

m2 furniture co.

WOODWORKING PLANS · FREE PLAN

The Simple Shaker

Kitchen Table



1 SPLINTER

Beginner friendly

A classic Shaker kitchen table: tapered Hepplewhite-style legs, aprons joined with mortise and tenon (drawbored if you like) and a top held on with Z-clips. Free from M2.

Size	60 x 34 x 30 in as drawn; top size can vary
Lumber	5/4 top and aprons, 8/4 legs (about 26 + 4 bd ft)
Joinery	Mortise and tenon or Dominos
Top	Z-clips
Price	Free plan from M2 Lumber

Questions while you build? Call us. 1-864-GOT-WOOD (468-9663)
Mon-Fri 9 am-5 pm, Sat 8 am-3 pm (Eastern)

Read This First

The Splinter Scale, our shop standards and how to use these drawings.



The Splinter Scale

Every M2 plan is rated 1 to 3 splinters so you know what you're getting into before the first cut.



1 SPLINTER · Beginner friendly <- this plan
Straight parts, square cuts and simple joinery.



2 SPLINTERS · Some skill needed
Curved or shaped parts, more joints and tighter fits.



3 SPLINTERS · Advanced
Drawers, doors, casework or complex shaped joinery that has to fit just right.

Why this plan is rated 1 splinter

Straight parts, simple tapers and one joint repeated eight times. A great first table.

M2 shop standards (apply to every part)

• **Edges.** We ease every edge about 1/8 in (sandpaper or a small roundover bit). Sharp corners splinter and chip, so don't leave them, even where a drawing shows a sharp corner.
• **Except at joints.** Never round or ease an edge where two parts meet. Keep joint lines crisp: ease edges after the part's joinery is cut, and skip any face that becomes a joint face.
• **Feet.** Where wood touches the floor, round the bottom edges 1/8 to 1/4 in so the feet don't splinter out when the piece is moved.
• **Curves and templates.** A single gentle curve can be cut by hand: bandsaw or jigsaw just outside the line, then sand or spokeshave to it. Parts with a series of curves are cut with a template and a flush-trim bit, and we strongly recommend our CNC-cut templates for those. The shop-drawing views are drawn to scale, so you can also enlarge and print them and trace your own paper template, but then you're making your own template: check it against every dimension before you cut.
• **++ means rough it out oversized.** On shaped parts, a dimension marked ++ is the FINISHED size of the part. Rough-cut the blank well oversized (about 1 in wider and 3 in longer than the ++ size), trace the template, saw about 1/8 in outside the line, then flush-trim to the template for the final size. Don't cut a shaped blank to the ++ size before templating.
• **Dimensions govern.** Always work from the numbers, not by measuring the drawing. Cut one part, test the fit, then cut the rest.
• **Joinery.** We join parts with Festool Domino loose tenons wherever two parts meet. Dowels, pre-drilled screws with plugs, or traditional mortise and tenon all work in their place (see the Joinery sheet). Pocket screws work but are weaker.
• **Thick parts are glued up.** We don't stock 16/4. For anything thicker than 1-3/4 in, glue up two 8/4 boards: plane each a little over half the final size (about 1-5/8 in for a 3 in part), glue, let it dry, then plane to the final size. Always leave extra width, thickness and length to do your final sizing after a glue-up.
• **Anything wider than 12 in.** Most shops have a 12 to 13 in planer and a 6 to 8 in jointer. Flatten and thickness boards before glue-up, glue wide parts in sections narrower than your planer, plane each section, then join them and level the seams with a hand plane, router sled or sander. Wide shaped parts are glued up from boards about 5 in wide and cut to shape afterward.
• **Tops.** Table tops finish 1-1/2 to 1-3/4 in thick unless noted, and attach with Z-clips in slots cut with a biscuit joiner (2 to 3 per side) so the top can move with the seasons.
• **Knock-down bases.** Stretchers attach with connector hardware so the base can come apart for moving. If you glue instead, make sure you have room to move one solid base.

Notes for This Design

Read these before you cut. They come from how we build it in our shop.

1 SPLINTER
Beginner friendly

• Legs taper on the two inside faces only; the outside faces stay square. The taper stops at least 4 in from the top so the aprons land on a flat face.

• Mortises are slightly wider than the tenons to allow for wood movement across the grain.

• Optional drawbore: the peg hole in the tenon is offset toward the shoulder so the peg pulls the joint tight.

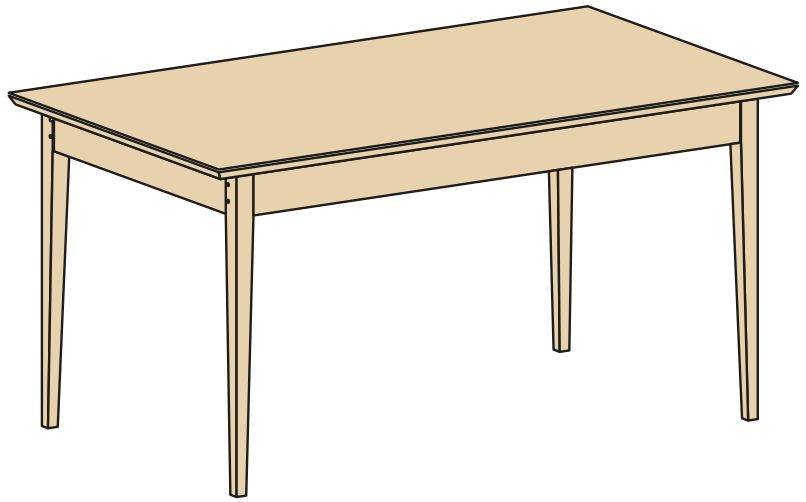
• Using Dominos instead? Cut the aprons to the shoulder length with no tenons.

