Unit-Cost Estimating for Remodeling

by Walt Stoeppelwerth

Accurate estimates depend on thorough job costing and attention to the intangibles

No aspect of running a remodeling business
tant than accurate estimating. To be accurate
your estimates must be based on your real c
business, and they must be integrated in
management of the business. Otherwise, an
just a stab in the dark as to what a remodelir
will cost.

Three Ways to Estimate

There are three basic approaches to estimat
ing. Most contractors are already familiar witl
the first two, which are the "guesstimate" and
the stick method.

In the guesstimate (also known as the
WAG, for "wild ass guess"), the contractor tri
price the job based roughly on his experience
jobs. While it is useful for giving ballpark figu
customers for price, this is no way to give a
either for sales purposes or for your own use.

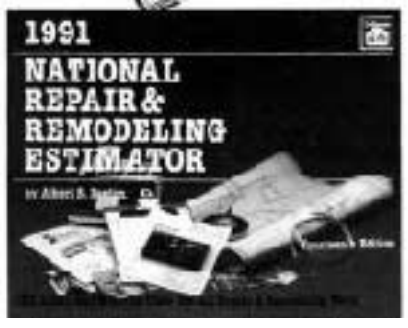
Most contractors have used the stick methoc
try to identify every piece of material the
requires and estimate the cost of buying
(materials) and installing it (labor). Subcon-
tractor costs are added to the cost of this
shopping list for a final expected cost; then
you add your markup to get a final estimate
This method can yield accurate estimates. Bu
takes too long to use in a business like remode
where, for most remodelers, only one of every f
five estimates lands a job.

That is why I prefer the third option, the
method.

The Unit-Cost Method

The unit-cost estimate is based on units c
such as lineal, square, or cubic foot, or per it
Every element must be included, from lineal f
measurements for footings, to square foot meas
ments for walls, floor, and roof systems, to per-i
counts for such elements as windows, doors,
electrical outlets.

Theoretically, you could compile your per-u
material and labor costs for each of these syst
from scratch by going over your own records
reality, it makes more sense to use one of
estimating manuals currently available, such
HomeTech's Remodeling and Renovation C
Estimator, or similar pricing manuals published
R.S. Means, Craftsman, and other companies,
basis for your costs. These manuals have unit-cost
labor and material prices for typical estimating
categories. Most provide yearly or quarterly
updates that give current costs for materials and



Cost estimating guides can serve as a starting point for developing your own price book. You should track actual costs for every job to keep your cost figures up to date and accurate.

rd unit-cost estimating categories. Some of them
area modification factors that further refine the
for your geographic area. Modified to reflect the
y you do business, these guides can form the
basis for accurate estimates.

Knowing Your Costs

The key to the success of the unit-cost method is
urately figuring out your actual costs. To accom-
this, you must keep costs by category on every
job. This is the only way to check the accuracy of
imates later, so you know where to make adjust-
ct time.

e two types of costs every estimate must account

e those costs that are directly attributable to a

osts are costs that cannot be tied to a given job,
the cost of being in business.

osts

ling, direct job costs consist of five elements:
True labor costs include hourly wages and the
" including Social Security, workers compensa-
employment insurance, and any fringes such as
olidays, vacation, medical benefits, or truck and
llowances. If you pay a carpenter $15 an hour,
ır true cost may be as much as $20 to $25 or
ore.

Materials. This should include not only the
naterials, but sales tax and delivery as well. If you
e a driver who spends 30 to 40 hours a week
up materials and delivering them to the job, this
ld keep a time card allocated by job.

. This is what you pay to your subs, recorded as a
r-unit cost.

Plans and permits. These costs should be
cluded in direct job costs rather than overhead,
ıd billed and estimated with particular jobs.

Cleanup. Whether done by your workers or
bbed out, this is a direct job cost, not overhead.
ump fees are also a direct cost.

Overall, any cost that can be applied to a partic-
ar job should be counted as a direct job cost.

ow to Track Job Costs

To track unit costs, you must record, for every
b, the actual costs associated with the elements
the job, such as square feet of wall demolished
or built, lineal feet of cabinets installed, or
individual windows framed and installed. Track
the costs by the same categories that you use in
estimating; you needn't invent your own, but can

take those that pertain to you from one of the published estimating guides mentioned earlier.

