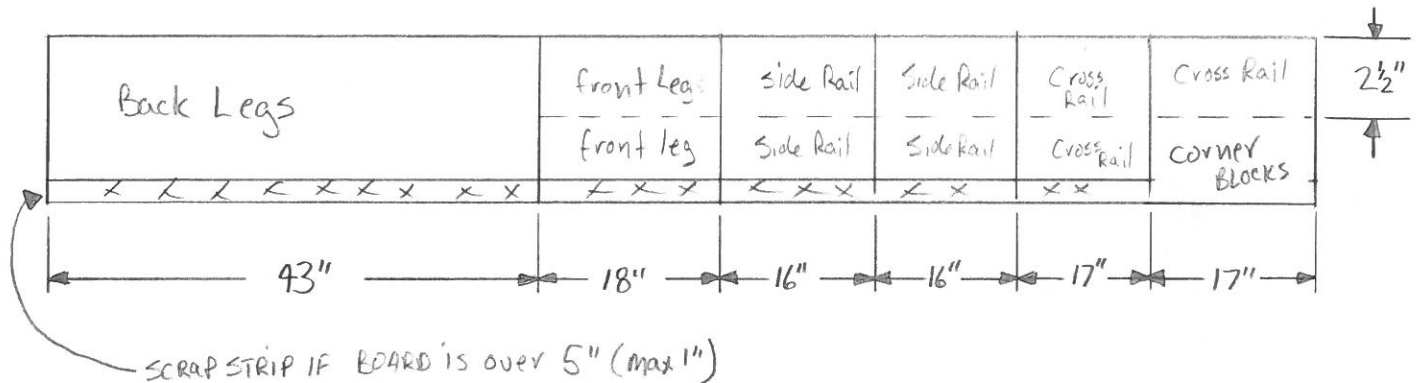


UPHOLSTERED CHAIR PROCEDURE

LEG AND RAIL PROCEDURE

1) Break out stock



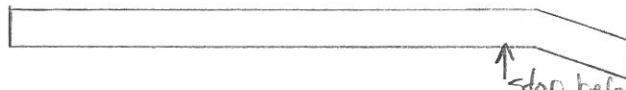
- layout parts on rough stock - you need a board that is at least 5" wide
 - get approval from instructor
 - cut front legs to rough length on the mitre saw - 18"
 - cut back legs to rough length on the mitre saw - 43"
- you only need 1 piece, it will be split later
 - cut side rails to rough length on the mitre saw - 16"
 - cut cross-rails to rough length on mitre saw - 17"
- Joint a face side on all boards with the jointer - mark them
 - Joint a face edge on all boards with the jointer - mark it
 - Plane to thickness of $\frac{3}{4}$ " - face side down
 - Rip front legs, cross-rails and side rails to final width on the Table Saw - 2 1/4"
- **DO NOT RIP THE BACK LEGS!!**
 - Cut one end square on the mitre saw - cut off as little as possible
- **IS IT SQUARE?**
 - Cut to final length on the mitre saw
 - 17" front legs
 - 14 1/2" side rails
 - 16" cross-rails

BACK LEGS

- 1) Joint the second edge of the board
- 2) Use the template provided by the teacher and draw BOTH legs on the board



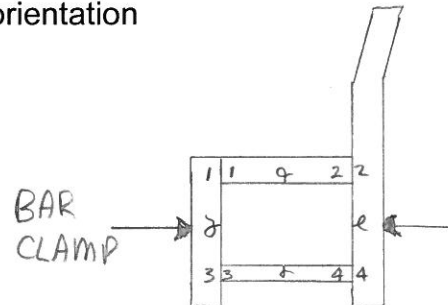
- 3) Use the bandsaw to separate the two legs
 - **DO NOT CUT ON THE LINES**
- 4) Rip to final width of 2 1/4"
 - Do this to the spot where the leg bends for the back rest
 - Check that the saw blade does not go TOO far on the underside



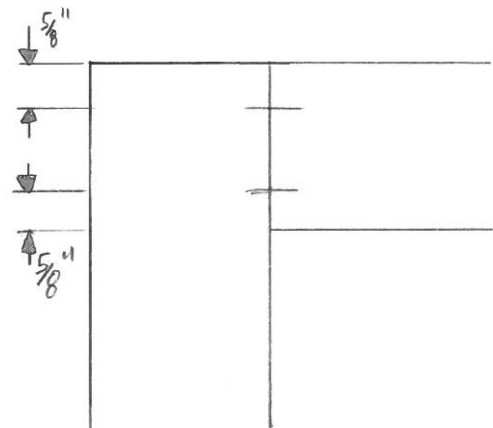
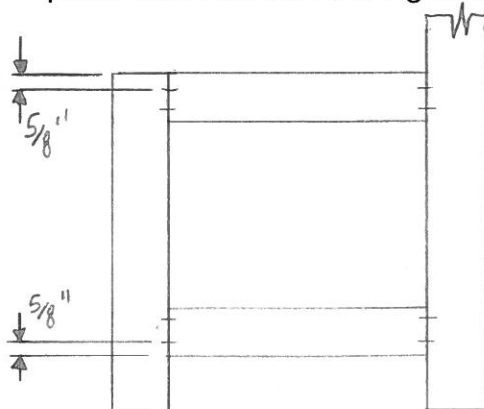
- 5) Cut one end square on the Mitre Saw
- 6) Cut to final length of 33"
- 7) Use the band saw and disc sander to tidy up the top bent part

DOWEL PIN LAYOUT

- 1) Clamp legs and side rails together before laying out dowel joints as shown
 - note the face side and face edge orientation



- 2) Layout dowel holes as indicated below
 - measure down 5/8" and up 5/8" on all rails
 - place a line across the leg and rail



- 3) **Have the teacher check it**
- 4) Use a dowel jig to drill all holes
 - line up the jig with the line that you drew across the legs/rails
 - drill $\frac{7}{8}$ " deep on all the legs and rails
- 5) Check dowel hole alignment
 - clamp legs together using dowels
 - **DO NOT GLUE IN DOWELS**
 - **get Instructors approval**

