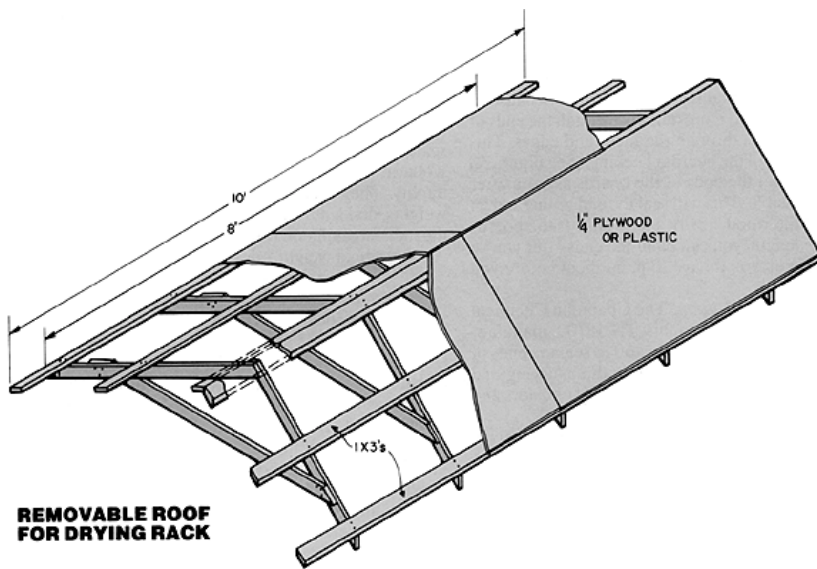


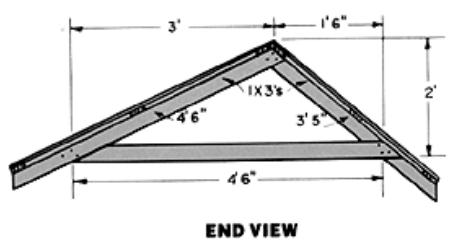
An attic on the other hand is usually too hot and will dry the wood too quickly. As I said before this results in surface checking. The wood on the outside of the board dries faster than the inside. As it dries it shrinks and cracks develop.

The best place to dry wood, believe it or not, is outside. Look for a spot that gets a breeze and isn't expose to a lot of direct sunlight. This will allow the wood to dry at a slow, even rate. You can build a simple drying rack, as shown in Figure 2. Make sure this rack is well off the ground and perfectly flat. Do not put the cross supports more than two feet apart or the boards will sag as they dry.

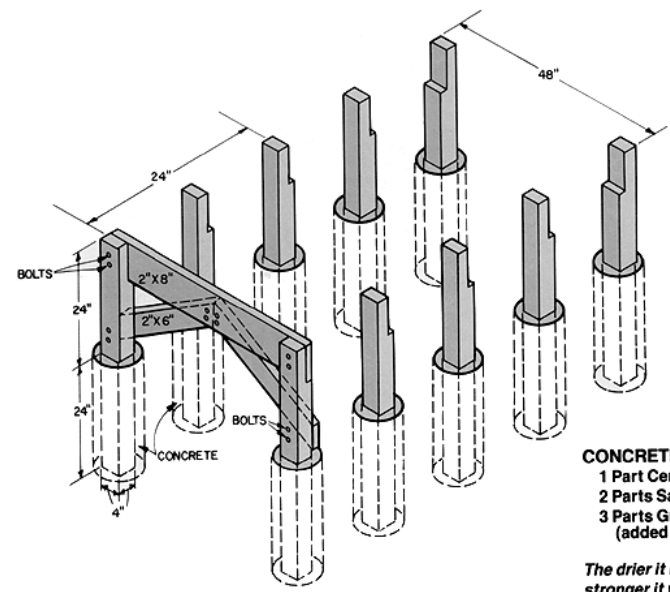
Once you've built the drying rack, you're ready to stack the lumber. To allow proper air circulation between each board, you'll need to put 'stickers' (small sticks) in between the rows to ensure proper air circulation. I use commercial furring strips for stickers, but any dry wood will do. The stickers should be as long as the width of the drying rack, at least 3/4" thick, and no more than 1 1/2" wide. The narrower the stickers are, the less likely they are to trap moisture and encourage fungus or rot.



