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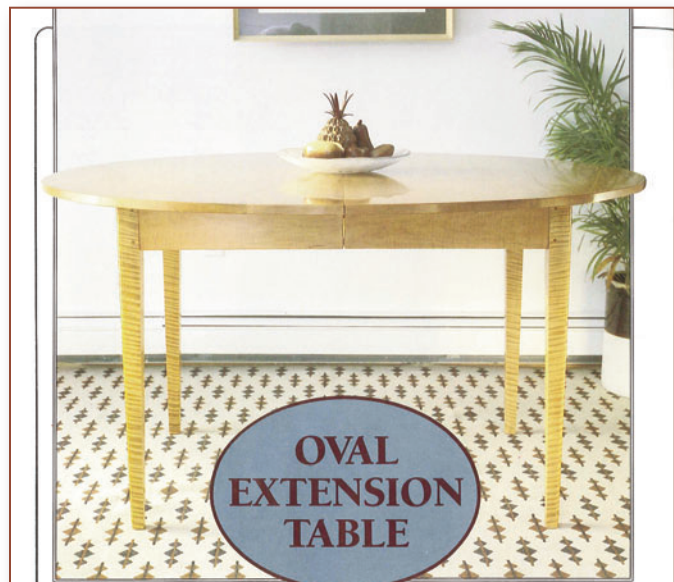
Classic Project



In this plan you'll find:

- Step-by-step construction instruction.
- A complete bill of materials.
- Construction drawings and related photos.
- Tips to help you complete the project and become a better woodworker.

Oval Extension Table



Massachusetts furniture maker Gene Cosloy designed this table so that it forms a perfect oval without any extensions. Even with both extensions in place, though, the table has an elegant look and doesn't appear stretched out of proportion.

As with much of Cosloy's work, the table makes a statement not with bold colors or contrasting woods, but with distinctive details that enhance a well-executed design. In this case the details are a small chamfer top and bottom around the perimeter of the tabletop, and curly maple legs accented with a full-length bead.

Cosloy used maple for all the table parts. The wooden extension slides (G) are purchased, since few shops are set up to produce a working slide. As you

can see from the top view, the top and frame are designed so that the oval top overhangs the frame by 8 1/4 in. at the maximum point on all four sides.

A good place to start is with the top (E). The two halves of the oval top are glued up separately, as opposed to being glued up as a unit and ripped in half. This is because such a ripping cut would eliminate the width of the kerf from the top, meaning it would no longer be a true oval. Start by edge-gluing the stock for the two halves of the top. By making this first operation, the blanks for the top will be dry by the time the frame is finished.

While you are waiting for the top to dry, go to work on the legs (A). After ripping and planing the 1 1/2 in. leg blanks, lay out and cut the apron mor-

tises. Note that the mortises are located so the aprons will be inset 1/4 in. Then establish the leg tapers, which start at a point 4 1/2 in. down from the top end. These tapers, which are cut on the table saw using a tapering jig, are on the inside edges only of each leg. Then hand plane the 8 in. long chamfer at the bottom end of the legs. Finally, using a 1/4 in. radius beading bit in the router table, establish the bead detail on the outside corner of each leg.

Next, go to work on the aprons (B, C, D). Note that the side aprons are cut to the length shown in the Bill of Materials, and then cut in half before the legs and aprons are assembled. The 1/2 in. that is lost in the apron length from the saw kerf is maintained as a space when the top is mounted. This