Once you have the costs for a completed job, check them against those in your estimating guide, and adjust the guide as necessary. This process of comparing actual to estimated costs, called job costing, isn't difficult; it's mainly a matter of persistence. But you will need to add some essential record-keeping steps to the way you work and track your workers' time.

Time cards. Have each worker on payroll keep a time card on a daily basis, accounting for time both by job and by category of work. For instance, Bob might spend four hours framing non-bearing interior stud walls at the Smith job, one hour blocking joists at the Wagner job, and three hours installing replacement windows at the Wagner job.

Record, in the proper categories on each job ledger, the total cost of paying Bob for those hours. Do this for each worker. At the end of each job, add up the labor spent on each category, then divide it by the number of units (such as linear or square feet of stud wall or number of windows) for a per-unit labor cost. By constantly checking your per-unit costs against your guide, you can fine-tune and update the category costs.

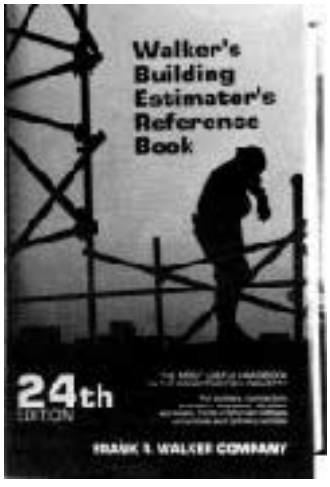
Using lead carpenters and one-person crews makes job labor costs easier to keep. Single workers tend to concentrate their efforts clearly on one task at a time. When crews of two and three workers are shifted regularly among jobs, tracking worker time by project and category becomes much more difficult.

Materials. In the unit-cost system, material costs account not only for large items, but for the many smaller ones that accompany them to make a finished assembly. Unit prices for drywall, for instance, include the board itself, drywall nails or screws, tape, corner beads, spackling compound, and even sandpaper. The cost of a door includes both the door and the jambs, as well as butts, locksets, and casing.

Costing materials is fairly easy. The key is to require each supplier to submit a separate invoice for every job on every order. This means that when you go to the lumberyard to pick up materials for three jobs, you get three separate invoices, so the costs can be attributed directly to the proper jobs.

Each job gets its own materials folder; the charges on the invoices are then entered into the job-cost ledger by estimating category. On one particular invoice, for instance, the cost of 2x6 studs, plywood sheathing, and half the 16-penny nails might be costed as "sheathed exterior wall," while the 2x4s and the other half of the 16-penny nails get entered as "frame interior stud wall." At the job's completion, the total sum in each category would then be divided by your estimating unit, which in this case would be lineal or square feet. This way, material costs always reflect the latest prices.

Subcontractors. Have each subcontractor submit a separate



invoice for every job. These costs should then be costed according to your estimating categories. Adjust these as necessary whenever your subs change their rates.

Change orders. Every change order *must* be estimated and costed as a separate job. If they are instead included in the overall estimate and job costs, they will mess up your attempts to know whether your estimate of the original job (or of the change order) was accurate. Treat them as separate jobs.

Running the Estimate

With your estimating manual updated where possible with your known record of job costs, you are ready to make quick and accurate estimates.

Material costs. As long as you correctly identify everything you need to build, estimating materials is fairly easy. Simply use your latest job-cost material figures. If you are faced with a category for which you don't have job cost records or that you haven't used for a long time, use the price from your estimating manual. If the unknown item is likely to be a significant part of the estimate, check the current cost directly with your supplier.

Labor costs. The hardest category to estimate is labor. Remodeling is a stop-and-start operation, and the time lost between steps can be substantial. A good estimating manual allows for this inefficiency in the labor costs it uses. The hidden costs of dead time — the quick run to the store for supplies, the dash to the truck to get the new blade — are included in the labor costs listed in these guides. Of course, if your job costing shows your own typical costs are higher or lower, adjust accordingly.