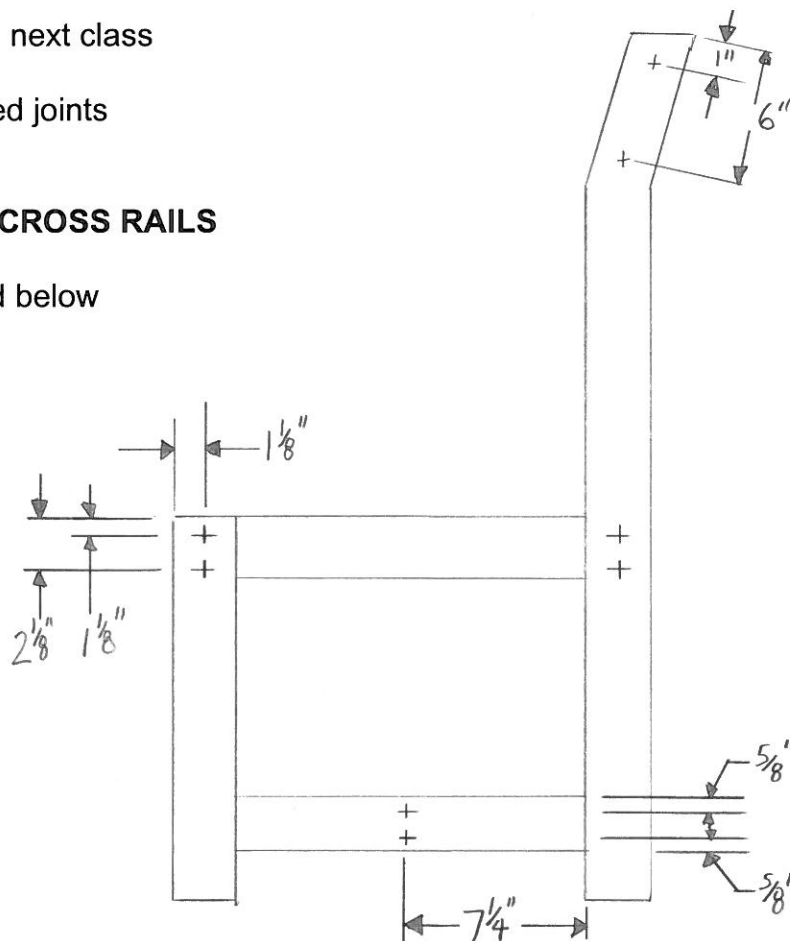
ASSEMBLY - legs and rails

- 1) Place a small amount of glue in all the dowel holes
 - **do not put glue on the dowel pins**
 - do not put too much glue in dowel holes
- 2) Insert dowel pins into the holes in the legs and push to bottom
 - use the pre-made $\frac{3}{8}$ " by $1 \frac{1}{2}$ " expandable dowel pins
- 3) Align legs and rails in their appropriate positions
- 4) Attach the side rails to the legs and press fit snugly
- 5) Clamp and set aside to dry until next class
- 6) Carefully plane any badly aligned joints

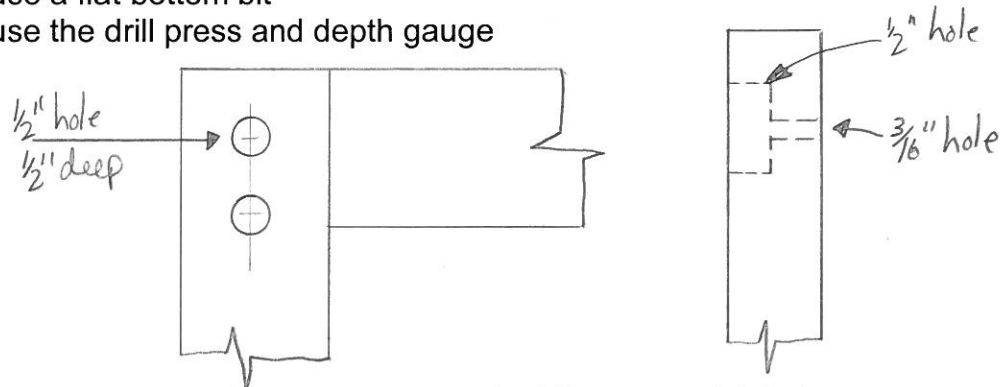
SCREW LAYOUT FOR ATTACHING CROSS RAILS

- 1) Layout screw holes as indicated below

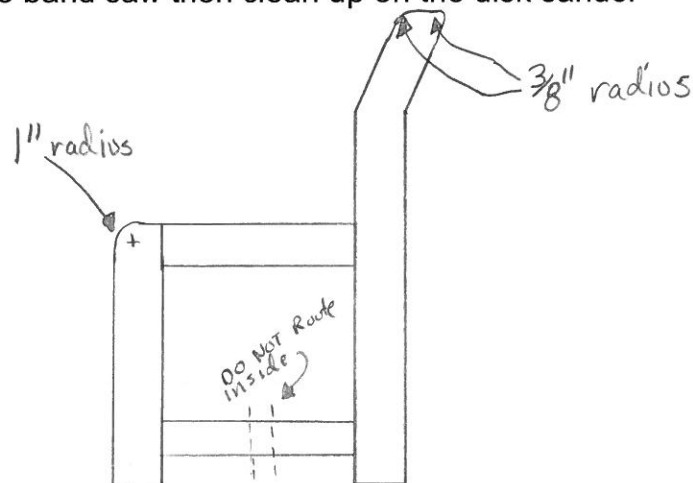
LAYOUT HOLES
SO THERE IS A
LEFT & RIGHT SIDE
to the chair



- 2) Drill countersink holes in legs and side rails 1/2" deep with a 1/2" drill bit
- drill in all spots laid out in previous step
 - use a flat bottom bit
 - use the drill press and depth gauge



- 3) Drill 3/16" hole the rest of the way through the 1/2" counter sink holes
- 4) Radius the corners on the chair as indicated below
- use the band saw then clean up on the disk sander



- 5) Sand all surfaces with 80 grit sandpaper
- 6) After the chair sides are sanded, router all edges **EXCEPT THOSE SHOWN ABOVE**
- use a 3/8" rounding over bit and router both sides
 - also route the cross rails
 - **DO NOT ROUTE THE LAST 2" OF THE BOTTOM CROSSRAIL.**

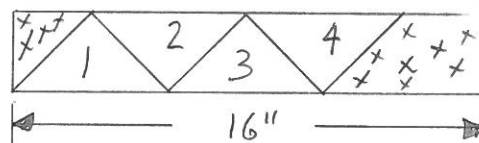
FINAL ASSEMBLY OF CHAIR FRAME

- 1) Align cross rails with legs and clamp together – they should be centred on the screw holes from side to side and 1/2" from the top side rails
- 2) Drill a pilot hole into the cross rail 1 1/2" deep with a 7/64" drill bit
- attach cross rail using 1 1/2" x #8 Flat Head wood screws
 - repeat for all other screw holes