• Top size can change; change the aprons to match (see Cut List).

• **Underside bevel:** 60 deg bevel on the underside edge, leaving a 1/4 in flat at the edge (never a knife edge). Do all 4 edges or just the 2 long ones.

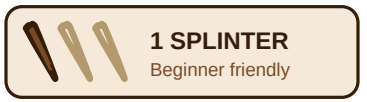
• **Drawbore:** 1/4 in dowel pegs; offset the hole in the tenon about 1/32 in (never more than 1/16 in) toward the shoulder.

• **Breadboard ends (optional):** a 3 in wide board across each end of the top. Cut a tongue on the top's end 1/3 of the top's thickness and 1 in long, with a matching groove in the breadboard. Glue only the center 2 to 3 in; pin with 1/4 in dowels through holes that are elongated toward the ends so the top can move. Make the top 6 in shorter to keep the same overall length.



Materials, Board Feet and Cost

What to buy. Board feet include 20% for waste and defects.



Board feet to buy, by table size

Length	30 in wide	34 in wide	36 in wide
4 ft (48 in)	5 (8/4) + 23 (5/4)	5 (8/4) + 25 (5/4)	5 (8/4) + 27 (5/4)
54 in	5 (8/4) + 25 (5/4)	5 (8/4) + 28 (5/4)	5 (8/4) + 29 (5/4)
5 ft (60 in)	5 (8/4) + 28 (5/4)	5 (8/4) + 31 (5/4)	5 (8/4) + 32 (5/4)
6 ft (72 in)	5 (8/4) + 33 (5/4)	5 (8/4) + 36 (5/4)	5 (8/4) + 38 (5/4)

Highlighted row = the size on our shop drawing. Numbers in parentheses are lumber thickness. Buy them in 5 board foot steps at m2lumber.com.

Approximate lumber cost (at the drawn size)

Species	8/4 price	5/4 price	Lumber cost
Black walnut	$13.75	$13.75	$495
White oak	$12.99	$12.99	$468
Sapele	$10.99	$10.99	$396
Hard maple	$8.49	$8.49	$306
Hickory	$7.69	$7.69	$277
Cherry	$6.59	$6.59	$237
Ash	$6.49	$6.49	$234
Ambrosia maple	$5.99	$5.99	$216
Red oak	$5.49	$5.49	$198
Poplar	$3.99	$3.99	$144

M2 Lumber prices per board foot on 10/21/26; check m2lumber.com or call for today's price. Plans are free with $800 or more of lumber. 5/4 is priced like 8/4 here; we stock 4/4 and 8/4 online, call for 5/4.

Also needed

- Z-clips (2 to 3 per side) and #8 x 5/8 in screws
- 1/4 in hardwood dowel for drawbore pegs (optional)
- Wood glue
- Finish

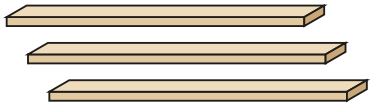
Tools

- Table saw or circular saw with a guide
- Jointer and planer (or S4S lumber)
- Tapering jig or hand plane
- Mortiser, router or Domino (or chisels)
- Drill and 1/4 in bit
- Biscuit joiner or slot cutter for Z-clip slots
- Clamps
- Sander

Rough Milling: From Board to Blank

Every part before any shaping, templating, angles or joinery, shown for the 60 x 34 in table. Not to scale.

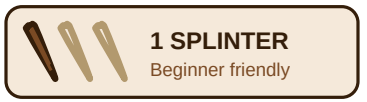
1 SPLINTER
Beginner friendly

1. ROUGH CUT FROM LUMBER	2. MILL AND GLUE UP	3. READY FOR SHAPING / JOINERY
TABLE TOP make 1	*joint and plane each board first; glue up in sections narrower than your planer (about 9 in)*	
 8 boards 5/4 x about 5-3/4 x 62 (3 of 8 shown)	 4 two-board sections, about 9 x 62, each planed	 join the sections, level the seams, trim to 34 x 60 (1 thick)
TAPERED LEG make 4	*joint, plane and rip to 1-3/4 x 1-3/4*	
 4 pcs 8/4 x 2-1/4 x 31 (full 1-3/4 or thicker)		 1-3/4 x 1-3/4 x 29 then cut the angles shown
LONG APRON make 2	*joint, plane and rip to 1 x 4*	
 2 pcs 5/4 x 4-1/2 x 55		 1 x 4 x 52-1/4 (length changes with the table)
SHORT APRON make 2	*joint, plane and rip to 1 x 4*	
 2 pcs 5/4 x 4-1/2 x 32		 1 x 4 x 29-3/4 (length changes with the table)

WIDER THAN 12 IN? READ THIS. Most shops have a 12 to 13 in planer and a 6 to 8 in jointer. Flatten and thickness every board **before** glue-up, glue wide parts in sections narrower than your planer, plane each section, then glue the sections together with Dominos or biscuits and cauls to keep the faces aligned. Level the seams with a hand plane, a router sled or a random orbit sander (start at 80 grit). A cabinet shop with a wide-belt sander can flatten a whole top if you'd rather.
Why rough out oversized: wood moves when it's cut and glue lines never line up perfectly, so every blank starts thicker, wider and longer than it finishes. Shaped parts are roughed out about 1 in wider and 3 in longer so the template and flush-trim bit cut them to size. Plane laminated blanks to final size only after the glue is dry. Sizes that change with your table are on the Cut List.

