

# ACCURACY OF ESTIMATES

## A Consultant's View

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Memphis, Chapter 62

As a Cost Consultant I am frequently asked by an architect or owner "What degree of accuracy do you guarantee on your estimate?" or "Percentage wise, how close will your estimate be to the bids?" I tell them there is no guarantee; it is my best judgment of cost based on the available information.

I like to tell them about the \$103 million estimate where the bids came in at \$103.3 million or the \$7 million estimate for a renovation/addition project that bid at \$7,065,000. There are plenty of success stories to be told but once in a while the bids may be significantly above or below the estimate.

Several years ago I received a bulk mailed advertisement from an estimating service that included a statement that their estimates were guaranteed within two percent. It didn't say what level of estimate this was for nor explain what would happen if the difference were greater. Could they really feel confident to give that guarantee on an estimate from schematic or fifty-percent design development plans? It seemed to me that such a statement could be an invitation for more trouble than for marketing advantage.

Thinking about the spread on bids from contractors, even on hard bid projects with completed plans and specifications, I went through the bid tabulations for twenty-five competitively bid general contract projects. Each project had a minimum of four bidders and some as many as ten. On some projects the difference between the low and the high bids was as little as one-half percent (.5%) and on others as much as thirty percent (30%). The average difference for all the projects was seventeen percent (17%).

To confirm the research of several years ago, I went through the same exercise on a dozen projects from the last twelve months. These competitively bid projects had a minimum of three bidders and as many as nine. The lowest spread on these projects was three percent (3%) and the greatest was thirty-five percent (35%). The average difference was sixteen percent (16%).

To me the above surveys say that if general contractors, bidding with

the same documents, can't get closer than a 15-20% spread, it is unrealistic to guarantee an estimate to be accurate within a specific, small percentage. A "Murphy's Law"-type axiom for estimating is:

*The same work under the same conditions will be estimated differently by ten different estimators or by one estimator ten times.*

Another says:

*It is an estimate not an exactimate*

Estimating is both scientific and an art form. Scientifically we are methodical, meticulous, organized and orderly in our takeoff and pricing of the project as we see it depicted. The art comes in being able to forecast what the economy, market conditions, competitiveness will be in six months or a year when the project is bid. There are times when the estimate is not well received by the architect who wants to give a greater project than the owner can afford, or, the owner wants a monument and suddenly realizes he doesn't have the resources to afford the dream. Tactfulness and thick skin are additional attributes of a cost consultant.

The DPIC's Risk Management Handbook for Architects and Engineers advises that the term "Opinion of Probable Cost" be used rather than "Estimate". The term Estimate carries a connotation of greater degree of accuracy than an Opinion. Of course DPIC's comments are being directed to design professionals whose expertise is not in the field of cost consulting. All too often designers opt not to hire a competent cost consultant for each project, instead relying on historic data and square foot costs to arrive at a projected cost for this unique venture. The result really is an *opinion* of cost, not an estimate.

From a marketing standpoint, Cost Consultants want to stress the expertise contained within the estimating process and the accuracy of previous projects. From a legal standpoint we need to attach disclaimers to the document to protect against liability issues. On the one hand we tell our client how good we are, on the other we say we aren't responsible if there is a cost problem. The key to achieving this balance is through educating your client, whether they are the designer or owner. Impress upon them that the accuracy of an estimate is in direct proportion to the written or verbal descriptions of the project that you are given. Remind them of the risk attached to lengthy time projections. Involve them in the estimating process where possible, define your assumptions and request the client's

agreement before you present a price for the project.

Managing the client may be as important as reporting the cost. E

**Editor's Note:** During the development of the levels of the estimate section of ASPE's Standard Estimating Practice Manual, the question of including a stated accuracy was discussed. Because of issues raised in this article, and other similar issues, no range of accuracy is included as a part of our Standard Estimating Practice Manual.

### Calendar

#### June 1999

East Regional Meeting  
Allentown, Pennsylvania  
26th  
Allentown Comfort Inn

#### July 1999

ASPE Annual Convention  
Cleveland, Ohio  
15<sup>th</sup> - 17<sup>th</sup>  
Wyndham Cleveland Hotel at  
Playhouse Square

Estimating Academy  
Cleveland, Ohio  
14<sup>th</sup> - 15<sup>th</sup>  
Wyndham Cleveland Hotel at  
Playhouse Square

#### September 1999

Technical Boards Meetings  
St. Louis, Missouri  
10<sup>th</sup> - 12<sup>th</sup>  
Murphy Company Offices

#### November 1999

Board of Trustee Meeting  
Chicago, Illinois  
5<sup>th</sup> - 7<sup>th</sup>  
Hotel - TBD

Central Regional Meeting  
Chicago, Illinois  
7<sup>th</sup>  
Hotel - TBD

JCMS Symposium  
Chicago, Illinois  
McCormick Place  
8<sup>th</sup> - 10<sup>th</sup>