



RISK MANAGEMENT 101:

10 RECOMMENDATIONS TO ASSIST OWNERS IN
ACHIEVING THEIR CONSTRUCTION PROJECT GOALS
ON TIME AND WITHIN BUDGET



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The construction of a new facility or the substantial renovation of an existing one depends upon the technical expertise of many people for an extended period of time and a diverse array of sophisticated materials and equipment. As such, a major construction project poses significant risk to person, property, revenue, and reputation in addition to the possibility of unmet expectations regarding cost, schedule, quality, and performance.

With so much at stake and outside the owner's direct control, a comprehensive risk management process should begin as soon as planning for the project commences. This process should involve the project's architect, engineer, contractor, and critical equipment manufacturers, as well as an attorney and insurance advisor knowledgeable of the specialized legal and insurance coverage issues that major construction projects present. This article will introduce some of the strategies and tactics the author has identified during more than twenty years practicing construction law and litigation. While "one size does not fit all," applying these tools should increase the likelihood of your project fulfilling your objectives and expectations and assist in preventing, avoiding, and mitigating the financial risks and liabilities that construction projects typically create.

1. **AVOID "CRAMMING": Allow Sufficient Time To Develop And Validate Your Vision And Goals For The Project**

A successful project begins by establishing clear goals and objectives, and confirming their feasibility from a budget, schedule, site, and operations perspective. These goals and objectives—commonly referred to as the "owner's program"—include the project's uses, functions, performance criteria, aesthetics, space, and expandability requirements. Most projects will benefit from having all project participants—the architect and its key consulting engineers (AEs) and the contractor and critical subcontractors—actively involved and communicating from the outset. This is especially true for projects intending (by choice or code) to achieve certification under a "green" code or rating system such as the USGBC's LEED® family of rating systems. As one consultant recently put it, "the most fertile environment is when contractors have a full understanding of the intent of the design and designers know the ability of the trades to carry it out."¹ For example,

¹ Romano N.A. Nickerson, Principal, Boulder Associates, quoted in "Target Value Design Makes Lean Work Better," *Engineering News Record* (September 2012).

a qualified general contractor (GC) or construction manager (CM) will have the most up-to-date information on material and equipment pricing and availability, and will be able to provide early constructability and value engineering expertise resulting in more informed, realistic design choices. A GC or CM also can assist AEs in identifying when cooperation from adjacent property owners may be required, for example, to complete installation of foundation systems or utilities or to access the site. Together, designers and contractors can help an owner resist attempts to unduly limit scope before it has been able to appreciate fully the potential impacts of decision-making based upon price alone.

Early GC or CM participation can be secured through the use of a Request for Qualifications (RFQ). An RFQ also can include a request for bidders' proposed markups for overhead, profit, and hourly rates, which may enable an owner to lock in favorable pricing. An RFQ also can request the contractor's proposed markups for insurance and bonding, which provide useful due diligence on the contractor's track record for both safety and performance.

2. "IT TAKES A VILLAGE": Assemble The Right Project Team

Assembling the right team means looking beyond a design and construction firm's general reputation, and investigating its expertise and track record on projects with a program similar to yours. Even more importantly, you must look behind the vendor's representatives who participate in your pitch, because a project's success depends on the actual people that will design and build it. Drill down by inquiring into the experience and availability of the particular designers, project managers, job superintendents, consulting engineers, and key subcontractors that will be assigned to your project. The right team also includes determining to what extent "specialists" will add value. For example, engaging a building envelope consultant may be a real "stitch in time" if the project includes the design and construction of a new exterior façade.

This degree of due diligence is especially important in today's market. According to a recent report analyzing labor needs over the next five years by Daniel Groves, Director of Operations for the Construction Users Roundtable (CURT), "there will be a shortage of two million craft workers across the U.S. by 2012."² Mr. Groves encourages owners to use CURT's Construction Labor Market Analyzer (CLMA) early in the planning stage "to decide when and even where to build. By using CLMA, an owner can see whether other projects employing needed craft workers are planned to be underway at the same time in the same region." Once you are satisfied that you have assembled an experienced team of designers and contractors capable of working together collaboratively beginning early in the development process, include a provision in their contracts that "key personnel" cannot be re-assigned without your consent.