Cut List

Finished sizes at the drawn size, and rough sizes to cut before milling.



Part	Qty	Finished T x W x L (in)	Rough size to cut	Lumber	Shape	Notes
Table top	1	1 x 34 x 60	5/4 x 34-1/2 x 62	5/4	Panel	Glue-up
Tapered leg	4	1-3/4 x 1-3/4 x 29	8/4 x 2-1/4 x 31	8/4	Angled cuts	Taper 2 inside faces
Long apron	2	1 x 4 x 52-1/4	5/4 x 4-1/2 x 55	5/4	Straight	Length varies
Short apron	2	1 x 4 x 29-3/4	5/4 x 4-1/2 x 32	5/4	Straight	Varies with width

Parts that change with table size

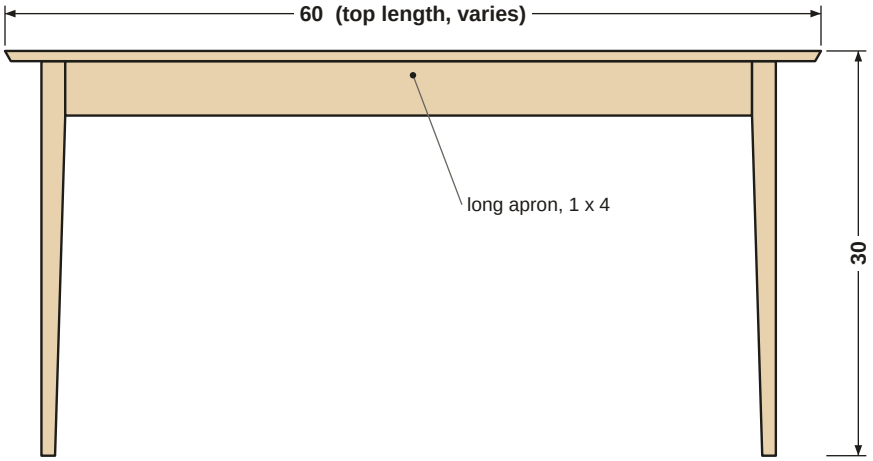
- Long apron overall (with tenons) = top length - 7.75 in; shoulder to shoulder = top length - 9.5 in.
- Short apron overall = top width - 4.25 in; shoulder to shoulder = top width - 6 in.
- Legs stay the same. (3 in overhang at the ends, 1-1/4 in at the sides.)

Rough sizes add about 2 in to length and 1/2 in to width. **++ shaped parts** are roughed out well oversized (about 1 in wider and 3 in longer) because the template and flush-trim bit cut them to the finished size; the finished size is the ++ size on the drawing. Laminated parts: see the part sheet. Cut the longest parts first so offcuts can cover the short ones.

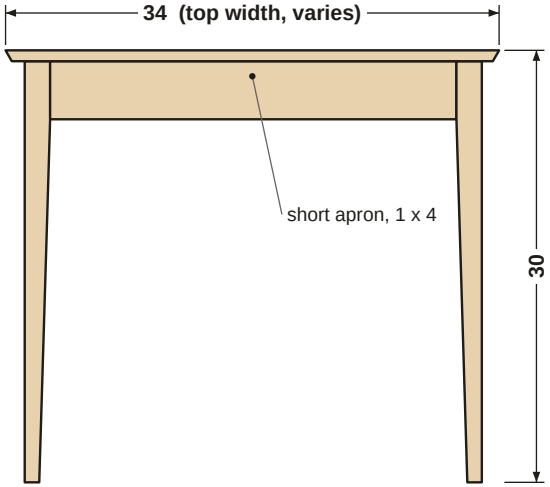
Assembly Views

Drawn at 60 x 34 in. The top can be any size; change the aprons to match (see the Cut List).