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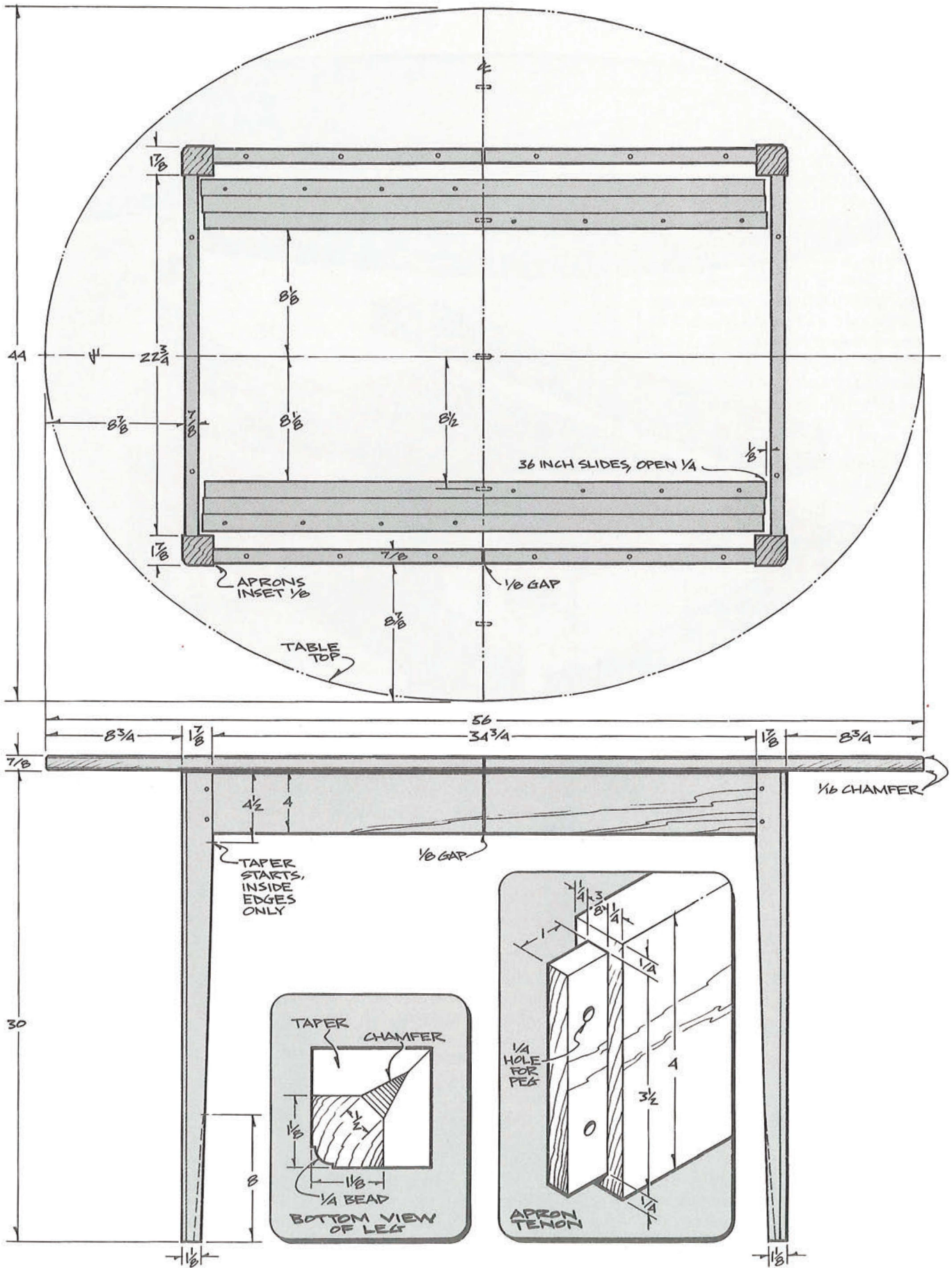
can see from the top view, the top and frame are designed so that the oval top overhangs the frame by $8\frac{7}{8}$ in. at the maximum point on all four sides.

A good place to start is with the top (E). The two halves of the oval top are glued up separately, as opposed to being glued up as a unit and ripped in half. This is because such a ripping cut would eliminate the width of the kerf from the top, meaning it would no longer be a true oval. Start by edge-gluing the stock for the two halves of the top. By making this the first operation, the blanks for the top will be dry by the time the frame is finished.