Subcontractor costs. With subcontractors, it's most efficient to prenegotiate fixed prices for standard items of work, so that your subs don't have to visit and estimate every prospective job. On the trickier jobs, you can describe the job to them on the phone or have them come out and take a look. In some cases, you can get the sub to give a markup for extra difficulty in your prenegotiated price list.

Weighing the Intangibles

With unit estimating, the above steps will let you develop 80% of an estimate quickly and accurately. This leaves time for the 20% that requires more time and judgment — the consideration of those intangibles that make or break most remodeling jobs. If not accounted for, these intangibles, such as difficult access or a surly client, can destroy your profit.

I recommend a four-part "judgment analysis" to account for them:

Condition analysis. Do the job conditions vary significantly from the normal conditions from which your unit costs are derived? By job conditions, I mean the conditions surrounding the job, but not directly affecting construction. These include such things as access, storage of tools and materials, and the threat of theft.

For instance, consider your labor costs on a remodel on a third-floor apartment accessed by a narrow community stairway that must be kept free of materials and clutter, and in an area where the likelihood of theft forces you to remove all your tools at night. Your costs will be higher than usual, because you're paying your workers to carry their tools and materials up and down stairs every day, and to clean up often. As closely as possible, estimate the hours that will be needed to handle these extra tasks.

Project analysis. This is similar to the condition analysis, but relates more to the actual work. Will demolition be particularly tough for some reason? Is there a tricky framing tie-in between roofs of different slopes? Are there obstructions or tight framing spaces that will give the subs difficulty installing the electric, plumbing, and heating runs? You can adjust for these factors by including additional estimated labor hours, and by getting your subs to adjust their estimates similarly.

Customer analysis. Is this client likely to be the one in five that will seem determined to deny you a profit? Is he likely to sue, or threaten to? Does he take an hour of each day asking you questions? Is he an engineer who works to fine tolerances and will scream if he sees the shims around a window frame? Or a meticulous housekeeper that insists the place be always spotless?

Analyzing customers is the most nebulous of all judgment factors. Some things, such as the cost of extra cleanup at, say, 15 extra worker-minutes a day, can be quantified for an entire job. An adjustment for spending 30 minutes every day with the customer to go over the job is also uncomplicated. But a decision to raise your costs or your markup 25% or more to account for the unpredictability — or deviousness — of a particular customer is much tougher. The ultimate judgment call is whether to walk away from the job because of such potential problems. For these variables, you must rely on your own experience and judgment. The important thing is that you recognize them and account for them somehow, either through added hours or an extra markup to protect your profit.

Company capability analysis. This has to do with your ability to efficiently handle the job. How does this job fit into your company's capacity to perform? If the job is outside your normal experience, then the learning cycle — a little head scratching and training time — must be included in the estimate. As well as possible, you must try to translate these concerns into additional hours.

Your judgment here will also involve issues such as your confidence that your crews can learn fast, your desire to take on new and different projects, your desire to keep crews busy in a slow time, or the likelihood of finding new or specialized workers or subs in good times.

Adjusting your estimate based on this four-part analysis can make the difference between profit and loss. But you need to make sure that the adjustments for a given job don't skew estimates for future jobs. Record

Table: Overhead Calculations

Business Expenses	Annual Volume $100,000	$250,000	$500,000	$1,000,000
Sales, 7-10%	7,000	20,000	50,000	100,000
Production Supervision, 5-7%	5,000	15,000	30,000	60,000
Advertising, 1-5%	1,000	5,000	19,000	50,000
Rent, 102%	1,200	5,000	10,000	19,000
Office Staff, 4-8%	4,000	15,000	30,000	60,000
General Insurance, 2-3%	2,000	4,000	12,000	22,000
Truck (Sales, Mngmt.. Only)	5,000	10,000	15,000	20,000
Telephone	1,200	2,400	3,600	5,000
Radiophone, beepers, etc.	360	720	1,080	1,440
Tools & Equipment, 1%	1,000	2,500	5,000	10,000
Office Equip., Lease/Rent	500	1,200	2,500	5,000
Office Supplies	100	250	500	1,000
Accountant, monthly ret.	300	600	900	1,200
Legal Fees	500	1,000	1,500	5,000
Dues, Associations	250	500	500	500
Education, Seminars, Travel	250	500	750	1,000
Entertainment	100	200	500	1,000
Bad Debts, 1%	1,000	2,500	5,000	10,000
Total Overhead Costs:	**$31,060**	**$86,250**	**$184,130**	**$370,340**
Percentage of Volume:	**31%**	**35%**	**37%**	**37%**

