

An Improved Open Web Joist Using Knurled Pins and a Heel Bearing Connection (Patent SIB3570204)

WHY USE WEB JOIST?

ECONOMY: Web Joist can be used successfully in many projects because it is a very economical floor and roof system when compared to other construction materials – especially when ceiling, decking, floor fill materials and labor costs are considered. Utilizing these lighter weight systems will generally result in reduced size of bearing walls, foundations and footings.

VERSATILITY: Longer spanability, with open webs for ductwork, and top or bottom chord bearing capability. Web Joist trusses may be supported on frame, steel, masonry, or concrete construction. Web Joist trusses weigh less than most other structural members – approximately

4 plf for Version 1 and 7 plf for Version 2. This feature facilitates quick and easy installation without the need for expensive mechanical equipment in most projects.

MECHANICAL ACCESS: The space between webs facilitates installation of ductwork, wiring, and plumbing to significantly reduce the system depth and cost.

FIRE SPRINKLERS: Web Joist trusses are unobstructed construction as defined by the 1999 edition of NFPA 13 for Fire Sprinkled Construction which eliminates sprinkling in each truss space.

ONE HOUR FIRE RATING: For one hour, fire resistive assemblies, see ICBO or LA City Report.

AVAILABLE CHORDS: The wood chords are 3 1/2" wide. The decking or ceiling can be directly attached to the chords to minimize construction time and labor.

ENGINEERED DESIGNS: Each Web Joist truss is custom designed by a computer program for its span, depth and loading requirements. The Web Joist engineering department will provide designs for all trusses on a project.

CODE ACCEPTANCE:

Web Joist trusses have been accepted by most building codes including:

ICC-ES Evaluation Report ESR-2504

L.A. City Report RR 25825

SPECIFICATIONS

SCOPE: Furnish all open web, pin-connected trusses as manufactured by an approved WEB JOIST Manufacturing plant per ICBO Report No. PFC-3246 or L.A. City Report No. 24189.

DESCRIPTION: The trusses shall consist of structural wood top and bottom chords and tubular steel web members. The webs shall have machined ends, inserted into the chords, secured with knurled steel pins. The end connections shall bear directly on the support.

MATERIALS: Top and bottom chords shall be kiln dried, machine stress rated (MSR) lumber for Version 1 trusses and LAM-CHORD for Version 2. Continuous chords shall be developed with glued finger joints. The galvanized tubular steel webs shall have a minimum yield stress of 45,000 psi. The steel pins shall be in accordance with applicable ASTM Standards and machined with a knurled upset for locking the web assembly in the pinned connection. The bearing hardware shall be 13 Ga., A570, steel.

SHOP DRAWINGS: Shop drawings shall be furnished in accordance with the specifications. The drawings shall reflect the span, loads, spacing and arrangement of the trusses required to meet the criteria of the plans. Approval of the shop drawings is required prior to fabrication.

PRODUCT HANDLING: The trusses shall be unloaded and stored in an upright position on blocking to prevent direct contact with the ground or standing water. Field repair or modification of trusses shall not be made without prior written approval of the manufacturer.

INSTALLATION: Trusses shall be handled, installed and stabilized in accordance with good construction practice, the Web Joist shop drawings and the Web Joist suggested handling procedures.

QUALITY AUDITING: Quality auditing shall be conducted by an ICBO-approved testing agency.