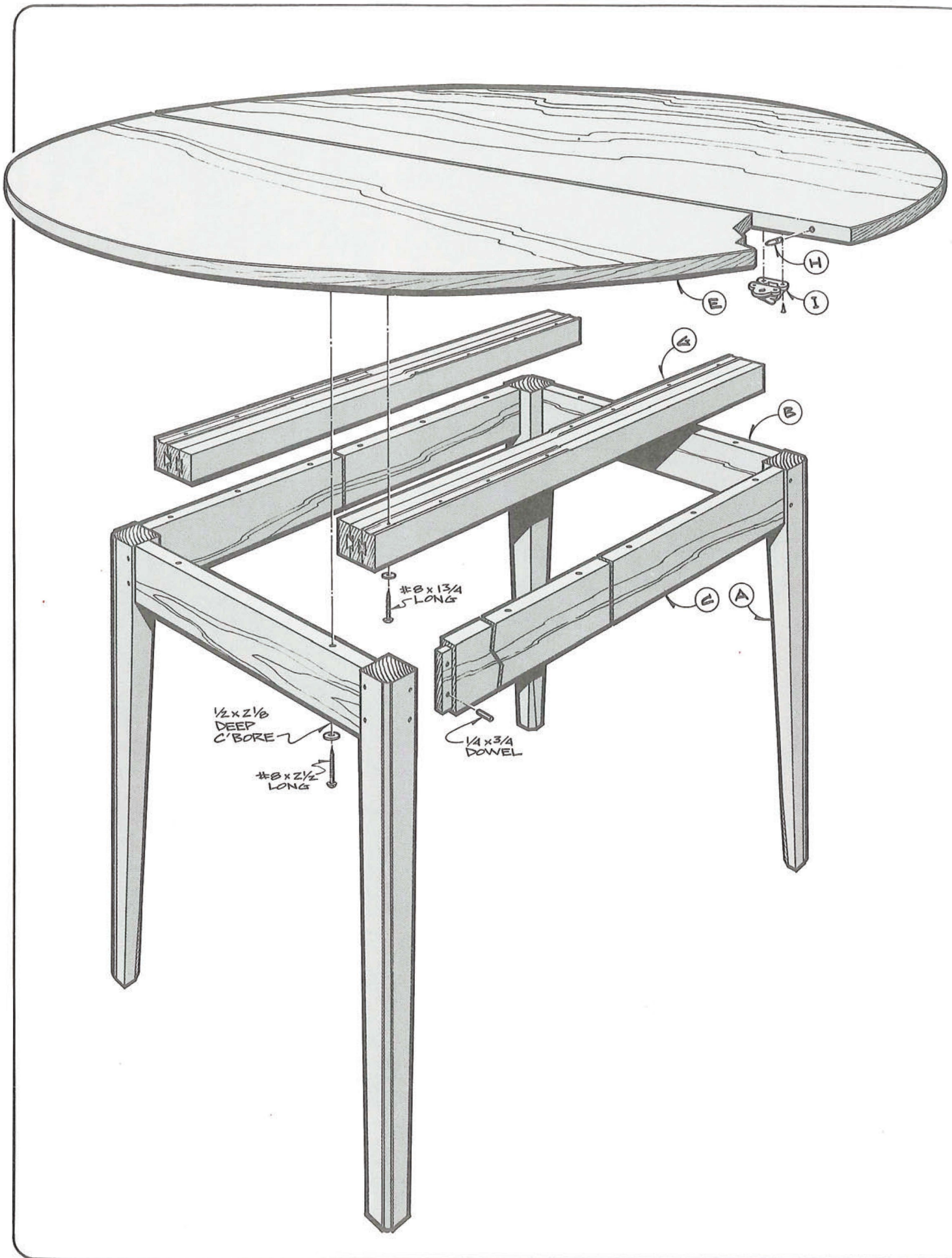
While you are waiting for the top to dry, go to work on the legs (A). After ripping and planing the $1\frac{7}{8}$ in. leg blanks, lay out and cut the apron mor-

tises. Note that the mortises are located so the aprons will be inset $\frac{1}{8}$ in. Then establish the leg tapers, which start at a point $4\frac{1}{2}$ in. down from the top end. These tapers, which are cut on the table saw using a tapering jig, are on the inside edges only of each leg. Then hand plane the 8 in. long chamfer at the bottom end of the legs. Finally, using a $\frac{1}{4}$ in. radius beading bit in the router table, establish the bead detail on the outside corner of each leg.