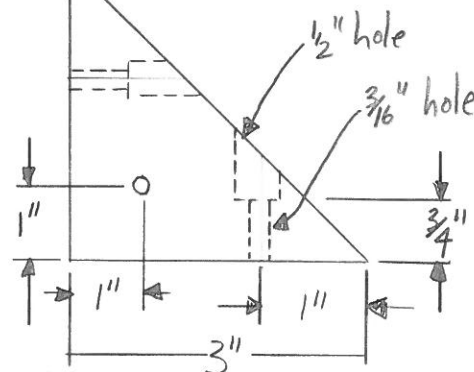
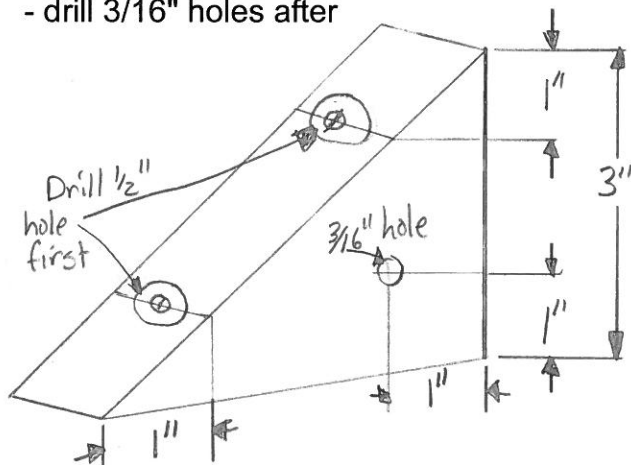
- 3) Router the bottom crossrail and the remaining sections on the side rails
- 4) Sand all surfaces
 - use 80, 120, 180 and 220 grits
- 5) Use the pre-made dowel plugs to plug the screw holes
 - be careful to align the grain correctly
- 6) Get a piece of 1/2" plywood for the seat from the instructor
 - cut to 16" x 17 3/4", **BUT** check your dimensions first
 - if you are using vinyl upholstery, drill holes to allow the air to escape

CORNER BLOCKS

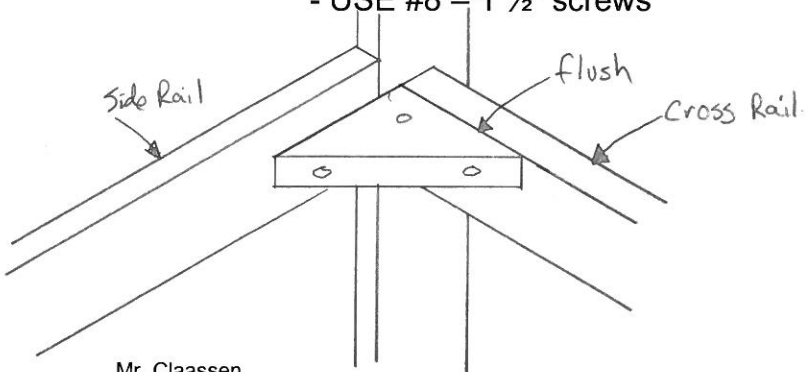
- 1) Use a piece of scrap wood and dress it to 3/4" x 2 1/2" x 16"
- 2) Set the Mitre Saw to 45° and cut off one of the angled blocks
 - flip the stock over and cut at 45°
 - repeat the process for the other blocks
 - don't use the first block



- 3) Layout all the holes on the 4 pieces as indicated below
 - drill the 1/2" holes first
 - drill 3/16" holes after



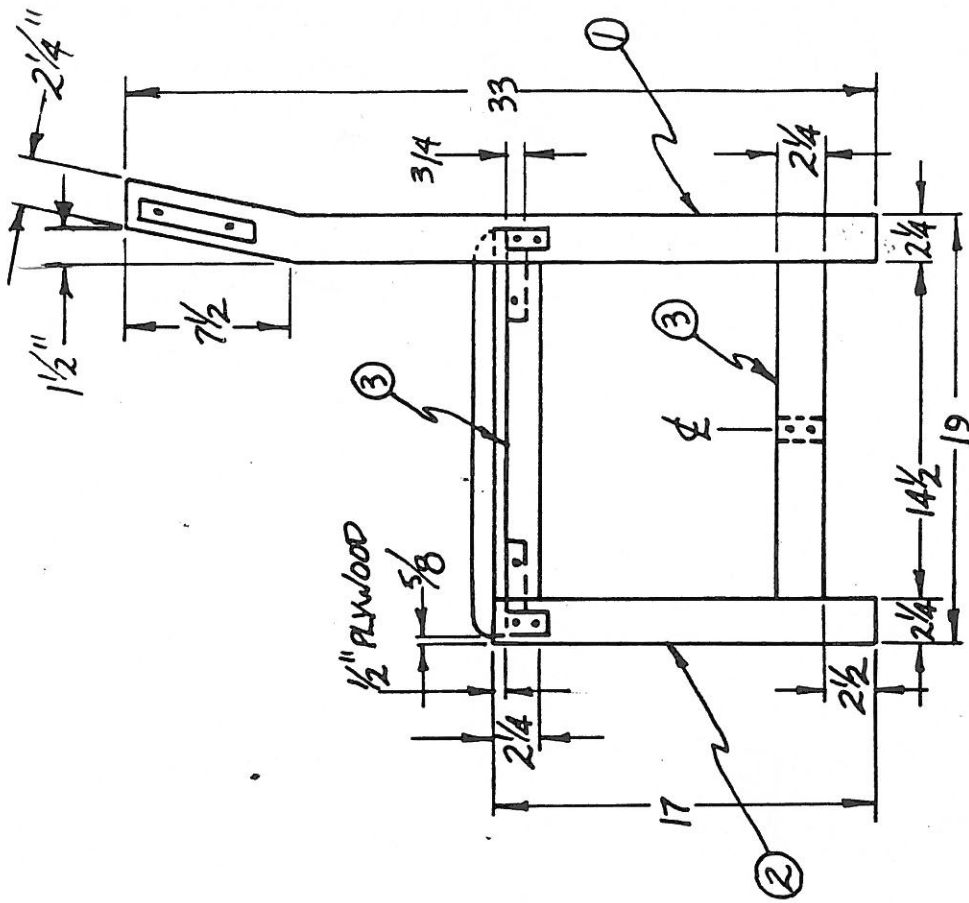
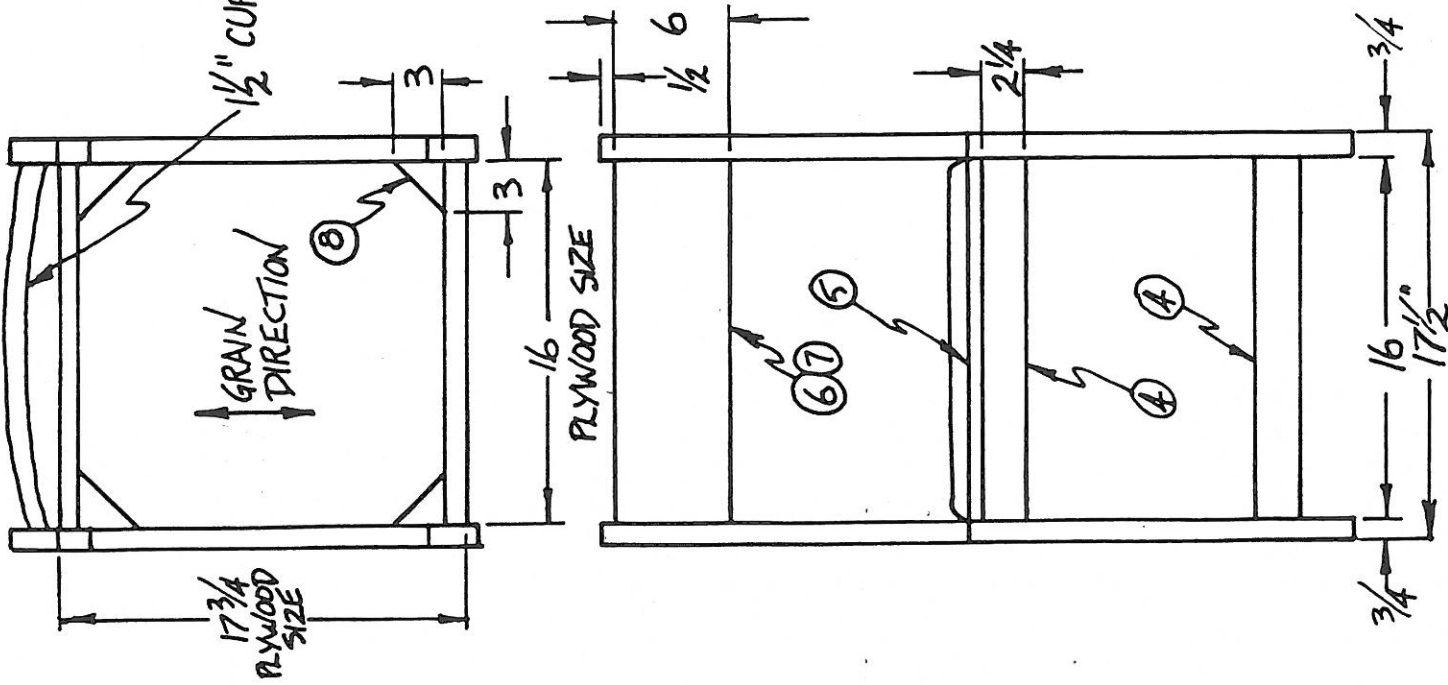
- 4) Install corner blocks flush to the cross rails
 - USE #8 - 1 1/2" screws



