

Don't Read This

By Dan Phillips

We're going to get technical. If you have lumberyard anxiety, or get nervous around builders, go take a nap. This article will be poison. In fact, we're going to get so technical that you will have to understand such erudite things as "gravity never stops," "my feet hold up the rest of my body," and "thin air does not hold a nail very well." And there are other, completely technical considerations, such as "wood doesn't just grow on trees, it grows on **trees**." Another caution: what follows flies in the face of the way your grandfather, your father, and your boss did it. So, if you don't have the nerve, hang up right now. I'm not kidding. This is extremely technical.

For starters, trees don't grow two inches by four inches, eight, ten and twelve feet tall, and perfectly squared. It requires colossal waste to achieve the humble 2X4. But the good news is that larger lumber mills are indeed making an effort to dispatch their waste in a responsible way, with a variety of engineered wood products. True, their motivation is profit, but technology has made sizeable inroads into making use of milling byproducts. Whatever the motivation, finding a use for waste is a good thing.

For example, particleboard is one of those products. There is a place for particleboard in the world (in spite of the fact that it outgases formaldehyde), if used in the right way. A wrong way is to use it as a sub floor—as in most mobile homes. An acceptable way is to make budget furniture from it, with wonderful veneers glued to the top. Since you don't see the inside, it makes no difference. And, cared for properly, particleboard furniture will last a very long time. You get the benefit of quarter-sawn cherry (as a veneer), for instance, without the expense of solid cherry or the pillaging of the environment that solid cherry would produce.

But it does no good to be responsible at the point of harvest if the ultimate consumers are wasting the harvest at the point of consumption. Here's where the average builder makes an entrance—with a 40-cubic-yard Dumpster. Here is a challenge: Watch for one of those mega-houses being built around town. Park down the road a bit, and walk up to the job-site. Don't talk to anyone, just walk over to the Dumpster, scramble up the side, and peek in. You will bruise your chin from it dropping so fast. It will be full of useable stuff—lumber, windows, tile, sheetrock—whatever the particular stage of construction produces. When someone confronts you, just say, "Sorry. I thought I had lost my watch, but I remember now that it is on my nightstand. I'll go now." You won't be arrested, but you will be glared at. Contractors don't like the idea that they could be accused of being wasteful.

Form boards are routinely thrown in the Dumpster rather than used as floor joists or rafters. Rather than paying a \$20/hour carpenter to pull a nail or two, a board is thrown away. The irony is that, with lumber prices skyrocketing the way they are, it is now cheaper to pull a few nails (or just bend them over), rather than reach for a new one. If a contractor is paying a carpenter \$300/hour, then, yes, it is cheaper to discard the one with

the nail, rather than pull it and use the board. After all, it only takes one minute to clean \$5 worth of boards. Do the math.

Framing a house typically requires “studs,” which are the upright members inside the wall. They hold up another board, known as a “top plate,” upon which the roof load rests. Again, typically, the top plate is a double row of boards, just in case a rafter happens to fall in-between two studs. Here’s an idea. Make the rafters fall *directly* over each stud, and skip the second top plate—kind of like how your feet hold up the rest of your body. Each hip is directly over each leg. Then tie the walls together at the corners with a gusset made of metal or wood. You’ll save a handful of change, and the inspector will applaud you.

Corners of buildings are typically framed with studs—one as part of one wall, one as part of the intersecting wall, and the third is simply a “nailer”—that is, something to nail sheetrock to, since you can’t nail sheetrock into thin air. It is numbingly easy to make two-stud corners, with the third being scrap boards for the sheetrock nailer. Easy, and incidentally, another handful of change. You skip the Dumpster fee, keep the jobsite clean, and save money on the new nailer that you would otherwise use.

Boards that hold up the roof load over doors and windows are known as “headers.” These are simply boards that are positioned on edge, and then supported by their own studs—known as “trim” studs, each nailed to an adjacent, full-length stud. You can save a bit more change if you mount the header to each full stud with a joist hanger, and skip the trim studs.

This is all good information for cocktail conversation, and will entertain everyone around you. They will nod excitedly and murmur little remarks like, “Wow! You must be a genius!”

A website that is especially useful to both contractor and client alike, is www.buildingscience.com. There is a lot of good reading there. If you are one of those readers who has lumberyard anxiety and ignored my warning, go to this website. It is far less technical than this article and some very engaging reading. But if you got this far and still want to take a nap, then maybe you should live in a mobile home.