Next, go to work on the aprons (B, C, D). Note that the side aprons are cut to the length shown in the Bill of Materials, and then cut in half before the legs and aprons are assembled. The $\frac{1}{8}$ in. that is lost in the apron length from the saw kerf is maintained as a space when the top is mounted. This



(continued on next page)



that the top and leaves will have no gaps. Gaps would result if wood movement caused the top or leaves to contract past the ends of the aprons. Sizing the aprons a little short allows for some wood movement in the top without risking the formation of these gaps.

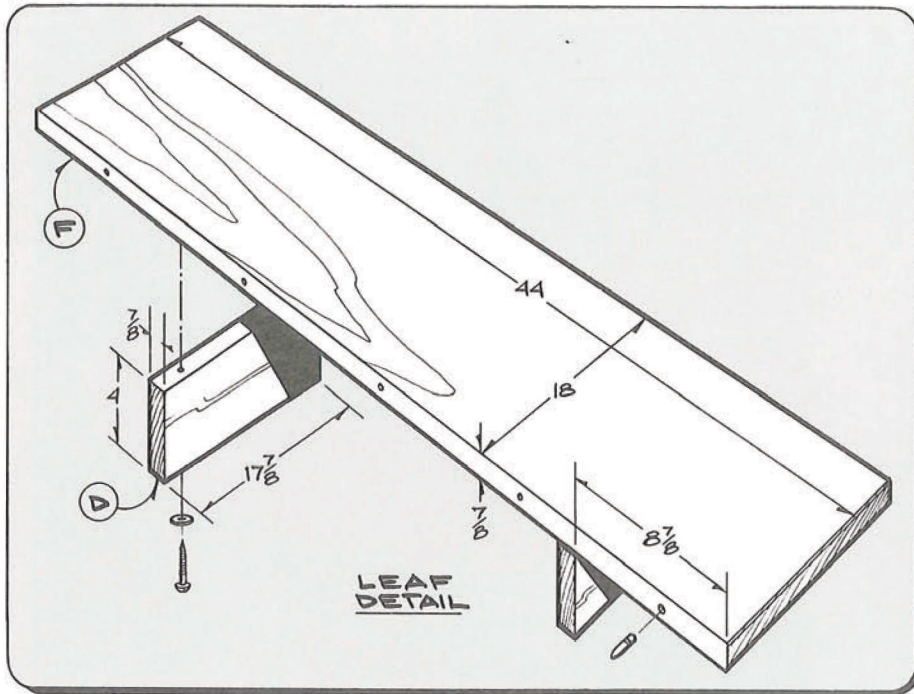
You are now ready to lay out the oval on the top. There are many different approaches to laying out ovals, but the method shown on page 40 is one of the simplest. You could make a large paper template or use our system to lay out the entire oval directly on the stock. Another easy method is to use the system to lay out a quarter section of the oval on stiff cardboard or plywood. Then, using the quarter section of the oval as a template, lay out the entire oval. The advantage of making the template is that you'll have a ready-made pattern if you'd like to make another table later.

With the oval shape drawn out on the two halves of the top, you'll now cut the top out. A band saw with a fine blade is best, since you'll minimize sanding. If you made a plywood template, you can use the band saw to cut just outside the line, and then clean up the cut by using a ball-bearing guided laminate trimmer bit, gauging off the template. Once the oval is perfect, apply a $\frac{1}{16}$ in. chamfer top and bottom around the table perimeter. A ball-bearing guided chamfering bit will provide a smooth cut. Make the two leaves (F) and apply the same $\frac{1}{16}$ in. chamfer.

Next, lay out and bore the holes in the top and leaves for the table alignment pins (H). The pins are spaced as shown in the top view. A dowel jig will help insure that the pins line up with their respective holes. Glue the pins in place.

To mount the top to the frame, position the frame upside down on the top, with a gap of $\frac{1}{8}$ in. between the aprons, and with the two halves of the oval top closed up tight. Clamp securely and mark out the pilot holes for the screws into the top. Remove the leg/apron frame and drill these pilot holes. Then reposition the leg/apron frame on the top and secure with the roundhead screws and washers.

