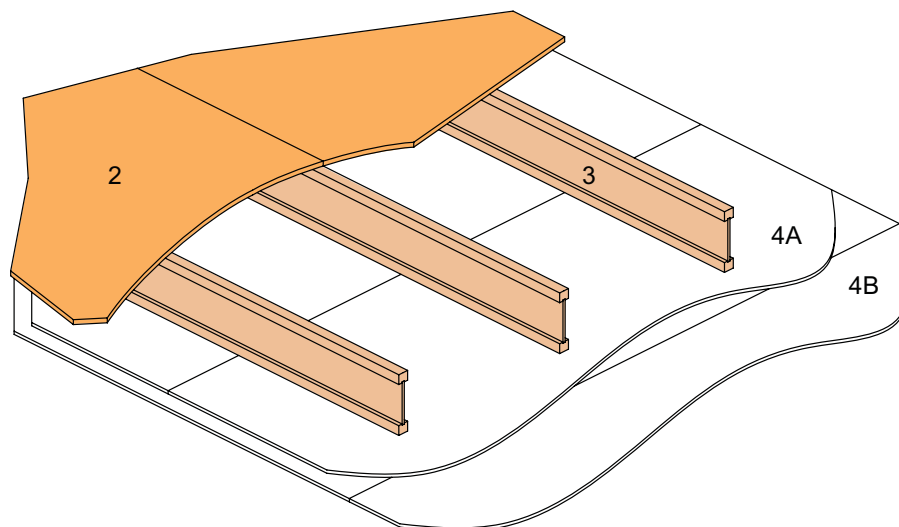


**WIJ-1.5 One-Hour Fire-Resistive Ceiling Assembly**Floor<sup>a</sup>/Ceiling - 100% Design Load - 1 Hour Rating - ASTM E 119 / NFPA 251

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. **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 flange area: 2.25 inches<sup>2</sup>

Minimum I-joist web thickness: 3/8 inch

Minimum I-joist depth: 9-1/4 inches

See ASTM D 5055-07 for qualification requirements.

4. **Gypsum Wallboard:** Two layers of minimum 1/2 inch Type C gypsum wallboard attached with the long dimension perpendicular to the I-joists as follows:

**4a. Wallboard Base Layer:** Base layer of wallboard attached to bottom flange of I-joists using 1 inch Type S drywall screws at 12 inches on center. End joints of wallboard centered on bottom flange of the I-joist and staggered.

**4b. Wallboard Face Layer:** Face layer of wallboard attached to bottom flange of I-joists through base layer using 1-5/8 inch Type S drywall screws spaced 12 inches on center on intermediate joists and 8 inches on center at end joints. Edge joints of wallboard face layer offset 24 inches from those of base layer. End joints centered on bottom flange of I-joists and offset a minimum of 48 inches from those of base layer. Additionally, wallboard face layer attached to base layer with 1-1/2 inch Type G drywall screws spaced 8 inches on center with a 4" stagger, placed 6 inches from face layer end joints.

5. **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 NGC Testing Services, Inc

Report No. FC-687 January 25, 2007

**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
-	-	-	-	-	-	49 <sup>b</sup>	55 <sup>b</sup>

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

<sup>b</sup> STC and IIC values estimated by David L. Adams Associates, Inc.