Capital Projects and Construction: Building in Risk Management and Project Controls

Making Every Dollar Count

The global economic crisis sparked by the subprime mortgage debacle, the collapse of the securitized debt market and the current credit crunch have hit the commercial real estate industry hard on many levels – particularly in the area of construction and development. The lack of funding for major commercial development has brought thousands of ongoing projects worldwide – as well as plans for new construction and development – to a grinding halt.

Banks that are still willing to fund capital projects are writing smaller loans to avoid taking on high levels of debt, and are charging higher rates to borrowers. This means real estate owners and operators must put in more equity to keep their projects moving forward. Even public companies – including real estate investment trusts (REITs) – with a long track record of successfully investing in capital projects are having difficulty securing adequate funding for their endeavors. Many have reduced cash dividends to shareholders in order to conserve capital.

For real estate owners and operators, gathering adequate and affordable financing to fund construction and development activities in this uncertain economy can be a significant challenge. Thus, it is imperative that they make every dollar count. Real estate owners and developers must maximize cash flows from existing operations, minimize financial leakage and ensure that the capital deployed into construction and development activities is utilized efficiently. In addition, they must communicate the results of their capital-saving activities to investors in a timely and effective manner.

Why Projects Are Derailed

Today’s capital projects are, by nature, highly complex, with many moving parts and players. This means there is significant potential for inherent risks that, if left unmonitored, can escalate into issues that will create major setbacks to a project’s progress and erode its budget. Consider recent national surveys by the Construction Management Association of America, which indicate that 40 percent to 50 percent of all major construction projects run longer than planned and incur significant cost overruns.

Other industry research shows that the typical construction project runs between 10 percent and 15 percent over budget. Common reasons for cost overruns include hidden fees that general contractors and construction managers do not disclose to project owners, insufficient...
or nonexistent bid and award activities, financial relief granted to subcontractors at the expense of owners, and the submission of overpriced change orders.

In addition, construction projects often fail to meet their deadline for completion due to the inability of general contractors and construction managers to control the pace of subcontractors’ work. It is not unusual for construction progress to be hindered when subcontractors are allowed to determine the number of workers they will provide to a project rather than the project owner demanding a bigger crew to meet or beat the scheduled duration of the subcontractor’s work. General contractors and construction managers often use overtime to entice crews to accelerate their pace versus demanding and delivering more workers to meet a set deadline at no additional cost to the project owner.

**Proactive Measure: Independent Risk Assessment**

While it may be relatively common for capital projects to run longer than expected or exceed original cost estimates, today’s real estate owners and operators cannot take the chance in this economic environment that they will not deliver a project on time or on budget. To identify problems, including the potential for fraud, waste and abuse, they should have an initial independent risk assessment conducted that includes all major participants in the capital project. Through this process, they can identify key operational and financial risks, and develop and deploy an appropriate plan for managing those risks.

An initial independent risk assessment is essential to the success of any capital project – from hotels and resorts to high-rise office buildings, power plants and data centers. By gaining a clear picture of potential risks and a consistent and efficient process for managing and mitigating them, real estate owners and developers can:

- Improve their ability to deliver capital projects on time and within budget.
- Gain an advantage over less-effective competitors.
- Fortify the confidence of both investors and shareholders.

**Operational and Financial Risks to Capital Projects**

An independent risk assessment addresses project and construction risks in the areas of safety, cost, pricing, quality, productivity, scheduling, performance, contracts, warranties and procurement. A wide range of risks can threaten the success of any capital project. Following are just some of the common operational risks that project owners should address prior to the start of construction:

- Incomplete design
- Inappropriate project specifications
- Inadequate site investigation
- Federal, state and local permits
- Availability of materials and resources, including labor
- Productivity of resources
- Availability of transportation to the project site
There are also financial risks to consider, such as:

- Delays in funding of the overall project
- Lack of a bid and award process at the construction manager, general contractor and/or subcontractor level
- Inflation related to specified materials
- Inadequate insurance coverage
- Lack of a defined change order approval process
- Inadequate bonding limits
- Lack of a defined material substitution request process
- Unanswered questions for information prior to soliciting quotations or bids

**Managing Capital Project Risks**

During an independent risk assessment (which should be conducted prior to the start of construction), a capital project’s proposed budgets, milestones, schedules, contracts and other vital process and control documentation are evaluated and reviewed. Next, the risk categories listed above – as well as other issues identified as having the potential to affect the project negatively – are prioritized based on their significance (impact) and likelihood (probability).

Once the independent risk assessment is completed and risks are ranked appropriately, each potential risk area must be addressed with a management action plan. It is important to note that these plans should not be viewed as static; instead, management should update and revise them as the construction project progresses from its design stage through completion.

Also, executive management reporting should be an ongoing process – ideally, performed on a monthly basis. Management reporting should include a cost report, as well as a schedule report that clearly identifies the “critical path” of the project. The critical path is the series of events that must occur in order for the project to be completed on time and on budget. The two key forms of reporting – construction cost reporting and construction schedule reporting, as described below – should be conducted with assistance from the party conducting the independent risk assessment.

**Construction Cost Reporting**

Through construction cost reporting, cost report projections are provided based on an accumulation of information related to the project. On a monthly basis, contractual commitments and the related costs processed against those contract amounts are tracked and compared to the project’s budget.

