

Octagon Picnic Table Plan# 42



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Octagon Picnic Table Shopping List

Boards needed,

5-2"x4"x10'
 2-2"x4"x12'
 2-2"x4"x14'
 3-2"x6"x10'
 3-2"x8"x10'
 3/8" x 48" Wooden Dowel

Hardware needed,

197-2 1/2" Galvanized deck screws
 14- 1/4" x 5" Carriage bolts, nuts and washers
 8- 1/4" x 3 1/2" Carriage bolts, nuts and washers
 20- 5/8" Corrugated fasteners
 Exterior construction adhesive.

MATERIAL LIST

ITEM	MATERIAL LIST (OCTAGON PICNIC TABLE)	REQ'D
A1	1-1/2" x 7-1/4" x 52" TOP BOARDS	3
A2	1-1/2" x 7-1/4" x 52" TOP BOARDS	2
A3	1-1/2" x 7-1/4" x 38" TOP BOARDS	2
B1	1-1/2" x 3-1/2" x 52" TOP FRAMEWORK	4
B2	1-1/2" x 3-1/2" x 17-3/4" TOP FRAMEWORK	8
C1	1-1/2" x 5-1/2" x 26" SEAT BOARDS	8
C2	1-1/2" x 3-1/2" x 23-1/2" SEAT BOARDS	8
C3	1-1/2" x 1-1/2" x 9" OUTSIDE SEAT BOARDS	8
C4	1-1/2" x 1-1/2" x 9" CENTER SEAT BOARDS	4
C5	1-1/2" x 3-1/2" x 14" SEAT LEG	8
C6	1-1/2" x 3-1/2" x 24" SEAT BASE BOARD	4
C7	1-1/2" x 3-1/2" x 13" SEAT ANGLE BRACKETS	8
C8	1-1/2" x 3-1/2" x 84" LOWER FRAMEWORK	4
D1	REFER TO LEG DETAIL; LEGS	4
	3/8" x 48" WOODEN DOWEL	1

HARDWARE	
2-1/2" GALVANIZED DECK SCREWS	197
1/4" x 5" ZINC COATED CARRIAGE BOLTS NUTS AND WASHERS	14
1/4" x 3-1/2" ZINC COATED CARRIAGE BOLTS NUTS AND WASHERS	8
5/8" CORRUGATED FASTENERS	20
TUBE EXTERIOR CONSTRUCTION ADHESIVE	

Octagon Picnic Table Directions

Before starting this project you will need to construct a jig for building both the table top and the lower leg assembly. This can be done by securing a 1/2" or 3/4" piece of plywood 48" wide and 59" long to a set of saw horses (see jig detail). To make the lower leg and seat assembly, attach one (W) 2" x 4" to each end. Make one of these 24-1/8" long and add two (X) pieces as shown in jig detail.