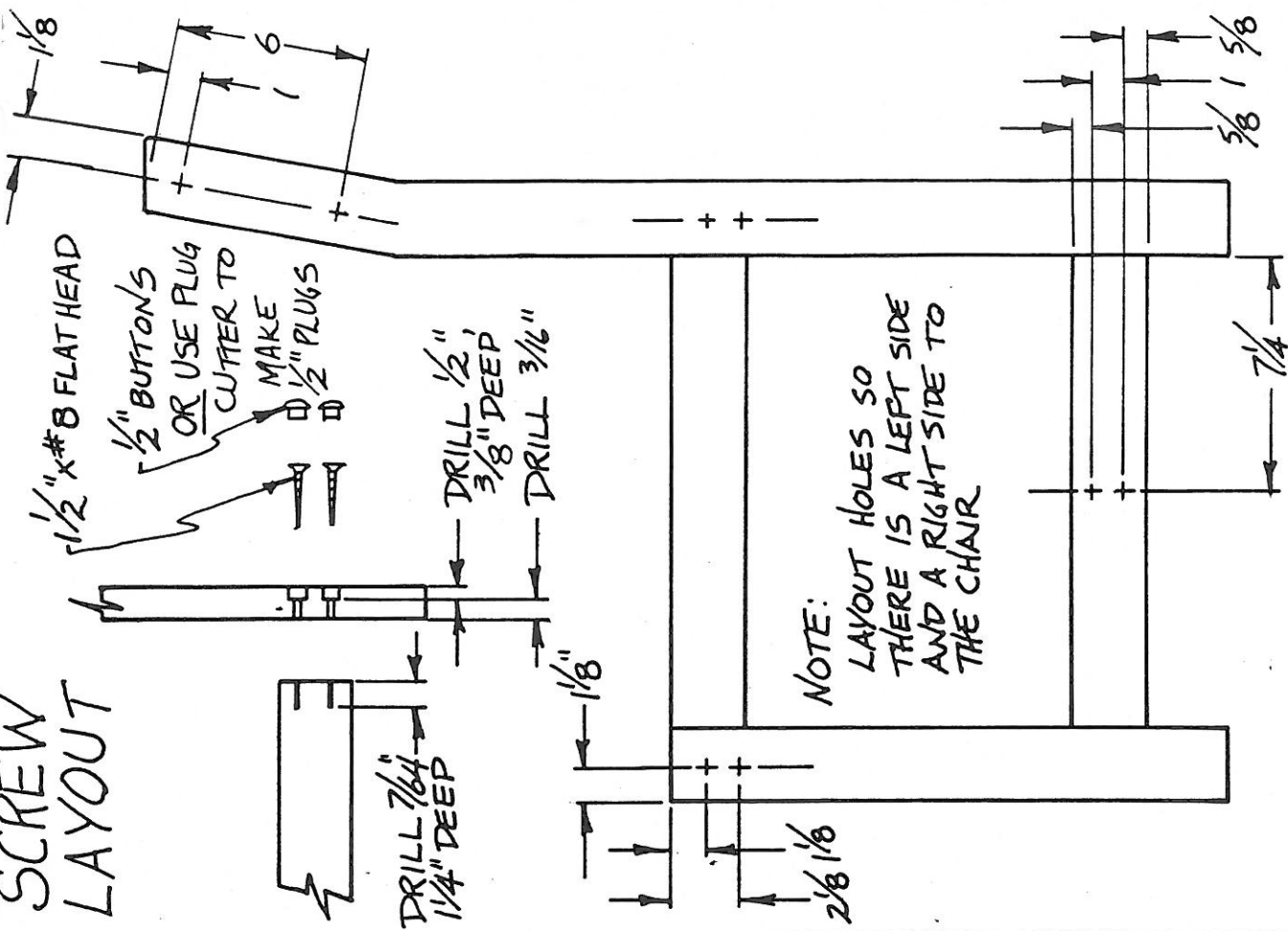
NAME: _____
BLOCK: _____

1 1/2" CURVE IN BACK

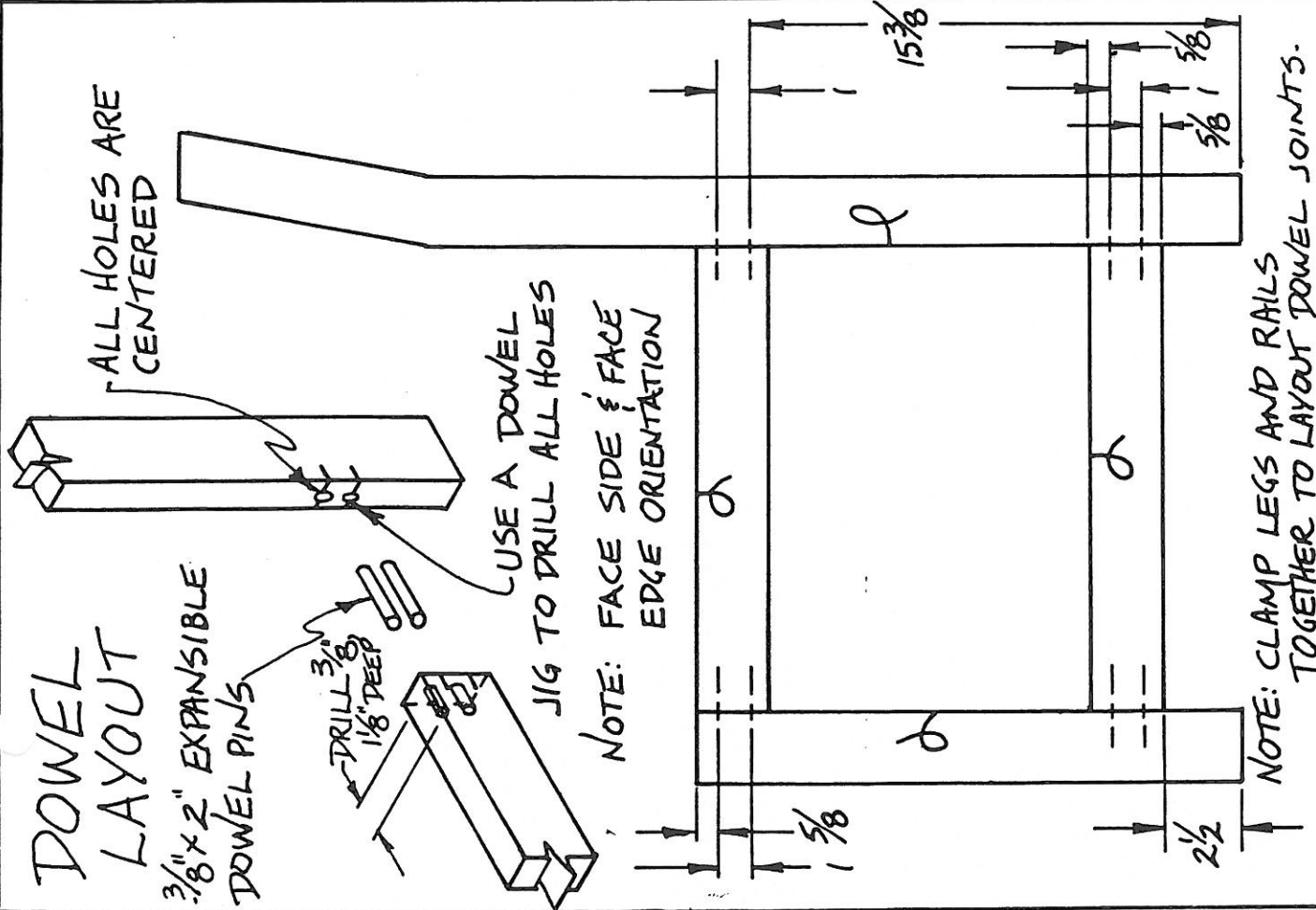
ALL RAILS 3/4" x 2 1/4"



