

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.

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(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?



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