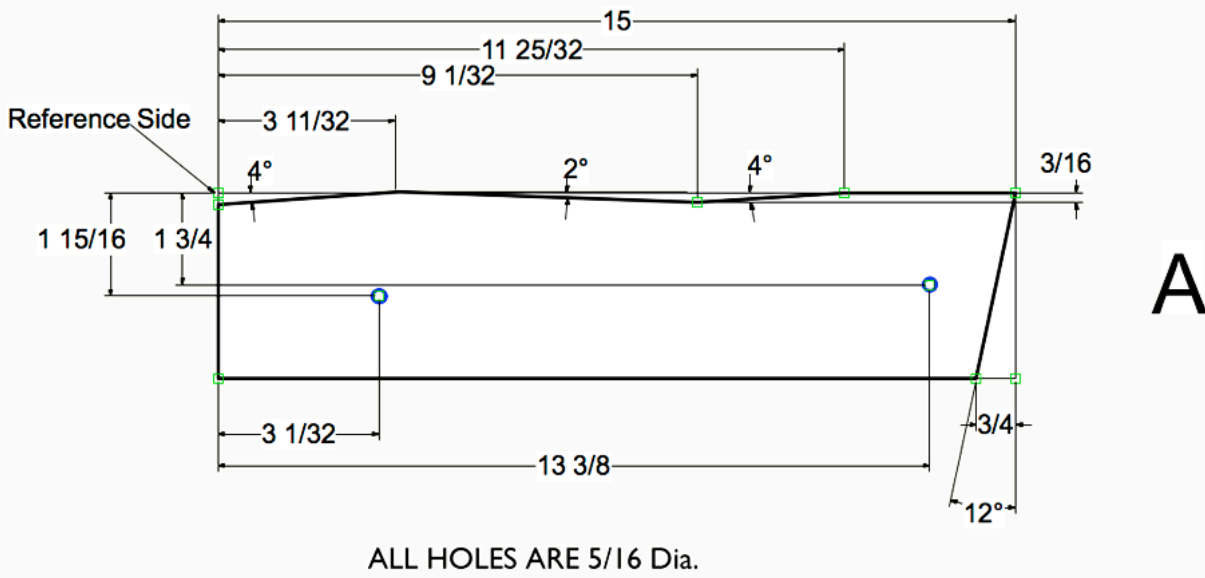
LENGTH: I generally make the benches 6 ft long. That will seat 4 people, (or 3 average Americans, sadly) or two strangers. You can choose any length less than this depending on where the bench will go.

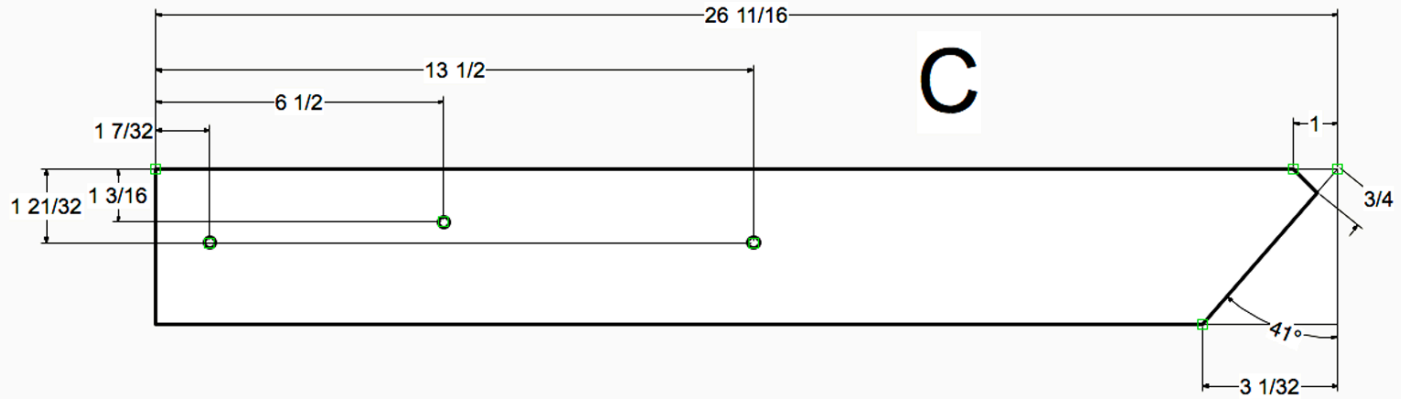
Lay six boards side by side and line up the edges with a square. Try to keep them exactly the same length when cutting and to align the holes as these are used as references at assembly.



