Building Inspections Department Bulletin:
Professional Involvement for Manufactured Engineered Components

Date: October 19, 2022

Purpose:
The intent of this bulletin is to provide clarification for professional involvement for Manufactured Engineered Components in response to Alberta Municipal Affairs Standata 19-BCI-023.

Summary:
Effective January 1, 2023 seals and signatures from an APEGA licensed professional in accordance with the APEGA Standards of Practice are required on the following documentation:

- Roof truss layouts and specification sheets
- Floor truss layouts and specification sheets
- Floor joist layouts where the manufactured components use falls outside the conditions and limitations stated within the CCMC evaluation report for the product.
- All truss and joist modifications and repair details.

Interpretation:
Structural components such as roof trusses, floor trusses, joists, and structural composite lumber (SCL) posts and beams constructed in a factory are commonly referred to as manufactured engineered components. Many of these products have evaluation reports issued by the Canadian Construction Materials Centre (CCMC), a division of the National Research Council of Canada to be used to determine compliance with the National Building Code - 2019 Alberta Edition (NBC(AE)) requirements. The design and placement of manufactured engineered components is commonly generated using design software in two platforms proprietary and non-proprietary. Proprietary design software is developed by the manufacturer and it replicates the design parameters of the manufactured engineered component's CCMC evaluation report. Non-proprietary design software does not limit the input parameters to the scope of a specific CCMC report allowing greater flexibility and is intended to be used by registered engineering professionals. The Association of Professional Engineers and Geoscientists of Alberta (APEGA) has noted that the use of design software may constitute the practice of engineering, and as such, would be subject to the Engineering and Geoscience Professions Act.
In response to these requirements Alberta Municipal Affairs has issued an Interpretation Standata 19-BCI-023 which clarifies when these manufactured engineered components require professional involvement.

The involvement of a registered professional is required when the specific use of manufactured engineered components cannot be verified by the CCMC evaluation report, or the component's use falls outside the conditions and limitations stated within the evaluation. For example: professional documents produced by a proprietary design software where the authority having jurisdiction is unable to verify the span, design or placement via cross-referencing the CCMC evaluation report - that component requires authentication by a registered professional. The use of proprietary design software does

not remove the potential for requiring a registered professional review and authentication of all or specific parts of the design.

Article 9.23.14.11. of the National building Code-2019 Alberta Edition (NBC(AE)) requires trusses to be constructed following good engineering practices such as described in TPIC 2014 or full scale testing in conformance with CSA 307-M is conducted. Unless a full scale test in conformance with CSA S307-M is conducted which is unlikely due to limitations of testing equipment facilities and cost, the remaining prescriptive requirements require all wood trusses (floor and roofs) be designed and authenticated by a registered professional.

For further background and clarification, the following links have been provided:

- Alberta Municipal Affairs - Standata 19-BCI-023
- APEGA - Authenticating Professional Work Products
- APEGA - Guideline for Professional Responsibilities in Developing Software

The reason for sending out this notice is to provide you the owner/builder with clarification of what is expected of you by the National Building Code Alberta Edition and the requirements as part of your building permit applications.

TO AVOID DELAYS IN YOUR PLAN REVIEWS AND PERMIT ISSUANCE, PLEASE ENSURE YOU PROVIDE THE ENGINEERING SEALS ON THE REQUIRED DOCUMENTATION INCLUDED WITH YOUR PERMIT SUBMISSION.

If you have any questions regarding this notice please contact the Building Inspections Department by phoning 403-207-7050.

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