

Title: Applying Internal Controls Skills on Construction Projects

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The professional quantity surveyor (QS) can use construction auditing skills at various stages of the building life cycle to reduce costs, linking construction with the financial bottom line by bringing lessons learned from previous engagements. Construction projects represent considerable financial risk for both the owner and the contractor, which can be managed and transferred through smart procurement, selection of delivery method, and continuous oversight. Controls serve a particular purpose for each project phase and react to the ever changing list of risks in that phase. (See graphic below.)

Due to the length of time required to guide a project from feasibility to closeout, the typical project manager gains experience from only a few complex projects (or a number of small projects) during his career – a career which is often made or broken by the luck of the draw, depending on the success of the project to which the team member is assigned. Many quantity surveyors and consultants, however, have had the privilege to participate in a variety of real estate and construction projects, and can bring that breadth of experience when guiding a project through its various phases.

During the concept phase, when the need for funding is being established and funding sources identified, the QS provides the estimating function that sets the budget and timeline (the cost and schedule goals) of the project. This data, and risk awareness, are invaluable during project scoping and selection of delivery method. The quantity surveyor brings value with knowledge of alternative financing arrangements, awareness of low-bid pitfalls, and skills in contract preparation so as to appropriately transfer risk. The construction contract and attachments contain the most defensible owner protections, in terms of preventing claims and overcharges, in the form of a legally enforceable document that enunciates and governs the expectations and delivery of the project.

As programming begins, controls systems are typically selected and implemented to guide the project toward the established goals and definition of success. Policies and procedures might be

reviewed, and improved or automated. While the project team at this point in time focuses on meeting the needs of the end users and staying within budget/schedule, the quantity surveyor develops controls to comply with compliance, financial, and stakeholder reporting needs.

During the design phase, expenditures begin to increase. This is a perfect time to fine-tune controls and practice reconciliation with financials, before the rate of expenditure spikes. The team begins reporting to stakeholders. Stumbling blocks at this time may include the complexities involved with payment milestones (as required by the funding source), calculation of percent complete, retention, and short payment of invoices. As the team considers letting the construction contract, the QS adds value by bringing skills in bid review, contractor selection, prequalification, and risk identification.

When construction begins, project controls seeks to manage cost by preventing claims, overexpenditures, and change orders. Audit experience will be useful at this time, as payment applications should be reviewed in as much detail and to the greatest depth possible, comparing amounts charged to both funding source requirements and the contract language. Labor and material charges should be traced back to their origin, such as timesheets, payroll records, subcontractor invoices, and bill of materials. The cost manager also conducts detailed review of change orders and approves the use of allowances and contingency. This phase of the project represents the greatest opportunity for recovery of expenditures due to errors and overcharges, and decision-making about how savings (through audit, value management, or other efforts) should accrue to the project. As expenditures peak, care must be taken to ensure that project reporting includes all costs incurred by both the construction team and the owner.

At project closeout and occupation, the QS conducts a final review of costs prior to the release of retention, and serves a cost recovery function through asset allocation and claims documentation. As the project is handed over to the owner, proper segregation of costs becomes important for depreciation and capitalization. Asset management becomes the owner's focus, and costing transitions to operations and maintenance. Stumbling blocks at this time may include the allocation of soft costs, and determination of the point in time at which operational responsibility

(not contractor's responsibility) begins for repairs. Finally, the QS captures lessons learned to apply on future projects.

Why is the QS able to provide so much more input than an auditor? Because the quantity surveyor's background and education are intentionally extensive. When an Owner hires an independent CPA firm (often choosing the lowest bid), the audit of the construction project is typically conducted as a high-level review of a sampling of expenditures. The expenditures are often reviewed out of context and out of sequence. The quantity surveyor, in contrast, has a depth of understanding and role as an intermediary that connects project management, project controls, contracts management, internal controls, cost accounting, and more. Often, the QS is an agent for organizational change, putting us in the ideal position to conduct construction project audits with a focus on economy, efficiency and effectiveness.

Audit During the Project Lifecycle

