

Tuesday, November 23, 2010

Managing Risks in the Bidding War

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Bidding is the fight for your livelihood. Every time you bid a job, you put your company at risk. When the job is done, will there be enough to pay the bills and put money in your pocket? In today's economy, you can't afford to "shoot from the hip."

Estimating a break-even point is challenging and time consuming. Today, software takes the guesswork out of bidding and improves job-cost estimating processes to quickly and accurately prepare a bid. Estimating procedures separate contractors scrambling on a hope and a prayer from confident, successful companies with sound business practices.

In an attempt to fire off a bid quickly, some contractors use the "magic multiplier." Taking the cost of materials and multiplying it by some magic number, hoping to create a bid that is competitive and still profitable is based on assumptions and filled with risk. The simple fact is that the true break-even point of a job is unique for each job, and the "right" multiplier varies significantly from job to job.

Another common approach used to prepare a bid quickly is the "unit price" method. If a cost-based approach is used to generate the unit price, this can be a useful approach. Unfortunately, this approach is also filled with minefields because there are too many variables that affect job costs. Unit prices do not consider job-specific situations, and are difficult to adjust because the wiggle room available is rarely clear.

Good estimators limit risks. They minimize guessing by using facts as the basis for consistent results. At the end of the day, the prices they set will be profitable and competitive. To do this consistently requires the ability to accurately determine the break-even point on every bid. This means creating complete materials lists and accurate time estimates of labor and equipment use. Good estimators know the price for materials as well as the hourly labor and equipment costs. Once direct job costs are estimated, they determine the breakeven point for the job by including a portion of overhead expenses.

Clearly, the cost to do a job is different for every company. Each company has a unique crew that will be proficient at some things, but lack experience in other areas. Crews may have access to

specialized equipment to improve their productivity. Some contractors have negotiated better pricing on materials. Overhead costs will be different. The volume of work that can be supported by the organization will also be different. Estimating the break-even point for a job requires understanding the company's unique costs and capabilities.

Determining a break-even point has historically been a daunting task, requiring significant time investments that end with a "spread-sheet headache," and a nagging concern that formulas may have problems.

Today, software tools move contractors beyond spreadsheet estimating into integrated database estimating, and the results are impressive. Doing it right gives contractors a tactical advantage. They are quicker, more accurate, and can bid jobs much easier. Spread-sheet headaches are being replaced by bidding confidence.

Getting organized

Integrated databases use key information about a company's costs and capabilities to automate estimating. As the estimator prepares his bid, databases are automatically accessed to estimate the break-even point for each aspect of the job.

Visualize an estimator who adds a single item to a materials list. Because of the power of integrated databases, related parts are automatically added to the materials list, along with the time and costs for labor and equipment needed for installation. This kind of automation is incredibly powerful in terms of its abilities to save time and increase accuracy, but it does not happen without valuable information.

Getting organized is an essential part of any estimator's process. Before bids can be produced with sniper accuracy, key information about a company's costs and capabilities must be entered into databases. This crucial step often makes the difference between guessers and winners.

With the right software, getting organized is easy and helps you to determine:

- uThe cost per hour for an employee, including pay, productivity, taxes, benefits, insurance, etc.

- The cost per hour for each piece of equipment, including acquisition cost, fuel, maintenance, insurance, etc.

- The company's production capabilities. uMaterial costs and commonly used assemblies.

- The overhead budget and the overhead-per-hour recovery rate.

Most mistakes made in estimating are related to installation costs.

How much time does it take to complete a task? Who will be assigned to perform the work? What equipment will be needed? Getting organized requires drawing on experience and documented production capabilities.

The work a company does should be broken into clearly defined operations. An operation should be divided into specific tasks. Each task should have a production rate and be linked to labor and equipment resource databases.

Visualize an operation entitled "Install Main Line Pipe." This operation can be broken into tasks such as "trenching, fitting pipe, and backfilling." Each task needs a rate. Trenching, for example might be 500 feet per hour. Labor and equipment resources can then be assigned to the task. A contractor might assign a trencher, an equipment operator, and a laborer cleaning out the trench to the task of "Trenching."

This is where integrated databases start to show real benefits.

Rather than re-entering key information about employees and equipment and their respective costs per hour, integrated databases allow an estimator to easily link employees and equipment to each task. If a change in salary or fuel costs is entered in a labor or equipment database, these changes will automatically be reflected in an operations database.

A materials database is another important element in any estimating software. Some software examples come preloaded with an extensive materials database, simplifying initial setup. In addition, cut sheets can be directly tied to the materials database, making submittals a breeze.

Templates or tied assemblies have become a big part of any decent bidding and estimating software tool. With some software, common assemblies for landscapers like tree planting kits, swing joints and manifolds come prebuilt, and the tools to create custom templates are simple to use. In addition to the materials portion of an assembly, a labor operation can be directly linked to a template, giving the ability to calculate the time and costs associated with the installation of the assembly. Remember, because of integrated databases, you can update an employee's salary or the cost of a piece of equipment, and the template will automatically use these changes when calculating costs.

Getting organized takes some time and effort, but the payoff is huge. With integrated databases, determining a break-even point on many jobs is minutes away, as opposed to hours.