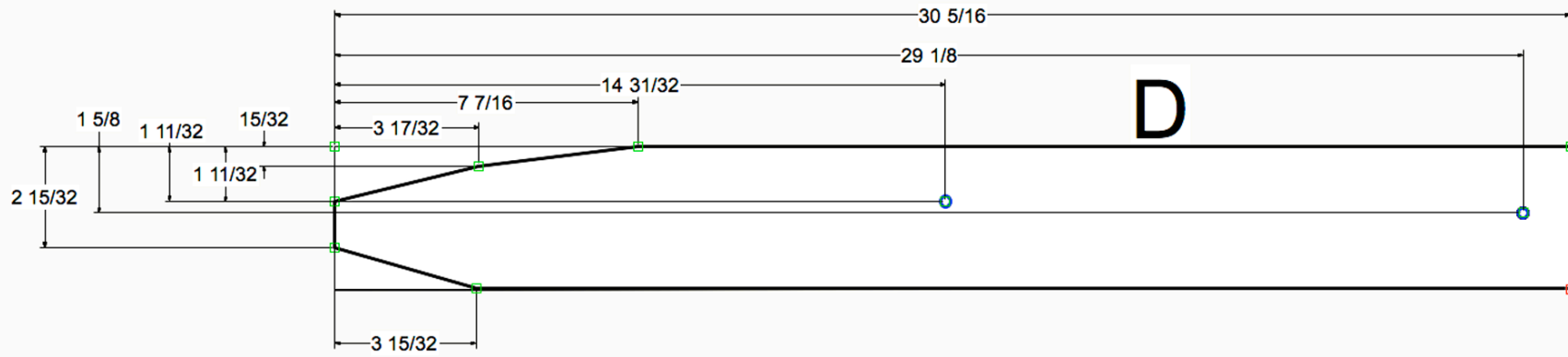
NOTE: As you will make all braces after the first set, using the first set as a template, I suggest you take care. Layout the boards completely before cutting as some of the reference corners are removed in the process.

BRACE TEMPLATES

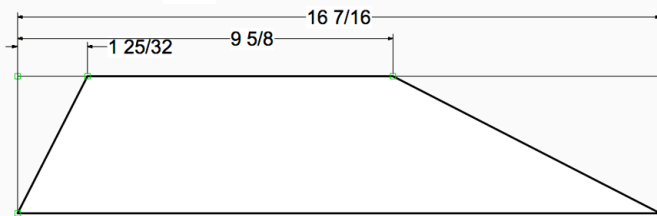




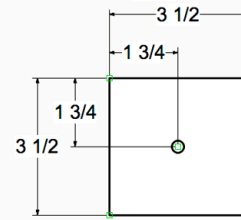
ALL HOLES ARE $\frac{5}{16}$ Dia.