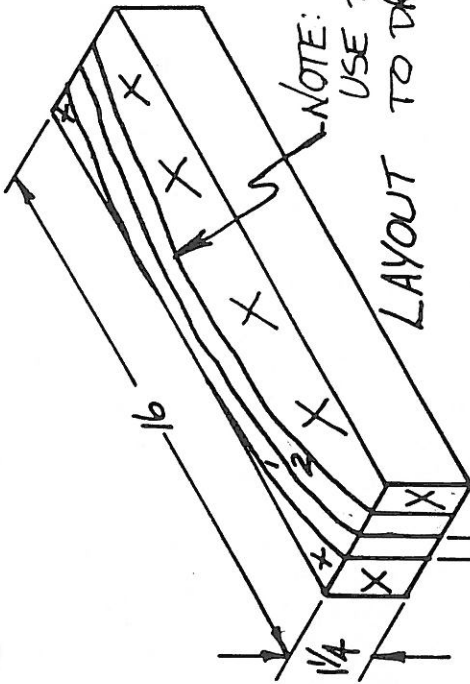
SCREW LAYOUT



DOWEL LAYOUT



CHAIR - JOINT DETAILS	CST 10	DRAWING 2 OF 7	DRAWN BY: D. ZAKLAN	SCALE 3/16" = 1"
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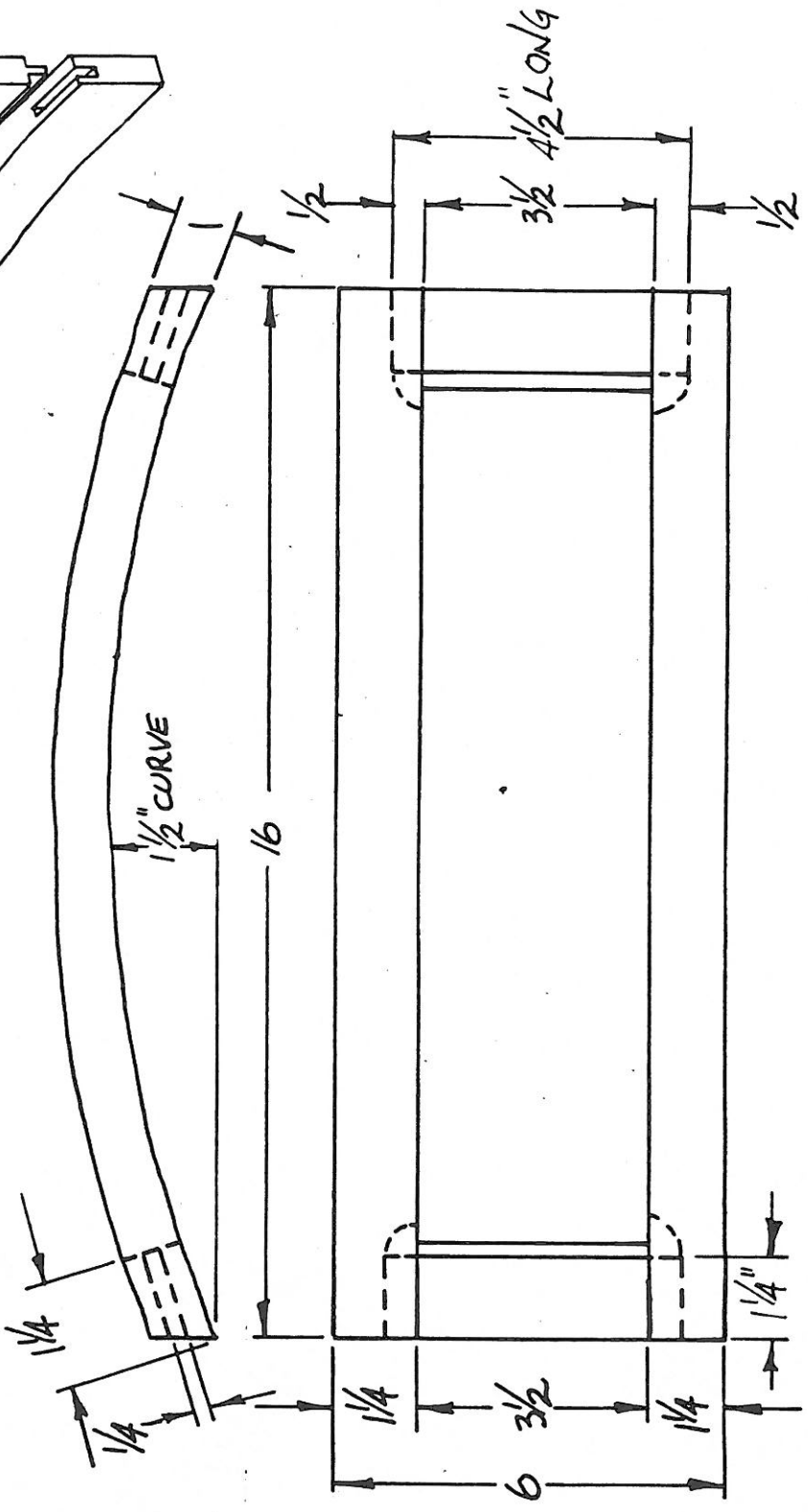
