



Congratulations.

You Were Awarded the Contract! (Now What?!) Account for Your Pre-Contract Changes

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Have you ever received a contract and not been certain if the amount in the contract lines up with your bid? It happens and it's happened to nearly everyone reading this article. How can that be? It happens because things change quickly during the estimating process. Drawings change, there are last minute negotiations, material substitutions, profit margin cuts in some areas to hit targets, and scope of work changes from being self-performed to being subcontracted or split out between companies. What is the best way to manage these changes? Is there help out there?

Consider Situation 1: One subcontractor turned in a bid with 14,980 labor hours and the contract was awarded at 33,122 labor hours. To true up the books / enter the information into the accounting system, the team had to figure out where the changes came from, after the fact. After a list of 15 items that were changes known in the estimator's head / on their spreadsheets, they accounted for another 15,000 hours. They determined that was 'close enough' as there is likely another 2,300 in low voltage rough in to add.

Consider Situation 2: One subcontractor has a contract accepted with 22 lines of acceptances / not accepted items for an adjustment of several hundred thousand dollars from the bid price. In the company's handoff meeting from estimating to the project management / field team, they crossed out nine of the lines and called out two of the lines to be

handed to subcontractors. This meant that 50 percent of the line items in the contract were not accurate.

Figure 1 shows MCA Inc.'s defined process of estimation (PoE) learned and documented via 30 years of clinical research in the industry. Changes that occur before the contract is awarded may happen throughout the estimating process, notably at the start of the estimation when risks are being Identified, as well as throughout the risk management portion of the process of estimating. In the risk management phase of estimating, it's critical that you understand and document:

- Strategy – understand your scope, including value engineering (VE) opportunities.
- Methods and Means – understand that you have included the full scope of RFIs including an accurate takeoff and bid. Are you certain you have the latest prints? Are there changes in scope as the process continues in time?
- Value Engineering – have you gathered information and ideas from the entire team, including the PM, estimator, foreman, and vendor? Knowing if you can substitute other products explicitly in the job needs to be documented clearly.

This work and risk management is required throughout the entire estimating cycle into the feedback loop portion of the process as the job is awarded and handed off to the project management team.

While managing the phases of estimation is key, categorizing the type of risk also is critical. Referring to the *IEC Insights* article *Change Orders: A Curse or Blessing*, September / October 2021, pre-contract change orders, like the overall project, need to have the three types of risks identified. Those types are technical, business, and integration risk. A change order checklist with guidelines is suggested to help manage the risk. Your team may think that if it all happens before contract award, the technical risks can be managed. Just don't forget integration and business risks! Pre-contract change questions to ask yourself and your team are:

- Technical Risk
 - Is the full scope of work defined for your team to create a full work breakdown structure (WBS) for the job so that it can be used to manage the 3Ms (manpower, money, and material)?
- Integration Risk
 - Was the base bid correct? Is information missing, were there changes prebid, new RFIs, VE or alternates proposed?
 - Is everything tracked in some version of a thorough change log?
- Business Risk
 - Are we certain the field team understands the scope? Were there bid day negotiations / adjustments made that did not get captured for correct handoff to the project management team?

