BY GEORGE WEISSGERBER

# Estimating Using Templates

**In my previous two columns** (Oct/13 and Dec/13) I discussed in detail how unit pricing items are developed and how using them to estimate jobs can save you time and increase accuracy. Whether you estimate with an off-the-shelf system or using an Excel spreadsheet, most systems today are built around a database of unit pricing items. Depending on your areas of focus, you could have a library of hundreds or even thousands of unit price items that can be used to develop a detailed estimate of the tasks required for any project, from startup to cleanup. All the parts, pieces, and labor will automatically be included even though you're focused on only the quantities of the units.

To carry these efficiencies one step further, I've built templates or assemblies of items into a library of estimates for the typical projects we do. While many folks I know often copy previous estimates that are similar to their current project, I suggest systematically creating a library of estimate templates to help achieve several key estimating goals: accuracy, efficiency, consistency, standardization, and predictability.



These sample screens are part of a proprietary estimating system used by several divisions. One list (left) holds typical project types and phases of construction; each line item in the other list (right) is a separate project.

## PROJECT TYPES

The first step in creating this library is to draft a list of all the typical project types you do, then break down each project type into subcategories that will reduce the number of items you need to address in your estimate.

For example, one project type might be a single-story addition. If you had three templates—one for additions built on piers, another for additions built over a crawlspace, and a third for additions built on a full masonry foundation—you would significantly reduce the time required to complete an estimate. Also, if you were to further break down these templates into typical project sizes—small, medium, and large, for example—you would end up with nine templates for one-story additions that should be representative of any one-story addition project you're estimating.

The lists I use (see samples, left) include both typical projects and separate phases of construction. They are probably a bit more complicated than what you need, because they're designed to be used by several divisions of our company. But the ultimate goal of creating these templates is the same: to make estimating more efficient and more consistent, project to project.

## BUILD IT ON PAPER

The second step is to take time to think through your typical project and standard specs. I recommend making a basic sketch for each template that includes dimensions, take-offs, specs, and notes (see samples, next page). There's no need to go into great detail here because no two projects will ever be exactly the same. But having all of this information on paper will make it easier to put together the templates, as well as give you a reference for that time down the road when something changes and you ask yourself, "How the heck did I come up with this in the first place?"

The last step—and it's a big one if you have a long list of projects—is to do estimates for small, medium, and large versions of each type of project on your list. For each project type, start with the "large" template and perform a complete estimate. You should include every line item—with the correct quantities—needed to build the project in its entirety, from start to finish.

Also add a list of items that *could* be part of a similar project, but leave the quantity at "zero" for these. Later,

**TAKE - OFF**

| | | |
|---|---|---|
| FLOOR | 300 SF | 2x10 |
| EXT WALLS | 50 LF | 2x4 |
| GABLE END | 20 SF | 2x4 |
| INT WALL | 18 LF | 2x4 |
| INT GABLE WALL | 250 SF | 2x4 |
| INT FLOOR | 280 SF | 2x4 |
| DW WALLS | 630 SF | 1/2" |
| DW CATH | 400 SF | 1/2" |
| SIDING | 300 SF | HDPLK |
| FIN FLOOR | NIC | NIC |
| ROOF GABLE | 400 SF | 2x10 |
| ROOF HIP/ VALLEY | 150 SF | 2x8 |
| ROOFING | 660 SF | 25 YR F/G |

**ADD-ONS ALLOWANCE**

| | | |
|---|---|---|
| MASONRY FOUNDATION | _____ | / SF |
| CEDAR SIDING | _____ | / SF |
| REDWOOD SIDING | _____ | / SF |
| BRICK VENEER | _____ | / SF |
| VINYL FLOOR | _____ | / SF |
| HARDWOOD FLOOR | _____ | / SF |
| CERAMIC TILE FLOOR | _____ | / SF |

**HVAC**

EXTEND EXISTING DUCTS

**FLOOR PLAN**
Scale: 1/4" = 1'-0"

**WINDOW/ DOOR SCHEDULE**
ANDERSEN W/ SCREENS AND GRILLES

Ⓐ C13                    ① FWH6068ASR
Ⓑ CXW15                  ② 2/6 6-PANEL H.C.
Ⓒ C13 (2)                ③ 2/0 6-PANEL H.C.
Ⓓ P6050                  ④ 3/0 CASED OPENING
Ⓔ AFFW301 (ABOVE)

**SPECIFICATIONS**

- HARDI-PLANK SIDING
- 5/4 x 4 WOOD TRIM
- ALUMINUM GUTTERS/ DOWNSPOUTS
- ANDERSEN WINDOWS/ DOORS WITH STANDARD HARDWARE
- CATHEDRAL CEILING
- 2x4 WALL FRAMING W/ 1/2" SHEATHING
- 2x10 FLOOR JOISTS AND ROOF RAFTERS
- HOLLOW CORE INTERIOR DOORS
- 1 SET OF (4) PANTRY SHELVES IN CLOSET
- 3 1/4" 1 PIECE BASE TRIM
- NO FINISH FLOOR
- 6/12 ROOF PITCH