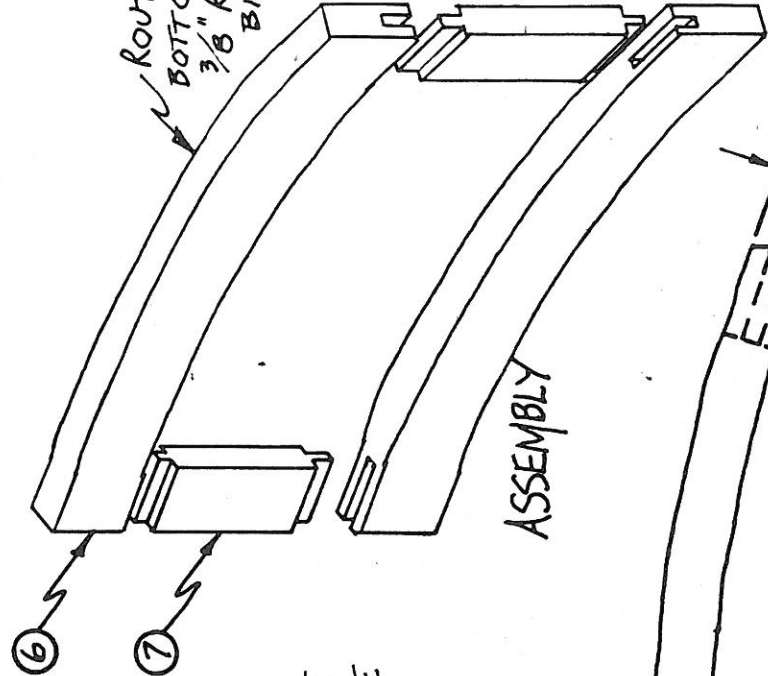


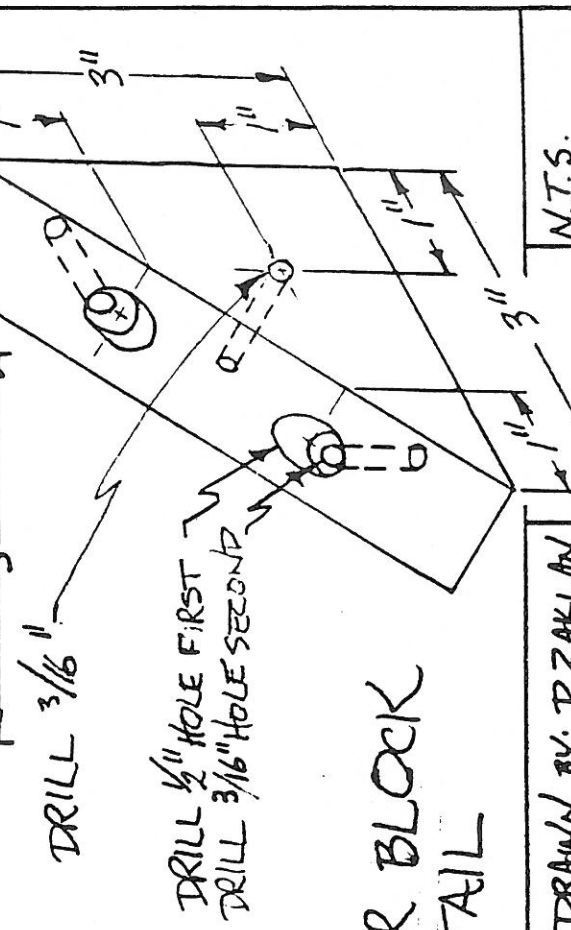
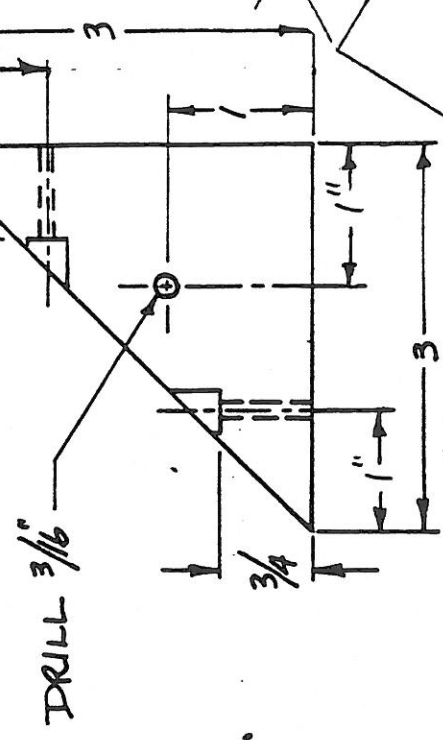
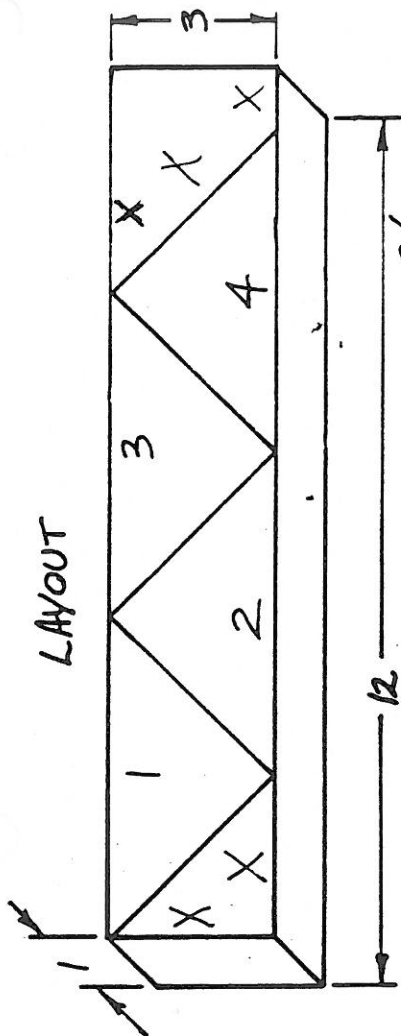
CUT 1" CAREFULLY ON THE BANDSAW,
DO NOT USE RELIEF CUTS

