

Fire-Rated Assemblies
Pacific Woodtech Corporation

PR-S262

Revised January 8, 2020

Products: PWI-20, 30, 40, 45, 47, 50, 60, 70, 77, 77w and 90 Series I-joists
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www.pacificwoodtech.com

1. Basis of the product report:
 - 2018, 2015, and 2012 International Building Code (IBC): Sections 104.11 Alternative materials, 703 Fire-Resistance Ratings and Fire Tests, 721 Prescriptive Fire Resistance, 722.6 Wood assemblies, and 2303.1.2 Prefabricated wood I-joists
 - 2018 and 2015 International Residential Code (IRC): Sections R104.11 Alternative materials, R302.13 Fire protection of floors, and R502.1.2 and R802.1.8 (2018 IRC only) Prefabricated wood I-joists
 - 2012 IRC: Sections R104.11 Alternative materials, R501.3 Fire protection of floors, and R502.1.4 Prefabricated wood I-joists
 - 2015 National Building Code of Canada (NBC): Clause 1.2.1.1 of Division A, Clauses 3.1.7, 4.1, 4.3.1.1, 9.10.3.1, 9.11.1.1, and 9.23.4.2 of Division B, Table 9.10.3.1.B, and Appendix D
 - ASTM D5055-13e1, ASTM D5055-13, and D5055-09 recognized by the 2018 IBC and IRC, 2015 IBC and IRC, and 2012 IBC and IRC, respectively
 - American Wood Council Design for Code Acceptance DCA 3, Fire-Rated Wood-Frame Wall and Floor/Ceiling Assemblies
 - APA System Report SR-405
 - ICC-ES ESR-1225
 - CCMC 13470-R
 - APA Product Report PR-L262
 - ASTM E119 and CAN/ULC S101 full-scale fire test reports, and engineering analyses
2. Product description:

PWI I-joists covered in this report, as described in Table 1, are made with laminated veneer lumber (LVL) flanges and oriented strand board (OSB) webs in accordance with the in-plant manufacturing standard approved by APA, as documented in ICC-ES ESR-1225 and APA PR-L262 in the U.S., and CCMC 13470-R in Canada. The PWC rim boards covered in this report are made of 1-1/4-inch thick LVL in accordance with ANSI/APA PRR 410 and the in-plant manufacturing standard approved by APA.
3. Design properties:

Design properties for PWI I-joists are provided in ICC-ES ESR-1225 and APA PR-L262 in the U.S., and CCMC 13470-R in Canada.
4. Product installation:

PWI I-joists covered in this report shall be installed in accordance with the recommendations provided by the manufacturer (www.pacificwoodtech.com). The Rim Board protection provided by the gypsum board contained in this report shall be permitted to be continuous or discontinuous. When the Rim Board protection is discontinuous due to the interruption of the floor framing, the floor framing must abut to the continuous Rim Board, and the required gypsum protection must abut to the floor framing with gaps of no greater than 1/16 inch. When used with I-joist framing, the gypsum protection must be notched to fit at all corners of the I-joist or the space between the I-joist web and the gypsum protection must be filled with a web filler with a gap of no greater than 1/16 inch between the gypsum protection and the web filler and between the web filler and the I-joist web and flanges.

5. Fire-rated assemblies:
 PWI I-joists covered in this report have been shown through testing and engineering analysis to achieve the fire resistance ratings described in this report. Fire-rated assemblies for PWI I-joists shall be constructed in accordance with the prescriptive requirements provided in this report or recommended by the manufacturer (see link above).
6. Fire-protection of floors:
 PWI I-joists, as shown in Table 2, when installed and protected as specified in APA System Report SR-405 (www.apawood.org/resource-library) meet the requirements of 2015 IRC Section R302.13 and 2012 IRC Section R501.3 or are alternatives to the 2-by-10 dimension lumber prescribed in Exception 4 to 2015 IRC Section R302.13 and 2012 IRC Section R501.3 with demonstrated equivalent fire performance.
7. Limitations:
 - a) PWI I-joists covered in this report shall be designed in accordance with the code using the design properties specified in ICC-ES ESR-1225 and APA PR-L262 in the U.S., and CCMC 13470-R in Canada.
 - b) PWI I-joists covered in this report are limited to dry service conditions where the average equilibrium moisture content of sawn lumber is less than 16 percent in the U.S. and the average equilibrium moisture content of solid-sawn lumber over a year is 15 percent or less and does not exceed 19 percent in Canada.
 - c) PWI I-joists covered in this report are produced at the Pacific Woodtech Corporation manufacturing plant located in Burlington, Washington, under a quality assurance program audited by APA.
 - d) This report is subject to re-examination in one year.
8. Identification:
 PWI I-joists are sold under the Pacific Woodtech and various private-label brands. Regardless of the brand applied, all I-joists are identified by a label bearing the manufacturer's name (Pacific Woodtech) and/or trademark, the APA assigned plant number (1048), the I-joist depth and series, the APA logo, and a means of identifying the date of manufacture.