1. Start this project by cutting the (C5), (C6), and (C7) pieces. Use the jig to assemble four complete leg/seat frame sets then remove both (X) pieces. Cut the (A1), (A2), and (A3) top boards. Place all boards in jig, face down and squeeze them tightly together by driving the wedge between the top board and (W) jig block. See Jig Detail.
2. Cut four (B1) frame members 52" long with ends at 22-1/2 degrees. Then find the center which is 26" and mark. Measure both directions from mark 7/8" and mark again continue on 1-5/8" and mark again. This will give you a center 1-3/4" section and two outside sections of 1-5/8" dado out the two outside sections in each piece half their thickness.
3. Next cut eight (B2) pieces, dowel together then fit in their proper position and secure to (B1). Position the framework on top boards then mark their location; Remove, apply adhesive and secure in place.
4. Cut four (D1) Legs 28-1/2" long with ends at 22-1/2 degrees, then measure 3-1/2" at bottom, place carpenter square across the bottom even with mark and mark up the back side of the leg and cut off. Remove spacers in leg location and insert leg then drill 1/4" hole through (B1) and (D1), then bolt with 1/4" by 5" carriage bolts.
5. Measure down 14" from leg ends (bottom of leg) and mark both sides of legs then drive a finish nail in a short distance. Refer to leg detail. Assemble the center frame section. This time attaching the 1-5/8" spacers between the (C8) pieces. Place frame assembly over legs and onto finish nails. Align center of upper and lower frame then clamp (C8) to legs and drill two 1/4" holes and bolt with 1/4" x 5" carriage bolts.
6. Attach (C5), (C6) and (C7) assembly to (D1) legs and secure with 2-1/2" screws. With the help of a second person, turn complete assembly over.
7. Refer to "Bottom side of seat" for build seat section. Cut eight (C1) seat boards 26" long at 22-1/2 degrees and eight (C2) boards 23-1/2" long at 22-1/2 degrees. Make sure to cut two left and two right so that both halves of good side down, drill for dowels, then put a small amount of adhesive in joint and drive two corrugated fasteners in each joint.
8. Line up center (C1) and (C2) leaving a 3/8" space between them apply glue in joint area and secure a (C4) block 1/2" from outside point with eight 2-1/2" screws. Place carpenter's square against (C4) block measure over 11-5/16" and attach (C3) block 1" from back edge.
9. Before attaching seats in place, sand and router edges with round over bit. Place seat on main frame, screw through (C8) into (C4) then bolt (C3) to (C5) with 3-1/2" carriage bolts. Sand top boards then router edges with round over bit and apply finish.



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CUTTING DIAGRAM

1-2" X 4" X 10'

C5	C5	C5	C5	C5	C5	C5	C5	
----	----	----	----	----	----	----	----	--

2-2" X 4" X 10'

C2		C2		C2		C2		C3	C3	
								C3	C3	

2-2" X 4" X 10'

B1		B1		C1	
----	--	----	--	----	--

1-2" X 4" X 12'

B2	B2	B2	B2	B2	B2	B2	B2	
----	----	----	----	----	----	----	----	--

1-2" X 4" X 12'

C6	C6	C6	C6	C1	C1	C4
						C4

2-2" X 4" X 14'

C8		C8	
----	--	----	--

2-2" X 6" X 10'

C1	C1	C1	C1	C7

1-2" X 6" X 10'

D1	D1	D1	D1	
----	----	----	----	--

1-2" X 8" X 10'

A1	A1	C7
		C7

1-2" X 8" X 10'