Now mount the extension slides (G). The slides are pre-bored with oversize screw holes and countersinks, just as the aprons were prepared, in order to allow wood movement in the top. With the table still upside down, and the two halves of the top closed tight, lay out
(continued on next page)



Bill of Materials (all dimensions actual)

Part	Description	Size	No. Req'd.
A	Leg	$1\frac{7}{8} \times 1\frac{7}{8} \times 30$	4
B	End Apron	$\frac{7}{8} \times 4 \times 24\frac{3}{4}$ *	2
C	Side Apron	$\frac{7}{8} \times 4 \times 36\frac{3}{4}$ *	2
D	Leaf Apron	$\frac{7}{8} \times 4 \times 17\frac{7}{8}$	4**
E	Top	$\frac{7}{8} \times 56 \times 44$	1
F	Leaf	$\frac{7}{8} \times 18 \times 44$	2**
G	Extension Slide	36 in. long, extends to 74 in.	1 pair
H	Table Alignment Pin	$\frac{3}{8}$ in. dia. \times $1\frac{1}{4}$ in. long	15
I	Lock	Standard double-hung window sash lock	2

*Length includes tenons. Note that the side apron length is before it is crosscut into the two halves.

**Parts shown are for two 18 in. wide leaves.

insures that the top closes up tight with no gap. Before assembling the legs and aprons, drill the holes through the aprons to accept the tabletop mounting screws and washers.

These holes are slightly oversize, with a $\frac{1}{2}$ in. diameter by $2\frac{1}{8}$ in. deep

in. deep counterbore, to allow the screws to move as needed to accommodate wood movement in the top. The depth of the counterbore is designed to work with a $2\frac{1}{2}$ in. long round-head screw. The washers prevent the screw heads from biting into the wood at the bottom of the counterbore. The screws through the leaf aprons into the leaves use the same oversize holes and counterbore to allow wood movement in the leaves. The counterbore depth and screw length are calculated so the screws won't break through the top or leaves. If you decide to use a different length screw, be sure to adjust the depth of the counterbore accordingly.


Cleats clamped on either side of the side aprons hold them in position during the leg/apron assembly. That way the legs and aprons can be assembled in a single operation, insuring that the table frame is square. Pins lock each of the leg/apron tenons securely. By slightly offsetting the holes through the tenons toward the shoulder, the pins will help draw the mortise and tenon joints together.

Also cut to length the shorter apron sections for the two table extension leaves. Note that these are sized $\frac{1}{8}$ in. less in length than the 18 in. width of the leaves. Again, this space insures