Preparing the bid

A job-cost estimate starts with understanding the scope of work. Remember that every bid puts your company at risk. Clearly, understanding expectations of the customer is essential when preparing a bid.

With a clear understanding of the scope of work and bid proposal requirements, the next step is putting together a materials list. This is where the preparation begins to pay off. As the take-off is completed, the materials database is accessed both for primary parts and associated templates. Because "Operations" can be linked to products, time estimates and costs can be automatically calculated.

For example, if a tree needs to be planted, the estimator will know how much time it typically takes for the landscape contractor to plant the tree, and how long the backhoe will be used. The costs associated with this work will automatically be added to the bid. An estimator can make job-specific adjustments. For example, the time it will take the landscaper to plant the tree could be increased due to the challenges associated with site conditions. This change will immediately make adjustments to the break-even point determined by the software.

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When compiling a materials list for an irrigation system, available software continues to impress. Using a nozzle count, an irrigation "wizard" can automatically calculate the number of valves, all the manifold parts, provide a lateral line take-off and even estimate a detailed lateral line fittings take-off. All of this is done respecting industry standards for head-to-head coverage, flow and friction loss.

With many distributors providing detailed materials quotes to contractors, some software applications allow an estimator to "paste" a quote directly into the software. Once there, labor operations can be linked to the imported materials list. Once again, labor and equipment costs are immediately and accurately calculated in great detail.

Overhead recovery

With the direct job costs calculated, the next step is to add the cost of overhead. Once again, software databases have already accomplished this task. Overhead estimated using the “overhead per hour” recovery method, is recognized by many as the best approach for overhead recovery. The estimate has already determined the number of hours that each employee will spend on the job. The hourly rate for overhead recovery was automatically determined, based on the company’s total productive hours and the overhead budget. Using these figures, the overhead costs associated with the job are automatically calculated and added to the bid total.

Profit

Until now, all we have is an estimated break-even point. This is the first time an estimator should think about what the competition may be bidding. Profit decisions should be made based on current work load, market conditions, and confidence in the estimate. Confidence in the estimate includes factors such as price stability, material list accuracy, estimated time accuracy, and fuel costs, just to name a few. The higher the risk, the higher the profit margin should be. Lower risk allows the freedom to bid with tighter margins. This becomes important when a bid must be extremely competitive. When you sit at the negotiating table, knowing your break-even point gives you the tactical knowledge you need to come to an agreement.

Job budget

Once a job has been won, a detailed bid provides a valuable resource. While the magic multiplier or the unit price method for bidding leaves you flying blind, a detailed bid provides a budget for the job. The purchasing agent has a detailed materials list, the foreman has a time estimate for each task of the job, and the equipment manager knows what equipment will be needed for the job. This budget can later be used to compare the estimate to the actual job-cost.

Improvement requires change

Determining a break-even point, and eliminating much of the risk associated with bidding requires an accurate calculation of all the costs associated with a job, including an accurate materials list, costs for labor and equipment, complete with time estimates, and a cost for overhead recovery. Integrated databases make these calculations happen simultaneously and seamlessly at the click of a button.

For many years the construction industry enjoyed the luxury of high profit margins. With the limited work available in today’s economy, accurate bidding is more important than ever. In the past, estimating errors were covered by high markups. The lower margins common in today’s economy raise the risk. More than ever, contractors must have accurate job cost estimates in order to win the war.

Improving your estimating processes requires a commitment to change. Proven software and guidance from professionals has helped many contractors reach new levels of success.

Operations Tasks	Category	Quantity	Difficulty Adjustment %	Production Rate (Units Per Hour)	Time	Unit Cost	Cost
Lateral Line Installation		7380					\$1,811.88
Trench			0	500.00	14.76		
Equipment Operator	Employees					\$16.01	\$240.15
Laborer	Employees					\$14.97	\$220.99
Trencher	Equipment					\$24.50	\$361.62
Skid Steer Tractor	Equipment					\$19.35	\$295.64
Fit Pipe			0	1,000.00	7.38		
Irrigation Technician	Employees					\$14.18	\$104.63
Backfill			0	500.00	14.76		
Laborer	Employees					\$14.97	\$220.99
Main Line Installation 1" - 1 1/4"		2165					\$1,640.65
Trench			0	100.00	21.05		
Equipment Operator	Employees					\$16.01	\$333.99
Laborer	Employees					\$14.97	\$315.06
Trencher	Equipment					\$24.50	\$515.72
Fit Pipe			0	100.00	21.05		
Irrigation Technician	Employees					\$14.18	\$298.44
Backfill			0	200.00	10.52		
Laborer	Employees					\$14.97	\$157.53
Sprinkler Installation		264					\$679.59
Layout Heads			0	60.00	4.40		
Foreman	Employees					\$26.85	\$118.15
Install Head			0	10.00	25.40		
Irrigation Technician	Employees					\$14.18	\$374.29
Adjust Head			0	20.00	15.20		
Irrigation Technician	Employees					\$14.18	\$187.15
Valve Installation		221					\$5,914.25
Build Manifold			0	1.00	221.00		
Foreman	Employees					\$26.85	\$5,934.25
Quick Coupler Installation		18					\$380
Fit Device			0	4.00	4.50		
Irrigation Technician	Employees					\$14.18	\$63.00

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