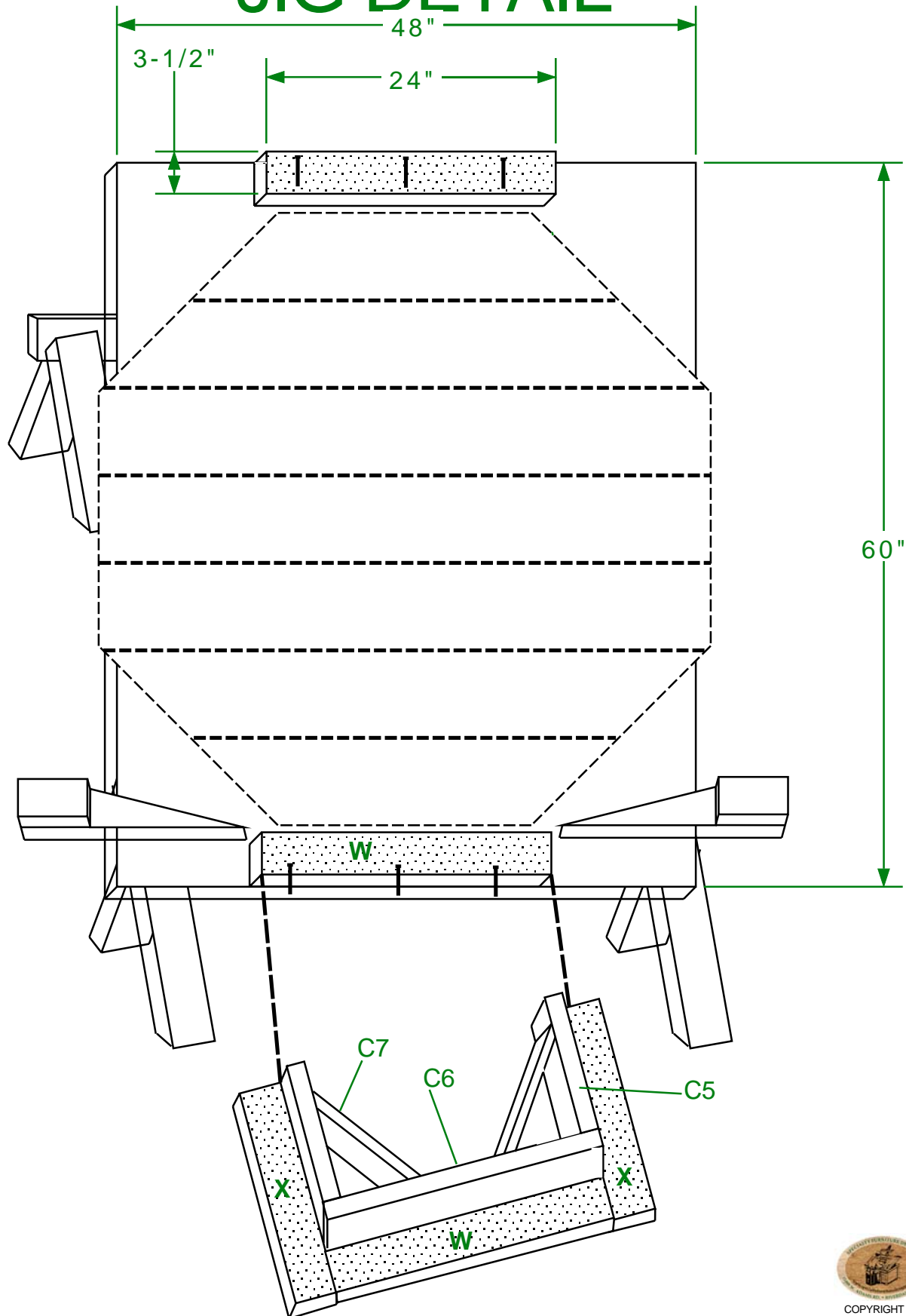
A1	A2	C4		
		C4		

(8)
1-3/4"
Spacer
blocks

1-2" X 8" X 10'

