

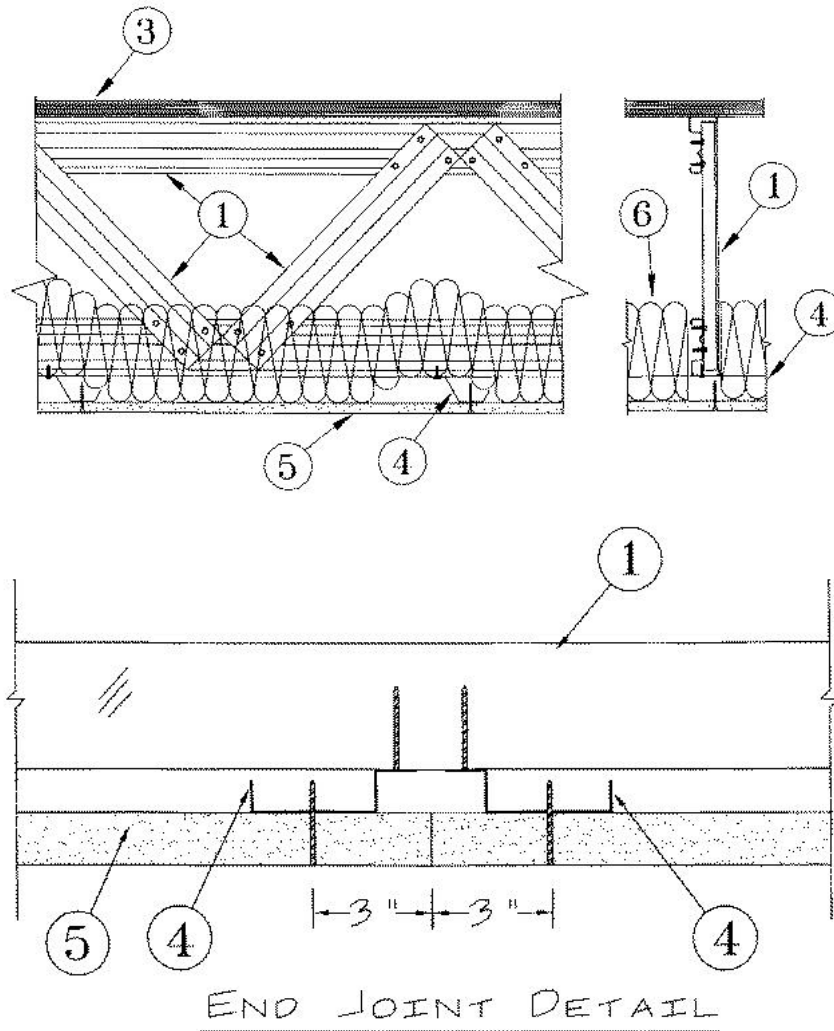
# Fire Resistance Ratings - ANSI/UL 263

Design No. L549

September 27, 2002

Unrestrained Assembly Rating — 1 Hr

Unrestrained Beam Rating — 1 Hr



1. **Structural Steel Members\*** — Pre-fabricated light gauge steel truss system consisting of cold-formed, galvanized steel chord and web sections. Trusses fabricated in various sizes, depths, and from various steel thickness. Trusses spaced a max of 48 in. OC.

**AEGIS METAL FRAMING L L C** — Ultra-Span, Pre-fabricated Light Gauge Steel Truss System

2. **Bridging** — (Not Shown) — Location of lateral bracing for truss chord and web sections to be specified on truss engineering.

3. **Flooring System** — The finish flooring may consist of any one of the following systems:

### **System No. 1**

**Finish Flooring** — Nom 1 by 4 in. T&G; laid perpendicular to trusses; or 15/32 in. thick wood structural panels, min grade "Underlayment" or "Single Floor". Long dimensions of panel (strength axis) or face grain of plywood to be perpendicular to trusses with joints staggered. **Vapor Barrier** — (Optional) — Commercial asphalt saturated felt, 0.030 in. thick. **Subflooring** — 23/32 in. thick wood structural panels, min grade "Underlayment" or "Single Floor". Installed perpendicular to trusses with end joints staggered 4 ft. Plywood or nonveneer panels, mechanically fastened to trusses 12 in. OC in conjunction with construction adhesive.

### **System No. 2**

**Finish Flooring-Floor Topping Mixture\*** — 6.8 gal of water to 80 lbs of floor topping mixture to 1.9 cu ft of sand. Compressive strength to be 1100 psi min. Thickness to be 3/4 in. min.

**HACKER INDUSTRIES INC** — Firm-Fill Gypsum Concrete, Firm-Fill 2010, Firm-Fill 4010, Firm-Fill High Strength, Gyp-Span Radiant.

**Floor Mat Material** — (Optional)— Nom 1/4 in. thick, adhered to subfloor with Hacker Floor Primer. Primer to be applied to the surface of the mat prior to the placement of a min 1-1/2 in. of floor topping mixture.

**HACKER INDUSTRIES INC** — Sound-Mat

**Subflooring** — 23/32 in. thick wood structural panels, min grade "Underlayment" or "Single Floor". Installed perpendicular to trusses with end joints staggered 4 ft. Plywood or panels, mechanically fastened to trusses 12 in. OC in conjunction with construction adhesive.

### **System No. 3**

**Finish Floor** — Mineral and Fiber board\*, sizes ranging from 3 ft by 4 ft to 8 ft by 12 ft, by min 1/2 in. thick. All joints to be staggered a min of 12 in. OC with adjacent sub-floor joints.

