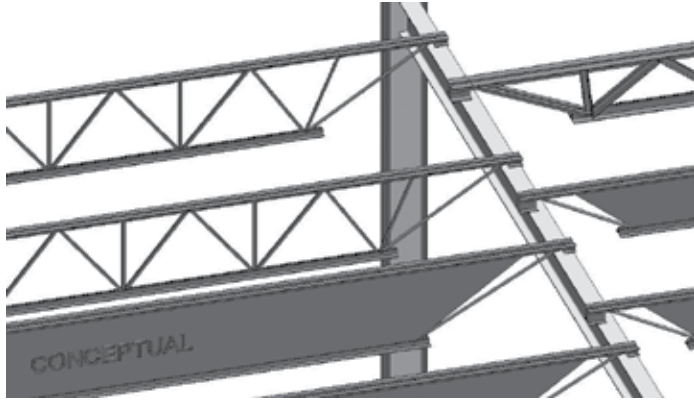




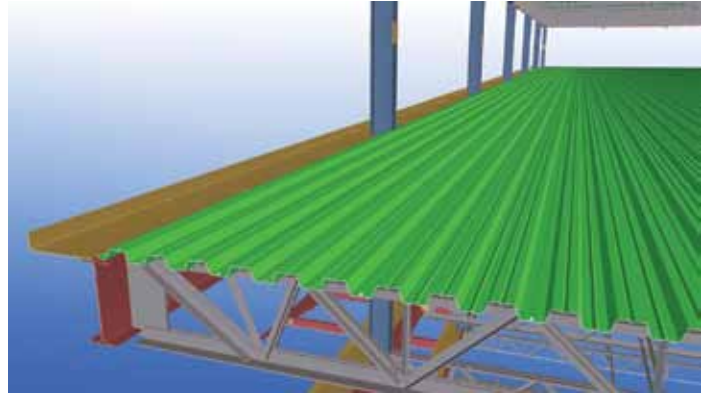
AISI BIM Initiative

Steel Joists and Deck Summary

By Joe Cipra



Sample of LOD 300 provided by specifying professional.



Sample of LOD 350 provided by joist and/or deck manufacturer.

As Building Information Modeling (BIM) continues to progress through the steel design and construction industry, showcasing its many benefits to the building project and its owners, demand for BIM information continues to increase. However, with a wide gamut of methods still being utilized for sharing job information, from the standard 2D contract drawings to 3D model sharing on cloud sites, there was inevitably going to be confusion among those specifying what information they wanted to be incorporated into their BIM and who should be responsible to provide that information.

The Steel Joist Institute (SJI) and Steel Deck Institute (SDI) have been working over the past year to address and educate the steel design and construction community on what SJI and SDI member groups are doing to comply with the ever evolving BIM process. Although most member companies are handling this education on their own, both the SJI and the SDI felt that providing standard “BIM Guidance” with regards to their specific products and their manufacturers role in providing information about steel joist and deck products would benefit the industry and alleviate confusion.

In August 2013, the Associated General Contractors (AGC) through the BIMForum group attempted to relieve some of this confusion as well. And so, the 2013 *Level of Development Specification* (LOD) was released. With permission from the American Institute of Architects (AIA), the BIMForum modeled

their framework around the AIA’s Digital Practice documents. The BIMForum group felt it was important to provide a distinction for a model used during construction coordination. The current AIA LOD 300 was geared more toward specification information, with too little information to actually begin trade coordination, and LOD 400, which was a fully designed handover type model which would rarely occur until items were already being fabricated, was thus not very valuable to increase trade coordination ahead of construction. The result was an LOD 350, which is unique to the AIA’s LOD document and provided the construction professionals more specific information to enable better coordination. The BIMForum *Level of Development Specification* provides easy to read tables defining what should be required at various levels for many different structural systems, including floor framing with steel joists and floor deck.

With the release of the BIMForum’s 2013 *Level of Development Specification* in August, the SJI and SDI felt they had a base framework by which to define their respective capabilities and still maintain cohesiveness with industry needs. The SJI and SDI “BIM Guidance”, as it has been titled during the initial working process, is being developed to assist owners, contractors, erectors, fabricators, and specifying professionals with Building Information Modeling guidance regarding the use of steel joists and steel deck through an SJI or SDI member manufacturer. The SJI and SDI have modeled their comments and included

reference to the AGC’s *Level of Development (LOD) Specification* document, paying special attention to LOD350 which the SJI and SDI believe is the information they will be expected to incorporate into the models for coordination. The SJI and SDI have also incorporated common items of note that should be considered when using steel joists or steel deck in a 3D model based on current design and manufacturing processes.

With draft documents now complete and in review, both the SJI and SDI are working through their respective committees to release the documents in the coming months as position statements added to their respective websites. The SJI and SDI member groups realize that BIM and its requirements will continue to evolve and, therefore, the SJI and SDI must continue to work with groups such as the AGC, AISI, AISC, and the National Institute of Building Sciences to provide input and maintain a cohesive working relationship with the steel construction community. The SJI and SDI also intend to monitor the trends and practices for BIM required of their members being put forth by owners, architects and engineers. ■

Joe Cipra leads the SJI and SDI BIM Task Group and is also involved in AISI BIM efforts as well as the AISC-Technology Integration committee. Joe is currently leading BIM Development within Nucor-Vulcraft’s New Product and Market Development group. Joe can be contacted at joe.cipra@nucor.com.