Finally, where the risk and consequences of cost overruns, delays in completion, or faulty design or construction are significant, an owner should hire a professional construction manager/advisor (CMA) to oversee the project on its behalf. Unlike the architect or contractor that has its own interests to protect, a CMA's purpose is to ensure that the owner's best interests are met during all phases of the project. During the preconstruction phase, a CMA will monitor the progress of design and permitting, validate cost estimating and budgeting, and make recommendations regarding value engineering of the design, among other things. During construction, a CMA can establish and enforce systems for cost and schedule control, and for documentation that will prove handy in resolving claims and disputes.

² Gary Tulacz, "Are You Ready for Recovery?" *Engineering News Record* (November 2012).

3. “WATCH YOUR LUNCH MONEY”: Require Firm Pricing

One of the benefits of establishing a clear and comprehensive program at the outset is the ability to secure firm pricing from your AE and your contractors. Even though contract templates issued by the American Institute of Architects (AIA) continue to include references to AE pricing based upon construction cost, this model should be resisted as should any pricing structure that is hourly based and entirely open-ended. At the same time that a fixed price is negotiated, the basis for additional compensation should be discussed and clearly spelled out. For example, the AE would be entitled to additional compensation for services resulting from material changes to the project's program, the reversal of a prior approval, changes in the project's legal requirements, contractor errors or omissions, or for services that are not readily quantifiable (such as requests for substitutions, attendance at legal proceedings, or consultation services following a fire or other casualty).

Firm pricing from contractors also should be the rule, particularly when the drawings and specifications that will govern the work are complete at the time of bidding. In this case, allowances, contingencies, and qualifications should be scrutinized and limited, if not eliminated altogether. However, obtaining (relatively) firm pricing is still possible even where construction must commence before drawings and specifications are complete using a “cost of the work plus fixed fee” (“cost-plus”) contract with a guaranteed maximum price (“GMP”). In a cost-plus/GMP contract, the contractor guarantees that the “hard” costs of completing the project, plus its fee for overhead and profit, will not exceed an agreed GMP. Any costs (and associated fee) required to complete the project that exceed the GMP are not recoverable from the owner and are the contractor's obligation. That said, the less developed the construction documents are when the GMP is established (which can be as early as one-third complete) the greater the number of qualifications and assumptions there will be that can result in a GMP increase.

Aside from permitting work to commence before plans are 100% complete, a cost-plus/GMP contract offers several other advantages over a fixed price contract (some of which are discussed in Section 4). For example, in a fixed price contract, if the work is completed for less than the cost upon which the contractor's bid was based (either because of efficiencies created during the work or, more likely, because the contractor was able to wring additional concessions out of its subcontractors), the contractor retains 100% of these “savings.” If, however, the owner would benefit from retaining all or some of these savings, either because the final project cost is critical or because savings may be applied to additional project elements, the owner may want to consider a “cost-plus/GMP” model. That said, a cost-plus/GMP contract requires more oversight of the payment process than a fixed price contract since it is based upon the submission of what could be an enormous number of invoices and purchase orders supporting the prior month's costs. Unless the owner has qualified personnel it can dedicate to this task, engaging a CMA for this purpose is the prudent choice.

4. PROVIDE FOR “EXTRA CREDIT”: Use Incentives And Disincentives

Incentive/disincentive (“I/D”) clauses are widely used to ensure that contractors do their utmost to manage and control factors that influence labor productivity, project duration and project cost. In fixed price contracts there are fewer opportunities for I/D provisions than in cost-plus contracting. Some of the more widely used I/D terms in fixed price contracting include “no-damage-for-delay,” liquidated damages and early completion bonus provisions.

As its name implies, a “no-damage-for-delay” (NDFD) provision precludes a contractor from seeking additional compensation for the financial consequences of project delays caused by matters outside the contractor’s control. Instead, the contractor’s sole remedy is to increase its time to complete the project, thereby preventing the imposition of liquidated damages. Thus, a NDFD clause represents a powerful incentive for a contractor to closely monitor the work and proactively adjust its efforts to achieve on-time completion. At the same time, the contractor’s assumption of these financial risks will ordinarily be reflected in a higher contract price. Furthermore, many states have prohibited, or restricted, the use of NDFD provisions because of their potentially harsh consequences.

