



A Carpenter's Dream

by Morris D. Carey, Jr.

Let's say that you are estimating a set of plans with a full hip roof, three dormers, a garage pop-out with a gable end, and you have to take off the rafters for both 16-inch and 24-inch centers for a cost study.

You've also been instructed to figure out how much concrete (in cubic yards) will be needed to fill thirty-five 27-inch pier holes, each of which is 14 feet deep. Plus, you need a cut list for a set of stairs so they can be priced. And, let's say that you need the complete bid in a couple of hours and nothing has come out right so far.

If this sounds at all familiar, you're going to like what comes next. It's called *Carpenter's Dream*, and that's just what it is. It's rare that a software find like this one comes across my monitor. For \$99 you get a program that can help you with many of the difficult little tasks you normally wrestle with during the take-off and material-ordering processes.

For Example

One of the first jobs I had as a carpenter was forming residential foundations. The company I worked for provided hypotenuse lengths (corner-to-corner diagonal measurement) right on the foundation plan. You don't have to be a wizard to run diagonals on a foundation, but having the correct hypotenuses to match the plan allowed us not only to determine if the foundation was square, but also helped us double-check measurements to confirm that all the other foundation dimensions were in accordance with the plans.

I haven't seen many plans since then that provided hypotenuses, but now they don't need to. *Carpenter's Dream* provides them quickly and easily, to a $1/16$ inch.

Carpenter's Dream is the easiest software program I have ever used. I had it up and running in less than one minute, and I didn't need to read a manual or any of the other instructions that came with the one-disk program. To top it off, the program doesn't even require a hard disk, although it runs much faster on one. The graphics in *Dream* will not run on some monochrome hardware, but the program itself will—and that's the important part. There are three graphics displays in *Carpenter's Dream*, which are just used to define terminology. A hard copy of the graphics is included with the program.

Let's take a look at the daily functions that *Dream* makes easy; one or more might be helpful to you.

Volumes and Material Coverage

First, there is a program to estimate concrete and fill volume. Answers are given in cubic yards, cubic feet, gallons, and semi-dump and tandem truck loads. The program calculates volumes for circles, triangles, rectangles, pentagons, hexagons, and octagons.

Estimating deck covering is a breeze. You tell the program the diameter of the deck (if it's a circle), the length and width (if it's a rectangle or square) or the base and height (if the deck is triangular in shape), and the program answers with the total amount of material needed (in linear feet) to cover the deck with either 2x4s, 2x6s, or 2x8s. At the same time, you can also figure how many sheets of plywood it would take to sheathe any area in each of four different sizes (4x8, 4x9, 4x10, 4x12).

By the way, waste is not calculated in any of *Dream's* programs. I tested the deck-covering footage that the program calculated against my own hand method and found *Dream's* takeoff to be two linear feet less on a 100-foot-square deck. My guess is that the program figures 2x6s at a full $5\frac{1}{2}$ inches. The answer may be off slightly if the 2x6 material you are getting is narrower than that. Test once, and compensate, and it should work out fine for you.

Roofs and Stairs

The part of *Carpenter's Dream* that I had the most fun with was the roof estimating and rafter cut list sections. You'll have a tough time trying to fool the program here. You specify the roof, and you'll be given specific dimensions for commons, jacks, and hips.

The second best part of *Dream* is the stair-calculation program. You provide the distance between floors, the overall finished tread, the desired tread overhang, and the program takes care of the rest. You get a minimum stairwell opening, a minimum overhead opening dimension, total stair run, riser height, and tread depth. The answers are given instantaneously.

But be careful with the stair program: it uses the upper floor landing as the final rise. For instance, when the program tells you that you'll be dealing with 15 risers, that applies to the stair horse (stringer) itself. There will actually be 16 total risers when you include the landing. *Dream* refers to the tread width as the run, and refers to the stair run as overall length.

A Hitch

There is one utility within *Dream* that's something of a disappointment. In the window cut list program, the author, Dan Heilman of Golden, Colo., uses 92 $5/8$ -inch studs with 2x12 header stock. No consideration is made for narrower headers, and Heilman is obviously not aware that standard stud lengths vary from region to region since he makes no allowance for the user to enter a different stud length or header height. You will have to do some cripple and trimmer adjustments if the studs in your area are different, or if you aren't using 2x12 headers.

The program also missed the building code requirement to provide double sills and trimmers on large win-

dows. The program specifies a 12-foot-3-inch long header for a 12-foot rough opening. Three inches short for double trimmers. The jack length answer given by the program only allows for one sill in all instances.

Another potential problem is in specifying oversized headers. I asked for a 16-foot-wide by 6-foot-high opening, and the program still called out a 2x12. The rule of thumb in my neck of the woods is 1 inch of 4-inch header height for each foot of rough opening width under normal loads (a 14-foot opening would require a 4x14 header). Back to the drawing board on this section of the program, Dan.

Another neat function of the program that makes *Dream* worth purchasing, even with the flawed window section, is the foot/inches calculator. Here you can add, subtract, multiply, and divide and get your answers in feet, inches, fractions of an inch, and meters. Cool!

The last selection on the program's main menu is a list of general information that covers 55 tips on construction, ranging from the width for a standard vanity cabinet to a tip that subfloors should always be glued. Cute, but kind of out of sync with the rest of the program.

Even though the "Window" and "Tips" sections bug me, I strongly recommend you take a look at *Carpenter's Dream*. It's super. You can purchase a copy by contacting the author (Dan Heilman, *Carpenter's Dream*, 1121 Cheyenne St., Golden, CO 80401; 303/279-8551). Although it's not an estimating program, it's got a great deal to offer at an inexpensive price. I bought a copy just for the stair calculations and roof cutting alone.

Letters

Practically, every letter I get contains a request for information about the availability of software or hardware for the construction industry.

Well here's your chance to find out. The Management & Computer Systems Show for the Construction Industry will be held October 29 through November 1, 1990 at the San Diego Convention Center, San Diego, Calif. It's sponsored by *Engineering News-Record* (The McGraw-Hill Construction Weekly), Dodge Dataline, and Sweets Group.

Computer shows for the construction industry are few and far between. When one comes along that lists exhibitors from all over country, I can't wait to write about it. Last year's event included a bunch of big-name companies: AEC, Apple Computer, Bidtek, CIP Communications, Construction Data Control Inc., Construction Computing, GTCO, IBM, McCosker Corporation, The Estimator's Center, Timberline Software, Turtle Creek Software, and many more. For ticket or booth information for this year's show, call show producer David Hanchett at 800/334-5864. ■

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