Note: *Typical remodeling overhead. Most remodelers don't mark up their estimates enough to cover the many items that make up their overhead. That's the main reason most remodeling companies fail.*

your adjustments *as adjustments* — added hours or extra markup — so that at job-costing time, you can "unadjust" the figures to standardize them for costing purposes. This will also help you gauge the accuracy of your adjustments.

Accounting for Overhead

Once you've estimated the direct job costs and intangibles of a job, you must mark up that total by some percentage to obtain a final estimate and sales price. Observing the remodeling industry for many years has convinced me — and this is proven in the marketplace every day — that the minimum markup a residential remodeling contractor can charge to stay in business is 50%, which will yield a 33% gross profit. (Marking up a $100 job 50% will give a total price of $150, 33% of which is profit.)

The 50% markup applies to contractors who do less than $500,000 annual volume. For businesses that gross over $500,000, the minimum markup is 67%, for a 40% gross profit.

These high markups are needed because overhead for a remodeling contractor runs at least 25% and may be 35% or more for medium-sized and large companies, which have more non-production workers such as administrators and salespeople (see Table).

Unfortunately, most remodeling contractors do not understand how many things overhead must cover, and thus use too small a markup. Overhead is more than your rent, utilities, and phone; it is everything that can't be directly job-costed. That includes sales efforts, production supervision, advertising, truck expenses (payments, insurance, gas, and repairs), office equipment and supplies, tool purchases and repairs, office work (whether done by administrative personnel, you, or your spouse), and your accountant, bookkeeper, and attorney fees. You must also pay yourself for whatever functions you perform that aren't direct costs, such as sales and general administration.

These costs add up. Over 90% of remodeling contractors in this country charge too little — that is, less than a 50% markup. This is why there is a 50% fatality rate in remodeling every year and a 96% fatality rate in five years. They simply don't charge enough to survive.

Other Principles of Estimating

Some other estimating fundamentals will help you keep estimates on target.

Estimate one job at a time. You should go out on the job, meet with the customer, then return directly to the office and complete that estimate before doing anything else. If you wait a day, you won't remember all the aspects of a job, particularly the details that feed your judgment analysis.

Include everything. You must include a price for every item and task on the job. Something as small as a 4-foot section of base molding must be priced, or moving a hose bib 10 feet. Leaving several small things out hurts you worse than misjudging the cost of bigger items. If an item that is 5% of the job is underestimated by 20%, it only affects the total estimate 1%, and may well be compensated for by another item that is overestimated. But if an item (or a number of items) that account for 5% or 10% of the cost is forgotten, the oversight could take away all the net profit on the job.

Round up. Don't estimate for a 20x7½ foot wall, estimate for one that's 20x8 feet. Do not subtract windows and doors from framing estimates on walls, but figure them solid. If you are figuring a gable end which is a triangle, figure it a solid rectangle for studding and sheathing and simply reduce the siding figure by 10%. By always rounding up and figuring areas solid, you help account for material waste; you'll almost certainly have to buy that much material anyway.

If there is a condition to quantify, do it on the spot. If you must plaster patch a wall, for instance, don't just write "patch plaster," or you may later misremember how big the patch is. Everything should be measured and quantified on the spot.

Have someone else check the completed estimate. This will turn up simple oversights and mistakes. One advantage of the unit-cost system is that the second person need not be experienced in construction, but can check the estimate against a master checklist or your estimating guide. With the stick method, someone who doesn't know precisely how you build things will have a difficult time checking your figures. ■

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