E

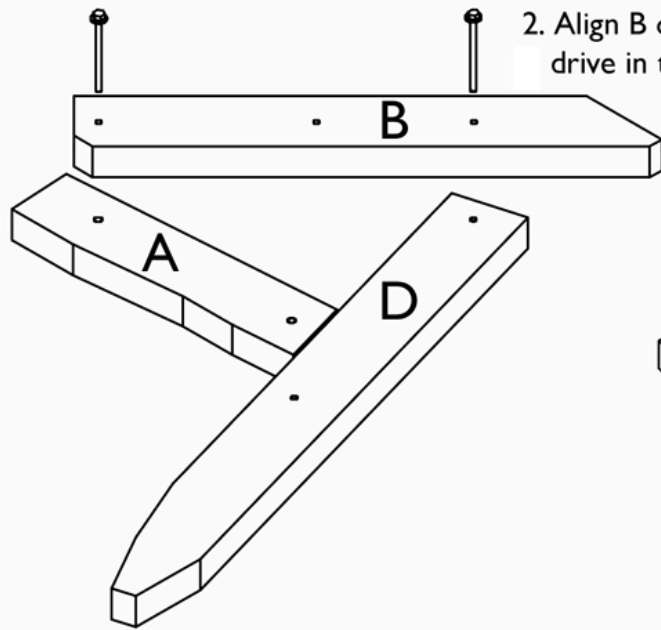


F

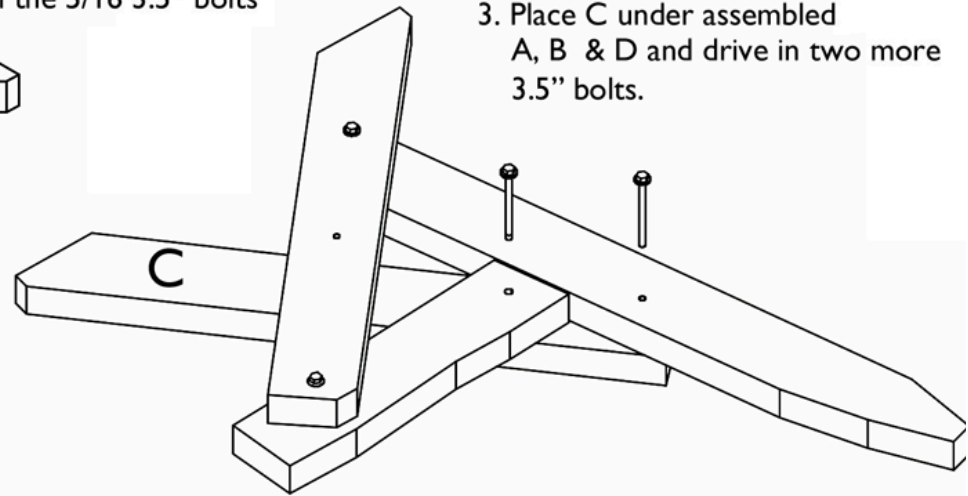


ALL HOLES ARE $\frac{5}{16}$ Dia.

1. Lay A & D flat on the saw horses

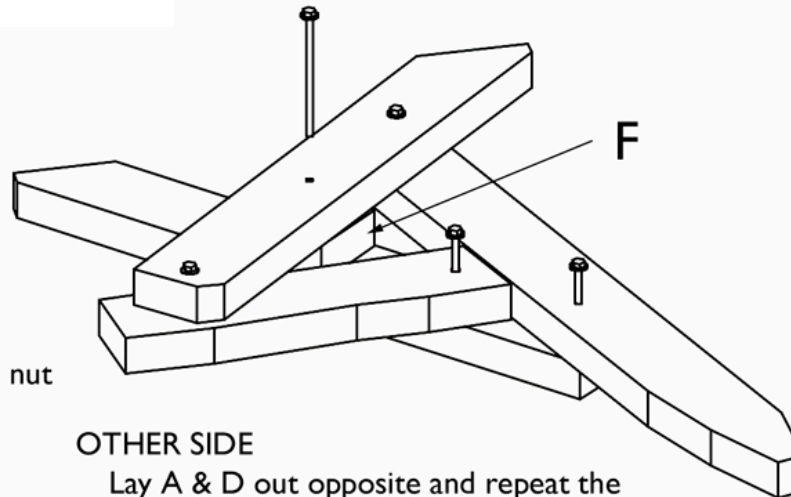


2. Align B over these and drive in the 5/16 3.5" bolts



3. Place C under assembled A, B & D and drive in two more 3.5" bolts.

4. Place F between B & C and drive in the 5" bolt. (You can eyeball the alignment or if you have a long piece of 1/4" round use it to align everything and drive it out with the 5/16 5" bolt)



