

FIRE & SOUND RATED FLOOR SYSTEMS

ONE-HOUR FIRE-RATED SYSTEMS WITH APA PERFORMANCE RATED I-JOISTS

The fire-rated assembly shown below is one of several assemblies that can be used with wood I-Joists. The required components of the system are dependent upon the physical characteristics of the I-Joist. See ICC ES Report ESR-1251 for other code approved assemblies with RFPI-Joists. Several other potential assemblies (1-hour and 2-hour) can be found in the American Wood Council (AWC) publication entitled "Design for Code Acceptance 3" (DCA 3) as well as various APA publications. The website addresses for these publications are as follows:

AWC:

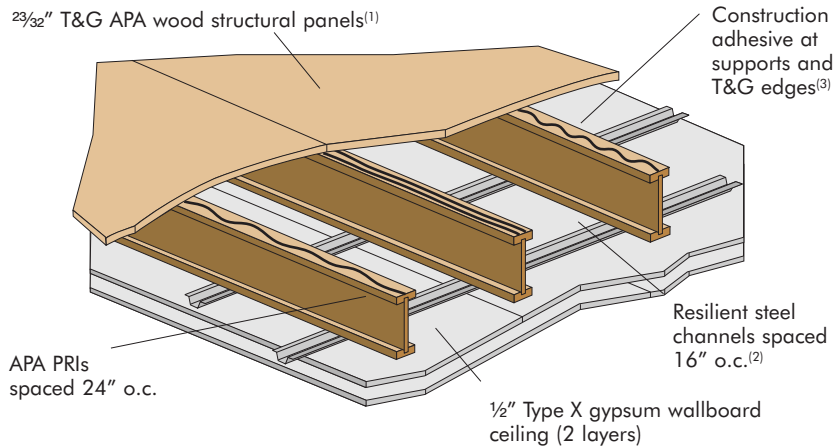
DCA 3 (www.awc.org/Publications/dca/dca3/DCA3.pdf)

APA:

ICC ES Report ESR-1405 (www.ICC-ES.org/reports/pdf_files/ICC-ES/1405.pdf)

Form No.W305 for I-Joists (<http://apawood.org/pdfs/managed/W305.pdf>)

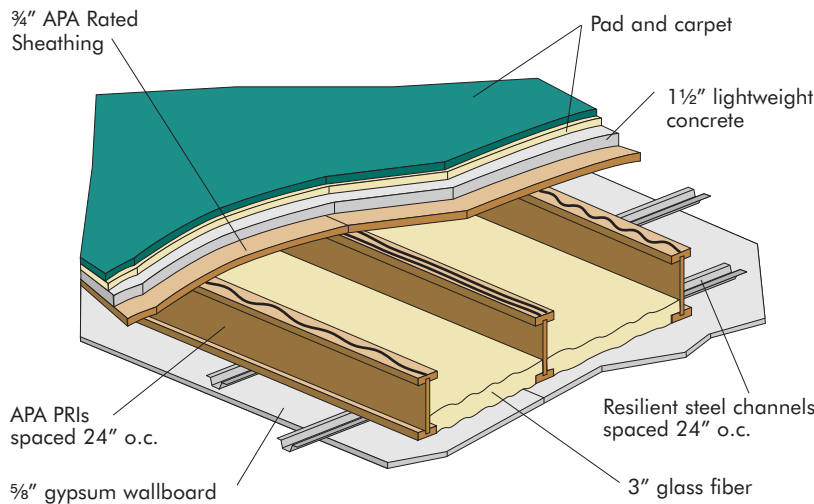
Form No. D350 for Rimboard (<http://apawood.org/pdfs/managed/D350.pdf>)



- (1) Tests have shown that substitution of OSB or composite APA Rated Sturd-I-Floor for plywood panels in fire-rated single-layer assemblies will not jeopardize fire-resistance ratings. Substitution is based on equivalent panel thickness. OSB panels are listed as alternates to plywood for finish flooring in accordance with product evaluation reports for APA PRI trademarked I-joists.
- (2) For improved acoustical performance, gypsum wallboard is fastened to resilient metal furring channels in some assemblies.
- (3) Construction adhesive must conform to APA Specification AFG-01, or ASTM D3498.

NOISE-RATED FLOOR SYSTEM WITH APA PERFORMANCE RATED I-JOISTS

The noise-rated assembly shown below is one of several assemblies that can be used with wood I-Joists. For additional STC and IIC sound rating systems, refer to the AWC and APA publications noted above. Additional general information regarding STC and IIC sound ratings can be found in APA Form No.W460 at the following website: (<http://apawood.org/pdfs/managed/W460.pdf>)



SOUND RATINGS FOR FLOORS USING APA PERFORMANCE RATED I-JOISTS

Test Sponsor and Number ⁽¹⁾	Floor	Deck	Gypsum Wallboard Ceiling	Insulation	STC Rating	IIC Rating	Weight (lbs./sq. ft.)
G&H USDA 11 ST	Vinyl Tile	1 1/2" of 100-pcf cellular concrete over 3/4" APA Rated Sheathing subfloor on I-joists at 24" o.c.	5/8" screwed to resilient metal channels	3" glass fiber	58	50	21.0
G&H USDA 11x ST	Carpet & Pad				58	77	
	None			None	57	None	20.7

(1) USDA Forest Service Wood Construction Research (Seattle, WA); acoustical tests by Geiger & Hamme, Inc. (Ann Arbor, MI)