

GUEST ARTICLE



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THE NEW IBC BIM CONTRACT APPENDIX

In an article published in Volume 31, Number 2 of the *Construction Law Letter*, the emergence of Building Information Modelling (“BIM”) in Canadian construction projects was discussed. BIM is still not widely used in Canada, arguably in part due to a lack of clarity as to the roles and responsibilities of the various parties involved in a project. On October 31, 2014, the Institute of BIM in Canada (the “IBC”) released the *IBC 100-2014: BIM Contract Appendix* (the “Appendix”) to assist the industry in becoming more familiar with the overlapping of disciplines and information, which occurs with the use of BIM. This article will give an overview of the Appendix and several of its key provisions.

Advantages of Building Information Modelling

A BIM, in its simplest terms, is a three-dimensional model of elements within a construction project.

While design and graphic technology have progressed significantly over the past 20 years to allow for design and analysis in three dimensions, the construction of buildings based on two-dimensional drawings remains the norm on a majority of projects in Canada.

Collaboration between different design teams and constructors at the outset of a project has often been problematic. While early interaction between consultants, constructors and suppliers can lead to more efficient projects and improved designs, such team work can be difficult when each discipline works independently on its own two dimensional drawings, and builders are engaged after the majority of the design has been completed.

BIM provides a solution to these issues by creating an integrated model where each element is overlaid and the interrelationships of design can be seen in a three-dimensional graphical space. For example, BIM would allow a contractor to identify whether there is sufficient space to execute work as designed or the sequence of construction must be changed to accommodate an element. Parties are able to see how all the various disciplines’ designs come together and make changes at an early stage to avoid costly changes during construction. Post-construction, a BIM provides an owner with a powerful tool to maintain, renovate or expand the project. With a three-dimensional model, the owner can more readily identify where each component of the building as built is located, and concerns regarding unforeseen conditions are alleviated.

These examples are just a glimpse into the many advantages that BIM can provide and hardships that it can prevent during and after the construction process.

The IBC 100-2014: BIM Contract Appendix

Until very recently, there was no simple way to incorporate BIM into construction contracts in Canada. Parties had to re-invent the wheel every time BIM was proposed, looking to the United States or elsewhere for precedents. This may be one of the reasons why, despite all of the advantages that it can provide, BIM remains minimally used in Canada.

Members of the Canadian construction industry recognised this setback and developed the IBC in order to “lead and facilitate the use of BIM in the design, construction, and management of the Canadian built environment”. The IBC is made up of four major national organizations, in addition to other members: Architecture Canada/RAIC, Association of Consulting Engineering Companies – Canada, Canada Construction Association, and Construction Specifications Canada.

This fall, the IBC released a long-awaited Appendix for use by the Canadian construction industry on projects involving BIM. The Appendix is a standard fillable PDF form, which is designed to be appended to RAIC 6-2006, ACEC31-2009, CCDC 2-2008 and other standard form contracts already known to the construction industry.

The parties to a project can enter into the Appendix at the time the principal agreement between the owner-architect or owner-contractor is executed. Ideally, if the parties know that BIM is to be employed, the Appendix should be included in the “Other Terms of Contract” in the RAIC 6-2006, the “Engineering Documents” in the ACEC31-2009, or the “Contract Documents” in the CCDC 2-2008. However, a BIM requirement can be added at a later date, and the Appendix can still be linked to the prime contract. This provides the parties with some flexibility at the outset of the project.

Key Provisions

The Appendix includes a number of provisions, which makes it a robust addition to any standard form contract used by the Canadian construction industry. While all provisions of the Appendix are important, this article highlights a few examples that help parties to understand their respective responsibilities and roles and the way BIM is to be used on the project.

The first such provision is s. 1.5, which allows for parties to the project to require others to prove that

the Appendix has been incorporated into other contracts on the same project. This serves to ensure that BIM will be used as desired by all parties and that each party’s rights and obligations are clearly set out.

The next key provision is s. 1.9, which clarifies that participation of the contractor, subcontractor or subcontractors in the modelling does not constitute design services unless otherwise specified. This is important, since contractors may be reluctant to assume liability for design issues that they otherwise would not have. This provision allows contractors to safely provide their input into the modelling, which greatly assists in the construction of the design.

The Appendix also contains a number of provisions addressing copyright of model elements and the licenses of other parties to use such elements during their modelling. For example, s. 2.5 states:

Each Model Element Author grants a non-exclusive license to each of the Project Participants to use Model content for design and construction purposes for this Project only. The license includes the right to alter content of a copy of the Model for the purpose of creating a derivative Model. Such alterations are at the sole risk of the Project Participant making the alterations and the Model Element Author shall have no responsibility for any alterations made to the Model Element Author’s content.

This is just one of seven provisions of the Appendix that addresses ownership of intellectual property and risks for changes made, which in turn will assist the flow of information and interaction between parties.

Finally, s. 3.9 contains a clear waiver of consequential damages as a result of any modelling activities that will curtail much of the uncertainty revolving around parties’ participation in a project using BIM.

The Protocol

Significantly, the Appendix requires agreement between the parties to a Protocol, which governs issues such as identity of “authors” and usage of design. Section 5.2 of the Appendix prescribes

the five minimum requirements of a Protocol:

(1) identification of the Model Element Authors, (2) definitions of the Levels of Design (“LODs”) and associated Authorized Uses for each LOD at each Project milestone, (3) identification of the Project milestones, (4) the construction classification system to be used on the Project, and (5) a Model Element Table indicating the LOD to which each Model Element shall be developed at each identified Project Milestone and the Model Element Author at each milestone.

The Appendix allows parties to define different stages of LOD to provide clarity as to what may be relied upon for design and construction purposes at each stage of the project.

The Appendix also contemplates the possibility of the Protocol changing throughout the project’s lifetime and does not require that the Protocol in place at the outset be maintained throughout.

IBC 201-2014: LOD, Authorized Uses and Model Element Table

Section 5.3 of the Appendix provides the parties with an option to use either IBC 201-2014 and the Model Element Table provided by IBC or their own detailed document for their Protocol.

IBC 201-2014 provides a standard form for most of the requirements of a Protocol. The LODs used in this form have been adapted from the American Institute of Architects’ (“AIA”) Documents for the use of BIM, such as the AIA Document E202-2008, with modifications for conformance with the Appendix.

For each of the five LODs defined in IBC 201-2014, there are fillable sections that allow parties to add authorized uses above and beyond those otherwise delineated.

An important function of this section is to ensure that parties turn their minds to their respective expectations of each other and capture these expectations in writing.

Conclusion

By creating a standard form Appendix that dovetails into contracts with which the construction industry is already familiar, the IBC has created a simple and efficient method of incorporating BIM into a project.

The Appendix employs straightforward language, which can be readily understood, allows parties to make changes to suit their needs, and contains important provisions to protect the rights of collaborating parties while shielding them from undue liability.

While parties should still obtain legal advice when contemplating the use of BIM on a project, the IBC’s Appendix is a major step in the evolution of design and construction and will assist the advancement of BIM in Canada.