

Conference Preview

Be Proactive

Tips on how all steel project parties—especially the fabricator and erector—can assist in identifying and resolving tolerance conflicts between steel and other trades at the beginning of a project instead of after a conflict has arisen.

By Nyckey Heath, PE, and Dan Welsh

In today's world of building models and clash-detection technology, there often still isn't enough consideration given to the realities of what a "built" environment can actually look like.

Consider the example of a concrete-core building with multiple levels of steel framing projecting out from the core. Due to a schedule requirement, the steel framing needs to be prefabricated as the concrete core rises from the foundation. Now consider that short-slotted connections back to the concrete core, due to projected imperfections with the core, are approved. The "as built" conditions exceed the planned adjustment allowed by the short-slotted connections, but the concrete core is "within" ACI standard tolerances. This situation impacts the project cost and schedule negatively—and it could have been avoided.

What's the key for successfully mitigating the potential conflicts between the myriad tolerance codes that exist on any building project? Getting the multiple contractor stakeholders to collectively buy into shared expectations on a *proactive* basis rather than a *reactive* basis. Once an issue arises regarding tolerance expectations, then the only path forward is reactive. The better, proactive alternative is to discuss tolerance expectations and what is actually achievable by the various contractors at the *front end* of a project. And the discussion should include the different tolerance standards of multiple relevant entities, such as AISC—specifically, the *Code of Standard Practice for Steel Buildings and Bridges* (ANSI/AISC 303, [aisc.org/specifications](https://www.aisc.org/specifications))—the American Concrete Institute (ACI), the National Association of Architectural Metal Manufacturers (NAAMM), the Steel Joist Institute (SJI), the Steel Deck Institute (SDI), and others and how they affect your project. And since steel has an easily defined set of tolerances (in the form of the *Code*), the fabricator/erector can take the initiative to work with other trades as a team to eradicate conflicts caused by lack of coordination and/or understanding.

Want to learn more? Check out the NASCC: The Steel Conference session "How Varying Tolerances and Lack of Coordination Can Cause Constructability, Quality and/or Cost Issues." NASCC takes place March 23-25 in Denver. To learn more about the conference, register, and sign up for this session (and others), visit [aisc.org/nascc](https://www.aisc.org/nascc).

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