

NORTH AMERICAN STEEL CONSTRUCTION CONFERENCE

Exposing the truth behind Naked Buildings

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Guest Columnist — The GTA Construction Report

Naked Buildings: You see them in the news after a severe wind event - sheet metal deck flapping and flying off buildings to find a tree or pole. One could be excused for thinking that severe winds find sheet metal clad buildings the way that tornadoes find trailer parks. In reality, sheet metal cladding and deck panels have inherent strength that can be properly utilized in design to prevent your building from becoming the eye-candy of the disaster news story.

After the storm, looking for the responsible party is too little too late for an owner. The specification clearly identified the proprietary cladding product on the drawing. Perhaps the specification also included compliance to FM, UL or ASTM standards (e.g. FM 4450 Class 1, UL 580, ASTM E1592) and CSSBI guidelines. An installation subcontractor bid the project with this material quoted from the manufacturer. If we break this down, we start to see holes in the process.

The Canadian Sheet Steel Building Institute (CSSBI) is an industry-sponsored organization which provides important research and manufacturer supported infor-



mation to assist in design, specification, handling and installation. Although they provide sample specifications and design procedures, they do not provide design/performance standards or standard of care expectations (e.g. not written in mandatory contract or building code language).

Both UL and FM provide test based compliance standards that play a significant role in ensuring that the product and installation meet performance expectations. At the least, the owner/consultant can avoid testing each assembly for every condition. Cladding manufacturers invest heavily in testing and proudly publish reports. The fine print always advises that the tests may not be sufficient compliance to any condition or building code.

With some exceptions, most cladding/deck manufacturers sell commodity component products at efficient prices. They usually supply a full range of parts, as a service convenience, but don't sell cladding "systems" or structural engineering services (e.g. select thickness, grades, fasteners or spacing). They may provide load tables and suggested assembly details for the consultant's design convenience and inclusion in project drawings. Only the project consultants can determine the suitability of any product or assembly.

Some cladding manufacturers retain their proprietary technology and testing information but they can provide signed/sealed drawings as part of the supply price to the sub-contractor, when requested in advance.

The supply/install subcontractor makes a submission based on guidance in the specification and presumed compliance by a supplier, whose product may be explicitly defined in the specification. Ultimately, the consultant requires signed/sealed shop drawings from the supplier, who looks to the manufacturer, who doesn't provide engineering services. This service probably wasn't included as a line item in the sub's bid price, wasn't confirmed in bid qualification and may not be easily available.

A new team member, a steel building system consultant, can improve project specifications and component selections and ensure compliance of cladding supplier submissions. The steel building consultant also supports the supply/install subcontractor with services required to comply with submission and installation. Avoid the naked building scenario in your project portfolio by including a steel building expert on the project team.

Paul Ransom, P.Eng. has been actively involved in the steel building industry for more than 25 years, is a member of CSA A660 committee and the founder of Steel Building Experts – specialists in providing innovative services to maximize the quality, sustainability and safety of metal building projects. For more information go to www.steelbuildingexperts.ca or call (905) 617-2729.



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