ASSEMBLY

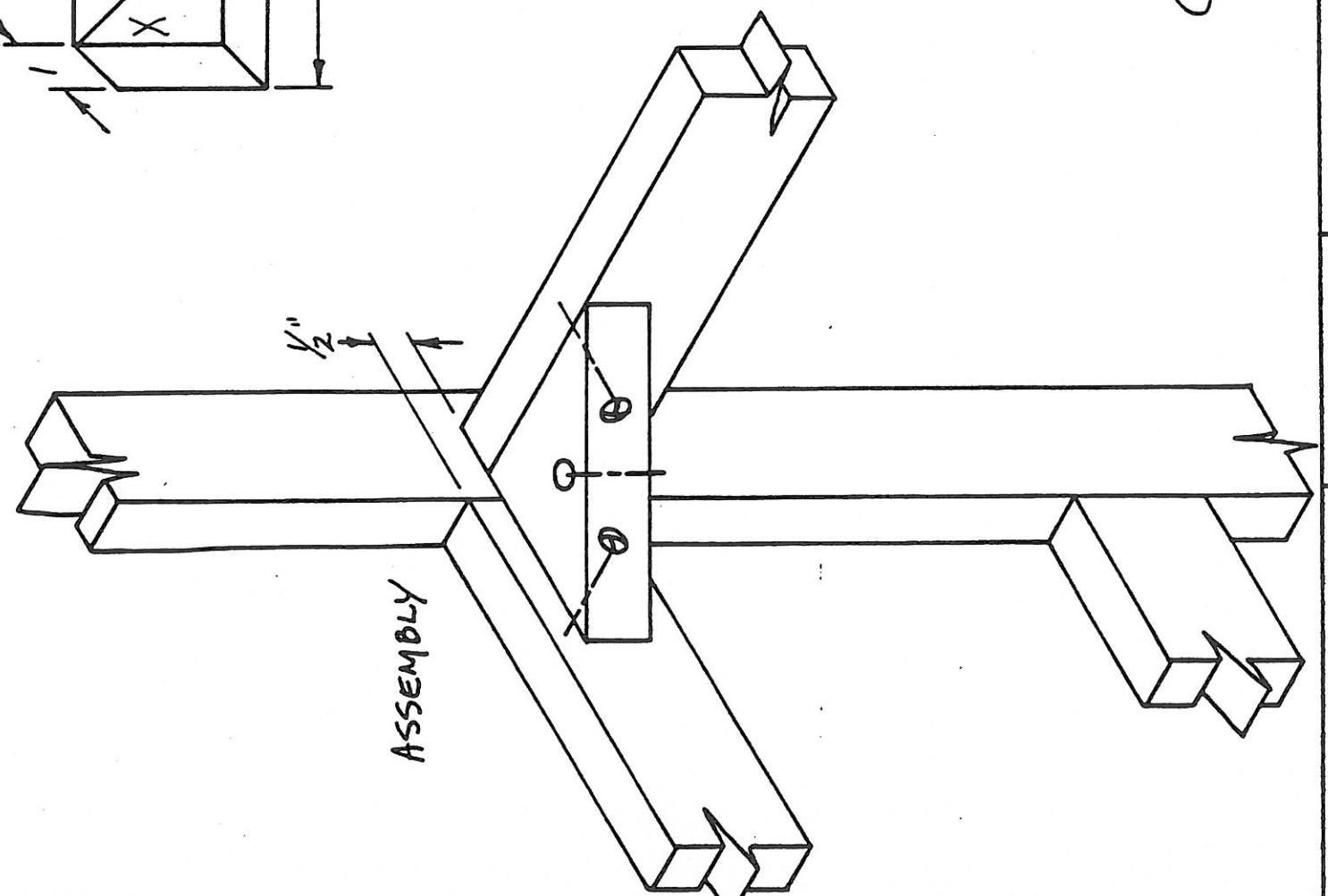
N.T.S.

ROUTER TOP AND
BOTTOM EDGES
3/8" ROUNDOING OVER
BIT.

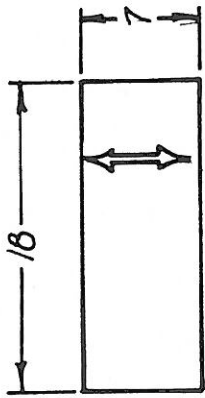




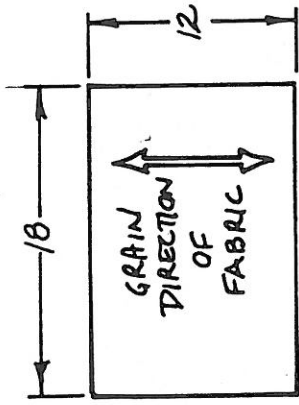
CORNER BLOCK
DETAIL



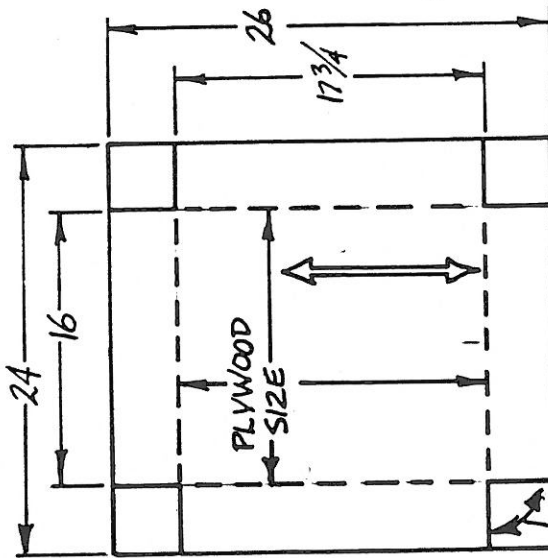
FABRIC LAYOUT



BACK



FRONT



SEAT

FINISHING DETAIL

$\frac{3}{8}$ " RADIUS

NOTE:

- AFTER THE CHAIR SIDES ARE GLUED AND SANDED, ROUTER ALL EDGES INSIDE AND OUTSIDE.
- USE A $\frac{3}{8}$ " ROUNDDING OVER BIT.

