

# Opinion of Probable Cost Estimates

By Carl Cathcart, CPE

Our estimating department gets frequent requests from architects and potential clients to provide budget estimates for upcoming projects that are still in the planning stages. These requests usually come with a short narrative and a simple sketch or a few pages of schematic plans. I prefer to call our response to these requests, "Opinions of Probable Cost" (OPC) Reports. Another favorable term used is a "Conceptual Estimate."

Basically, what we are providing is just an opinion of what the project may cost. Some strong variables that could affect the estimated cost once the construction documents are finalized are:

- Date of construction
- Time of year
- Labor forces
- Material used and associated costs

Could the project cost as much as, more than, or less than the OPC? Is it probable (most likely, odds on, anticipated, predictable, foreseeable) in all cases?

I've learned that once you say or write the word "estimate" (without the term "opinion" or "conceptual" preceding it), the person who requested the "estimate" doesn't hear anything else. The upshot is that even listing the preliminary bid as an estimate is a challenge without the items needed for a true estimated cost.

A true estimated cost can only be determined when all plans or scopes are complete. In addition, you must have documents listing the dimensions, materials used, methods, and means of attachments. You should then involve contractors whose expertise is in the scope of work required, along with general conditions and general contractor fees.

OPCs and Conceptual Estimates are usually completed by referencing previously estimated or previously built projects that are kept in a database. They also should carry some sort of contingency at this early stage. A great tool for these types of OPCs is the "Conceptual Estimator" featured in the Design Cost Data website ([www.dcd.com](http://www.dcd.com)), which uses previously constructed projects.

## Square-Foot Estimating vs. Take-Off Estimating

Both these terms are exactly as they read, and they are as different as concrete is to door hardware.

Square-foot estimates could be used in cases with large repetitive volumes of construction, for example: concrete sidewalks, siding, cement block/brick, drywall, roofing, painting, flooring, and straight uninterrupted areas.

A 30-foot-long block wall 14 feet high (30' by 14' = 420 square feet), with no openings or architectural details can usually be estimated with accuracy using a square-foot estimate.

However, insert four window openings and two door openings, and now you have steel lintels involved, and a slight slowdown in production. Now, what if all the elevations have different openings, corners, or architectural details – would that affect the square-foot cost?

Using a square-foot approach for a concrete slab with formwork, reinforcement, thickened footers, and control joints will always be different than when using a square-foot approach for just a slab.

A square-foot approach is easy enough to use for flooring in a square or rectangular room, but what if that room has steps to another level, 6" wooden baseboards or transition strips? What if that room now has even more additional components involved?

Estimating drywall in a 10' by 10' room with a flat ceiling is fine when using the square-foot approach, but what if the walls change with different elevations? Would scaffolding be needed for the additional wall height?

What about if there are soffits added for architectural features or to hide HVAC work? Perhaps that flat ceiling now becomes a cathedral ceiling with skylights, or maybe control joints are now required.

Square-foot estimating has its place, but it is limited to large, uninterrupted scopes of work, like big box store construction or when utilizing a database of similar types of projects. Repetitive construction such as big box stores, chain restaurants, and tract homes are all basically the same except for the work associated with the site on which they sit. Does that mean you can use square-foot estimates for this type of work?

In most cases, yes. But with a caveat: If they are all in the relatively same geographic location and if the estimator has compiled a database of previous and/or similar projects that are broken down in square-foot format per scope of work. Again, the Conceptual Estimator on DCD's website is a great database tool for these types of estimates.

A chain restaurant in Arizona, for example, will always be different than one in New York, due to local modifiers such as labor affiliations, material costs, and time of year. Add additional items that the local jurisdiction or building department demands to keep with the look and code of the region, and that square-foot estimate is challenged.

A takeoff or Quantity Survey (QS) estimate will be much more accurate, because a QS estimate starts with quantifying the various components in a construction project before adding an estimated cost. Unfortunately, this information is not always provided when a client asks for a conceptual estimate. In contrast, square-foot cost estimating quickly gives you a reference based on historical data, whether you use your own historical data or estimating databases such as DCD's Conceptual Estimator. A QS estimate will always be more detailed and accurate than a square-foot estimate, but a QS estimate comes much further down the line of design.

## Estimating is both a science and an art form

The science comes from approaching the estimate in a methodical, meticulous, organized, and orderly process. The art comes from being able to imagine the project being built in the location with the means and methods of starting from the bottom and working to the top.

OPCs and Conceptual Estimates are provided to offer the estimator's best opinion based on the science and the art form they have developed.

## Murphy's Law of Estimating

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

**About the author:** Carl Cathcart, CPE, is a Certified Professional Estimator and member of the American Society of Professional Estimators. He is the Chief Estimator for Fiorilli Construction Inc., a commercial general contractor located in Medina, Ohio, that specializes in retail, mixed use, restaurant, medical, and commercial construction projects throughout the mid-west. Visit Fiorilli at [www.fio-con.com](http://www.fio-con.com)