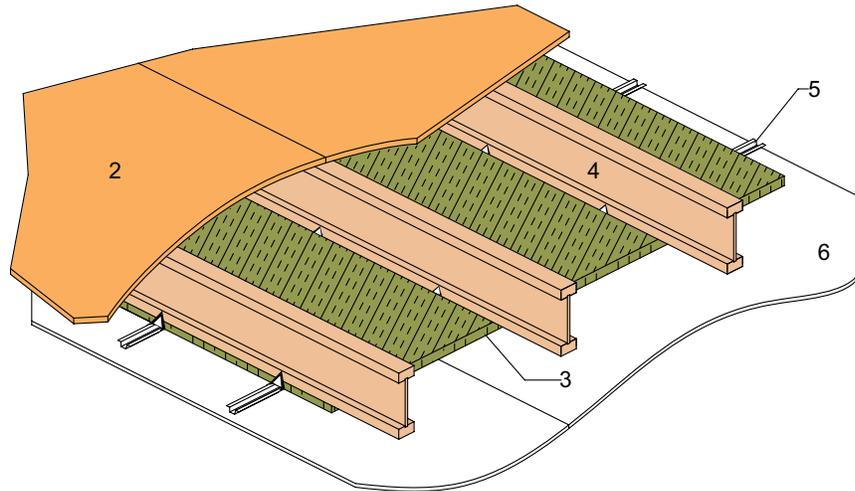


WIJ-1.4 One-Hour Fire-Resistive Ceiling Assembly

Floor^a/Ceiling - 100% Design Load - 1 Hour Rating - ASTM E 119 / NFPA 251



1. **Floor Topping (optional, not shown):** Gypsum concrete, lightweight or normal concrete topping.
2. **Floor Sheathing:** Minimum 23/32 inch thick tongue-and-groove wood sheathing (Exposure 1). Installed per code requirements with minimum 8d common nails.
3. **Insulation:** Minimum 1 inch thick mineral wool insulation batts – 6 pcf (nominal), with width equal to the on-center spacing of the I-joists. Batt installed on top of furring channels and under bottom flange of I-joists with the sides butted against support clips. Abutted ends of batts centered over furring channels with batts tightly butted at all joints.
4. **Structural Members:** Wood I-joists spaced a maximum of 24 inches on center.
 - Minimum I-joist flange depth: 1-1/2 inches
 - Minimum I-joist web thickness: 3/8 inch
 - Minimum I-joist flange area: 3.45 inches²
 - Minimum I-joist depth: 9-1/4 inches

See ASTM D 5055-07 for qualification requirements.
5. **Furring Channels:** Minimum 0.019 inch thick galvanized steel hat-shaped furring channels, attached perpendicular to I-joists spaced 24 inches on center. At channel splices, adjacent pieces overlapped a minimum of 6 inches and tied with a double strand of No. 18 gage galvanized steel wire at each end of the overlap. Channels secured to I-joists with Simpson Type CSC support clips at each intersection with the I-joists. Clips nailed to the side of I-joist bottom flange with one 1-1/2 inch long No. 11 gage nail. A row of furring channel located on each side of wallboard end joints and spaced 2.25 inches from the end joint (4.5 inches on center).
6. **Gypsum Wallboard:** Minimum 1/2 inch thick Type C gypsum wallboard. Wallboard installed with long dimension perpendicular to furring channels and fastened to each channel with minimum 1 inch long Type S drywall screws. Fasteners spaced 12 inches on center in the field of the wallboard, 6 inches on center at wallboard end joints, and 3/4 inches from panel edges and ends. End joints of wallboard staggered. For staggered wallboard end joints, furring channels extend a minimum of 6 inches beyond each end of the joint.
7. **Finish System (not shown):** Face layer joints covered with tape and coated with joint compound. Screw heads covered with joint compound.

Fire Test conducted at Underwriter’s Laboratories, Inc.
Third Party Witness: Underwriter’s Laboratories, Inc.

May 11, 1983
Report No: UL R10371-1

STC and IIC Sound Ratings for Listed Assembly

Without Gypsum Concrete				With Gypsum Concrete			
Cushioned Vinyl		Carpet & Pad		Cushioned Vinyl		Carpet & Pad	
STC	IIC	STC	IIC	STC	IIC	STC	IIC
-	-	46	68	51	47	50	73

^a This assembly may also be used in a fire-rated roof/ceiling application, but only when constructed exactly as described.