A2	A3	A3
----	----	----

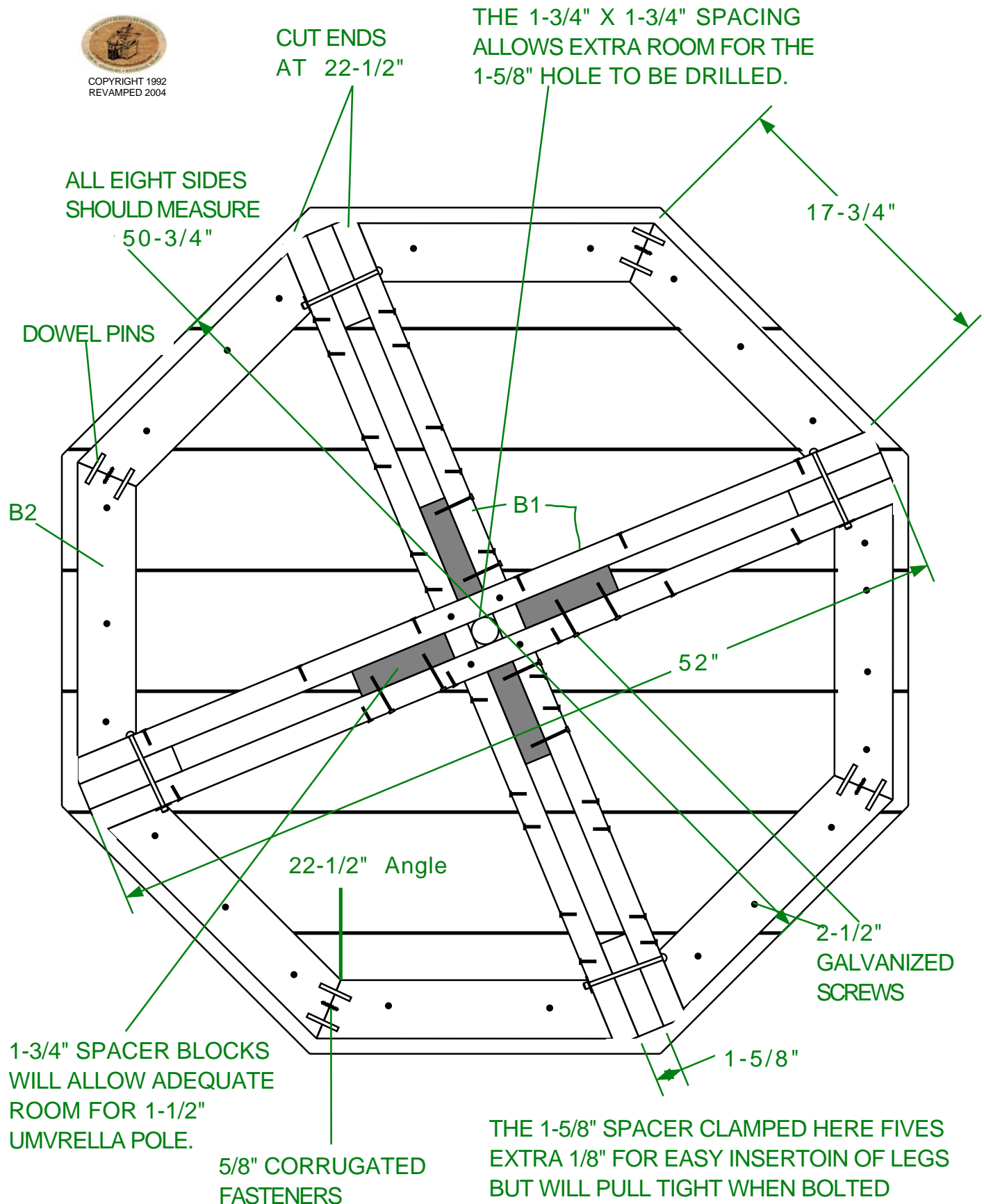
JIG DETAIL



BOTTOM SIDE OF TOP