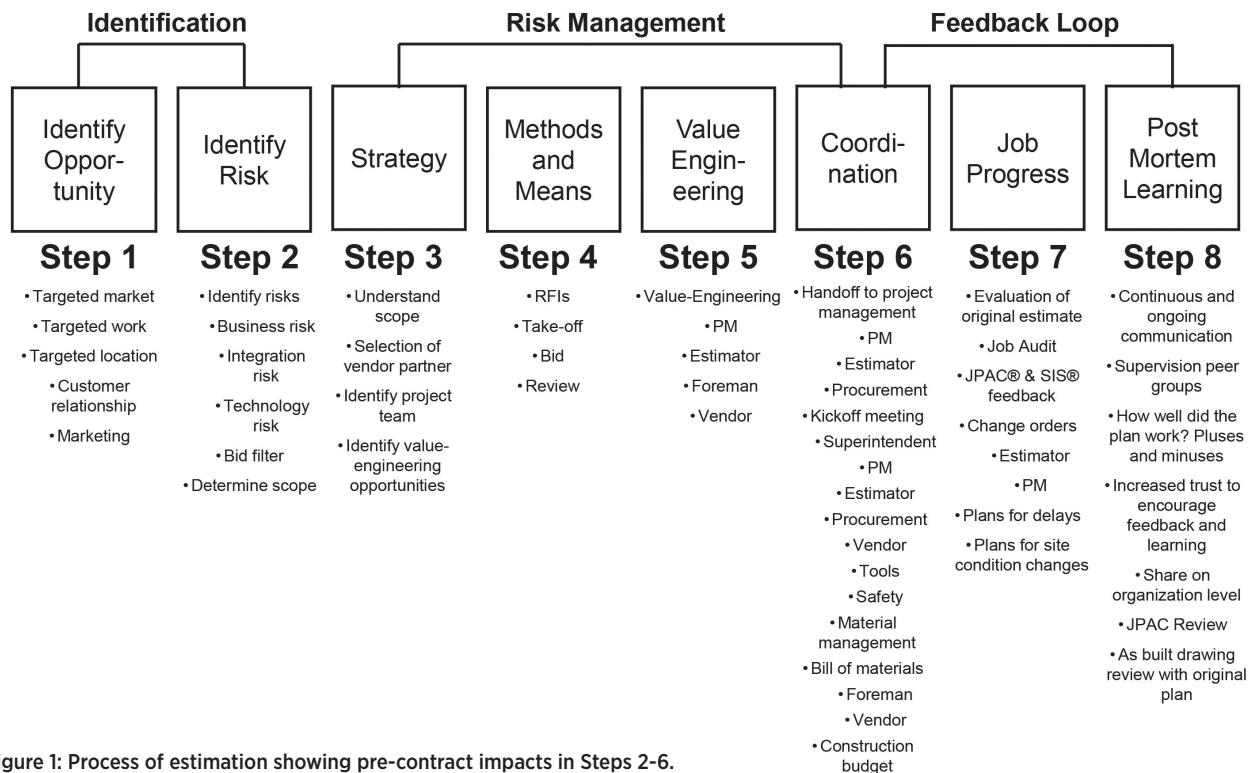


Figure 1: Process of estimation showing pre-contract impacts in Steps 2-6.

The support you need is handled through digitalization, commonization, and interconnection of information. The September / October 2022 *Insights* article, *How Visible is your Pipeline and Backlog?*, reviewed the use of spreadsheets attempting to document verbal quotes, email proposals, change orders, and contracts that find you in situations like 1 and 2 above, trying to re-create in your accounting or estimating program, to get a true picture of your pipeline and backlog. Think of a step ahead of that – can you even manage the work if you don't know what that work is? Programs like DCI Construction™'s Change Log Module, which can be used pre-contract and post-contract award, together with the usage of the Agile Construction® tools like JPAC® and SIS®, that use the Standard for Job Productivity Measurement in Construction, ASTM-E2691, will allow every project team to make the change orders visible before they greatly impact the job.

How can that be? Let's consider (and aspire to) *Situation 3*: There is an initial bid submitted and a list of pre-contract change orders has been documented through the final bidding and negotiation process. They can be identified as pending, included, declined, or deleted. They are noted as adder or deduct changes. There is notation on who requested

the change, as this can be quickly forgotten in the heat of negotiation. The individual change orders also can have documentation of the reason for the change, such as:

- Change in scope
- Construction change directive
- Error
- Omission
- Professional error / omission
- Unforeseen conditions
- Value engineering

Envision that when the contract is awarded, all of the pre-contract change orders are coded appropriately, and there is a total value and total labor hours for the full contract. This allows you to confirm, before starting, that everyone understands the scope and can make a work plan to move forward. You are able to manage all three types of risk, enabling you to continue to learn through the feedback loop in the third and final portion of the process of estimation.

You've spent all of this time estimating the work, winning the work, and celebrating the award of the contract. Make sure you start off the job on the correct footing by understanding the full scope and being aware of the labor hours planned as well as the full profit margin on the overall job before it begins. ⚡

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