



The "Perfect Project" Preconstruction Resource Guide

A Practitioner's Handbook for Preventing & Mitigating Avoidable Change Orders and Delays in Commercial Construction Projects



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Presented to
Confidential Client

Targeting Outcomes in the Design Phase

Every commercial construction project has an impetus - often businesses want to relocate, expand, or improve their facility. This core motivation starts a conversation between an owner and architect that results in two important milestones of communication that will define the project experience: owner requirements and design intent.

Requirements are the bedrock of the project, the things the owner *has to have* for the project fit for its intended purpose. This is often communicated as a certain amount of space, adjacencies between business departments or functions, infrastructure to ensure access and functionality, and perhaps an aesthetic in the form of design and finishes. Design intent are the instructions to achieve the owner requirements, provided in the form of drawings, specifications and contract terms. If these requirements are not correctly or fully described in the design intent, errors and omissions will create costs and delays to everyone involved - most of which will be paid by the owner.

While a lead architect and owner work closely on the initial schematic designs, before you know it, a committee of designers will be engaged, each contributing the elements they believe are necessary to achieve the owner's requirements. As with any large group of collaborators, misunderstandings and omissions are to be expected. The architect will typically shepherd this information transfer and perform the quality control function of ensuring the design intent is correctly described and coordinated between design disciplines. Increasingly though, coordination and quality control are "value engineered" out of the architect's scope in an effort to reduce costs. Even with a fully funded and engaged team, this translation of owner requirements to design intent is rife with potential for human error.

Regardless of fault, any errors in this phase that are not timely discovered and corrected by the design team will create substantial additional costs to redesign, document, price and approve the changes. Worse, in many cases the discovery will not be timely which can result in additional costs to tear out conflicting work, re-stock obsolete materials and delay the planned progress of the work.

01 Targeting Outcomes in the Design Phase *Continued...*

Targeting Outcomes...Continued

Change costs and delays can and do exhaust budget contingencies, increase construction interest costs and delay business operating revenue to the owner. The owner needs to get the facility operational; designers and contractors need to get started on to the next project and the bank wants to loan that money to the next borrower. Delays create a huge economic log jam and even the substantial change fees and additional services won't make anyone whole.

To add insult to injury – these revisions, costs and delays pummel morale, strain relationships, and make a difficult job even more so. But what can be done?

Here are four tips your team can use to more effectively assemble, communicate, develop and document the owner requirements and design intent. This effort will reduce revisions, change orders and delays, expedite the operational benefits to the owner and avoid the revenue log jam for the entire team.

Tip 1: Ask "Why" then "How". The more we can know about the motivations and goals for the project, the more accurately designers can translate them into documents that can be permitted, priced, contracted and built. Work with the owner to fully understand their motivations and to help you define metrics that describe how achieving their goals will be experienced. Too often we get caught up in "what" which can be both missing important elements and include too many "nice to haves", resulting in blown budgets and costly, avoidable revisions.

Tip 2: Create a Requirements Inventory to communicate the owner requirements and design intent. Use this inventory to guide your quality control efforts and to help the contractor and subcontractors with an improved context to understand the scope and how to achieve it. The goal here is crystal clear communication of the most important outcomes for the project.

Tip 3: Establish a formal quality control lead and scope for each design discipline.

Determine what validations are to be performed and documented at the schematic, design development, permitting and pricing document milestones (e.g., does "it" really deliver the intended benefit? Will it fit through the door? Does it require setbacks or connections? Does it need noise mitigation or utility connections?).

Tips...Continued

Tip 4: Use the Requirements Inventory to interview designers, the GC, key subcontractors prior to award. Especially for design-build scopes, ask them what their strategy is to define or complete each requirement and review when quality assurance requirements will be performed, by whom, and how they will be documented.

The AIA suite of contracts generally defines design intent as what can be inferred from the totality of the project documents - often comprised of more than 100 pages of plans, volumes of specifications and the owner contract (plus exhibits). While this language might seem to provide protection to the owner or design team, without a high degree of definition and rigor in these documents, it is impractical to expect that any contractor or subcontractor will or can accurately price or achieve it without additional cost or delay.

A more effective strategy is to cause the design intent to be based on reasonable standards, be efficiently described, useful, and not so vague or cryptic to be overly opportunistic in its application. Because what is fair and practical is achievable and certainly enforceable. Not simply because you deserve it, but because you asked for it, they had every opportunity to timely deliver it, and should be prepared to do so without changing the price.

At the end of the day, we only have so much bandwidth at any given time. An organizational focus on clear communication and quality documentation is an achievable strategy to overcome the root causes of revisions, additional costs and delays. This way we have time to deal with unavoidable challenges like the weather, wildfires, supply chain interruptions, and so on...

END OF SECTION



1R ***Design Phase Resources:***

In order to ensure the design intent is captured in the design, owner requirements need to be fully understood and integrated into the design and contracting strategies. These resources are designed to assist the project team to confirm that the requirements and design intent are adequately documented before the pricing and contracting phases.

- ***Owner Requirements Checklist*** - An informed list of topics and questions I have assembled over the years that help discover and clarify owner requirements and outcome metrics. [Click here](#)
- ***Technical Support*** - Get 3cd to help you identify strategies and procedures to target outcomes during the design phase. [Click here](#)