

“Destiny is not a matter of chance; it is a matter of choice.
It is not a thing to be waited for; it is a thing to be achieved.”

- William Jennings Bryan

LEPATNER REPORT

CONSTRUCTION COST CERTAINTY

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Controlling Healthcare Construction Costs in the Age of Reform

By C. Bradley Cronk, RA, LEED AP, and Glenn A. Grube, AIA

Identifying the Challenges

Despite uncertainty surrounding healthcare reform, most hospitals, healthcare systems, and long-term care providers can be sure that their facilities must adapt, improve, and grow to cost effectively compete for patients while providing the best patient care. The specifics of capital planning strategies may vary, but upgrade, expansion—even consolidation—requires careful design and cost-effective, quality construction. Unfortunately, construction cost overruns on healthcare projects of all types and sizes are all too common. The cost and complexity of healthcare construction present special challenges to institutional executives and facilities directors, who are often working with reduced staff or limited in-house expertise. While many have experience in building such projects, they may lack access to market information and effective tools to anticipate and control a project’s financial outcome. How can healthcare executives control costs and reduce the risks of building, even as they advance the institutional mission?

Healthcare facilities are among the most technically and logistically complex projects built today. They house a diversity of functions from inpatient care to diagnosis and treatment to outpatient services. They possess dense mechanical, electrical, and IT systems with stringent performance requirements. These complex buildings require well-detailed and tightly coordinated architectural and engineering drawings and specifications, along with volumes of detailed information on the medical equipment itself. The pace of innovation in medical technology often outruns the time required to build healthcare facilities, creating coordination nightmares for the designers and a major source of cost overruns when current designs are made obsolete by even newer healthcare technology and practices.

When lack of coordination between the design team (architects and engineers) results in large information gaps in a project’s construction drawings, contractor change



Ending Business as Usual: How Project Owners Can Free Themselves from Unwarranted Construction Cost Overruns

By Barry B. LePatner, Esq.

As the economy has picked up so has construction in New York City. In fact, development on many new construction projects in and around the New York City area has begun to return to pre-recession levels. Certainly, that’s good news for an industry that was hard hit by the recession. The bad news is that the construction industry continues to be plagued by the same problems it experienced prior to the recession-induced slow down. That’s why project owners of complex capital projects need to know that delays and cost overruns can be avoided.

There were several prevalent problems in the construction industry before the recession: unwarranted cost overruns and project delays resulting from change orders, projects contracted using standard AIA or other form agreements, and so-called “fast-track” projects that incorporate a “guaranteed maximum price.” Little to nothing has been done to curb these problems. In the best of times, the construction industry was allowed to waste upwards of \$120 billion each year, and it appears that contractors are perfectly happy making that the industry standard once again.

How do construction costs get so out of hand?

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orders, delays, claims, and other unexpected costs are inevitable. While the ability to quickly identify and resolve conflicts early in the process is essential from both a construction and a legal standpoint, it is far preferable to avoid these situations in the first place. But how?

**Want to minimize change orders?
Start with a clear contract.**

In this economic environment, how can healthcare organizations protect themselves when undertaking capital projects? First, prudent budget planning should always allow for some change order contingency on a project with as many variables as in healthcare facilities, but minimizing change orders should be a primary business objective of the project team. Change order prevention begins by selecting a smart team with the right contracts that clearly define scope, cost, and coordination responsibilities of and between the participants.

The process should begin with fixed-price agreements with the design team—architects, engineers, and consultants. Fee increases are permitted only if the owner modifies the scope of work. Good agreements must provide adequate time and fees for thorough services. In return, the design team must be held responsible to prepare construction documents for bidding that are fully detailed, complete in all respects, and coordinated with each other. This is not typical or in many instances even expected of the design team.



Image courtesy of Faithful+Gould.

Similarly, contractors need to prepare with a thorough review of field conditions and the construction documents to identify conflicts, errors, and omissions during the bid process. If conflicts or errors are found in these early reviews, the design team should be allowed time for corrections before the construction contract is finalized. Only then can contractors provide true fixed-price proposals.

Early in the planning process, and during contractor selection, owner, architect, engineer, and prospective builders should engage in candid, “up-front” discussions to identify the potential risks and problems that might arise during construction. Workshops that focus on the critical issue of means and responsibilities for resolving changes will produce a list of identifiable risks, possible mitigation strategies, and costs. This defined contingency should be appended to the construction agreement before the contract is signed and construction begins.

Agreements should contain strong but fairly worded provisions that defend the owner against unwarranted and excessive change order claims.