The executive summary of the monthly cost reporting package should include the following key milestone measurements:

- Change orders submitted through the date of the report
- Variance analysis, with a detailed explanation of the increased cost of the project, as well as management’s plan to resolve the projected increase(s) in cost
• Status of contracted work versus uncommitted work with a schedule of projected award dates
• Schedule analysis, including the original completion date, revised completion date if slippage has occurred and management’s action plan to expedite completion of the project with the associated cost impact
• Evaluation of the construction budget and any approved funding increases, including required authorizations
• Accumulation of the projected costs through completion for all owner-incurred charges, including, but not limited to, internal labor, legal expenses, environmental remediation and technology-related charges
• Alignment of all contractual commitments to processed costs and solicitation of projected costs through completion from all service providers and construction managers
• Evaluation of all change order logs to ensure recognition of all items that could affect project cost or schedule

**Construction Schedule Reporting**

Monthly construction schedule reporting should provide schedule verification, which is designed to test the duration of each remaining work activity, and the availability of critical path resources, materials and owner-furnished materials. Management should also facilitate, or arrange to have facilitated, “one-week look-ahead” schedule meetings throughout the project. The result of these schedule meetings should be creation of an updated master project schedule that should include the following information:

• Each remaining work activity with revised durations, if required, based on the actual productivity of each subcontractor over the previous week
• Revised or confirmed critical path for the project, based on the sequence of activities that will be performed during the current week
• Revised or confirmed resource commitments based on the actual progress of each subcontractor versus the projected progress included within the previous schedule update
• Verification that the project end date is accurate based on the duration of all remaining work items

Any remaining work items should be discussed and evaluated by each subcontractor’s project manager with assistance from the owner’s project management team, the architect, each major material supplier and any owner-furnished material supplier. These discussions should occur on a monthly basis throughout the project.

**Quarterly Reviews: A Vital Process**

Lastly, the project owners should make certain that any construction project is audited on a quarterly basis to verify that the billed amounts are appropriate and allowable based on the executed construction contract. These reviews also should be used to verify that the construction manager and/or general contractor are disbursing payments received from the owner to subcontractors in a timely manner.
To confirm that a capital project is under operational and financial control, each of the following work areas should be evaluated on a quarterly basis:

- Progress payment requests, including verification of supporting documentation
- Process of percentage of completion estimates
- Construction cost reporting
- Construction schedule reporting

In addition, these areas should be evaluated and verified on a quarterly basis:

- Draw process
- Bidding process compliance
- Project expenditures to budget
- Adjustments to invoices
- Payroll costs
- Compliance with change order procedures
- General conditions audit process, including rental equipment
- Owner control insurance program, if one has been utilized on the project
- Travel and entertainment audit process
- Bank reconciliations, if a separate bank account is being used
- Proper accounting and administration of the project’s tax exempt status
- MBE/WBE compliance reports
- Lien releases

**Manage Risks Proactively to Prevent Major Issues**

While risk is inherent in any stage of a capital project, there are steps that real estate owners and operators can take throughout the entire construction process to prevent or reduce the possibility of common risks evolving into full-blown issues that undermine timely project delivery and drive up costs. One key step, an independent risk assessment, will set the tone for success from the outset by providing all major participants in the project with a clear view and a deeper understanding of potential risks. In the current economic environment, it is more important than ever for developers to demonstrate to lenders, investors and shareholders that the money and resources deployed into a capital project are being used wisely and in ways that ultimately can deliver a positive return.

**About Protiviti**

Protiviti ([www.protiviti.com](http://www.protiviti.com)) is a global business consulting and internal audit firm composed of experts specializing in risk, advisory and transaction services. We help solve problems in finance and transactions, operations, technology, litigation, governance, risk, and compliance. Our highly trained, results-oriented professionals provide a unique perspective on a wide range of critical business issues for clients in the Americas, Asia-Pacific, Europe and the Middle East.
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About Protiviti’s Real Estate Practice

Protiviti’s real estate consultants are experienced professionals who bring significant operational and tactical real estate expertise to client engagements. They assist real estate organizations with an array of services, including internal audit, technology risk and regulatory compliance. Within each of these areas, our professionals offer expertise to enhance efficiency and mitigate the risks within a real estate organization’s most significant processes, such as leasing, construction and development activities, acquisitions and dispositions programs, property management operations, and back-end office operations.

Protiviti’s Real Estate practice includes a dedicated Capital Projects and Construction Risk Management group. Our consultants have proven accounting, finance, engineering, procurement and construction skills derived from years of financial/operational construction experience. They provide solutions to owners/contractors to address all phases of construction from feasibility through engineering, procurement, construction and turnover. Services include:

- **Construction Contract Compliance and Cost Recovery**: Audits of project documentation to determine if construction activities are conducted in accordance with contract requirements and to potentially recover costs for overbillings.
- **Construction Process and Internal Controls Review**: Independent assessments of processes and controls associated with the initiation, planning, execution, monitoring and completion of capital projects.
- **Construction Process Re-engineering**: Assistance in the design of processes and controls around a client’s initiation, planning, execution, monitoring and completion of capital projects.
- **Project Risk Advisory**: Review and evaluation of proposed budgets, key milestones, schedules, contracts and other key control documentation for a capital project.
- **Construction Dispute Assistance**: Assistance in contract analysis, discovery assistance, cost analysis, schedule impact analysis and project controls analysis for capital projects in dispute.
- **Construction Project Management**: Performance of project controls, including monthly project reporting, change order processing and payment application reviews.
- **Outsourced Construction Accounting**: On-site construction accounting guidance through the duration of a project, including “real time” review and verification of all contractual obligations and expenditures.

To learn more about Protiviti’s Real Estate practice, contact:

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