

Fire-Resistive Floor Assemblies for Wood I-Joists													
Source #1: American Wood Council (AWC) - Design for Code Acceptance 3 (DCA 3), Jan. 2009							Highlighted boxes indicate that the RFPI-Joist listed above the box meets all						
Source #2: 2006 International Building Code - Table 720.1(3)							I-joist size requirements and is approved for use in the system or systems						
Source #3: 2009 International Building Code - Table 720.1(3)							listed in the first five columns on this sheet to the far left of the box.						
Source #4: APA "Fire Rated Systems - Design/Construction Guide" form W305Y, June 2005													
Source #5: APA ICC-ES Code Report ESR-1405, reissued Sept. 1, 2007													
One-Hour Systems							RFPI 20	RFPI 400	RFPI 40	RFPI 40S & 60S	RFPI 70 & 700	RFPI 80S	RFPI 90 & 900
DCA3	2006 IBC <sup>(1)</sup> Table 720.1(3)	IBC 2009 Tbl 720.1(3) 2012 Tbl 721.1(3)	APA guide - "Fire Rated Systems"	APA ESR-1405	General Ceiling Requirements <sup>(2)</sup>	I-joist Requirements	Flange thickness =	Flange width =	Flange area =				
							1-3/8"	1-3/8"	1-3/8"	1-1/2"	1-1/2"	1-1/2"	1-1/2"
							1-3/4"	2-1/16"	2-5/16"	2-1/2"	2-5/16"	3-1/2"	3-1/2"
							2.406	2.84	3.18	3.75	3.47	5.25	5.25
WIJ-1.1	Item 25-1.1	Item 24-1.1	Fig. 4.3A		1 layer 5/8" type C gypsum Furring channels 1-1/2" mineral wool, 2.5 pcf	Min. flange thick = Min. flange area = Min. web thick =	1-1/2" 5.25 sq.in. 3/8"	√	√	√	√	√	√
WIJ-1.2	Item 26-1.1	Item 25-1.1	Fig. 4.3B		1 layer 5/8" Type C gypsum Resilient channels 1-1/2" mineral wool, 2.5 pcf	Min. flange thick = Min. flange area = Min. web thick =	1-1/2" 5.25 sq.in. 7/16"			√	√	√	√
WIJ-1.3	Item 23-1.1	Item 23-1.1	Fig. 4.3C		1 layer 5/8" Type C gypsum Resilient channels 1 x 4 wood strips to bottom flange 2" mineral wool, 3.5 pcf	Min. flange thick = Min. flange area = Min. web thick =	1-5/16" 2.25 sq.in. 3/8"	√	√	√	√	√	√
WIJ-1.4			Fig. 4.3D		1 layer 1/2" Type C gypsum Furring channels 1" mineral wool, 6 pcf	Min. flange thick = Min. flange area = Min. web thick =	1-1/2" 3.45 sq.in. 3/8"	√	√	√	√	√	√
WIJ-1.5	Item 27-1.1	Item 26-1.1	Fig. 4.3E		2 layers 1/2" Type X gypsum (IBC) 2 layers 1/2" Type C gypsum (WIJ-1.5)	Min. flange thick = Min. flange area = Min. web thick =	1-1/2" 2.25 sq.in. 3/8"	√	√	√	√	√	√
WIJ-1.6	Item 28-1.1	Item 27-1.1	Fig. 4.3F		2 layers 1/2" Type X gypsum Resilient channels	Min. flange thick = Min. flange area = Min. web thick =	1-5/16" 2.25 sq.in. 3/8"	√	√	√	√	√	√
WIJ-1.7					2 layers 1/2" Type X gypsum Resilient channels Fiberglass insulation	Min. flange thick = Min. flange area = Min. web thick =	1-1/2" 2.25 sq.in. 3/8"	√	√	√	√	√	√
	Item 21-1.1	Item 21-1.1		Assembly 2	2 layers 5/8" Type X gypsum	Min. flange thick = Min. flange area =	1-5/16" APA only 1.97 sq.in. APA only	√	√	√	√	√	√
				Assembly 1	1 layer of 1/2" or 5/8" Type X gypsum Furring channels 1" mineral wool, 6 pcf Min. req'd bearing length = 2"	Min. flange thick = Min. flange width = Min. web thick =	1-1/2" 2-1/2" 3/8"	√	√	√	√	√	√
				Assembly 3	2 layers 1/2" Type C gypsum or 2 layers 5/8" Type X gypsum (depends on flange size)	Min. flange thick = Min. flange width =	1-5/16" 1-1/2"	√	√	√	√	√	√
Two-Hour System													
WIJ-2.1	Item 29-1.1	Item 28-1.1	Fig. 5		3 layers 5/8" type C gypsum Furring channels 3-1/2" fiberglass insulation Support wires for insulation	Min. flange thick = Min. flange area = Min. web thick =	1-1/2" 2.25 sq.in. 3/8"	√	√	√	√	√	√

(1) Refer to the 2nd printing or newer of the 2006 IBC for correct Item Numbers.

(2) These are general requirements only. Carefully review the appropriate detailed assembly information for a full description of the system requirements. The requirements may differ slightly between the various sources.