

BY DAVID BOWCOTT

# Mega-Hospitals

Securing & Assuring Major Subcontractor Performance

**T**he Canadian construction marketplace has entered its “golden age” of mega-hospitals. With well over a dozen large to very large hospitals already in various stages of procurement, there appears to be more coming in the pipeline. Even though there was another era of major hospital developments in the early 2000’s stretching into the early 2010s, the sheer size of these new hospitals is much greater. Hospitals in the early 2000s period were in the range of \$150 million to \$650 million. In the current “golden age” market we are in hospitals are coming in at a range of \$350 million to as much as \$8 billion. Beyond simply the rapid inflation in the cost of construction, these huge facilities are pushing 3 million square feet. This represents a tremendous leap in the size of the construction contract values and with this leap comes some challenges to the Canadian construction marketplace – a primary challenge being securing the necessary performance security for the large subcontract packages and providing assurance that these packages will be performed.

When looking at a greenfield hospital construction project a majority of the construction project costs are made up of three components:

1. **Mechanical (HVAC, plumbing, water supply, drainage, etc.)** – 25% to 35% of total contract price
2. **Electrical (Power, lighting, electrification of specialty medical equipment, etc.)** – 15% to 25% of total contract price
3. **Structural Concrete and Steel** – 20% to 30% of total contract price

These three subcontract categories could make up around 2/3rds of the total construction project. This is a massive amount of contract value associated with just three subcontracts and when you are looking at hospitals that could have a contract value of \$8 billion you could have a challenge not only securing the necessary performance security from these key subcontract packages, but you also have a challenge to assure that these subcontract packages are executed to plan.

Mechanical contract in the \$2 billion range, Electrical contracts in the \$1.6 billion range, and structural concrete and steel packages in the \$2 billion range, represent an epic challenge for both the general contractor and the various subcontractors responsible for these packages.

When the challenges are this substantial all stakeholders to the project must collaborate to ensure the necessary performance security is obtained and the providers of that performance security (surety companies and subcontractor default insurance insurers) are comfortable issuing said security. Communication and collaboration amongst all stakeholders is vital to successfully navigate the challenge of securing and assuring subcontractor performance.

When communicating and collaborating, the project stakeholder community should consider some of the following strategies/methodologies in order to successfully secure and assure performance:

### **Go or No-Go Decision Diligence**

The general contractor and the major subcontractors need to come together prior to deciding whether they will bid the project to determine if they actually want to bid the project. A full review of the available project documents (RFQ, RFP, contracts, geotechnical reports, environmental assessments, risk assessment documents, etc.) should be reviewed along with assessments of each contractor's ability to take on the project (labour and material assessments). If the general contractor and the major subcontractors can evidence strong diligence prior to the decision to bid the project, providers of performance security will gain substantial comfort and release best terms.

### **Clear Outline of Schedule and Payments**

Ensure you have a clear map of how each major subcontract will be executed, what is required in each stage of the schedule, and how you will ensure evidence is readily available that these requirements are not only met but even exceeded in order to allow the funds to be released from the owner, to the general contractor, and further to the major subcontractors.

### **Project Delivery Model Assessment/Plan**

Given these are larger projects it is vital to have a clear picture of the project delivery model being utilized on the project being bid. Surety companies (and insurers for the property & casualty requirements) are very aware of project delivery models that do not invest in up front planning and design. If the traditional design-build procurement structure is utilized whereby the design is not sufficiently developed (under 30% design completed), this will be a red-flag for surety and insurance capital. Ensure your team

can illustrate for insurance capital how it will be investing in design, either by choosing procurement models that inherently look for more planning and design investment (i.e., progressive design build) or by making the investment themselves if a more traditional design build model is utilized.

### **Strong Change Order Protocols**

Have very clear procedures in place between all relevant stakeholders (owner, general contractor, design, and major subcontractors) to manage changes to contracts and schedule to ensure no disruption to payment for work contemplated and/or completed

### **Materials Purchase Strategy**

Creative purchases of materials could help reduce the contract value and lower overall performance risk to the major subcontractor, thus improving the appetite of performance security providers to release best terms.

### **Joint Venture Strategies**

Utilizing joint ventures at a major subcontractor level can create an improved credit profile for performance security providers thus making issuance of necessary security easier. Ensure proper risk management protocols are utilized when choosing joint venture partners and entering into joint ventures.

### **Cashflow Strategies**

The general contractor and major subcontractors should develop a cashflow plan that ensure the major subcontractor remains cashflow positive during the project. With 10% holdback on these projects the ability of the subcontractor to finance these large holdbacks can be substantially constrained. Collaboration around cashflow strategy is key and will provide surety providers with comfort that the money will be there to ensure performance.

### **Collaborate and Combine Performance Security Negotiations**

Within the Canadian market, three primary performance security solutions are utilized to secure major subcontract packages on a hospital project: i) surety bonds, ii) subcontractor default insurance, and iii) letters of credit. The general contractor and the major subcontractors should collaborate on the ideal mix of these solutions to be utilized to arrive at the ideal performance security package. It is paramount that you have advisory partners that are aware of the ways these performance security offerings can be combined.

## Harness the Power of Best-in-Class Operational Practices

Once again the general contractor and the major subcontractors need to collaborate with each other to share and devise the ideal mix of operational practices that can be utilized to assure subcontract performance. Such operational practices could include prequalification of tiered subcontractors to ensure their performance (and security), robust daily log practices, strong quality control and quality assurance protocols, the utilization of mock-ups for more vulnerable components of the built, the monitoring of resourcing at the GC, major subcontractor, and tiered subcontractor/supplier level, QA/QC on major component parts at the manufacturers site, etc.

Such utilization of best-in-class operational practices will not only assure performance, but it will also provide comfort to providers of performance security allowing them to release best terms.

## Performance Bond Sizing Strategies

Work with all project stakeholders (owner, general contractor, major subcontractors, surety providers and lenders where relevant) to discuss adequate surety bond sizing. 50% bonds are quite substantial on a billion plus contract and such bond sizes are not necessary given maximum probable loss numbers in the surety sector. Discuss what an ideal size should be as this will help in obtaining the performance security.

## Harness the Power of Technology (the Digital Twin)

We have entered the age of the digitally aware project. Harness the power of key components of the project digital twin including the following:

- **Project Management Technologies** – The operational practices cited above are often digitally captured via these platforms and the data from these platforms evidencing best practices adherence, can be very valuable not only to the key project stakeholders, but to the providers of performance security.
- **Reality Capture Technologies** – The quality of reality capture technologies continues to improve at a rapid pace. Utilize this technology class to track progress of the project remotely and identify project risks that could lead to slowing of performance. Projects are well executed when not only project progress can be track, but the quality of project work can be track and stakeholders can ensure quick payment release for quality work completed.

- **Internet of Things (IoT) Backbone** – IoT devices can be a VERY early warning of project risks manifesting. Whether it is water monitoring IoT devices providing an early sign of defective workmanship in the mechanical system, or structural IoT devices pointing out issues with concrete and steel work completed. IoT are like nerves on your project, and you should harness the power of this burgeoning project nervous system to ensure performance and assure performance security providers.

The above listing of strategies/methodologies are but a sampling of solutions you can utilize to not only assure performance of major subcontract packages on a mega-hospital project, but you can utilize these solutions to provide performance security providers the necessary assurance they need to issue the security required on the project.

It is vital that your team have the advice (and advisors) with the depth of experience, and market relationships, and creativity to assure and secure your projects performance and allow the general contractor and the major subcontractor partners to enter into contracts that will be executed with minimal risk of deviation from plan.

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