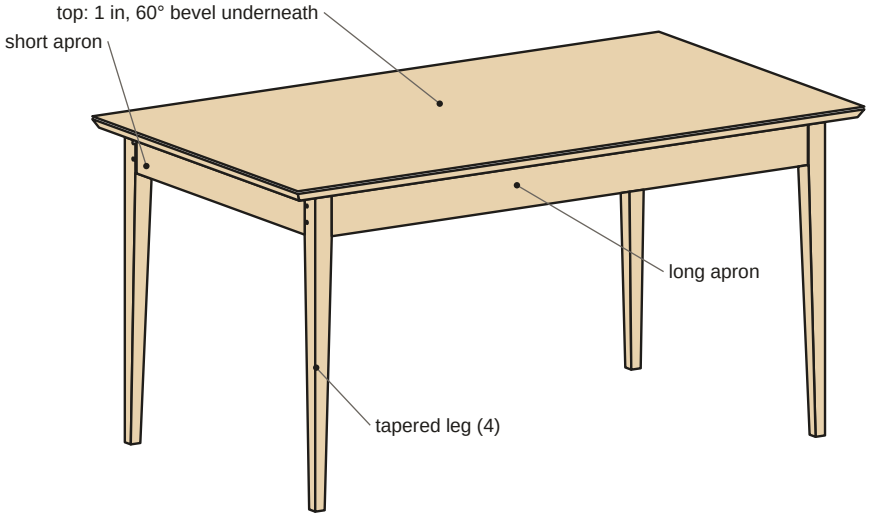
1 SPLINTER
Beginner friendly



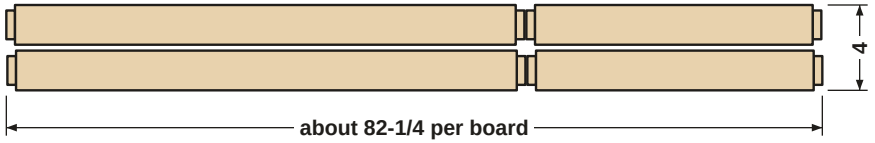
Front view (60 in long)



End view (34 in wide, 30 in high)



3D view



Aprons laid out on rough stock (one long + one short per board)

m2 furniture co.	TITLE **The Simple Shaker Kitchen Table - Woodworking Plans** Plan set for personal use. Dimensions govern; don't scale the drawings.	LUMBER AND QUESTIONS **M2 Lumber, Laurens, SC** m2lumber.com 1-864-GOT-WOOD (468-9663)	REV / DATE A draft, 10/21/26 SHEET **7 / 16**

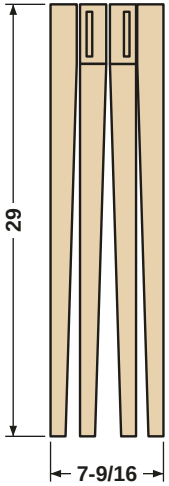
Details

Drawn at 60 x 34 in. The top can be any size; change the aprons to match (see the Cut List).

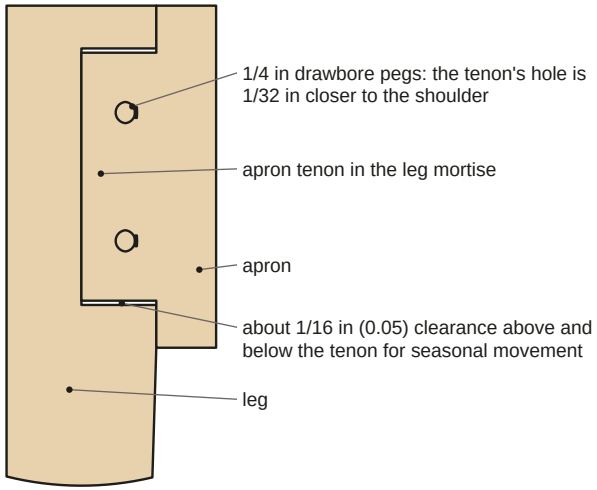
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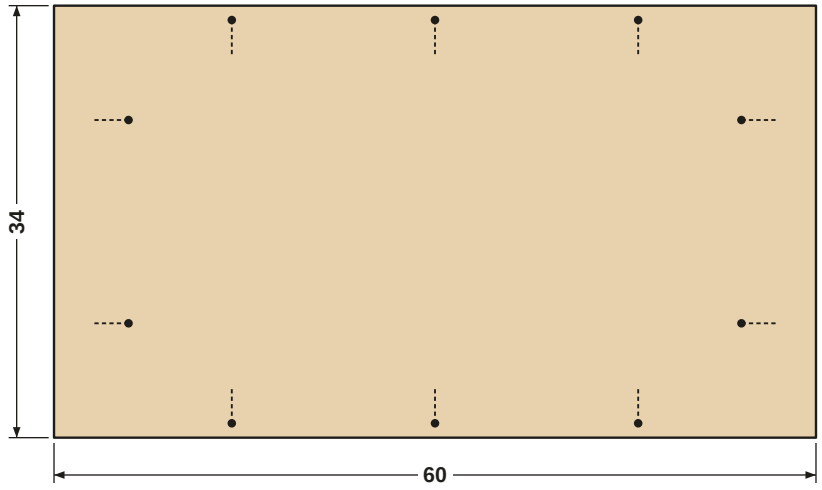
Top blank, 60 x 34 in



