Introduction to Contractor Estimating

Executive Summary. The reader is introduced to the process of contractor estimating from initial project evaluation through the call for bond, the takeoff, the actual estimating of a civil project, an even the turn in of the bid.

Bid Evaluation and call for bond. Contractors consider many facets of a job before deciding to submit a bid: the client, the project and its "rules", and the client's management team. Each of these items is evaluated as to the risk it poses (usually financially) to a contractor. If a client is litigious or short on money for legitimate change orders, this is a risk. The type of project and its "rules", or the contents of the contract, also play a huge role. Is there relief for changes in time and/or cost? Is there a differing site conditions clause, are there killer clauses? Lastly, what is the construction manager like – are they experienced, are they paid by the calendar day on the job or lump sum?

Calling for the bond is a process which requires providing necessary financial and contractual data to the bonding agent so that a "give/no give" decision can be made by the surety as to whether or not to provide the bond. The cost of a bid bond is zero.

Takeoff – purpose and methods. The purpose of takeoff is to capture the necessary quantities of materials that must be assessed from a production standpoint (i.e., how many widgets can I build an hour) as well as the quantity which must be purchased. Methods of takeoff vary from pen and paper to on screen takeoff systems to AutoCAD-type softwares.

Contractor estimating – how do they do it? Frankly, sometimes it starts with a guess as the estimator has maybe never seen it and cannot find anyone who has built it. There are other databases for pre-calculated production rates, crew make-ups, and unit costs for all types of work: building, pipe, process, concrete, framing, drywall, et cetera. Sources like RS Means, MCAA, Richardson Database, and Rental Rate Blue Book.

Most contractors use a combination of some or all of these things, however, the bulk of their pricing is built on personal experience and historical costs/production rates.

Softwares vary for the actual creating of the costs in an estimate, but they all contain tools to help generate direct and indirect costs, subcontractor/supplier comparisons, markups, and bid closing.

My story. This was a presentation I recently provided to a large municipal owner and two engineering firms. I showed the actual estimates as prepared in HCSS' HeavyBid software on jobs actually constructed by my former company. The questions generated by the attendees were excellent both during and after the presentation. I think the most valuable component of the day was the candor in which it was delivered. Hopefully a greater understanding of the contractor approach will help owners manage projects better and exercise their fiduciary responsibility to the taxpayer.

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