

Construction of the Safety Bench

3 pages total

Materials for each bench: Standard or 1/4 Scale.

All lumber was CCA Pressure treated for durability. We purchased it in 8' lengths for handling convenience but if you wish to minimize waste buy the longest lengths possible.

Quantity in 8 foot lengths Size

3 pieces 2X6

2 1/2 pieces 2X4

2 1/4 pieces 1X4

1/2 piece 1X6

Hardware:

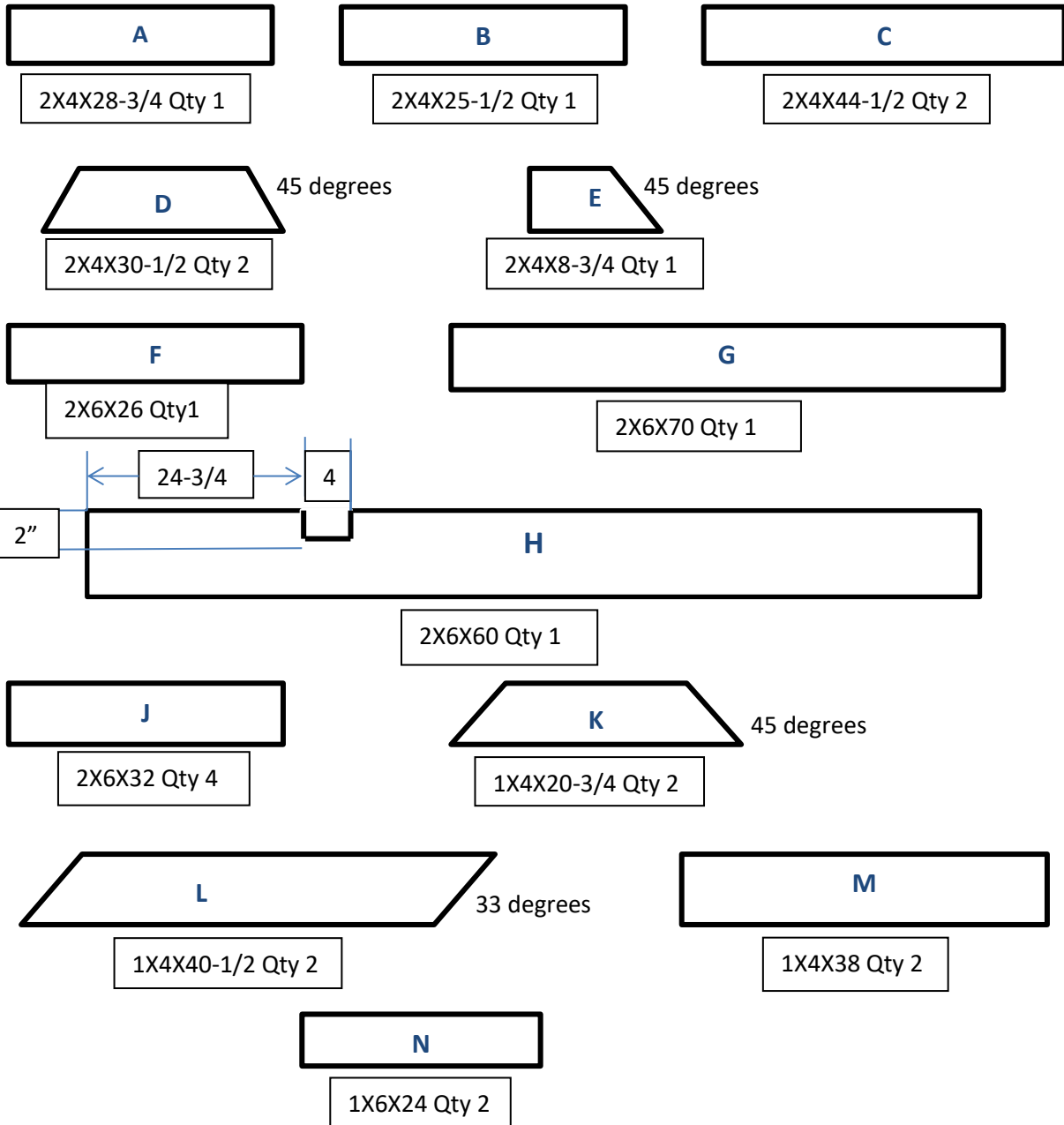
1/2 lb. #8 all weather deck screws 3" long

1/8 lb. #8 all weather deck screws 2" long

T-50 staples

Other

Scrap carpet to act as a cushion on the wing restraints.



Pre-drill all screw holes with a 7/64 drill to prevent the wood from splitting.

Start by laying 2 pieces of part **J** down. Lay down part **G** next to it. Lay down 2 more pieces of part **J** next to the part **G**. Make all pieces flush on one end and space each seam between the 5 boards with the thickness of the body of a deck screw. This will allow for swelling of the wood. On the flush end lay down flush on the front and flush on the ends the 2x4 part **A**. Use the big framing square and square everything up particularly on the front. Put in 2 screws on each top board. Next put down part **B** on the opposite end away from part **A**, note that the part **B** is shorter and should be the width of a 2x4 short on each side. again put 2 screws in each board.

After the top is constructed lift it up and turn it over, slip under the Spine which is part **H**. The horizontal spine must be centered under the middle of the long 2X6 top piece part **G**. The spine must be notched where it meets the rear cross brace part **B**. This notch does not have to be very precise. It can be cut with a circular saw and then knocked out with a hammer. Make several cuts before knocking it out. You can use a chisel if you prefer. Screw the spine to the Part **G** with about 8 screws.

The 2X4 front legs part **C** can be added now. Use two screws on each. Draw guide lines across both legs at 26" & 27 1/2". The legs are attached 10" back from the front of the top and with the top centered between the guidelines on the legs. Make sure the 26" length is toward the bottom. Turn the table upside down and add the field box supports part **N** on each underside. These should be butted against the spine and back against the leg. Use at least 7 screws on each support. The 2X4 angled side braces part **D** is added next with two screws on each end. Make sure to square the legs using the big framing square before screwing in the braces. The front 1X4-angled braces part **L** is now added. Screw in the bottom of the front one first then square the other leg left to right before screwing in the top screws. Repeat with the other brace. It is important to square everything before screwing in the bracing.

The rear leg part **F** is attached by butting it against the spine end. Use two screws into the spine. Add the short 2X4 angled brace part **E** in the same manner. Attach the 1X4 small-angled braces part **K** on each side. Turn the table right side up. Add three more screws through the middle top piece part **G** into the rear leg and two screws on each rear corner of the top into the 2X4 angled brace part **D** that was previously installed. Attach the 1X4 topside rails part **M** on both sides. Use a piece of scrap 1X4 as a height guide to make the topside rail approximately 1 inch higher than the part **G**.

To prevent abrasion between the 2x4 wing restraints and the airplane wings we used surplus or used carpet to act as a cushion. Add scrap carpet to the airplane wing restraints using 1/2", T-50 staples or 3/4" roofing nails.