**HOMASOTE CO** — Type 440-32 Mineral and Fiber Board.

4. **Furring Channels** — Resilient channels formed of 25 MSG galv steel, installed perpendicular to the steel trusses (Item 1), spaced a max of 16 in. OC when no insulation (Item 6 or 6A) is fitted in the concealed space, or a max of 12 in. OC when insulation (Item 6 or 6A) is fitted in the concealed space, draped

over the resilient channel/gypsum wallboard ceiling membrane. Two courses of resilient channel positioned 6 in. OC at wallboard butt-joints (3 in. from each end of wallboard). Channels oriented opposite at wallboard butt-joints. Channel splices overlapped 4 in. beneath steel trusses. Channels secured to each truss with type S12 by 1/2 in. long screws.

**4A. Furring Channels** — As an alternate to Item 4, resilient channels, double legged formed of 25 MSG galv steel, 2-7/8 in. wide by 1/2 in. deep, installed perpendicular to the trusses (Item 1) spaced max 16 in. OC when no insulation (Item 6 or 6A ) is fitted in the concealed space, or a max of 12 in. OC when insulation (Item 6 or 6A ) is fitted in the concealed space, draped over the resilient channel/gypsum wallboard ceiling membrane. Two courses of resilient channel positioned 6 in. OC at wallboard butt-joints (3 in. from each end of wallboard). Channel splices overlapped 4 in. beneath steel trusses. Channels secured to each truss with Type S12 by 1/2 in. long screws or with No. 18 SWG galv steel wire double strand saddle ties. Channels tied together with double strand of No. 18 SWG galv steel wire at each end of overlap.

**5. Gypsum Board\*** — One layer of nom 5/8 in. thick by 48 in. wide boards, installed with long dimension parallel to trusses. Attached to the resilient channels using 1 in. long Type S bugle-head screws. Screws spaced a max of 12 in. OC along butted end-joints and in the field when no insulation (Item 6) is fitted in the concealed spaced, or a max of 8 in. OC along butted end-joints and in the field when insulation (Item 6) is fitted in the concealed space, draped over the resilient channel/gypsum wallboard ceiling membrane.

**CANADIAN GYPSUM COMPANY** — Type C or IP-X2

**UNITED STATES GYPSUM CO** — Type C or IP-X2

**USG MEXICO S A D E C V** — Type C or IP-X2

**6. Batts and Blankets\*** — Optional — Mineral wool or glass fiber insulation bearing the UL Classification Marking for Surface Burning Characteristics, having a flame spread value of 25 or less and a smoke value of 50 or less. Insulation fitted in the concealed space, draped over the resilient channel/gypsum wallboard ceiling membrane.

**6A. Loose Fill Material\*** — As an alternate to Item 6 — Any thickness of loose fill material bearing the UL Classification Marking for Surface Burning Characteristics, having a flame spread value of 25 or less and a smoke spread value of 50 or less. Loose fill material fitted in the concealed space, draped over the resilient channel/gypsum wallboard ceiling membrane.

**7. Finishing System** — (Not Shown) — Vinyl, dry or premixed joint compound, applied in two coats to joints and screw-heads; paper tape, 2 in. wide, embedded in first layer of compound over all joints. As an alternate, nom 3/32 in. thick veneer plaster may be applied to the entire surface of gypsum wallboard.

**8. Steel Beam** — Optional— (Not Shown) — W8x35 min size, used to support structural steel members (Item 1) at ends.

**Alternate Ceiling Membrane — Not Shown** — Not for use when insulation (Item 6 or 6A ) is used.

## 9. Steel Framing Members —

a. **Main Runners** — Installed perpendicular to Structural Steel Members, - Nom 12 ft long, 15/16 in. or 1-1/2 in. wide face, spaced 4 ft OC. Main runners hung a min of 2 in. from bottom chord of Structural Steel Members with 12 SWG galv steel wire. Wires located a max of 48 in. OC.

b. **Cross tees or channels** — Nom 4 ft long, 15/16 in. or 1-1/2 in. wide face, or cross channels, nom 4 ft long, 1-1/2 in. wide face, installed perpendicular to the main runners, spaced 16 in. OC. Additional cross tees or channels used at 8 in. from each side of butted wallboard end joints. The cross tees or channels may be riveted or screw-attached to the wall angle or channel to facilitate the ceiling installation.

c. **Wall angles or channels** — Used to support steel framing member ends and for screw-attachment of the gypsum wallboard - Painted or galvanized steel angles with 1 in. legs, or channels with 1 in. legs and 1-9/16 in. deep, attached to walls at perimeter of ceiling with fasteners 16 in. OC.

### **CGC INTERIORS, DIV OF**

**CGC INC** — Type DGL or RX

**USG INTERIORS INC** — Type DGL or RX

10. **Gypsum Board\*** — For use with Steel Framing Members (Item 8) - One layer of nominal 5/8 in. thick by 48 in. wide boards, installed with long dimension parallel to the main runners. Wallboard fastened to each cross tee or channel with five wallboard screws, with one screw located at the midspan of the cross tee or channel, one screw located 12 in. from and on each side of the cross tee or channel mid span and one screw located 1-1/2 in. from each wallboard side joint. Except at wallboard end joints, wallboard screws shall be located 1/2 in. from the joint. Wallboard fastened to main runners with wallboard screws 1/2 in. from side joints, midway between intersections with cross tees or channels (16 in. OC). End joints of adjacent wallboard sheets shall be staggered not less than 32 in. Wallboard sheets screw attached to leg of wall angle with wallboard screws spaced 12 in. OC. Joints treated as described in Item 7.

**CANADIAN GYPSUM COMPANY** — Type C, IP-X2, IPC-AR

**UNITED STATES GYPSUM CO** — Type C, IP-X2, IPC-AR

**USG MEXICO S A DE C V** — Type C, IP-X2, IPC-AR

\*Bearing the UL Classification Mark