

BY GEORGE WEISSGERBER

Building a Unit Price

The foundation of every computerized estimating system is its database of unit prices. This type of pricing looks at typical project components, such as an exterior wall or a floor system, and calculates the cost per a particular unit of measure, such as a square foot, a square yard, or a linear foot. To develop a unit price, you need to do a stick estimate, but you only need to do it once for each component in your database. The stick estimate worksheet I discussed in my last column (Business, Aug/13) has all the elements needed to create a unit price.

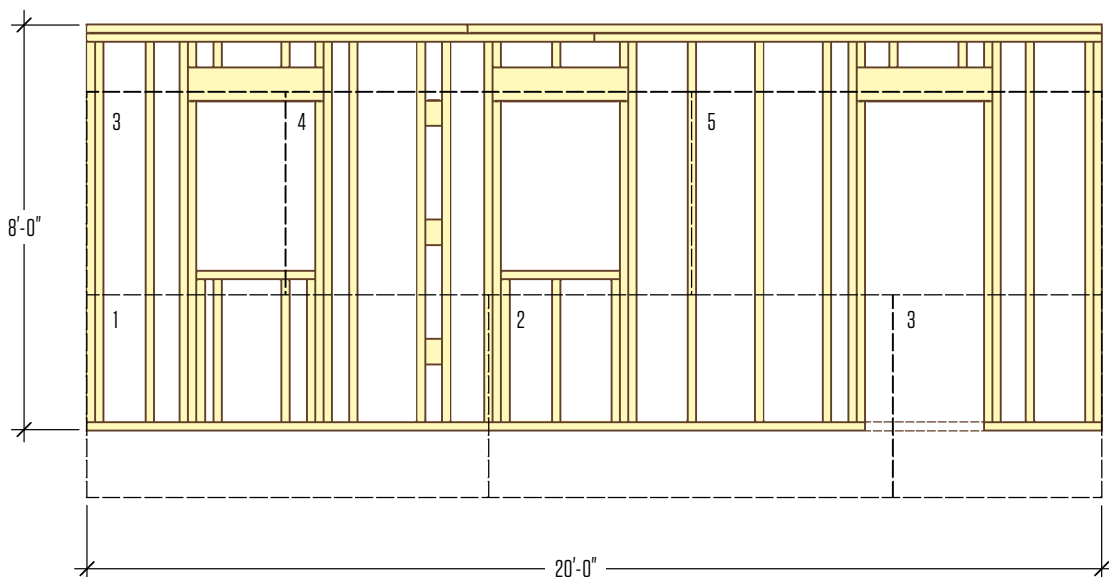
Let's look at how you might go about calculating a unit price to frame a typical exterior wall. I find that working from a sketch of the wall, such as the one below, makes it easier to visualize all the parts and pieces that need to be included. As with the custom item worksheet, the unit price worksheet uses a unit of measure that fits the kinds of materials and dimensions for the task at hand. In this example, I have chosen to build a unit price based on the materials needed to frame an exterior wall that is 20 feet long and 8 feet high. (We'll look at adding labor to this unit price next time.)

Waste is something to consider when making this initial takeoff. For example, I've listed 24 8-foot studs for this wall, which is the actual count. But you may discover over time, as I did, that jobs keep coming up short by a few 2-bys. My solution today is to add one additional stud. Similarly, the actual count for OSB sheathing is a little over 5 ½ sheets (remember, the OSB has to cover the rim joist, so a narrow strip is needed to fill out the top of the wall), but I've rounded this up to 6. There are other strategies: Some contractors add a waste factor to allow for damaged material or to provide lumber for bracing; others simply round up (as I did for sheathing) or add a separate line item. However you treat this issue, in the end it's cheaper to have figured a little extra than to have to make a run to the lumberyard for more material.

Because the base wall has a total area of 160 square feet (8x20), all of the costs listed in the worksheet will have to be divided by 160 to yield the price-per-square-foot (see table, next page). I've also included calculations for a price-per-linear-foot, which some contractors prefer. The difference is that a linear-foot price applies to a wall of a

Framing Diagram for Exterior Wall Unit Pricing 2x4/6 at 16" o.c.

This rough framing plan depicts a typical exterior wall of a length and height that are easy to visualize and convert to square-foot or linear-foot units of measure. With its three openings, this wall has a little more material than a wall with no openings, but the takeoff is accurate enough for sales pricing.



2x4 Ext. Wall, 16" o.c. 2 windows, 1 door	Material Estimate by Count							
	Qty	LF or SF	+	Qty	LF or SF	=	Total	Units
Studs/jacks/cripples	24	8	+	7	4	=	220	LF
Top & sole plates/sills	3	20	+	2	4	=	68	LF
Headers (2x8)	3	3.5	+	3	3.5	=	21	LF
Sheathing (4x8 OSB)	6	32	+	0	0	=	160	SF

2x4 Ext. Wall, 16" o.c. 2 windows, 1 door	LF Material per SF of Wall					
	Total	Units	÷	Wall Area	=	LF/SF
Studs/jacks/cripples	220	LF	÷	160	=	1.38
Top & sole plates/sills	68	LF	÷	160	=	0.43
Headers (2x8)	21	LF	÷	160	=	0.13
Sheathing (4x8 OSB)	160	SF	÷	160	=	1.00

2x4 Ext. Wall, 16" o.c. 2 windows, 1 door	LF Material per SF of Wall					
	Total	Units	÷	Wall Length	=	LF/LF
Studs/jacks/cripples	220	LF	÷	20	=	11.00
Top & sole plates/sills	68	LF	÷	20	=	3.40
Headers (2x8)	21	LF	÷	20	=	1.05
Sheathing (4x8 OSB)	160	SF	÷	20	=	8.00

Material Estimate by Count

To build the unit price, count quantities for each wall element—studs, plates, headers, and sheathing. In this example (top), doors and window rough openings are assumed to be 3 feet, and sheathing is assumed to be applied horizontally in staggered courses. Waste from jack studs provides blocking, but cripples are counted at a rough length of 4 feet each. Some contractors add a waste factor to allow for damaged material, or to provide lumber for bracing; others add a separate line item for these.