5. Flip the Assembly over and place a 5/16-18 nut and flat washer on each bolt and tighten.

OTHER SIDE

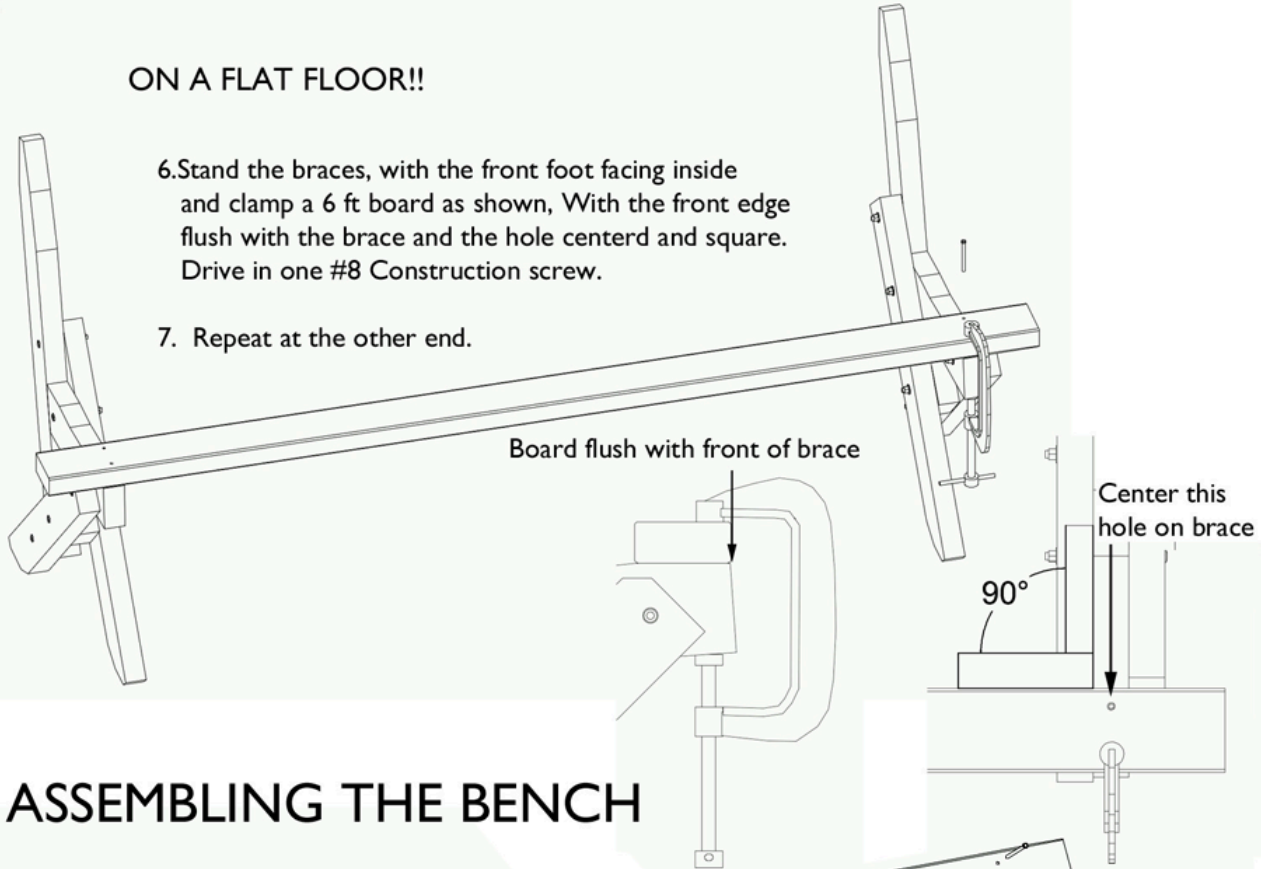
Lay A & D out opposite and repeat the process.

Brace Assembly Notes

ON A FLAT FLOOR!!

6. Stand the braces, with the front foot facing inside and clamp a 6 ft board as shown, With the front edge flush with the brace and the hole centered and square. Drive in one #8 Construction screw.