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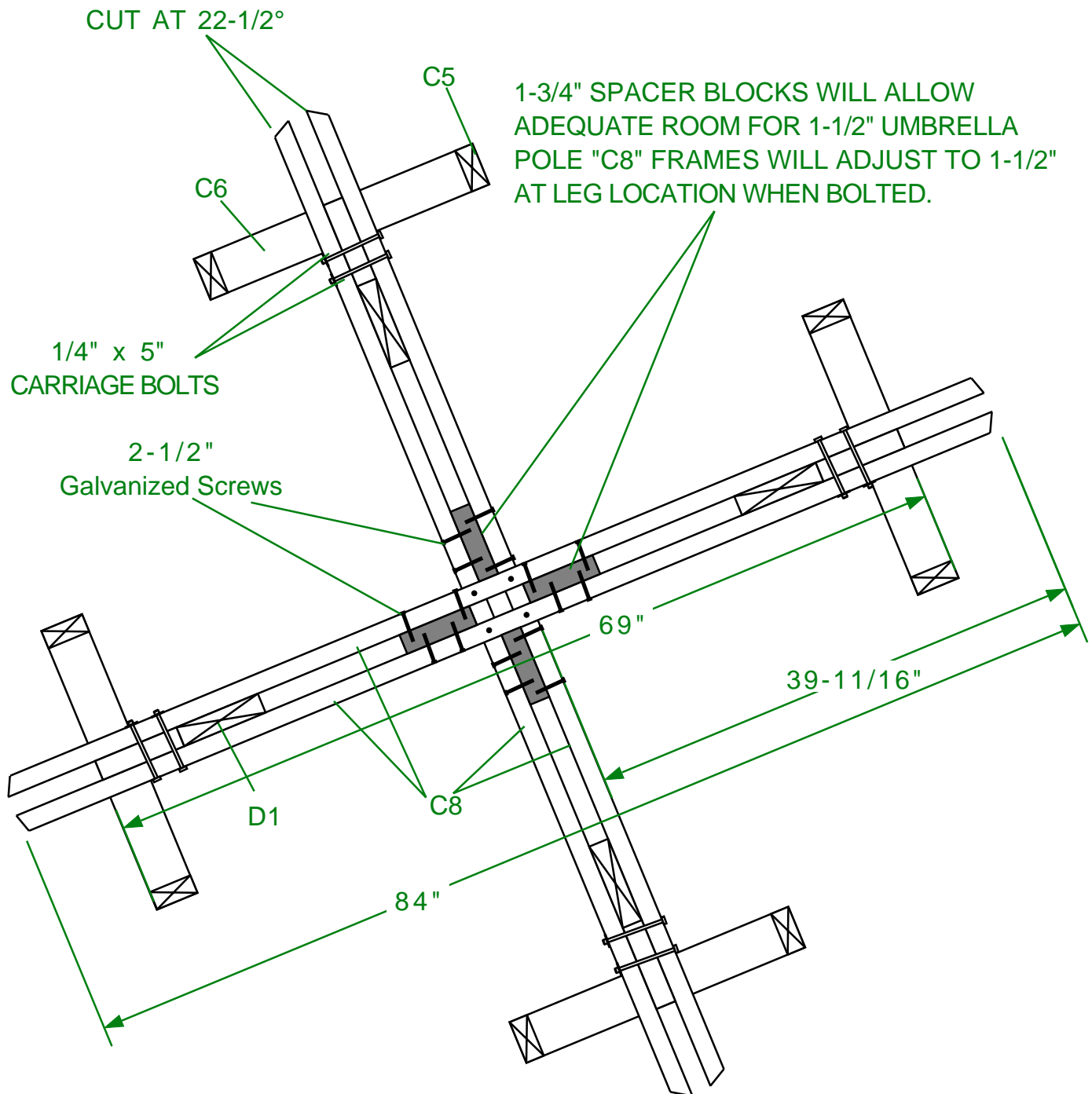
Picture Layout