Table 1. Description of PWI I-joists^(a)

Joist Series	Joist Depths (in.)	Flanges			Web	
		Material	Dimension		Material	Thickness (in.)
			Depth (in.)	Width (in.)		
PWI-20	9-1/2 – 14	LVL	1-3/8	1-3/4	OSB	3/8
PWI-30	9-1/2 – 11-7/8	LVL	1-1/2	1-1/2	OSB	3/8
PWI-40	9-1/4 – 16	LVL	1-3/8	2-5/16	OSB	3/8
PWI-45	9-1/2 - 16	LVL	1-3/8	2-1/16	OSB	3/8
PWI-47	7-7/8 – 20	LVL	1-1/8	2-5/16	OSB	3/8
PWI-50	9-1/2 – 16	LVL	1-1/2	1-3/4	OSB	3/8
PWI-60	9-1/4 – 16	LVL	1-3/8	2-5/16	OSB	3/8
PWI-70	11-7/8 – 20	LVL	1-1/2	2-5/16	OSB	3/8
PWI-77	9-1/2 – 24	LVL	1-1/2	2-5/16	OSB	7/16
PWI-77w	9-1/2 – 24	LVL	1-1/2	2-1/2	OSB	7/16
PWI-90	9-1/2 – 24	LVL	1-1/2	3-1/2	OSB	7/16

^(a) Referenced dimensions are nominal. Tolerances are as specified in the in-plant quality manual.

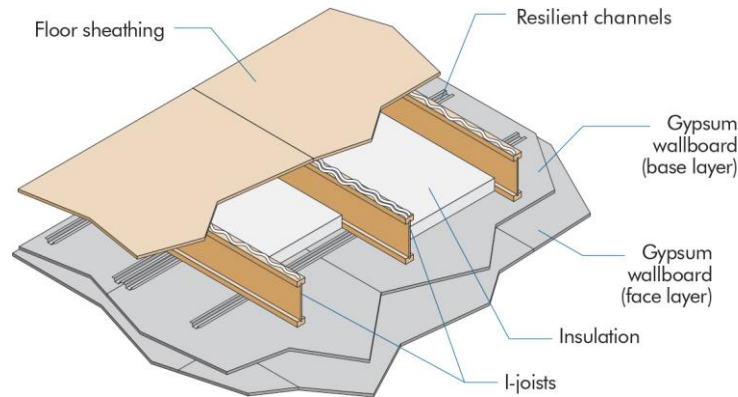
Table 2. Applicable PWI I-joists for SR-405 Assemblies

Assembly in SR-405	Applicable Joist Series
FP-01	PWI-20, PWI-30, PWI-40, PWI-45, PWI-47, PWI-50, PWI-60, PWI-70, PWI-77, PWI-77w, and PWI-90
FP-02	PWI-70, PWI-77, PWI-77w, and PWI-90
FP-03	PWI-20, PWI-30, PWI-40, PWI-45, PWI-47, PWI-50, PWI-60, PWI-70, PWI-77, PWI-77w, and PWI-90
FP-04	PWI-20, PWI-30, PWI-40, PWI-45, PWI-47, PWI-50, PWI-60, PWI-70, PWI-77, PWI-77w, and PWI-90
FP-06	PWI-20, PWI-30, PWI-40, PWI-45, PWI-47, PWI-50, PWI-60, PWI-70, PWI-77, PWI-77w, and PWI-90
FP-07	PWI-20, PWI-30, PWI-40, PWI-45, PWI-47, PWI-50, PWI-60, PWI-70, PWI-77, PWI-77w, and PWI-90
FP-09	PWI-20, PWI-30, PWI-40, PWI-45, PWI-47, PWI-50, PWI-60, PWI-70, PWI-77, PWI-77w, and PWI-90



Pacific Woodtech Assembly PWC60.1 One-Hour Fire Resistance Rated Floor/Ceiling Assembly*

This fire resistance design is listed in accordance with Intertek Report Number 101938600SAT-003_Rev.1, dated March 3, 2015
Min. 9-1/2 inches (241 mm) Deep: PWI-40, PWI-45, PWI-47, PWI-60, PWI-70, PWI-77, PWI-77w, and PWI-90 I-Joists