1" RADIUS

Do NOT ROUTER INSIDE EDGES UNTIL AFTER CROSS RAIL IS IN PLACE

CHAIR - DETAILS

CST 10

DRAWING 5 OF 7

DRAWN BY: P. ZAKLAN

N.T.S.

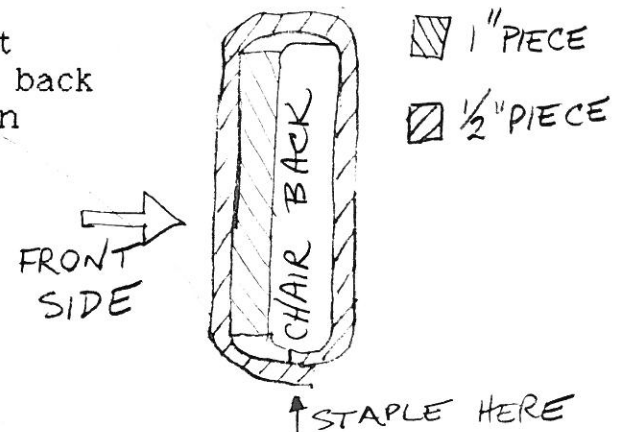
DINING ROOM CHAIR

UPHOLSERING THE BACK

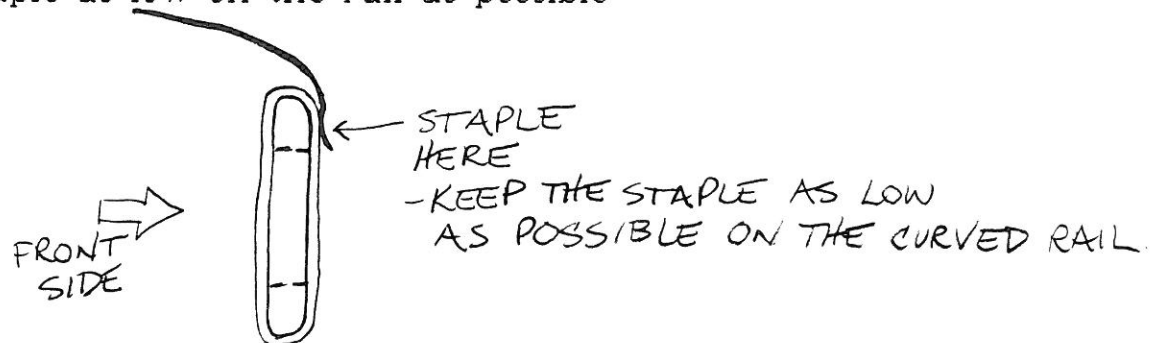
- 1) Cut out the fabric as it shows in the book.
-**NOTE:** Ensure the Stripe in the back matches the seat before the fabric is cut out.

UPHOLSERING IS BEST DONE WITH 2 PEOPLE. FIND A PARTNER

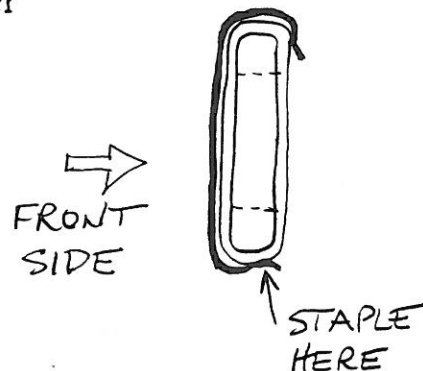
- 2) Staple the foam to the chair back.
-the 1" piece mounts on the front
-the 1/2" piece wraps around the back
-use 1/4" staples in the staple gun



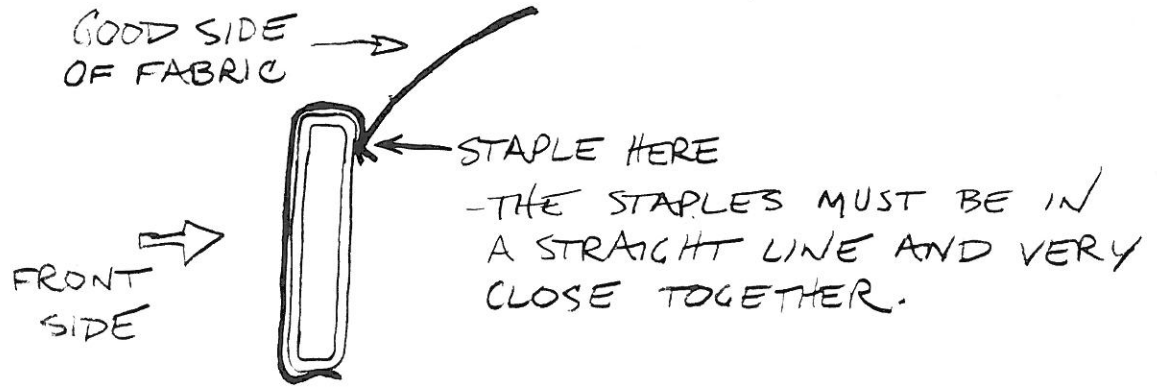
- 3) Staple the larger piece of fabric onto the back of the back
-staple as low on the rail as possible



- 4) Staple the fabric onto the bottom edge of the back
-staple near the back edge so the staples will not show later



- 5) Staple the small piece of fabric onto the back of the back.
 - NOTE: Staple this piece inside out
 - Draw a line on the fabric and staple on the line. The row or staples must be straight.
 - There must be no spaces between staples when stapling.



- 6) Staple the fabric onto the bottom edge of the back.
 - Before stapling, fold a hem on the edge of the fabric.



- 7) Carefully staple the edge of the fabric onto the ends of the frame. This operation will require some help.
- 8) Install the back into the chair and drill the pilot holes through the chair legs.
- 9) Sit down and have a rest. You have done a great job.
- 10) Install the buttons or plugs and clean-up.
- 11) Level the chair legs, if necessary.
 - use the Disc Sander.
- 12) Submit for marking.

ZAKLAN '89