Liquidated damages provisions are typically used for projects where the financial consequences of a delay to the owner are difficult to calculate including, for example, lost net revenue, or expected but unrealized improvements in productivity or energy efficiency. Liquidated damages clauses also can be used, however, for projects where the damages arising from a delay are not complicated—for example, the cost of renting temporary space or the higher interest on a construction loan vs. permanent financing—in order to preserve, and simplify, the owner’s right of a recovery. This is especially true where a waiver of consequential damages is also made part of the transaction.³ In either circumstance, care must be taken to identify and monetize, as best as possible, both the financial consequences of a delay and the financial benefits to the owner of early completion. If not, an owner will sell itself short (or overly reward its contractor) because the amount of liquidated damages becomes the maximum amount an owner can recover from a contractor that inexcusably delays completion of a project.

In addition to a liquidated damages/early completion bonus provision, an owner using a cost-plus/GMP contract can share with the contractor some portion of the “savings” between the GMP and the contractor’s actual cost of the work and fee. If carefully drafted, “savings” also can be allocated before the work is complete so as to afford an owner additional funds to procure additional desired project components.

The amount of retainage and the timing for its release also can serve as an I/D provision. It is typical in fixed price and cost-plus contracting for a portion of the contractor’s compensation for completed work to be held back (“retained”) until the project is substantially complete. This earned, but undistributed, portion of the contractor’s compensation is intended to promote timely completion of the work and to afford the owner a source of funds in the event that defective performance is not corrected. Upon substantial completion, the amount of retention is usually reduced to an amount that is 50-100% greater than the cost of fully completing the remaining work.

While retention of 10% is typical, contractors will propose any number of alternatives designed to reduce the amount of retainage since a portion of retainage represents the contractor’s fee in a cost-plus contract or its markup over the price negotiated with its subcontractors in a fixed price contract. Alternatives include reducing the amount of retainage, excluding certain costs, or releasing retention earlier than substantial completion for certain trades’ work such as excavation, foundations, or site utility installations. While owners should resist attempts to limit retention or to distribute it early because of the important I/D role that retention plays, any agreement to reduce retainage or to release any

³ A complete discussion of the risks to owners of including a mutual waiver of consequential damages provision (CDW) in project related contracts is beyond the scope of this article. In most cases, the inclusion of a blanket CDW is not recommended. If included, however, a CDW must be carefully crafted so it will not to deprive the owner of the vendor’s insurance coverage or, because consequential damages are not well-defined in the law, include within its scope damages for which compensation is expected by the owner.

portion of it early should be contingent upon the project being on schedule and the contractor not being in default.

5. “ONE PLUS ONE SHOULD NOT EQUAL THREE”: Require Your AE To Design To A Budget

On some projects, your hard construction budget may be firm from the outset. On others, a final budget may not be established until after your programming meetings are completed and the relative merits and cost of satisfying various goals are considered and weighed. In either event, once a reasonable construction budget for the project is established, your AE should be required to design the project to conform to that budget. Once a construction cost budget is established, a comprehensive estimate of construction cost based upon your AE's design should be obtained at the end of each phase of the design process. This estimating can be performed by the AE but, preferably, is performed by an independent cost consultant, engaged by the owner, who may be the GC/CM that the owner contracted to perform pre-construction services before supplying its GMP to complete the work. If the estimated cost of constructing the project (or a designated project element) exceeds your budget, the AE should re-design the project without an increase in its basic compensation unless the overrun can be explained by market changes your AE could not have foreseen.

Of course, hard construction costs do not represent your project's "all-in" cost. When establishing your construction budget, be sure to account for all related "soft" costs, including professional fees, financing charges, insurance, permitting and testing costs, and, where applicable, LEED registration costs. And, require your AE to advise you during programming if other professional consulting services will be required to fulfill your program's objectives.