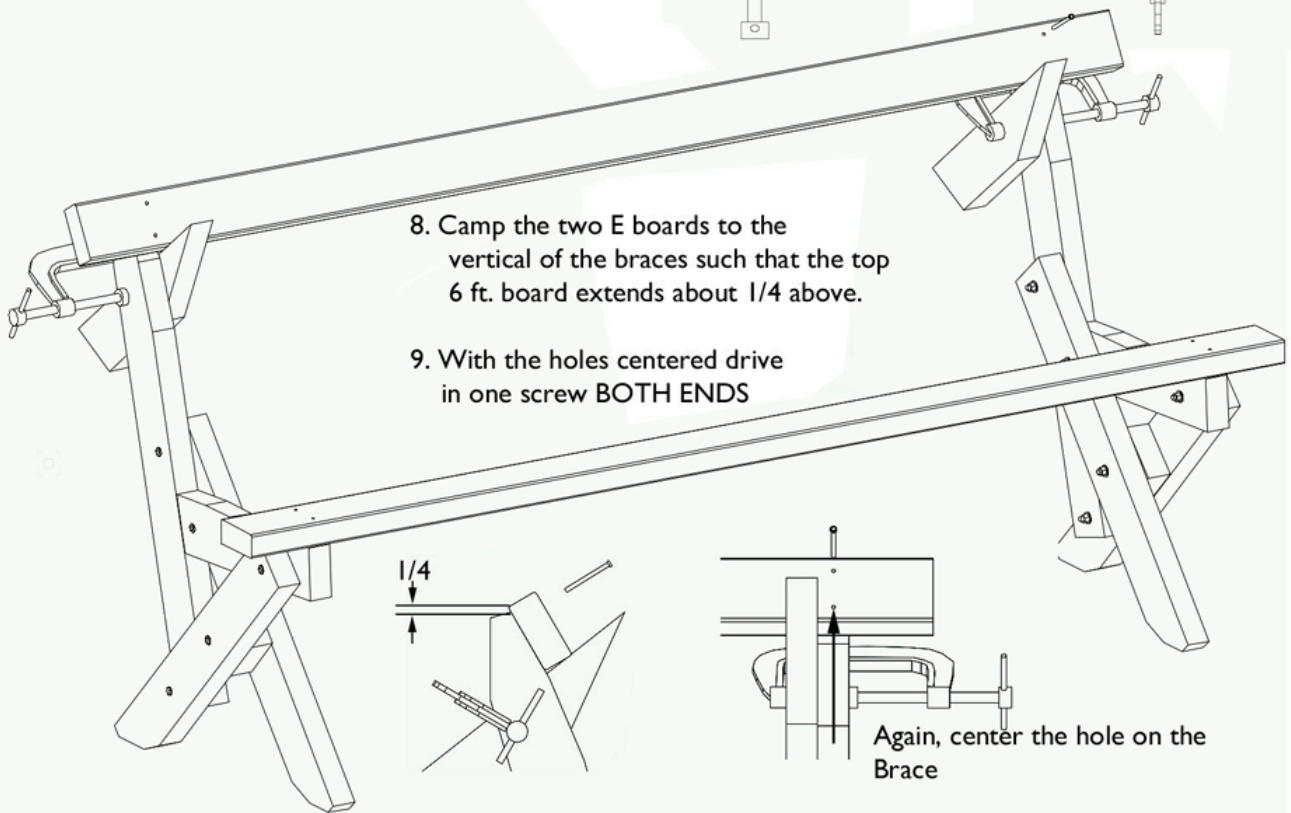
7. Repeat at the other end.

