



THE FREEDOM Tower rises above Ground Zero in New York City. New technology where designers work side by side with the builders can raise the risk of professional liability exposures.

AP PHOTO/MARK LENIHAN

**PROFESSIONAL LIABILITY
COVERAGE IS UNDERWRITTEN
BY MANY INSURANCE
COMPANIES, WITH SOME
CARRIERS OFFERING BROADER
COVERAGE THAN OTHERS.**

This process begins with the design team and the general contractor directly collaborating on building information modeling virtual imagery that highlights numerous construction details, ranging from procurement and development plans to materials and specifications.

After inputting all this data into the system, the program models and displays the wide-ranging stages of construction including actual structure geometry, spatial relationships, building material quantities and even vendors and manufacturer product information.

In addition, it can also be programmed to differentiate processes involved in the scope of work, which can be isolated and analyzed according to various construction, scheduling and sequencing details.

For example, let's consider the actions of a project manager involved in the construction of a 12-story commercial building on a lot that was previously undeveloped.

Using building information modeling before the start of any field work, the design team and general contractor can then "virtually" work in unison to build a structure from start to finish before the physical building process ever begins in the field, while identifying any inherent or even expected challenges.

Subsequently, this process includes utilizing the expertise and technical consulting skills of the general contractor, who is likely to have years of field experience.

Recommendations also will likely cite methods for the best clearing of land, excavating foundations, pouring footings or driving piles, staging concrete pump trucks, stockpiling/lifting/erecting steel structural members, as well as installing mechanical, electrical, shell, window and door systems.

Imagine how this technology can then effectively identify, eliminate and rectify numerous issues and challenges, before a blade of grass is cut and or the land is cleared.

However, such interaction between the owner, design team and the general contractor can present higher professional liability exposure.

Since the general contractor is contributing to the virtual building process, which ultimately helps the design team, it also means that the general contractor is offering technical consulting.

There can be a liability scenario if building information modeling is not used correctly by the construction team of designers and contractors, as shown by a recent lawsuit over the related use of building information modeling.

In this example, the design team failed to properly inform the contractor that the installation of a mechanical system was to result in a very tight fit. While it worked in the model, it did not work in reality.

As a result of the technical nature of design,

● TECHNOLOGY

Raising the Risk

Building information modeling technology eases the interaction between the owner, the design team and the general contractor, and that can raise the risk of higher professional liability exposures.

BY MITCH COHEN

In this tough economic environment, project owners are continually seeking the best methods for leveraging technologies, decreasing costs, expediting schedules and minimizing conflicts.

As a result, building information modeling has become the leading tool to assist designers and the construction industry in demonstrating the entire cycle of a building's life including the construction process.

In fact, integrated systems that include both computer-aided drafting and design and building information modeling are becoming increasingly important catalysts for managing the time and cost efficiencies of projects in nearly every phase of construction.

Years ago, there was only really one project delivery methodology: design, bid, build.

However, as the use of computer technologies such as computer-aided drafting and design

continually increased, design/build became a preferred method for speeding schedules and reducing costs since the construction process could actually begin before the design plans were even completed.

Consequently, if mistakes were made they were normally discovered once construction was well under way, which often resulted in extended downtime to rectify problems and economic damage claims issued by owners against the general contractor.

However, building information modeling has presented contractors with a unique method for producing digitized representations of the building process from the ground up. As a result, designers and contractors have been able to better coordinate their efforts in addition to the various design and construction phases of a project before a shovel ever hits the ground.

Summary

- Contractors produce digitized representations of the building process from the ground up before construction using building information modeling.
- Liability issues crop up when building information modeling is not used correctly by the designers and builders.
- The risks of using building information modeling are covered under contractors' professional liability policies.

challenging construction means and methods and the use of building information modeling, the insurer chose to negotiate a settlement, realizing that a jury would have difficulty comprehending the design issues. There are a variety of ways that contractors can manage the professional liability risk associated with the use of building information modeling on projects. Among these are:

- Tighter contracts that clearly define what and what will not be offered as advice by the contractor.
- Working with owners who are

proficient with the building model utilization on projects.

- The careful selection of experienced subcontractors and design professionals.

Another method that has helped contractors manage financial risks over the past several years has been contractor's professional liability policies.

In general, contractor's professional liability coverage is offered by many insurance companies, with some offering broader coverage than others. In many cases, these policies can

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include, but are not limited to pollution liability, in-house design support services for design/build projects as well as construction management.

Furthermore, since most forms of this coverage are not standard and are manuscripted by the insurance

companies, they can often be modified and/or tailored to meet specific contractor risks.

In addition, the building information modeling coverage afforded under the contractor's professional liability policy typically provides coverage for erroneous or flawed technical consulting and advice services offered to the design team. Such coverage will normally extend to the vicarious liabilities imposed by either subcontractors or sub-design professionals offering design or advice on building information modeling.

Furthermore, it must be noted in these instances the contractor may be subject to liability for the technical consulting services provided in the virtual design/build phase of the structure.

Consequently, if a problem should occur in relation to constructability issues, scheduling, staging and sequencing, and it is therefore determined that the issue was a result of the advice offered by the general contractor during the early stages of modeling use, then that contractor may possibly be found legally responsible for any potential professional liability exposure.

In such cases, a general contractor would not only benefit through the general terms stipulated in a contractor's professional liability policy, but also through the coverage for defense costs incurred during the defense of lawsuits.

As a result, this coverage alone can typically be worth the cost of the policy since claims can either end in favor of the contractor or with the payment of significant amounts of money, depending on the settlement or court decision.

Building information modeling is an extremely valuable tool, which can greatly facilitate design-build projects, while helping to minimize field challenges. However, professional liability exposures related to the use of modeling do exist for the general contractor and must be managed like all other business-related risks.

As a result, contractors professional liability policies offer an extremely effective method for helping general contractors to focus



on building projects, while providing financial protection against costly claims that can potentially devastate their bottom lines.

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