

The Preconstruction Predicament: Knowing What You Need and When

By Tom Dionne, Vice President of Preconstruction and Design

When embarking on a commercial construction project—whether it's a ground-up facility, a renovation, or fit-up—the decisions made during the earliest stages of the project can have a significant impact on cost, quality, timeline, and overall outcome. This is why developers, business owners, and institutions will sometimes choose to engage in a comprehensive preconstruction effort. This white paper series explores scenarios in which investing in paid preconstruction services yields measurable benefits. Insights gleaned from past projects we've encountered, will be explored as we attempt to demonstrate when owners should consider undertaking a paid preconstruction effort and how it can lead to more informed decision-making as the project design progresses.

CASE STUDY 1:

An educational institution wants to build a new 50,000 SF addition to their existing building. This addition will consist of a new, state-of-the-art performance space, offices and makerspace for teachers to utilize and facilitate a more hands-on approach to learning. The school has already retained an architect and Schematic Design (SD) of the addition has been completed.

Next, the school proceeds to issue a Request For Proposal for a qualified Construction Management (CM) company. Each CM is asked to provide a budget for the project based on the SD set of architectural drawings, as part of their proposal.

Scenario A:

Budgets are coming in higher than expected. The client does not have sufficient funds allocated to cover the cost of construction.

This scenario is a prime example of when an owner should start to consider exploring the option of undertaking a paid preconstruction effort. A paid preconstruction effort can address the following issues:

- ACCURATE BUDGETING AND COST CONTROL

The strategy involved in developing a budget and managing cost control becomes inherently more challenging once the design effort is well under way (as is the case here). Depending on the level of pricing certainty needed, this can be a good point at which to engage a CM partner with the ability to provide a more detailed, thorough budgeting effort. This type of budgeting effort often involves a significant amount of time, due diligence and, depending on the scope of the project, engaging certain subcontractors (like MEP/FP) to provide in-depth analysis and feedback. This level of effort and work often requires paying the CM for their time.

The goal is for the CM to compile a Cost Model Budget, that's based on several key pieces of information such as:

- *Recent historic cost data*
- *Input on constructability and costs for proposed systems from an assemblage of qualified subcontractors*
- *Existing conditions and other factors that may affect project cost*

The resulting cost model budget spreadsheet will contain specific line items for all trades that will be comprehensive and help guide any design changes or other cost savings that will bring the project budget back in-line with expectations.

- VALUE ENGINEERING

Since the project in Scenario A has already gone through the schematic design phase, an owner's leverage over costs has been substantially diminished. We can therefore expect additional time (and money) to be spent on re-designing the project or, in the worst case, the project does not move forward and time/money spent on design is wasted. Lack of access to detailed cost data makes it extremely hard for the project team to identify the root causes driving the budget, and thereby makes effective cost control extremely difficult.

A more attractive alternative would be to engage the CM to provide value engineering. **Value engineering** is one tool a CM can utilize during preconstruction to identify possible ways of controlling costs. Value engineering consists of feedback and direction on constructability, means and methods, material selections, and MEP/FP systems. Possible areas for savings are identified in the budget as alternates, along with associated costs. Cost comparisons for proposed alternates are included as part of the CM's detailed cost model budget, thereby enabling the owner to thoroughly understand the options available for saving money and help them direct any design changes the architect needs to make, in order to reign in project costs. This is why it's important for the owner and design team to provide the CM with as much information pertaining to the project as possible. These value-engineering suggestions are especially helpful early on in the design process, when changes are easy and less expensive to implement.

RECAP: LESSONS LEARNED

Scenario A highlights how owners can potentially end up with a project that is over-budget very quickly. This is also an opportunity to understand the benefits to be gained by engaging a CM in a paid preconstruction effort. This case study underscores how projects can easily end up being over-budget and ways the owner, architect and CM can work together to control costs for a more productive and positive outcome.

Our next white paper will offer a more in-depth look at value engineering, specifically when VE should be done and what to expect from it.

SIDEBAR:

WHAT DOES A "DETAILED BUDGETING EFFORT" CONSIST OF?

This can differ from one CM to the next however, owners should look for some commonality in approach. Historical cost analysis data is one way a CM provides a greater level of pricing certainty. Another is with input from subcontractors. The more information the CM has regarding the project, the more accurate the cost model budget becomes, thereby enabling the project team to have greater control over project costs.

SIDEBAR:

WHAT DOES VALUE ENGINEERING CONSIST OF?

It's critical to understand what constitutes value engineering in order to make sure the CM provides you with this information. In short, VE is an additional layer of cost analysis that the CM can perform to arrive at an improved *functionality-to-cost* ratio, without sacrificing quality. This analysis can consist of budgetary cost information for different systems or materials that may be desired but not required, alternate systems/materials, and the corresponding cost comparisons. This analysis can help the project team by proactively providing pricing information necessary for ownership to make decisions upfront, and thereby limit the need for costly design or scope changes.

About the author



Thomas A. Dionne

Vice President of Preconstruction Services & Design

Tom joined Connolly Brothers in 1995 after working at construction firms in southern New Hampshire and in the Washington, D.C. area. After graduating from the University of New Hampshire in 1984, his degree in civil engineering and interest in architecture led him to the construction industry, where he has served in many roles, including design, estimating, and management. He uses the knowledge he has gathered over the course of his career to better understand clients' needs and to focus on providing them with comprehensive preconstruction services. At Connolly, Tom oversees all budgeting, preliminary scheduling, preconstruction activities, subcontractor bidding, and final development of contract amounts.

About Connolly Brothers Inc.

Established in 1880, Connolly Brothers is an award-winning construction management firm serving private commercial, industrial, and institutional clients across New England. A five-generation family business, Connolly has built an unprecedented reputation based on setting the highest standards for construction and attention to detail that have been our hallmark for 145 years.



SUBSCRIBE

Subscribe now to receive the next installment in this white paper series directly to your inbox.