Four legs nested on 8/4 stock



Detail I: drawbore mortise and tenon in the leg



Plan: Z-clip locations under the top

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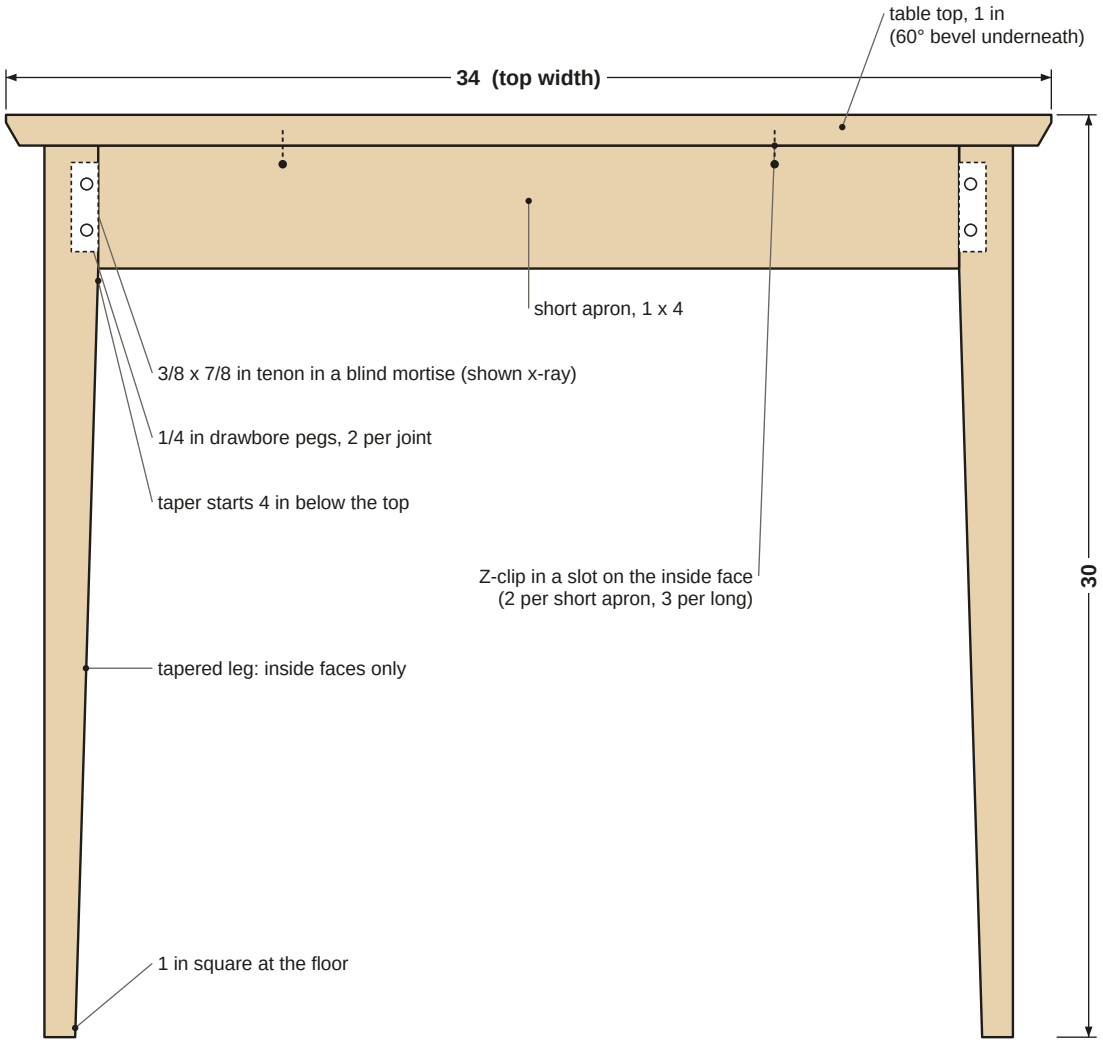
SHEET

8 / 16

End Frame: Mortise, Tenon and Drawbore

Make two. Two tapered legs and a short apron, glued and pegged. The long aprons join the same way.

1 SPLINTER
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Mortise and tenon

- Tenons 3/8 in thick, 7/8 in long and 2.9 in tall (0.55 in shoulders top and bottom), centered on the apron.
- Mortises 3/8 in wide, 3 in long, 7/8 in deep, starting 1/2 in below the top of the leg and 7/16 in in from the outside face.
- The mortise is a little longer than the tenon is tall (3 in vs 2.9 in) so the apron can move with the seasons.
- Cut all the mortises **before** you taper the legs, while the stock is still square.

Drawbore pegs (optional, no clamps needed)

- Drill 1/4 in holes 1-1/4 in deep through the outside face into the mortise, 1-1/4 and 2-3/4 in below the top.
- Dry-fit the joint and mark the tenon through the holes with the bit's point.
- Pull the tenon and drill its holes about 1/32 in closer to the shoulder (never more than 1/16 in).
- Glue up, then drive 1/4 in hardwood pegs with a slightly pointed tip. The offset pulls the shoulder tight. Trim flush.

Using Dominos instead

Cut the aprons to shoulder length (no tenons) and use two Dominos per joint, one above the other.

Z-clips and glue-up order

Cut the Z-clip slots on the apron inside faces with a biscuit joiner, about 1/2 in below the top edge, before glue-up. Glue both end frames first and let them cure, then add the long aprons and check the diagonals. Screw the clips to the underside of the top with #8 x 5/8 in screws; don't glue the top.