Some typically overlooked protections include:

- The owner should not be obligated to pay for any additional work without prior authorization by change order or other mutually accepted written directive.
- At a minimum, any proposed change order should clearly define and itemize the additional scope of work and document the corresponding costs required to perform that work.
- In addition to the subcontractor cost, any additional contractor “general conditions” costs claimed in the change order should be itemized, including applicable profit markup determined by the owner-contractor agreement. If the change does not require additional supervision by the contractor or construction manager, general conditions charges may not be warranted.
- Change order proposals should document their impact on the construction schedule and include schedule-related costs, if allowed by contract. The contractor should not be allowed to return at the end of a project to seek additional “delay” compensation for change order work.
- Agreements should provide the owner adequate time to review and approve proposed change orders.
- In the case of a dispute, the agreement should require contractors to proceed with the base contract and change order work while the dispute is resolved by a preselected, neutral third party in a short, one-day arbitration.

Alternative contract options?

What project delivery methodology is best for maintaining control and minimizing change orders? The traditional design-bid-build process theoretically results in a fixed-price, lump-sum contract, since the scope of work detailed in bid documents defines the price. However, omissions and design conflicts in the bid drawings can open the door to later claims by the contractor. Fast-track, as described in the “Five Facts” sidebar, has its obvious drawbacks too.

Design-build is an alternate project delivery option that has become increasingly popular in healthcare and other industries. Design-builders are single-source providers of architectural, engineering, and construction services. The design-builder designs and constructs the facility for a fixed sum that includes all design fees and construction costs. This consolidation of responsibility eliminates contractor claims that allege errors and omissions by the design team, since the builder is responsible for their design work. Change orders should be limited to owner-initiated changes from the initial design or unforeseen site conditions that arise during construction. However, design-build has limitations: This process eliminates the traditional checks and balances between a separate A/E and contractor. For this reason, it is crucial that institutions retain experienced, construction-savvy owner representatives who will properly monitor the design-builder’s work.

BIM: A powerful tool for reducing change orders.

Other than circumstances in which an owner decides to increase the scope of work, change orders almost always result from incomplete and uncoordinated design documents. Reducing change orders plays a direct role in reducing construction cost overruns—and building information modeling (BIM) is one of the best ways to achieve this.

BIM is a collaborative design process based on three-dimensional building models imbued with a wealth of data used not only to construct the facility, but to operate and maintain it throughout its life cycle. With BIM, a facility can be designed, virtually “built,” and performance-tested in real-time simulations before actual construction starts. The BIM process allows the project team to identify errors, omissions, and conflicts during the planning process when they can be corrected in advance of actual construction at little or no cost. Compare that to the delays and costs of adding or redoing work during construction when errors or omissions in the design documents are discovered. BIM technology enables faster, smarter decision making; provides better documentation; and equips managers to predict performance prior to construction.

Owners and contractors use BIM software to accurately calculate the amount of material needed to build the project, which translates into incredibly precise construction cost budgeting. Contractors also use BIM to phase and coordinate construction, optimizing site logistics. Industry studies have found that the savings resulting from reduced requests for information, change orders, delays, and designer-contractor conflicts far outweigh BIM’s added design fees.

After construction is complete, BIM continues to accrue value to the owner by providing a database of facility information for use throughout its functional life. Future upgrades, operational procedures, and scenario planning can all be modeled with BIM technology, and the facility’s building management system can be tied to the BIM model for more efficient operation and control.

BIM is revolutionizing the way buildings are designed, constructed, and operated. The healthcare sector should take full advantage of this cost-effective tool that reduces unknowns in the construction process.

Construction costs can be contained.

To effectively manage the complexity and risks associated with healthcare construction, institutions should be prepared to invest in innovative, project-specific approaches to contractual relationships with design teams and contractors. Institutions must be confident that their representatives and consultants will deliver actionable insights and measurable results that achieve the sponsor’s business goals and maximize return on capital investment. At the same time, healthcare providers can bolster their construction management capabilities through emerging best practices like BIM.

Project success is often determined by a strategic combination of legal, architectural, and professional project management services. By front-loading discussions of a project’s risks before contracts are signed, and insisting on complete and coordinated construction documents before construction starts, healthcare organizations can obtain true fixed-price contracts that minimize costly change orders. Through planning, proper professional assistance, the use of emerging technologies, and other innovative project management techniques, today’s healthcare institutions can succeed in effectively controlling their construction costs.

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Five Facts the Construction Industry Doesn’t Want Owners of Large-Scale Construction Projects to Know

Fact #1—Every project that uses a “fast-track” methodology is guaranteed to experience delays and as a result missed deadlines. “Fast-track” projects will also experience cost overruns, routinely adding 20-30 percent or more to the contract price.

