Sheathing Attachment to TrusSteel Members

Purpose of this Bulletin

To identify proper attachment techniques, outline important design considerations, and define design responsibilities that relate to the application of structural sheathing to TrusSteel chords.

Information

Designers should refer to the following standards and informational resources when selecting and designing sheathing and sheathing attachments:

- Recommendations of specific fastener manufacturers
- Recommendations of specific sheathing manufacturers
- The Diaphragm Design Manual published by the Steel Deck Institute (SDI)
- CFSEI Tech Note F101-12 – Screws for Cold-Formed Steel-to-Wood and Wood-to-Cold-Formed Steel Attachments
- CFSEI Tech Note F102-11 – Screw Fastener Selection for Cold-Formed Steel Frame Construction
- CFSEI Tech Note F300-09 – Pneumatically Driven Pins for Wood Based Panel Attachment
- TrusSteel Standard Details TS007, TS008, and TS008A (for the mechanical properties of TrusSteel chords).

There are several types of fasteners and fastening methods available for the structural attachment of sheathing to cold-formed steel framing:

- Pneumatic pins - Suitable for attaching wood based panels (see CFSEI Tech Note F300-09),
- Self drilling screws - Suitable for attaching metal deck, wood based panels, and cementitious panels, and
- Welding - Not a recommended attachment means for metal deck to TrusSteel chords.

For those applications where the attachment of sheathing to cold-formed steel framing is non-structural, the designer should refer to the sheathing manufacturer and job specifications to determine the proper method of attachment.

Application

The designer shall address proper fastener application. Whatever attachment means is selected to attach sheathing to framing, it is important that care is exercised when driving fasteners. DO NOT over torque or overdrive fasteners. DO NOT under drive pneumatic fasteners.

Design Considerations

Structural sheathing typically provides permanent bracing for a truss or framing system and/or acts as a shear diaphragm as part of an overall building design. Design of the sheathing shall include, but not be limited to, the selection of the appropriate sheathing as well as the appropriate type, pattern, and application of fasteners. When designing framing members or the chord of a truss, it is typically assumed that the structural sheathing provides lateral restraint for the member or component. The sheathing shall provide adequate lateral restraint for all affected framing members.

Responsibility

A qualified professional shall verify that the proper fastener has been selected and designed for the appropriate sheathing. The Engineer or Architect of Record shall be responsible for the overall building design, which includes the design of the sheathing as well as the permanent bracing system, by providing either a design or a final review and acceptance of the system.

Referenced Documents

TS007
TS008
TS008A

Revisions

- This bulletin was revised on 1/15/03 to update all standard details attached to this technical bulletin
- This bulletin was revised on 11/8/13 to revise the referenced documents in the Information section