Part: Table top

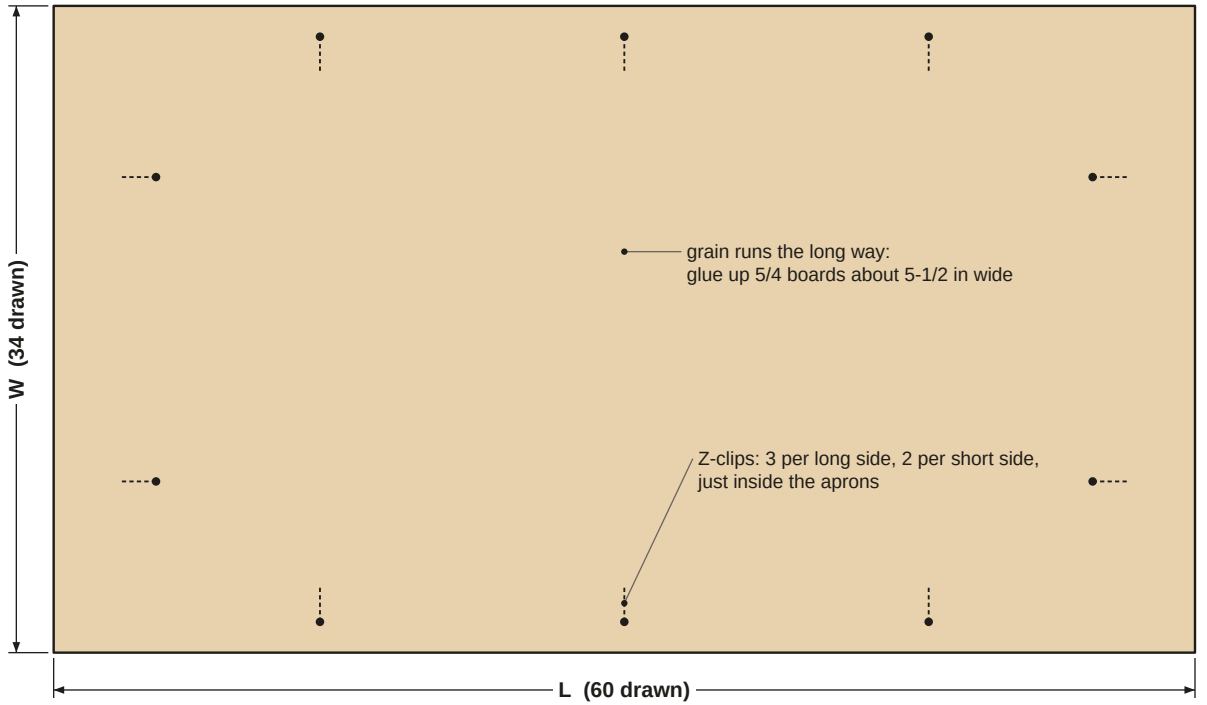
1 SPLINTER
Beginner friendly

Quantity	1
Finished size	1 x 34 x 60 in
Lumber	5/4
Angles	60 deg underside edge bevel (Detail A)
Changes with size	length = table length; width = table width

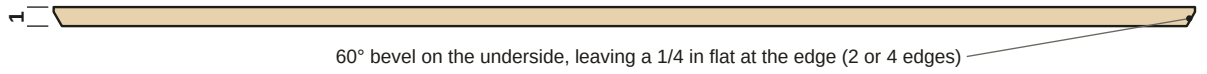
How to make it

• Glue up 5/4 boards about 5-1/2 in wide in two-board sections, plane each to 1 in, then join and level the seams.
• Bevel the underside edge 60 deg, leaving a 1/4 in flat (2 or 4 edges).

PLAN VIEW (UNDERSIDE: Z-CLIPS SHOWN DASHED)



EDGE VIEW



Dimensions in inches. '++' = finished size of a shaped part; rough it out oversized.

Part: Tapered leg (make 4)

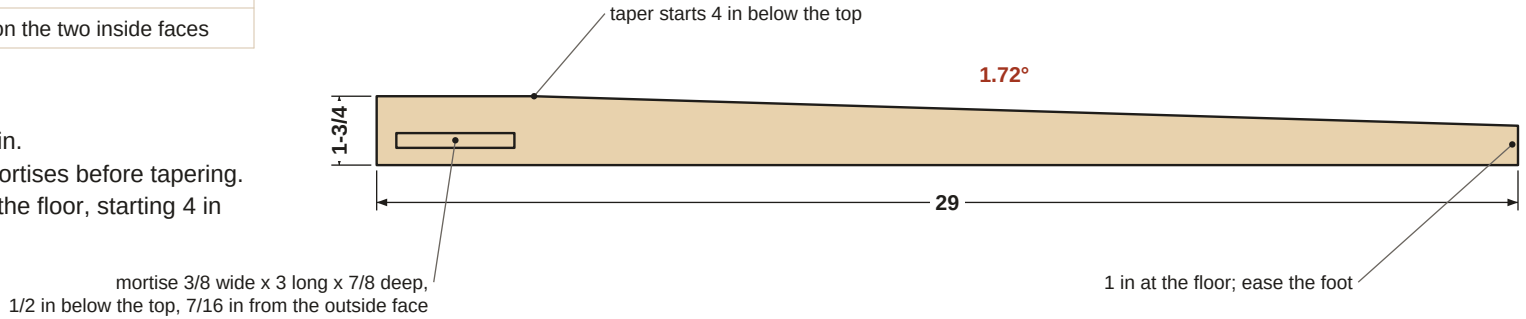
1 SPLINTER
Beginner friendly

Quantity	4
Finished size	1-3/4 x 1-3/4 x 29 in
Lumber	8/4
Angles	1.72 deg taper on the two inside faces

