

# Reduce Risk & Increase Revenue: Pricing Wall Panels

by Jim Boyle

(Part 5 of 6)

An accurate pricing method is crucial for a successful wall panel plant.

In this part of the series, we will discuss Estimating and Pricing Wall Panels. Most wall panel company estimators use similar approaches to doing wall take-offs from a set of plans. It goes something like this.

Start by quickly reviewing the floor layout sheets by level to determine stud size and sheathing requirements if indicated. Next, review the elevation sheets to determine stud height and wall panel type. Then move to the structural notes for header sizes, bearing point sizes and locations, beam pockets, king/trimmer assemblies, arched openings and sub-sheathing/shear sheathing requirements. Finally, check the nailing schedules.

The next step is to review the floor joist layout—particularly around the entry area and stair sections—to determine the location of any balloon walls. Then look at the section sheets for rake (angled) walls or in some cases compound angled walls. If the building is multi-family or mixed commercial, review the “detail notes” for manufacturing parapet walls and party/chain walls.

Once you have a basic understanding of the plans, you can scale or measure the lineal footage of each wall type: 2x4 or 2x6, exterior walls, interior wall, balloon walls, rake walls, party/chain walls, garage face walls, any special walls, and single or double sheathed walls.

When working with many walls types, a good tip is to make a color key and mark each wall type with a different colored pen for easy reference. Finally, mark and count all header types, and any additional studs, beam pockets or posts required for bearing points and multi-stud king/trimmer assemblies. If you manufacture pre-assembled arched rough openings, measure and record them also.

Once the wall take-off is completed, you can manually determine the type, size, and quantity of materials required for a particular panel job, which can take several hours. However, it is much more efficient to use a customized computer pricing program to produce material, labor and final wall panel quotes. It will save you untold hours and costly mistakes.

As an example, I'll describe a program I used when working with a roof truss/wall panel company in the Pacific Northwest. We used a two-part computer pricing model for quoting wall panel jobs.

## Estimating—Part 1

The first part is the Wall Panel Material Price Sheet. You enter the total lineal footage of each wall panel type and the program automatically calculates the required number of pieces, sizes (including waste and loss), studs, plates and sheathing. Then you input the lineal footage of all header types, bearing point types, and miscellaneous wood or material. The program will provide a total piece count, and/or the total lineal footage, and cost. The program also allows you to easily adjust the price per thousand in each material category to get a total material cost for the job. Additionally, you can add as many material categories as you need. It only takes about 10 or 15 minutes to cost out virtually any size job, once the wall take-off is completed.

The next step is to accurately determine the labor cost and total job cost. What is meant by total job cost? Every wall panel manufacturer should have a method of pricing wall panels that provides for direct labor costs (with burden), and plant overhead costs before adding a material markup and profit margin.

Amazingly, a lot of companies use what I like to call the “fly-by-the-seat-of-your-pants” method of pricing and quoting a job. This method requires minimal analysis, and usually ends up costing you money in the end.

The one method which I do recommend requires knowing, having, accumulating and updating the following data and information:

- Wall panel or labor type
- Number of personnel typically required to manufacture each wall panel or labor type
- Total number of plant employees (direct labor)
- Average direct labor wage (with burden), i.e., \$15.00/hour
- Plant labor cost per hour
- Plant labor cost per day
- Number of hours in a production shift/day
- Lineal feet of production for each wall panel or labor type
- Labor cost per lineal foot for each wall panel or labor type
- Man-hours per lineal foot for each wall panel or labor type
- Monthly (average) plant Break Even Analysis

I realize this seems like a lot to keep track of, but it's pretty important stuff! The really successful wall panel plant owners and/or managers need to have this information. Realistically, how can any plant manager provide an accurate quote without knowing their direct labor costs and monthly operating expenses?

## Estimating—Part 2

The second part of the pricing model, Wall Panel Pricing Worksheet, combines the lineal footage of each wall panel or labor type with the material and cost information previously calculated from the Wall Panel Material Price Sheet.

Additionally, there are areas in the worksheet where you can input nails, fasteners and other miscellaneous hardware and material costs that we would normally mark up. You also have the option of inputting delivery and other random costs that you wouldn't typically attach a margin to.

A really neat feature with this pricing model is that the mark-up of wood materials, nails, fasteners and other hardware can be adjusted to fit the volume of work expected from any customer. The total margin on labor costs (with burden) can also be adjusted accordingly. Other costs as required (which would normally be marked up), can be noted as a separate line item. Items with no mark up or margin added, like delivery costs, can be added as a separate line item.

In addition, (now this is really cool), the program has what is called a Difficulty Factor for the job. This number can be adjusted up or down (1.0 is the average). When adjusting the Difficulty Factor in increments of 0.1 (up or down), the program will automatically increase or decrease the overall margin! This becomes desirable when there are substantial non-machined or special wall panel types being quoted (i.e., balloon or rake walls).

When using this pricing program, estimating wall panel types and producing finished quotes are easily calculated and adjusted (usually in just a few minutes). I've personally unrolled as many as eight sets of plans in a single day (it was a long day), completing each of the wall take-offs, material pricing and finished quotes. As you can see, having a detailed, informative, and easy-to-use computer pricing model will save hours of labor and costly mistakes, provide you with a wealth of information and have a very quick return on investment.

Next month I will cover Marketing and Sales of Wall Panels. See you then! **SBC**

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## at a glance

- When doing a material take-off for wall panels, identify the different wall types for each level.
- Wall panel manufacturers should have a pricing method that accounts for direct labor costs and plant overhead costs before adding a material markup and profit margin.

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