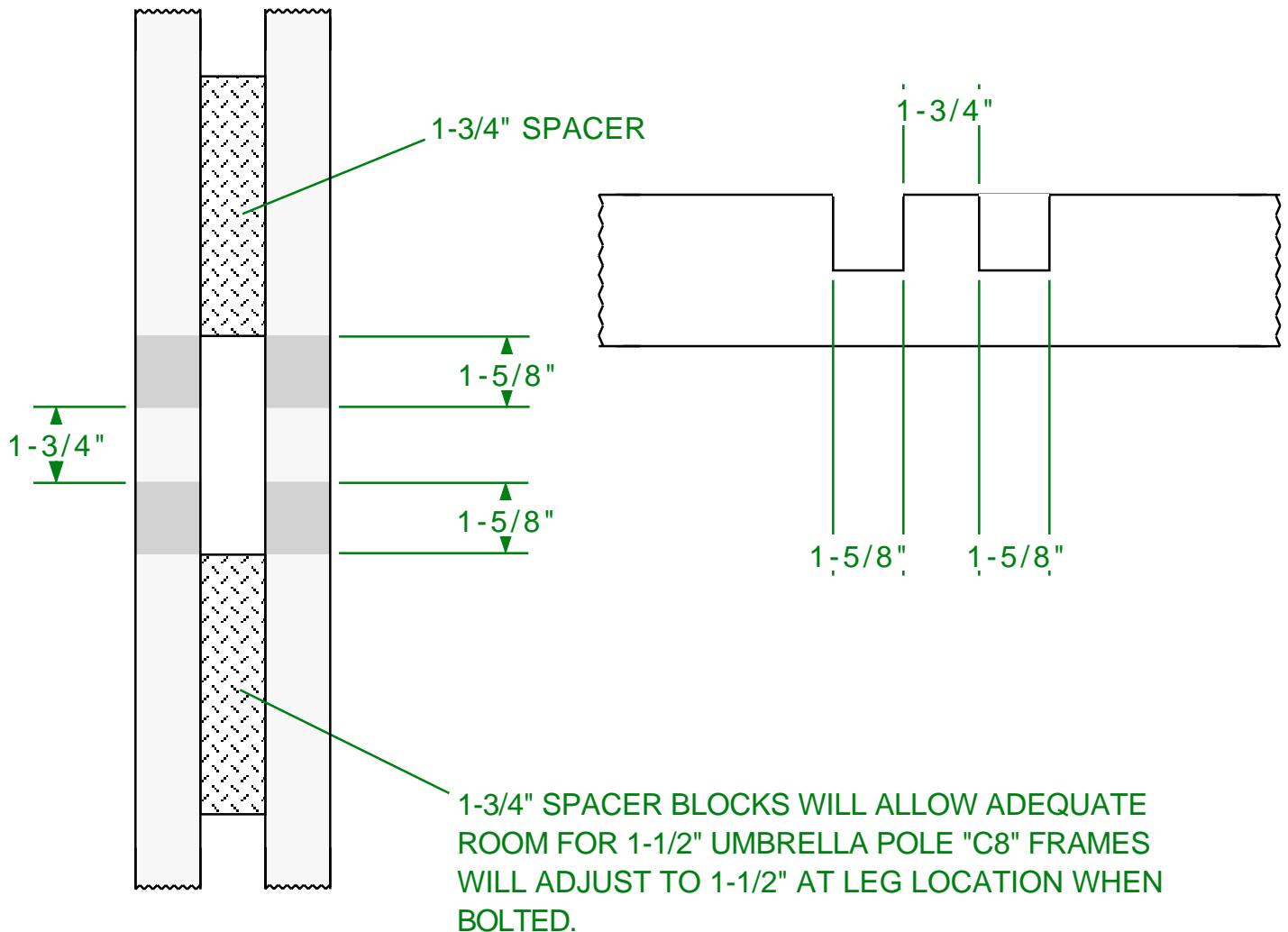
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FRAMEWORK VIEW

(SEATS REMOVED)