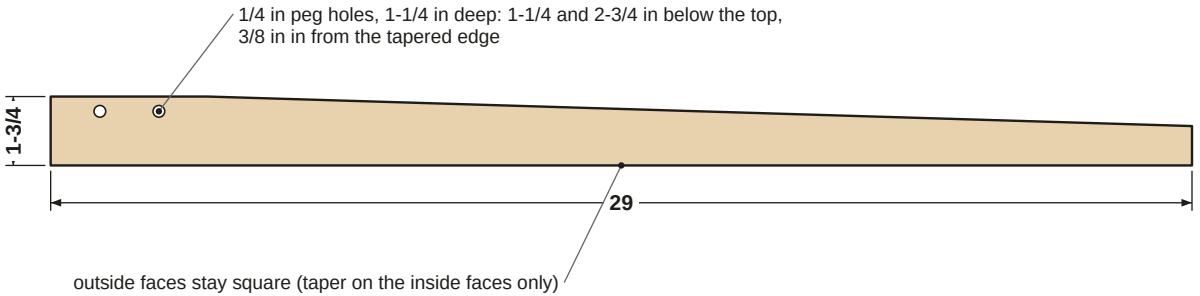
How to make it

- Mill to 1-3/4 in square, cut to 29 in.
- Mark the two inside faces; cut mortises before tapering.
- Taper the inside faces to 1 in at the floor, starting 4 in below the top.
- Ease the foot 1/8 to 1/4 in.

INSIDE FACE (MAKE TWO MORTISES PER LEG)



OUTSIDE FACE (PEG HOLES)



Dimensions in inches. '++' = finished size of a shaped part; rough it out oversized.

Part: Long apron (make 2)

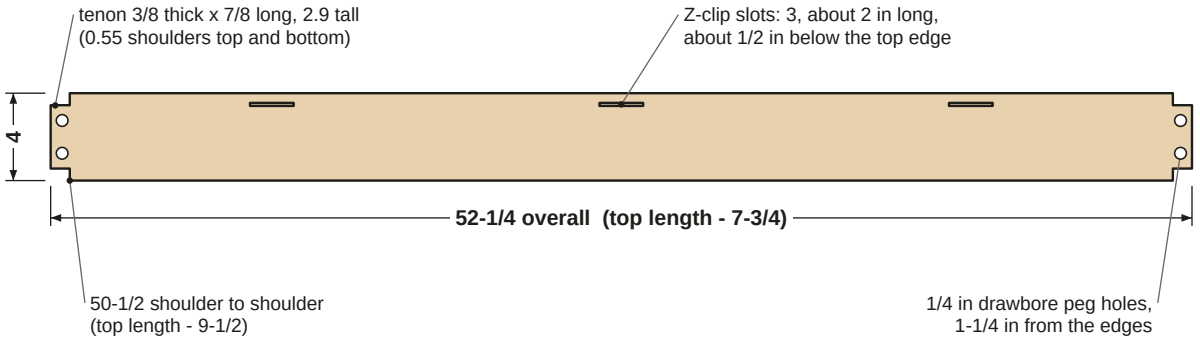
1 SPLINTER
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Quantity	2
Finished size	1 x 4 x 52-1/4 in
Lumber	5/4
Changes with size	length = table length - 7.75

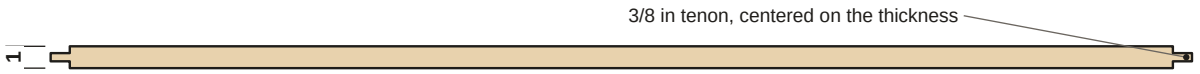
How to make it

• Cut tenons 3/8 x 7/8 in. For drawbore, offset the 1/4 in peg hole about 1/32 in toward the shoulder (optional).
• Cut Z-clip slots on the inside face before glue-up.

INSIDE FACE



TOP EDGE



Dimensions in inches. '++' = finished size of a shaped part; rough it out oversized.

Part: Short apron (make 2)

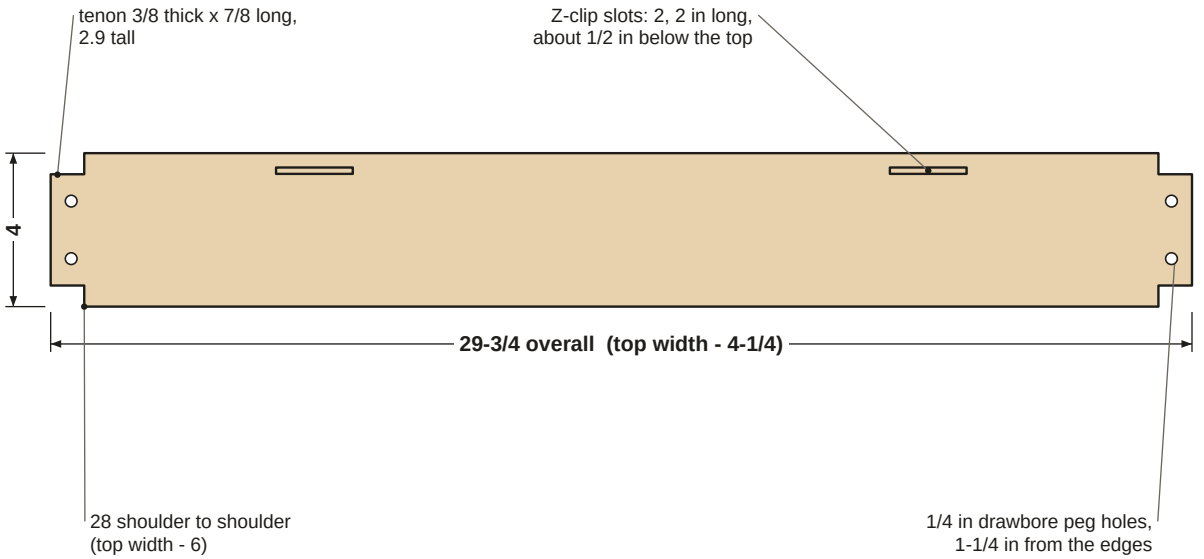
1 SPLINTER
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Quantity	2
Finished size	1 x 4 x 29-3/4 in
Lumber	5/4
Changes with size	length = table width - 4.25

