

TOOLBOX TALK #5

Definition of Structural Steel

(5 minutes)



QUESTION: What elements of the construction project fall under the definition of structural steel?

The Code says...

2.1. Definition of Structural Steel

Structural steel shall consist of the elements of the structural frame that are shown and sized in the structural *design documents*, essential to support the design loads and described as follows:

- Anchor rods* that will receive *structural steel*
- Base plates, if part of the *structural steel* frame
- Beams, including built-up beams, if made from *standard structural shapes* and/ or plates
- Bearing plates, if part of the *structural steel* frame
- Bearings of steel for girders, trusses, or bridges
- Bracing, if permanent
- Canopy framing, if made from *standard structural shapes* and/or plates
- Columns, including built-up columns, if made from *standard structural shapes* and/or plates
- Connection* materials for framing *structural steel* to *structural steel*
- Crane stops, if made from *standard structural shapes* and/or plates
- Door frames, if made from *standard structural shapes* and/or plates and if part of the *structural steel* frame
- Edge angles and plates, if attached to the *structural steel* frame or steel (open-web) joists
- Embedded *structural steel* parts, other than bearing plates, that will receive *structural steel*
- Expansion joints, if attached to the *structural steel* frame
- Fasteners for connecting *structural steel* items: permanent shop bolts, nuts, and washers; shop bolts, nuts, and washers for shipment; field bolts, nuts, and washers for permanent *connections*; and permanent pins
- Floor-opening frames, if made from *standard structural shapes* and/or plates and attached to the *structural steel* frame or steel (open-web) joists
- Floor plates (checkered or plain), if attached to the *structural steel* frame
- Girders, including built-up girders, if made from *standard structural shapes* and/ or plates
- Girts, if made from *standard structural shapes*
- Grillage beams and girders
- Hangers, if made from *standard structural shapes*, plates, and/or rods and framing *structural steel* to *structural steel*
- Leveling nuts and washers
- Leveling plates

TOOLBOX TALKS

If you're using structural steel, the *Code of Standard Practice for Steel Buildings and Bridges* (ANSI/AISC 303-22) applies to your contract.

Simply put, the AISC Code defines who's in charge of what, when, where—including before any potential conflict arises—and other members of your project team are already using it in their own contracts. Download it for free at aisc.org/code.

Section 2 of the Code

provides the definition of structural steel and should be referenced during preconstruction for managing the contract with your fabricator and/or erector.

TOOLBOX TALK #5

Definition of Structural Steel

(5 minutes)



- Leveling screws
- Lintels, if attached to the *structural steel* frame
- Machinery supports, if made from *standard structural shapes* and/or plates and attached to the *structural steel* frame
- Marquee framing, if made from *standard structural shapes* and/or plates
- Monorail elements, if made from *standard structural shapes* and/or plates and attached to the *structural steel* frame
- Posts, if part of the *structural steel* frame
- Purlins, if made from *standard structural shapes*
- Relieving angles, if attached to the *structural steel* frame
- Roof-opening frames, if made from *standard structural shapes* and/or plates and attached to the *structural steel* frame or steel (open-web) joists
- Roof-screen support frames, if made from *standard structural shapes*
- Sag rods, if part of the *structural steel* frame and connecting *structural steel* to *structural steel*
- Shear stud connectors, if specified to be shop attached
- Shims, if permanent
- Steel plate shear walls and/or composite steel plate shear wall systems, and steel plate structures, if made from standard shapes and/or plates, and if part of the *structural steel* frame
- Struts, if permanent and part of the *structural steel* frame
- Tie rods, if part of the *structural steel* frame
- Trusses, if made from *standard structural shapes* and/or built-up members
- Wall-opening frames, if made from *standard structural shapes* and/or plates and attached to the *structural steel* frame
- Wedges, if permanent

Commentary:

The *fabricator* normally fabricates the items listed in Section 2.1. Such items should be shown, sized, and described in the structural *design documents*. Bracing includes vertical bracing for resistance to wind and seismic load and structural stability, horizontal bracing for floor and roof systems, and permanent stability bracing for components of the *structural steel* frame.

Need help understanding the Code?



STEEL SOLUTIONS CENTER

aisc.org/askaisc
solutions@aisc.org
866.ASK.AISC