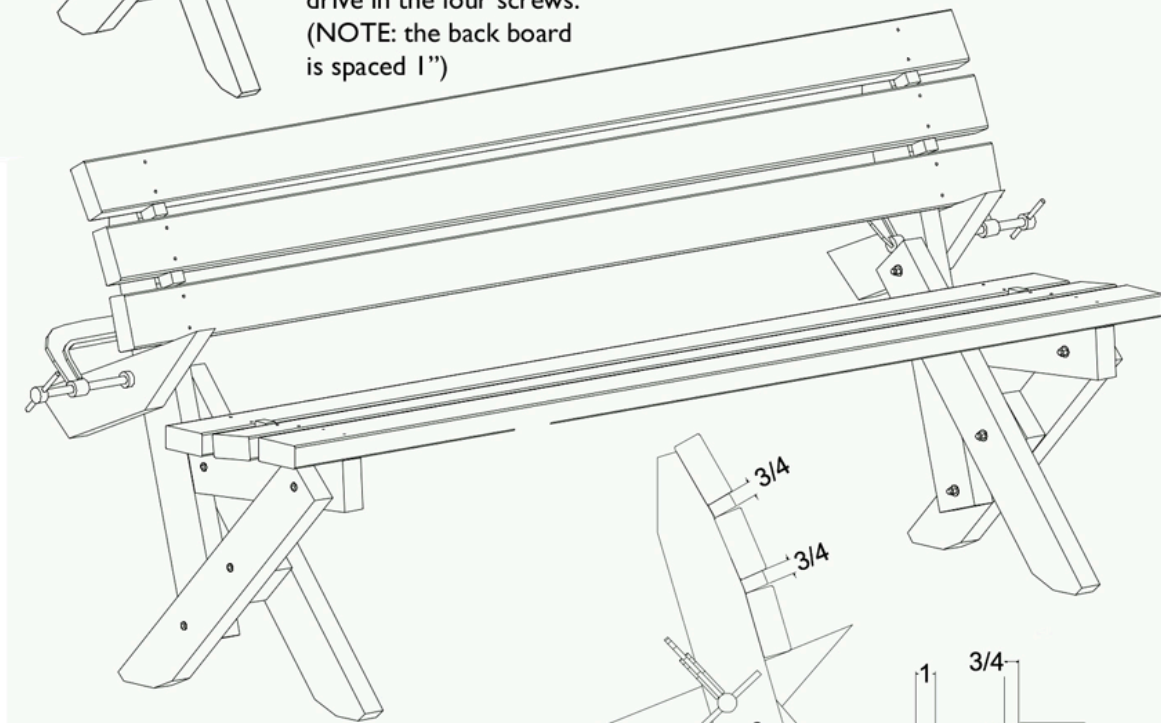
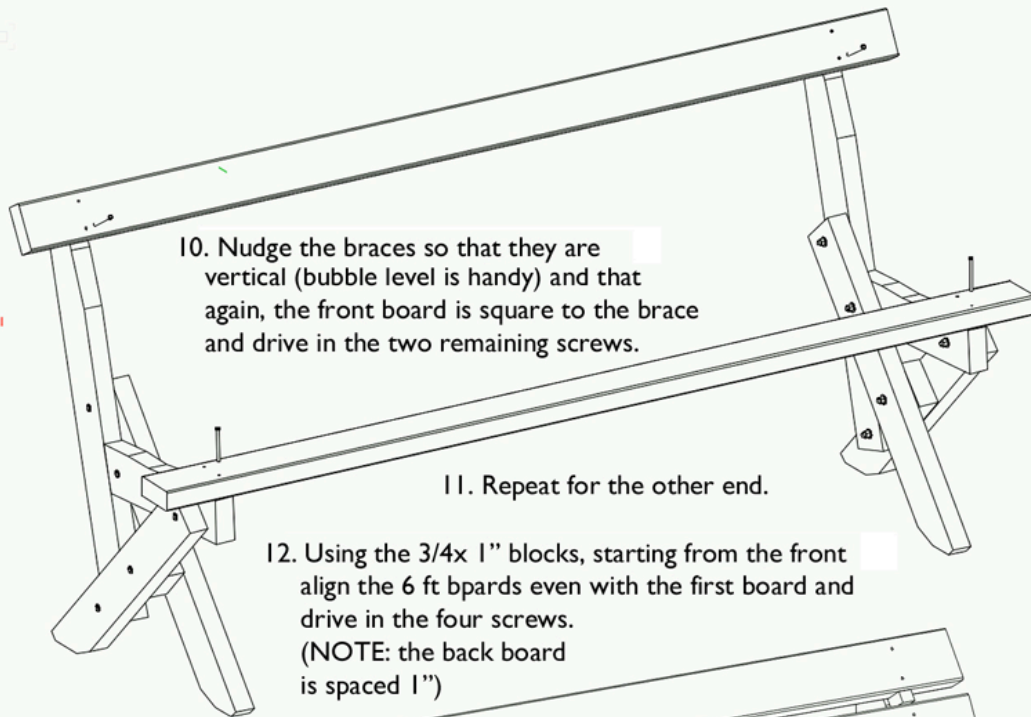