Unit Price per Square or Linear Foot

The middle table converts quantities from the material takeoff to a quantity per square foot of wall area. This value, combined with a dollar cost, will yield the unit price per square foot. The bottom table converts quantities to linear feet. Combined with a dollar cost, this value will yield the unit price per linear foot of wall.

particular height, while a square-foot price can be used on shorter or taller walls, provided they are constructed in more or less the same way. A square-foot price could also be applied to a gable wall, although labor might vary with wall height and roof pitch, as well as whether the walls are framed “on the ground” or in-place.

This is a fairly simple example, but you get the idea. You could create similar linear-foot and square-foot unit prices for exterior walls constructed using 2x6s at 24 inches o.c. And you could create linear-foot versions for 9-foot- and 10-foot-high walls, and the square-foot unit prices for 2x4 or 2x6 exterior walls could also be used to find the cost of walls taller than 8 feet. All together that would give you six options for basic exterior wall framing.

You could also expand the materials covered by the unit price to include metal con-

nectors, insulation, drywall, even siding. And you can build these so-called “assemblies” for other parts of the building, including floor and roof framing, siding and roofing, exterior and interior trim, and so on. Assemblies are common in computerized estimating systems, which often come preconfigured with unit measures and pricing. But if you want to customize estimating software to reflect the way you actually build, you’ll want to go through something like the process I have just described.

You can create as many assemblies as you find useful, but it’s possible to over do it. This process works well for those building elements for which you have a “standard” method of construction. If you include an element that is used only occasionally (rain screen siding in a wall assembly, for example), that assembly becomes useless to you on jobs that aren’t built to that spec.

Note that this system gives you a rough material quantity, but it won’t deliver a bill of materials that a lumberyard can use to quote current pricing and build a pick list the way a computer-based system can. Estimating software can also introduce rules that improve accuracy, and they can use menu systems that allow you to specify number and size of windows to change the dimensions of the lumber used in a wall or floor.

That said, once labor hours and prices are added, it will give you a reasonably accurate price for direct costs of a job. We’ll look at adding these, plus menu systems in future columns. But even a simple, manual unit-pricing system will keep you from investing too much time in projects for which you may never sign a contract.

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Three Changes to Your SEO Strategy

BY APRIL WILSON

The world of search engine optimization (SEO) has radically changed in the last year. (SEO is marketing lingo for how easy it is for search engines such as Google, Bing, and Yahoo to find your website.) The search engines have made several big changes—you may have heard of Google’s “Penguin” or “Panda” updates—in the way they calculate which websites best match a user’s search query. Everything you thought you knew about SEO is likely to no longer be true. Gone are the days when your HTML code and tag structure were important, and today repetition may hurt your ranking.

Subject Matter Expertise (Not Keywords)

Search engines aren’t dumb. They quickly figured out that spammers were working very hard to “game the system” by repeating high-traffic keywords over and over. Unfortunately, many legitimate business owners were also using those same strategies. If you’ve noticed in the last year that instead of being on the first page of Google you’re now showing up on page 12, you are probably overusing keyword repetition.

In the new world of content marketing, what you choose to talk about on your website is more important than how you talk about it. Ideally, focus on no more than three featured topic areas. For example, you might choose bathroom remodeling, kitchen remodeling, and basement finishing as the top three things your business does. Everything you post on your website (blogs,

project photos, events, news, etc.) should focus on one of those topics. Remember, the search engines are now looking for subject matter experts, not generalists.

Content Structure (Not Page Titles)

“Old” SEO had some very basic rules to follow: Make sure you have keywords in your page title; use keywords at least four or five times in the text on those pages; and make sure all of your meta-tags and meta-keywords are coded in your HTML. None of these are very helpful anymore, and overuse of keywords in your writing can actually result in a lower ranking in today’s search engine algorithms. Remember, search engines are wary of people gaming the system.

Because search engines rank subject matter experts higher than sites that seem like they’re trying too hard to do well on certain topics, consider redesigning your navigation to classify all of your content into one of your specialty topics. Using the example introduced above, we might change that website’s navigation to read: Home, Bathroom Remodeling, Kitchen Remodeling, Basement Finishing, About, Contact Us. Any new content posted should fit into one of those categories, and the URL for anything would include those keywords (for example: <http://www.awesomeremodelers.com/bathroom-remodeling/main-street-project-photos>).

Experts (Not Amount of Content)

Finally, start paying attention to who writes for your website. Author rank is becoming extremely important for SEO in the new landscape, because Google now assigns a higher search ranking to people who write about the same topics on multiple websites. Their logic is that because these people write for many sites on the same topics, people must believe them to be an expert. Your SEO strategy must include incorporating author rank into every new piece of content created to make sure that the author’s influence is part of a search engine’s process.

In short, the new SEO technologies operate less like computer algorithms and more like reporters sniffing out a good story and chasing down qualified sources. In coming issues, we will focus on how to change your strategy accordingly for each of these three areas.

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