

Estimating Tips for Owners and A/E Firms

We work for both Owners and A/E firms nationwide to assist with cost estimating. In doing so, we have noticed a few trends that tend to be common amongst all initial cost estimates that they come up with on their own.

The first trend being that some costs aren't accounted for as they don't typically fall under a normal construction projects SF costs, and this is not anyone's fault. This can only be accounted for from experience and lessons gained in the field as the person directly involved with the building process on a day to day basis.

For example, on a recent project to remodel a large building at a University, since the building was in the middle of six other buildings, just to be able to access the site would require building a temporary access ramp structure costing upwards of a million and half dollars- costs the owner did not include in their budget submitted to the Board of Regents. The fight for the additional money afterwards was not fun for the Owners Reps.

The second trend we see commonly is not accounting for escalation of labor and materials. It is sometimes falsely assumed that any contingency percentage tacked on to the job will cover this, but as anyone with experience can attest to, this contingency money is often eaten up in either the design progression or change orders to the base contract for various reasons.

So, what are some things to consider above and beyond the normal CSI division square foot costs?

Access to Site- This should not be lumped under the General Conditions fee percentage. How are the men, materials and equipment going to get to and from the site every day? Where are the job trailers and storage yard going? Is the daily access to the site going to affect the schedule? What is it going to take not only to get men and equipment to the actual site, but also what is it going to take to restore the site once you are completed? So, you have accounted for crane costs, but can those heavy pieces of equipment access the site without damaging their surroundings? We have had jobs where the realistic daily production was only around six hours per day per man due to the difficulty of getting to, setting up for and leaving the job site daily. This makes a difference on cost and schedule, so site access should be considered. Ask whoever is doing your cost estimating to be sure and review this and account for these costs.

Escalation- This is the biggest item we don't see accounted for. The costs simply aren't going to be the same for a project estimated in 2017 but built in 2019. I have seen the owners expect GC's to hold their price which is both unreasonable and unfair. Do you want your salary to be the same two years from now? We typically add 2.5% a year for labor increases and around 5% a year for material increases. Turner Construction puts out a wonderful Cost Index chart every quarter that helps visualize these changes. Cost escalation cannot be covered by the contingency either, this is simply not good practice.

Contingency Percentage- While it's easy to slap on a 10% contingency, and I've even see a 25% contingency percentage, it's often an unintentional lazy practice. Sometimes, during the initial programming and even Schematic Design Process, a contingency is required to cover all bases. This is a given. However, the contingency applied should be looked at more carefully. What is expected of these

contingency dollars? Often, we see that it is expected that this money will cover all changes to the DD and CD documents, all change orders during construction, any labor/material escalation costs and any “unforeseen issues” that may arise such as the fees incurred if delays happen. We have seen GC’s, A/E firms and Owners get in three-way heated arguments over the definition of what this percentage covers. What the contingency percentage money is going to be used for should be agreed upon by all parties at the very beginning- most often coming in at around 7 to 10 percent which is meant to cover the progression of the estimates from the design Programming phase through the CD phase. It covers items not yet designed, material changes, adjusted user requirements, etc. It should not be used to cover site access, escalation, change orders, etc.- these should all be accounted for separately.

Cranes/Equipment/Special Formwork- Can you forget equipment? It happens. It gets assumed that subcontractors will carry these costs in their price, and when estimating from an Owner and A/E firm perspective that these costs fall under the individual trades square foot costs, but they don’t always. So, what am I talking about? Tower cranes- not just the need for one, but how many will be needed. Call your GC’s and talk with them, they are happy to help you and let you know if and how many will be needed. I have seen assumptions made of “we will just stick a crane in the middle and that will work” for estimating purposes. At an average of \$350K a month, if you need three on the job for a year instead of one this becomes a big budget bust very quickly and makes all parties involved look bad. Also, tying back to site access and considering building height, how is the exterior shell going to be built? Is crawling scaffolding required? If so, these costs add up quickly and should be remembered.

And finally, an item that will affect the cost, sometimes the most:

Schedule- Everything these days needs to be done yesterday. While it used to be random one-off projects that required double shifts or extremely short construction durations, it has become the norm. That forty-story high rise condo project that used to take 18 to 24 months to build? It now needs to be done in 11. We see this constantly, for various reasons. But we often see that the costs to do this are not considered upfront. Essentially, half the time can mean between 1.5 to 2 times the costs. Basic math, right? Surprisingly no. Tying back to the above items, number of men, escalation, number of pieces of equipment, higher fees from material manufacturers for production and delivery speed ups...these all need to increase to make it happen sooner. For example, site work, the mat slab foundation hole needs to be dug in 20 days to make schedule, well that is going to take 2 more excavators than the subcontractor may normally include costs for and so this should be considered upfront in the SF estimate costs- the job that may normally cost \$295 per SF to build just became \$350 per SF because of an escalated schedule.

We see a lot of owners and A/E firms account for these costs, but we see some that do not and why should they? We are all experts in our own fields and while we are expected to think big picture, day to day stresses can make that difficult to do. That is why there are experts at each stage of the process, to provide input and to help the team see the big picture. The Architect is the design expert, the GC the build expert and the Cost Estimator the expert at helping all parties involved at all stages of design and construction.

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