ASSEMBLING THE BENCH

8. Clamp the two E boards to the vertical of the braces such that the top 6 ft. board extends about 1/4 above.

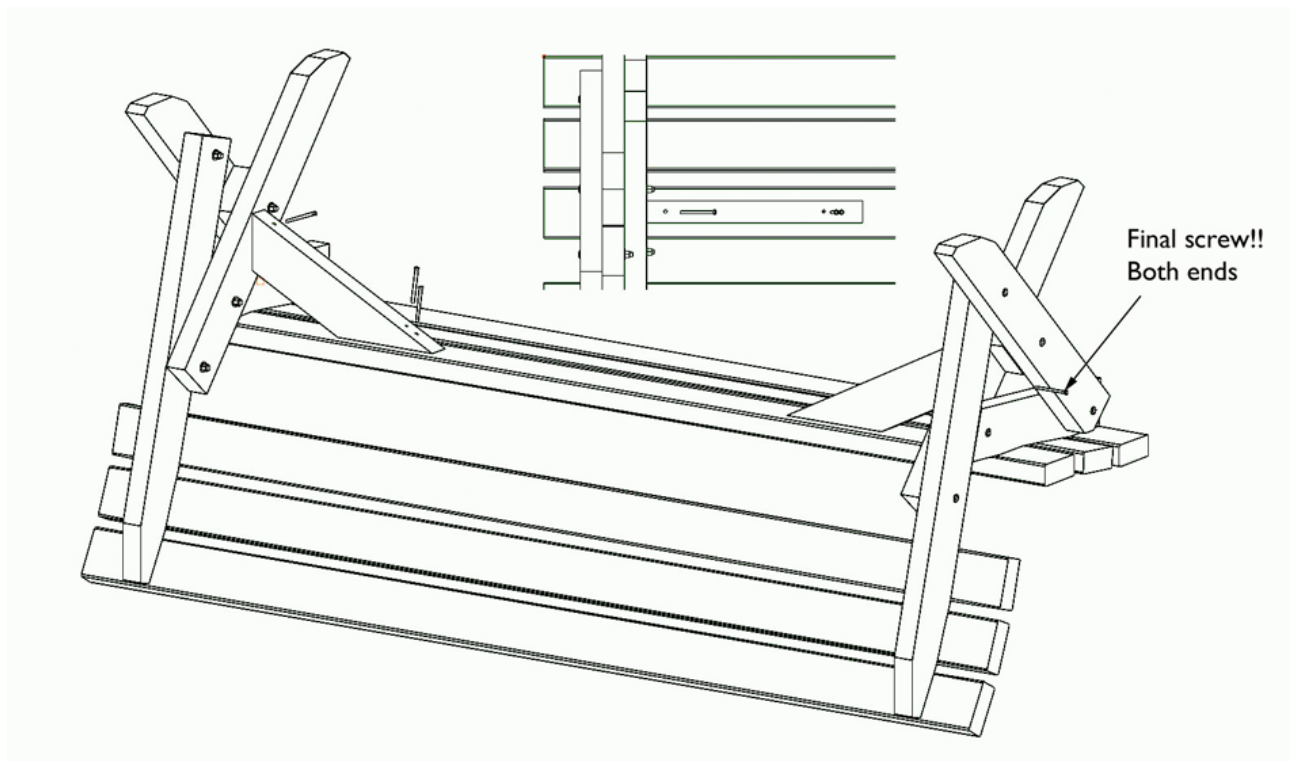
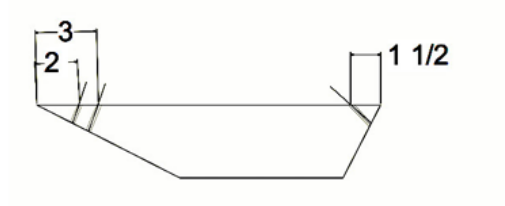
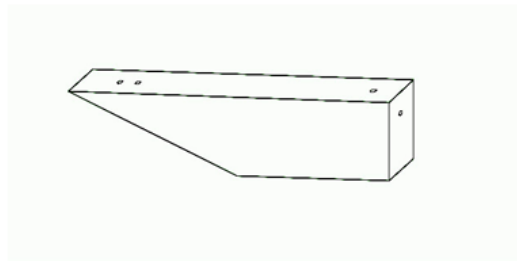
9. With the holes centered drive in one screw BOTH ENDS





ALMOST DONE!

14. Take a seat, Really, Set down and insure that the four feet touch the ground evenly.
If it is not, place a piece of 1x4 under the foot opposite the gap and sit down HARD.
15. When level turn the bench upside down,
16. With a 3/16 drill bit drill releaf holes in the pieces F,
17. Position these braces on the last seat board against, the front foot as shown.
Drive the three screws in , Both Sides.
18. Lastly, eyeball a final screw in from the end of the bench through to the brace.



At this point, as it's on it back anyway, I sand the sharpness off the feet. The optional orbital sander works really well from this point on.

I then set it back upright and take the edges of the slates and anything that might snag and go over anything that gets set on or leaned against.

At this point you have a bare bench that will weather nicely, with a little sanding as the grain sometimes opens over time. One note, if you leave the bench on dirt, the bottoms of the feet very slowly deteriorate and in a dozen or so years the bench may be a couple inches shorter.

As to PAINTING: What I do is, first I fill anything blemishes on the used surfaces with vinyl spackle, sand, two coats of good primer, and a finish coat of a color or to depending on it covers. I've found Kelly-Moore exterior semi-gloss to hold up best. I use it for the graphics as well, and then for public benches I get their epoxy graffiti clear sealer, but it's expensive.

Good luck and if you have any questions or find types or missing dimensions, please contact me so I can fix them. My dream is little groups of elves all over the world sawing away making benches.

Chris Duderstadt
The Public Bench Project