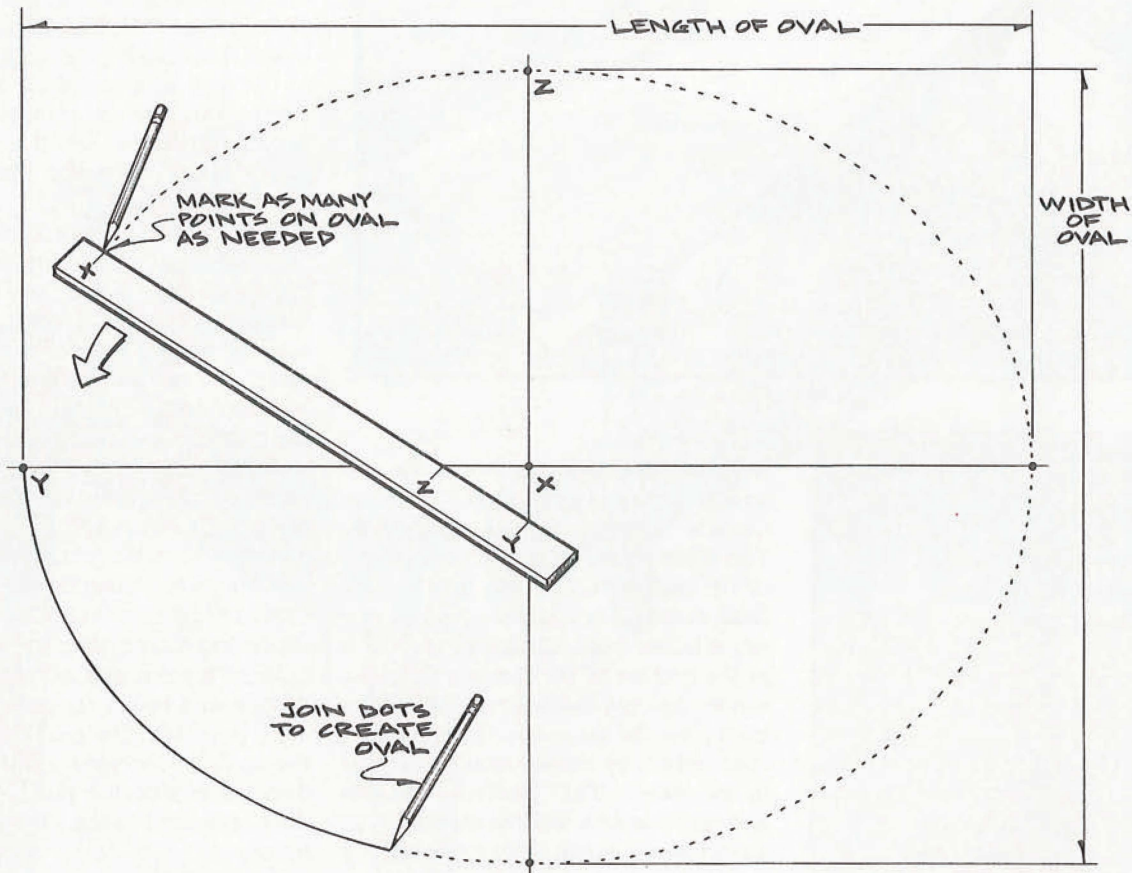
the location of the two slides. It is important that the slides be perfectly parallel to each other and perpendicular to the edge where the two halves of the oval meet to prevent binding. In order to insure that the table always closes regardless of wood movement in the top, open the slides

about $\frac{1}{4}$ in. before screwing them to the top. With the slides open $\frac{1}{4}$ in., you'll still have a $\frac{1}{8}$ in. gap on each end between the slides and end aprons, as shown in the top elevation.

Final sand and finish with four coats of tung oil to bring out the natural beauty of the wood. Next, mount a

window sash lock (I) on the bottom of the tabletop on each side just outboard of the apron along the joint where the two halves of the oval top meet. These sash locks, which are available at any hardware store, serve to draw the two halves of the oval up tight and lock them in place. 


OVAL LAYOUT TECHNIQUE



Draw two perpendicular lines along which the outermost points of the oval can be marked. The length of the horizontal line is the length of the oval, while the length of the vertical line represents the width of the oval. The center point of the oval is the intersection of the two lines. Mark the center point *X*. Mark point *Y* on the horizontal line, and point *Z* on the vertical line, as shown.

Next, cut a straight stick that is a little longer than one-half the length of the oval. Near one end of the stick mark a point and identify it as *X*. Lay the stick along the horizontal line with point *X* on the stick lined up with point

X on the oval, and mark the stick with a *Y* where point *Y* on the oval touches it. The distance on the stick from point *X* to point *Y* will be equal to one-half the length of the oval. For the oval table, the distance between point *X* and point *Y* is 28 in., or one-half the 56 in. length of the oval. Now reposition the stick along the vertical line so point *X* on the stick is at point *X* on the oval. Mark point *Z* on the stick where point *Z* on the oval touches it. The distance on the stick will be equal to one-half the width of the oval. For the oval table the distance between point *X* and point *Z* is 22 in., which represents one-half the 44 in. width of the oval.

Now, with point *Y* on the stick intersecting the vertical line, and point *Z* on the stick intersecting the horizontal line, gradually rotate the stick to mark out the points along a one-quarter section of the oval's perimeter. Make a series of marks as shown using point *X* on the stick as your guide. The more points that you mark, the easier it will be to draw a smooth curve by connecting the dots. Continue around the entire perimeter if you like, or make a pattern of the quarter section as a template for tracing out the four quadrants of the oval. 

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Thank you again for your purchase, and happy woodworking!

Matt Becker
Internet Production Coordinator