Fact #2—Standard form agreements do not serve the interests of owners. They do little to prevent cost overruns, they foster delay claims, and they contribute to added costs associated with the resolution of claims during and after a project.

Fact #3—The use of a guaranteed maximum price (GMP) contract all but ensures that the owner will encounter change orders and delay claims that will boost the final price in the contract

by 10-30 percent or more, an additional cost that severely impacts the bottom-line success of the project.

Fact #4—Today, owners can learn the accurate price of a project while the design is in process. They no longer have to wait until the construction team submits its proposals, which can occur a year or more after design has begun.

Fact #5—Insurance brokers are an unreliable source for ensuring placement of the all-important builder’s risk, general liability, and professional liability coverages that must be correlated with the indemnity provisions of each team member’s contract.

Too often, owners designing and constructing projects rely on contractors to set the price for these projects. But contractors are frequently a highly unreliable source for determining the true cost of a project. As one major developer recently confided to me, “I paid \$1 billion for [my latest] building but I am sure with all our experience that it could have been brought out for 10 percent less, but we just don’t know how to get there.” Project owners need to know that paying an additional 10 percent or more in this fashion is no longer necessary.

To properly manage costs and to properly protect their interests, owners must act proactively to address these serious issues. For the past 40 years, the construction industry has deemed cost overruns to be the norm. As such, owners seeking to avoid cost overruns but who choose to retain project advisors from the construction world will not be well represented.

Cost overruns can and should be avoided. Here’s how:

1. **Insist on complete and coordinated drawings.** The design team contracts should clearly require that the architect and engineers produce complete and coordinated drawings. A “fast-track” model that starts construction before the design documents are complete practically guarantees there will be unwarranted cost overruns, adding 15-30 percent or more to the owner’s budget.
2. **Conduct “constructability reviews.”** During the design phase, a short list of construction managers should be invited in to do a “constructability review.” This review will assist the design team in creating drawings that are buildable and include cost-saving features that are best secured from contractors. On one recent project I led, ideas generated during the review saved six weeks from the schedule.
3. **Secure a detailed cost estimate before going out to bid.** The owner must secure a detailed independent cost estimate of the designs before going out to bid. In this fashion, the owner will know the true cost of the work and no longer be totally reliant upon the self-serving “bids” by construction managers who dictate the individual line items from amongst their subcontractors and vendors.
4. **Require fixed-price contracts.** Contractors working from complete and coordinated design documents should sign contracts requiring that they provide a true fixed price for all items specified on the design documents. Since they will have already reviewed the designs with the architect and engineers, they should certify that they perform this work without recourse to unwarranted claims for errors and omissions in the design.
5. **Say no to guessing games.** Contractors should agree that once they have been provided with complete and coordinated design documents, there are no more guessing games as to the scope of the work, and they should be able to assure completing the project on schedule.

Once this practice starts to take root, far-reaching effects will take place in the marketplace. Owners will begin to have equal bargaining power with the construction industry when negotiating the cost of their projects, large and small. By adopting the above proven methodologies, owners will know the price of the work before they secure bids from contractors. Finally, they will be able to gain the confidence of a secure budget for their projects free and clear of the omnipresent cost overruns that seem to strangle all projects under construction in our nation today.

Barry B. LePatner is the founding partner of LePatner & Associates LLP, whose law firm and affiliated project management team, LePatner C³ LLC have represented corporate, commercial, institutional and development clients for more than thirty years.

* As a follow-up to the observations of *Broken Buildings, Busted Budgets*, LePatner developed its C³ Model, which helps ensure projects are constructed on time and on budget. Now our latest effort to improve efficiency in the AEC industry is our creation of a software platform that will revolutionize how designers specify materials and create project specifications. Stay tuned for more announcements and please contact us if you’d like to learn more about this exciting initiative.

* A co-op board retained LePatner to assist it in evaluating major building damage it suffered due to heavy construction activity on adjacent property. LePatner has assembled experts to propose repairs and is working closely with the co-op’s carrier to ensure minimal out-of-pocket cost to the building’s shareholders.

* A condo board retained LePatner to assist them in investigating and repairing several major design and construction deficiencies discovered in their recently completed luxury residence tower. LePatner is working with consulting engineers and contractors to synthesize a claim to be presented to the condo’s sponsor for immediate repairs.

* LePatner has served as construction counsel to Simon Development Group, which is building a 31-story hotel on East 31st Street. LePatner drafted and negotiated each of the architect and consultant agreements for the project as well as the construction management agreement, which is based on our trademarked C³ Methodology. LePatner is now working on a second hotel development project with the same client.

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