6. “TURN IN YOUR WORK ON TIME”: Require Design And Construction Schedules To Include Interim Milestones

While due diligence into the track records of your AE and GC/CM for on-time delivery is important, establishing a clear schedule at the outset of each engagement with measurable milestones is essential. For example, the standard AIA contract form for architects provides only for the anticipated date for commencement and completion of construction. This lack of detail not only prevents meaningful monitoring of the AE's progress, but deprives the owner of information it needs to meet its own obligations of design review and approval. In addition to requiring a more detailed milestone schedule, be sure that the owner's turnaround times are realistic taking into account the particular decision-makers and processes involved. Missed deadlines by the owner not only impede progress but can result in additional compensation having to be paid.

Design and construction schedules with interim milestones should be accompanied by requirements for regular progress reports and remedies if a milestone is not achieved. These may include requiring the AE or contractor to develop a recovery plan, to work overtime, and/or to add resources to get the project back on track—all without an increase in compensation. And, if all else fails, an owner should have the right to step in and hire a replacement.

7. “DON'T FORGET THE HANDOUTS”: Supply Your Vendors With Contracts And Get Them Signed

A successful project requires the AE to coordinate the preparation of design documents among the several members of the design team and the GC/CM to coordinate the work among its various subcontractors. The owner, too, has a critical coordination obligation: the contracts that the owner enters into with the

various project members must be coordinated with respect to scope, schedule, administration, insurance, liability, and remedies. For example, unnecessary overlap may result in the owner paying more than once for the same work, warranty, or insurance coverage, whereas divergent payment or dispute resolution procedures can result in missed deadlines, late payments, and multiple dispute resolution proceedings.

The surest way to obtain the benefits and avoid the pitfalls of contracts lacking coordination is not to rely upon your vendors to supply them. Each proposed contract will be drafted from each stakeholder's peculiar and, typically, more narrow project perspective. Any attempt at reconciling the variances will become a tedious and time-consuming exercise if (and a big "if") reconciliation is even possible. Furthermore, do not rely upon industry standard forms—such as those issued by AIA—that have not been modified to afford an owner important protections that the market has shown will, if presented, be accepted by both AEs and GC/CMs.

Ideally, the project's proposed contract forms should be drafted before the first request for proposal (RFP) is issued and included as an exhibit in any formal RFP document. Even though the project's scope, budget, or timetable may still be "on the drawing board," the proposed contracts can and should convey the owner's expectations about how price, performance, schedule, and liability risks should be allocated. Being proactive in this regard will not only enhance contractual coordination but, in addition, will produce "apples to apples" bids because each vendor will have taken (or be deemed to have taken) into account the same expectations. Furthermore, including your contract form in an RFP, and making clear that a contract is not awarded until a contract is signed, will decrease the amount of time (and cost) required to negotiate a final contract.

8. "PLAN FOR EMERGENCIES": Understand The Benefits And Limitations That Property And Liability Insurance And Surety Bonds Can Play

As qualified, professional, and well-intentioned as most AEs and GC/CMs are, there are considerable opportunities for mistakes among the myriad of interconnected players and parts involved in the design and construction of modern buildings. Unfortunately, the consequences of these mistakes can be even greater and may not surface until years after the work is completed. Even the most highly capitalized AEs or GC/CMs cannot be expected (or have the capacity) to assume all of these risks on all of their projects, past, present, and future. Accordingly, the critical roles played by property and liability insurance and performance bonds in a project's overall risk management strategy cannot be overstated.

Like so many fields, however, the construction insurance and bond industry is highly specialized. Insurance agents whose stock in trade may be life, health, or property insurance, and attorneys whose focus is land use and real estate transactions, are unlikely to appreciate the nuanced interplay among builder's risk, professional indemnity ("E&O"), and general liability coverages and exclusions, the options available to address the respective limitations of each tool (such as controlled insurance programs, subcontractor default insurance or Owner's protective professional indemnity programs) or the value that performance bonds may add to the mix. Making matters more complicated, significant limitations on the scope of insurance coverage are driven by state law. For example, in many states, a contractor's liability insurance does not provide coverage for damage caused by defective work whereas in many others the damage will be covered but the cost to repair the defective work will not.

In short, there are important opportunities and choices to be made with respect to the scope and extent that a project is backstopped by insurance and bonds that

cannot be overlooked and must be discussed with practitioners well versed in this arcane industry.