**ELECTRICAL**

1 - 20 AMP CIRCUIT
7 - DUPLEX OUTLET
1 - GFI OUTLET
2 - SP SW
1 - 3 WAY DIMMER
2 - SURT MTD OUTLET
1 - CLG FAN OUTLET
4 - RECESSED LIGHT
1 - FLOOD LIGHT
1 - PHONE

In addition to creating a drawing and spec sheet, such as the one shown above, for small, medium, and large versions of each project type, the author also creates a complete estimate, including all quantities. Complex projects can be estimated by combining templates—for example, combining templates for a kitchen addition, a powder room, and a laundry.

when you're using this template to estimate an actual project, these "zero quantity" items will serve as "ticklers" that will prompt you to ask, "Do I need this item on this job?"

Once you are happy with the large project template, clone it and revise it to create templates for the medium and small versions of the project. This typically requires changing most of the quantities, but may also result in fewer line items. Zero-quantity items are still useful, however, so keep as many as you think you will need.

When all three templates for one project type are complete, move on to the next project type. The result will be a set of estimating tools that will help you not only to

estimate the obvious, but also to minimize errors and omissions.

**TIME SAVER**

My database has 6,000 items in it. If I had to scan all of them for every estimate, I would be poor, crazy, and blind by now. If I had only items with quantities in my templates, I would be just plain poor. Having the right zero-quantity items offers a balance between these two extremes.

It takes time to set up a library of templates in your estimating system, but once you have it established, you can then combine two or more templates to create complex estimates: For instance, you can use four templates to estimate a one-story addition

with a kitchen, powder room, and laundry. You will drastically reduce your estimating time, while making fewer errors. And if several people in your company are responsible for estimating, their estimates will be much more in line with one another's.

Finally, your estimates will be more predictable. That makes possible a fantastic "ballpark" tool that produces very accurate pricing in seconds, based on your estimating system. I'll show you how to create this exciting tool in a future column.

*George Weissgerber, a senior vice president at Case Design/Remodeling, in Bethesda, Md., developed the company's estimating system and handyman division.*

# Oops—Was That 100 Feet or 1,000?

BY ALEXANDER BARTHET

**Opportunities for mistakes abound** in a construction setting where quantities, prices, and dates are so critical. The consequences depend on whether the mistake is unilateral—made only by one party—or mutual—shared by both parties.

If you alone misunderstand the plans and specs and allow for 100 square feet of tile instead of 1,000, this would be a unilateral mistake. It's your problem without any immediate relief unless you can show that someone intentionally deceived you in some way.

But if both parties to an agreement are mistaken because a document fails to correctly reflect what they each intended, then a court will likely correct the error. For example, let's say that a lumberyard advertises 4x8 sheets of OSB for sale at $1 each but actually meant to price the sheets at $10 each. You buy 10 sheets, expecting to pay $10, but are charged $100. Who would be right? A case with similar facts held that you, the purchaser, would be right. The store made a mistake in an offer that you accepted, and it's the store that would be out of luck. The law is clear in most jurisdictions that what one party may have *intended* is not enough to undo a deal.

However, if it can be shown that the non-mistaken party actually knew that the other party in the deal didn't accurately understand the terms of the agreement, a court may step in. It may completely cancel the agreement (called "contract rescission"), whereby both parties are no longer bound by the deal and revert back to the position they were in prior to entering into the agreement. Or, if *both* parties misunderstood the agreement, the court may modify it (known as "contract reformation") to correctly reflect the parties' understanding.

But don't count on either of these remedies to save the day. Courts are reluctant to alter contracts, even when the result of not doing so may be disastrous to the party making the mistake. So remember: Attention to detail is equally important before and after contract execution.

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# Approving Overtime

BY DOUGLAS DELP

**WHAT HAPPENED**

To control costs, policy at Good Guys Construction Co. requires prior approval of all overtime by the owner or a supervisor. Recently, when a carpenter's timecard showed overtime hours that hadn't been approved, the company paid those hours at the employee's regular pay rate. When the employee protested, Good Guys cited the company policy.

**WHAT THE LAW SAYS**

Federal Wage and Hour regulations require that all employees—unless specifically exempt—must be paid 1.5 times their rate of pay for any hours worked over 40 hours in workweek. There are no exceptions based on prior approval. This can place companies in a difficult situation when trying to control overtime costs.

**WHAT YOU SHOULD DO**

Carefully monitor time worked throughout the week and be certain to modify employees' schedules should they approach having enough hours to qualify for unapproved overtime. Even though overtime rates need to be paid if worked, companies that experience chronic unapproved overtime being worked by their employees should develop a policy that subjects employees to disciplinary action should they work overtime without supervisor approval. These disciplinary actions can include formal written warnings, cuts to future pay, and even termination.

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