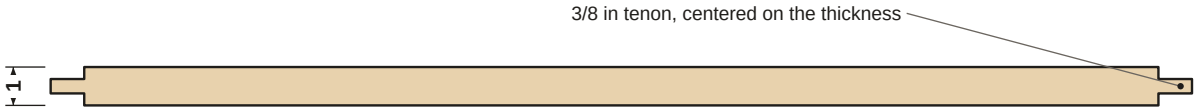
How to make it

• Same as the long apron.

INSIDE FACE



TOP EDGE



Dimensions in inches. '++' = finished size of a shaped part; rough it out oversized.

Joinery and Hardware

How the parts go together, with alternatives if you don't own a Domino.



1 SPLINTER
Beginner friendly

How we join it

• Aprons to legs: blind mortise and tenon, 3/8 x 7/8 in tenons, optionally drawbored with 1/4 in pegs.
• Or Dominos: cut aprons to shoulder length, two Dominos per joint.
• Top: Z-clips in slots on the aprons so the top can move.

Alternatives to Dominos

• **Knapp Zipbolt?** Not for this design. A Zipbolt only works on a T-joint where both parts are flat and flush on both faces, so the pockets sit on one shared hidden face. Where the connector would land in the middle of a part (a stretcher into a leg, an apron into a corner leg) use a cross dowel and bolt or pocket screws instead.
• **Dowels:** two 3/8 in dowels per joint with a doweling jig, 1-1/4 in deep each side.
• **Screws and plugs:** pre-drill, counterbore 3/8 in, glue a face-grain plug and trim flush.
• **Mortise and tenon:** the traditional joint. Add tenon length to the parts (not detailed here).
• **Pocket screws:** work, but they're the weakest choice for a piece that gets used hard.

Assembly tips

• Glue two legs and a short apron at a time, let cure, then add the long aprons.
• Measure diagonals to check square.

Choosing Lumber and Grain

Good boards and careful layout matter more than any tool.

1 SPLINTER
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At the lumber rack

• Buy everything for one piece from the same species and, if you can, the same bundle so the color matches.
• Kiln-dried, 6 to 8% moisture. Let it sit in the room where you'll build for 1 to 2 weeks before milling.
• Sight down each board. Pass on heavy twist or cup; a little bow is fine since parts get cut shorter.
• Avoid the pith (center of the tree) and long cracks. Small end checks get cut off.
• Buy the board feet on the Materials sheet. The extra 20% lets you be picky about grain.

Laying out the top

• Lay the boards out best face up and move them until color and grain flow as one surface. Mark a big triangle across them.
• Straightest grain on the outside edges; save figured boards for the middle.
• Boards 5 to 7 in wide stay flatter than very wide boards.
• Keep sapwood to the underside unless you like the contrast.

Shaped and structural parts

• Straight grain for the legs so the taper looks even.
• Match the top boards for color before gluing.

Board-foot math

Board feet = thickness x width x length (inches) / 144. 8/4 counts as 2 in thick, 4/4 as 1 in.

Milling, Build Sequence and Finishing

Work in this order: mill, cut and shape, joinery, glue-up, finish.



1 SPLINTER
Beginner friendly

Milling

- **Cut the longest parts first**, then the shorter ones from what's left.
- Cut every part to rough size (cut list) and let them sit overnight.
- Flatten one face, square one edge, plane to thickness taking wood off both faces.
- Mill matching parts at the same time so they come out identical; cut to length with a stop block.

Shaping

- Taper legs with a tapering jig on the table saw or bandsaw and clean up with a plane.

Build sequence

#	Step
1	Mill all parts.
2	Glue up the top in planer-width sections and level the seams.
3	Cut mortises in the legs; taper the legs.
4	Cut tenons and Z-clip slots in the aprons.
5	Dry fit, then glue up (drawbore if used).
6	Sand and ease edges.
7	Finish.
8	Attach the top with Z-clips.

Finishing

We use a 1K water-based polyurethane in satin: 3 coats on surfaces that get wear, 2 elsewhere, scuffing with 320 grit between coats. Finish both faces of a top the same.

Stuck? Give us a call

Call **1-864-GOT-WOOD** (864-468-9663) Mon-Fri 9-5 or Sat 8-3 (Eastern) with your sheet number handy.

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