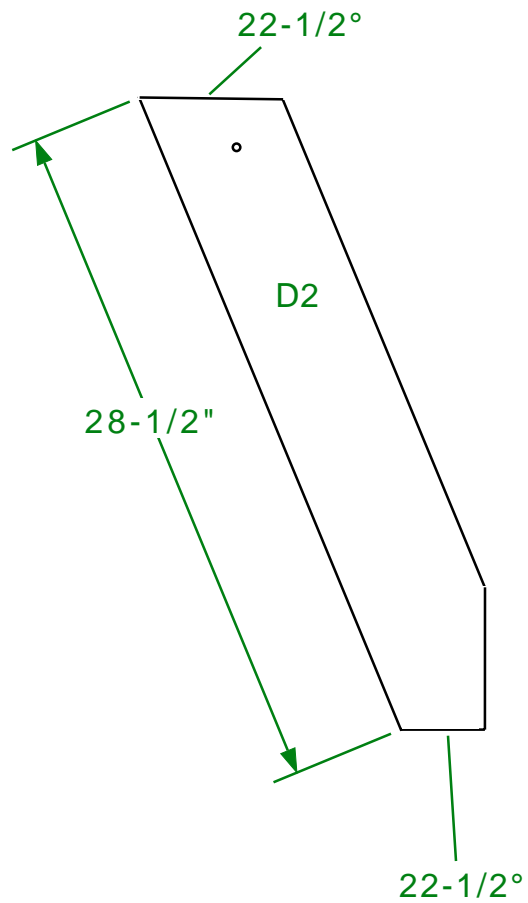


FRAMEWORK JOINT DETAIL

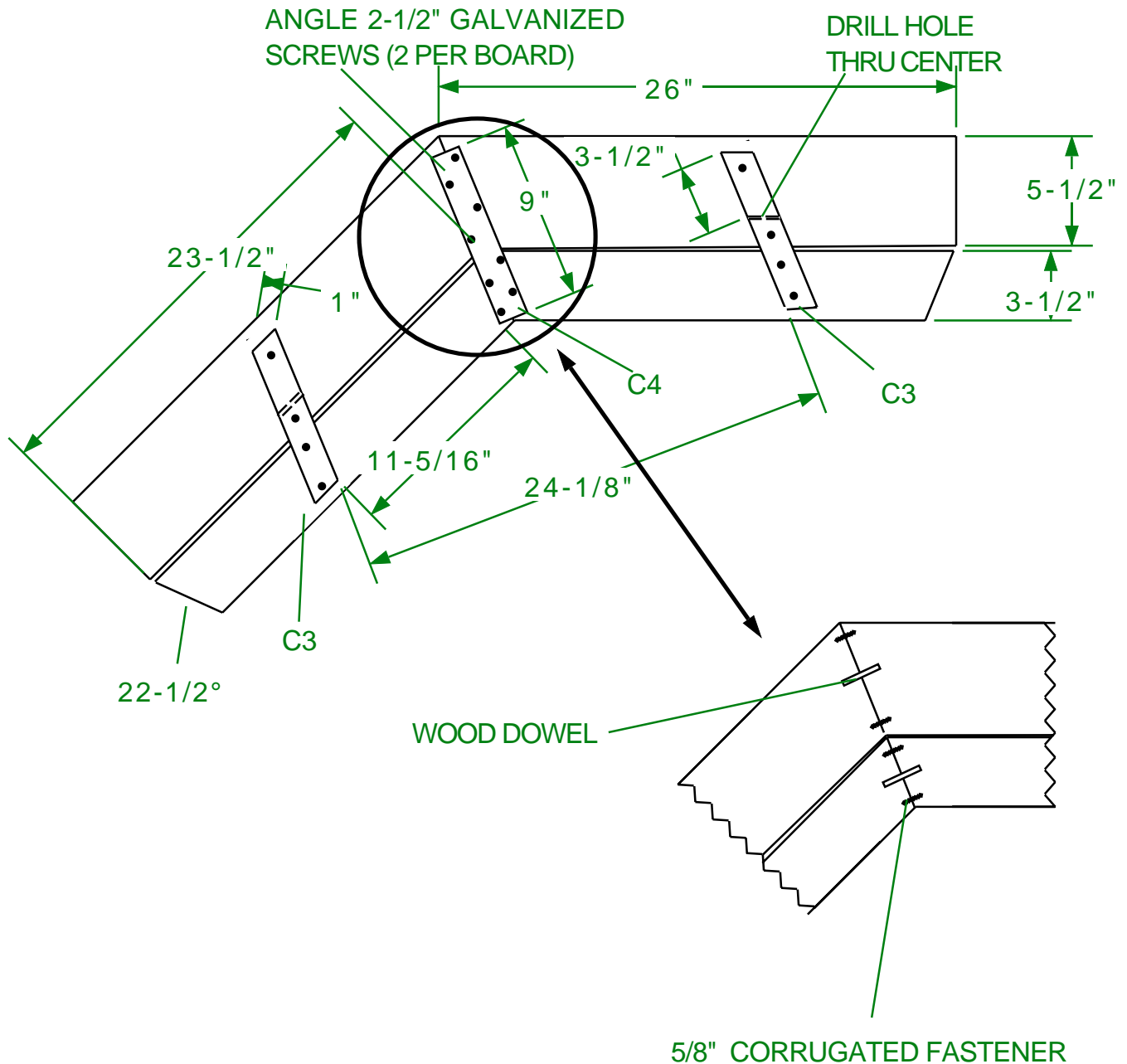


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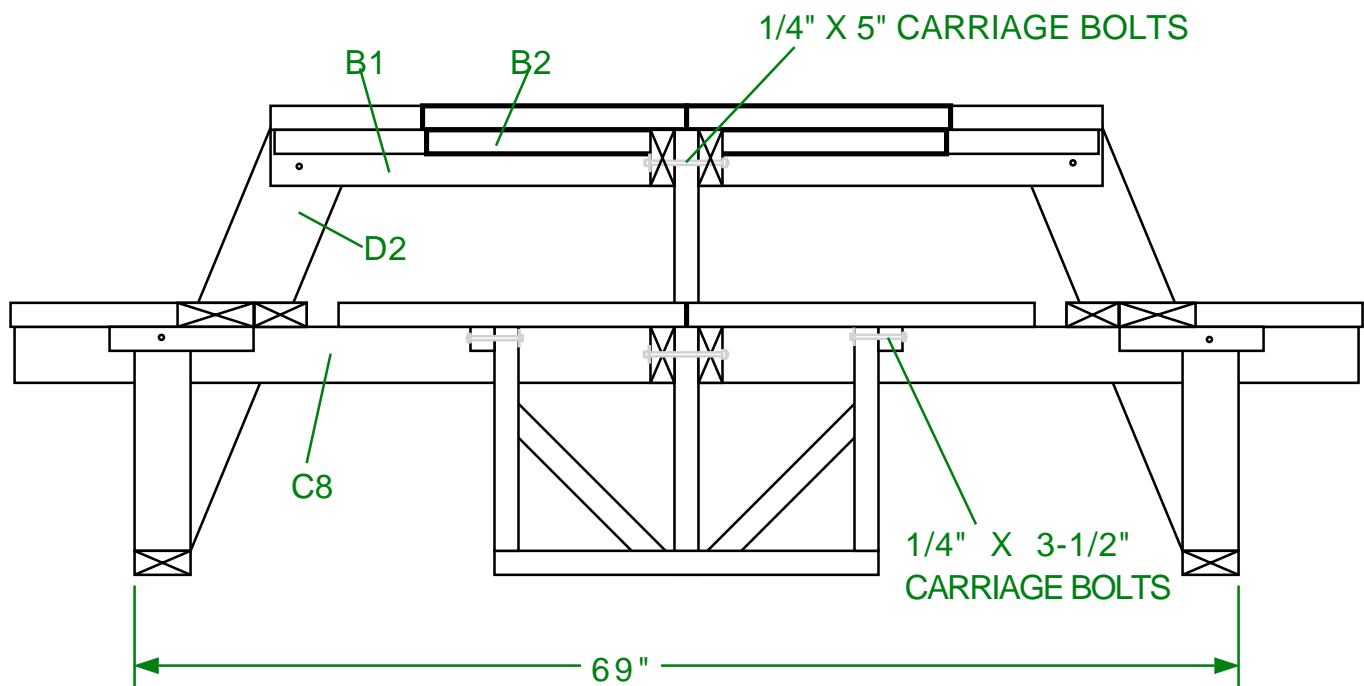
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BOTTOM SIDE OF SEAT



SIDE VIEW



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TOP VIEW OF COMPLETED TABLE