REMOVABLE ROOF FOR DRYING RACK



END VIEW



CONCRETE:
 1 Part Cement
 2 Parts Sand
 3 Parts Gravel
 (added after water)

The drier it is, the stronger it will be.

Figure 2. You can dry your own lumber on this simple drying rack. Just stack the wood on the supports, then rest the roof on the stack to keep the rain off.

The structures within a tree -- the xylem phloem -- pass water up and down the trunk. Because of this, water leaves a board more quickly through the ends of the boards than it does through the faces and edges. This can result in the ends of the boards checking. (See Figure 3.) To prevent this, paint the ends of the boards as soon after they are cut as possible. This will seal the end grains and let the water leave the wood slowly and evenly. If the boards are all the same length, you can paint the ends after you've stacked them. If not, you'll have to paint them before you stack them.

A note on sealing end grains: The Chapman Chemical Company, P.O. Box 9158, Memphis, TN 38109, manufactures a wax emulsion called Sealtite #60 to seal the ends of boards as they dry. It will work with both air-drying and kiln-drying processes, and comes in a variety of colors and container sizes.

As you stack the lumber, arrange each layer so that it's as wide as the layer beneath it. That way, each layer will be properly supported, and the weight of the boards from above and below will help to keep all the boards from cupping. Leave space in between the edges of each board to allow for air circulation. Positioning them too close together will keep boards on the inside of the stack from drying properly. (See Figure 4.)

Be careful to place the stickers directly over each other, in line with the supports. (See Figure 5.) Don't stack the wood more than 4'-5' thick. When you've finished, build a simple roof and lay it on top of the stack. This roof should have plenty of overhang, to keep the rain from dripping on the stack. If you can't build your rack in the shade, paint the roof with aluminum paint. This will reflect the sunlight and prevent the stack from getting too hot.

Testing and Preparing Air-dried Lumber

You can be fairly comfortable using 4/4 wood after it's dried for a year. For 8/4 wood, you'll want to test the and the moisture content before using it. There is a simple method for this. Saw off a small piece of green lumber (taken from the inside of the stack) and weigh it. An inexpensive postage scale works well for this purpose. Now put the piece of wood in the oven at 350-degrees for a few hours to dry it thoroughly. Then weigh it again. The difference in the two weights, divided by the original weight of the wood, equals the moisture content. Here's the equation written out:

$$\text{Original weight} - \text{dried weight} = \% \text{ Moisture content} \text{ Original weight}$$

A note on measuring moisture content: You can also measure moisture content the easy way -- with a meter. Lignomat U.S.A. Ltd., 14345 N.E. Morris Court, P.O. Box 30145, Dept. B-H, Portland, OR 97230, makes



Figure 3. Paint the ends of the boards to prevent them from checking. If left unpainted, the ends will dry out faster than the rest of the board.

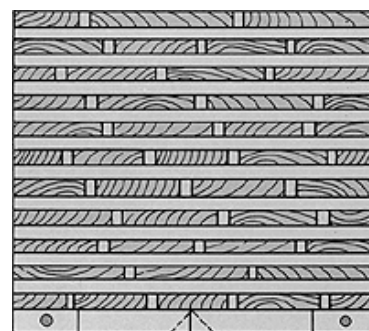


Figure 4. When you stack your green wood, don't stack the boards edge to edge. Leave a space in between each board so that the air can circulate freely.

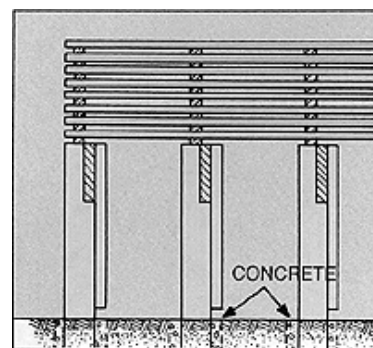


Figure 5. If you're careless about where you place the stickers, many of the boards will dry with a bad warp or bend. The stickers must be carefully placed one above the next, directly over the supports.

several models of moisture meters. Write them for more information.

Once the wood has dried sufficiently, bring it into the shop and let it sit for four to six weeks before using it. This will give it time to get acclimated to your shop. A shop is usually drier and warmer than the outside, and the wood needs time to adjust itself to the change in temperature and humidity. If you cut into the wood right away, the pieces may change shape before you get a chance to assemble them.