9. “MEET THE PARENTS”: Pay Attention To Manufacturer’s Warranties, Bargain For More Favorable Terms, And Be Sure The Owner Is Named As A Beneficiary

As Recommendation 2 emphasizes, assembling the right team of designers and contractors goes a long way towards minimizing the risk that your finished building will not meet the expected levels of performance, quality, and durability. More is required, however, because projects are comprised of “materials and equipment” as well as “labor,” and contractor warranties for defective equipment will not exceed the warranties supplied by product manufacturers.

During the design phase, the warranties offered by manufacturers of project-critical equipment should be discussed as part of the same discussions having the objective to obtain the “most” performance for the best price. Construction documents can then specify a warranty of the broadest scope and longest duration that is commercially available for equipment fulfilling the project’s performance objectives. Alternatively, owners can explore opportunities to bargain directly with manufacturers for more favorable warranty terms and conditions in exchange for specifying their equipment on the project. Most “off the shelf” warranties are of limited scope, duration, and remedy. For example, owners can require a manufacturer to confirm that issuance of the warranty represents confirmation that it has inspected the plans and installation for conformance with requirements of the warranty.

Regardless of the efforts taken to secure the most favorable warranty terms, all warranties, but especially those for project-critical equipment, should expressly name the owner as beneficiary as a condition precedent to payment for that equipment. Privity of contract and other legal issues, such as the economic loss rule, remain significant obstacles in many states to enforcement of warranties against product manufacturers for defective materials. This is especially true in cases where the defect has not (yet) caused consequential damage to other property.

10. “EXPECT HOMEWORK EVERY NIGHT”: Be Vigilant Enforcing Your Rights During The Project

Too often, construction contracts are treated like insurance policies consigned to file cabinets until a problem arises. While a well drafted contract is not unlike an insurance policy—something you’d prefer not to think about but are glad to know you have—the similarities should end there. Unlike insurance policies, owners must be vigilant during the course of a project or risk having important rights or remedies lapse.

For example, carefully drafted construction contracts will require contractors and their subcontractors to endorse their liability policies to name the owner as an “additional insured.” In the event a claim is filed against the owner because of the contractor’s acts or omissions (a worksite injury; damage to adjacent property), an additional insured endorsement (AIE) allows the owner to tender the defense of the claim to the contractor’s insurer. As a result, the owner does not have to pay a deductible, preserves insurance proceeds for claims not attributable to the contractor, and avoids premium increases that can follow the making of a claim. Because contractor liability insurance will include claims made after construction is complete (known as “completed operations” coverage), an AIE will afford this coverage to the owner years later in the event a latent defect in the work results in a claim.

Unfortunately, many owners will typically accept a certificate of insurance (COI) instead of requiring their contractors to produce copies of AIEs signed by their insurers, even though the COI expressly states it should not be relied upon to confirm coverage. The practice of accepting COIs should be rejected because only a properly endorsed AIE will secure defense and indemnity and may no longer be available if the contractor is no longer in business.

Properly drafted contracts also will make progress payments contingent upon the production of lien and claim waivers (LCW) from the contractor and its subcontractors. LCWs serve several important functions. First, by confirming that payments made to the contractor have been properly distributed to subcontractors, LCWs help to avoid disruption in the project caused by subcontractor non-payment and minimize the likelihood of lien claims being made against the property. Furthermore, because they require contractors to assert known claims or forfeit them, LCWs help to avoid potential budget busting surprises later in the project. There are several approaches to securing LCWs; however, whichever one is adopted, LCWs should not be ignored.

LCWs are just one of the several types of documents that well drafted contracts will require a contractor to produce as a condition for payment. Progress reports detailing the as-planned versus the as-constructed schedule also will be required and should be received and reviewed. These reports will notify the owner of the project's progress and whether other contractual remedies should be invoked to get the project back on track.

CONCLUSION

A construction project that meets an owner's expectations and is completed on time and within budget requires a multi-faceted risk management process to begin as soon as a decision is made to proceed with development, and executing that process vigilantly throughout design and construction. The recommendations in this article provide a roadmap for developing the appropriate risk management strategy for your project.

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