A. BASIC ASSEMBLIES

- 1) Floor Topping (Optional): Varies (reference sound ratings if applicable)
- 2) Floor Sheathing: Wood structural panels designed and installed in accordance with building code requirements.
- 3) Insulation (Optional): Glass Fiber Insulation. Installed between I-joists and supported by resilient channels.
- 4) Structural Members: Min. 9-1/2-inch (241 mm) deep I-joists at maximum 24 inches (610 mm) on center spacing. Min. flange dimension of 1-1/8-inch (29 mm) thick by 2-5/16 inches (59 mm) wide. Min. web thickness of 3/8 inch (9.5 mm).
- 5) Resilient Channels: Min. 0.019-inch (0.5-mm) galvanized steel resilient channels attached perpendicular to the bottom flange of the I-joist with 1-1/4 inch (32-mm) Type S drywall screws. Channels are spaced a max. of 16 inches (406 mm) on center when I-joists are spaced a maximum of 24 inches (610 mm) on center or 24 inches (610 mm) on center when I-joists are spaced a maximum of 16 inches (406 mm) on center, and are overlapped a minimum of 4 inches (102 mm) when more than a channel is required to extend the channel length.
- 6) Ceiling: Two layers of 1/2-inch (13 mm) Type C gypsum board. Install with long dimension perpendicular to resilient channels.
 - a) Base Layer: Attach to the resilient channels using 1-1/4 inch (32-mm) Type S drywall screws at 12 inches (305 mm) on center with nominal 1-1/2 inches (38 mm) from edges and 3/8 inch (9.5 mm) from ends. The end joints of the wallboard must be staggered and the edge joints must be centered between I-joists.
 - b) Face Layer: Attach to the resilient channels through the base layer using 1-5/8-inch (41-mm) Type S drywall screws spaced at 12 inches (305 mm) on center. The longitudinal joints of this layer must be offset 24 inches (610 mm) from those of the base layer. Additionally, face layer end joints are attached to the base layer with 1-1/2-inch (38-mm) Type G drywall screws at 8 inches (203 mm) on center placed 1-1/2 inches (38 mm) either side of the joint.
 - c) Finish: The face layer joints must be covered with tape and coated with joint compound. Screw heads must also be covered with joint compound.

B. SOUND RATINGS

Information not available

C. SIMILAR ASSEMBLIES

Information not available

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

REPRESENTING THE ENGINEERED WOOD INDUSTRY

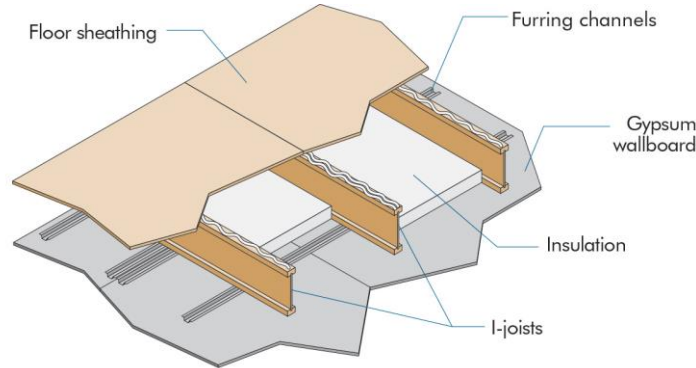


Pacific Woodtech Assembly PWC1.1

One-Hour Fire Resistance Rated Floor/Ceiling Assembly*

This fire resistance design is listed in accordance with the International Building Code (IBC) and American Wood Council's Design for Code Acceptance (DCA) 3

PWI-90 I-Joists



A. BASIC ASSEMBLIES

- 1) Floor Topping (Optional): Varies (reference sound ratings if applicable).
- 2) Floor Sheathing: Min. 23/32-inch (18-mm) T&G Wood Structural Panel. A construction adhesive must be applied to the top of the joists prior to placing sheathing. The sheets shall be installed with their long edge perpendicular to the joists with end joints centered over the top flange of joists. Floor sheathing must be installed per code requirements.
- 3) Insulation: Min. 1-1/2-inch (38-mm) Mineral Wool Insulation Batts (min. 2.5 pcf). Installed adjacent to the bottom flange of the I-joist and supported by the furring channels.
- 4) Structural Members: Min. 9-1/4 inches (235 mm) Deep I-Joists. Max. 24 inch (610 mm) on center spacing. Min. flange thickness of 1-1/2 inches (38 mm) and each flange area of at least 5.25 inches² (3,387 mm²). Min. web thickness of 3/8 inch (9.5 mm).
- 5) Furring Channels: Min. 0.026-inch (0.66-mm) Hat Shaped Galvanized Steel Channels attached perpendicular to the bottom flange of the I-joist with 1-5/8-inch (41-mm) Type S drywall screws. Channels are spaced a max. of 16 inches (406 mm) on center, are doubled at each wallboard end joint, and extend to the next joist beyond each joint.
- 6) Ceiling: One layer of 5/8-inch (16-mm) Type C Gypsum Wallboard. Installed with long dimension perpendicular to furring channels and fastened with min. 1-1/8-inch (29-mm) Type S drywall screws spaced at 12 inches (305 mm) on center on intermediate joists and 8 inches (203 mm) on center at end joints, and 3/4 inch (19 mm) from wallboard edges and ends. The end joints of the wallboard must be staggered.
 - a) Finish: The face layer joints must be covered with tape and coated with joint compound. Screw heads must also be covered with joint compound.

B. SOUND RATING^(a)

Components	STC	IIC
Base Assembly with Carpet and Padding, Gypsum Concrete	49	59

^(a) Sound ratings from the American Wood Council publication Design for Code Acceptance (DCA) 3. Available from www.awc.org/publications/DCA/DCA3/DCA3.pdf.

C. SIMILAR ASSEMBLIES

- 1) 2012/2015/2018 IBC Table 721.1(3) Item 24-1.1, and DCA 3 WIJ-1.1

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

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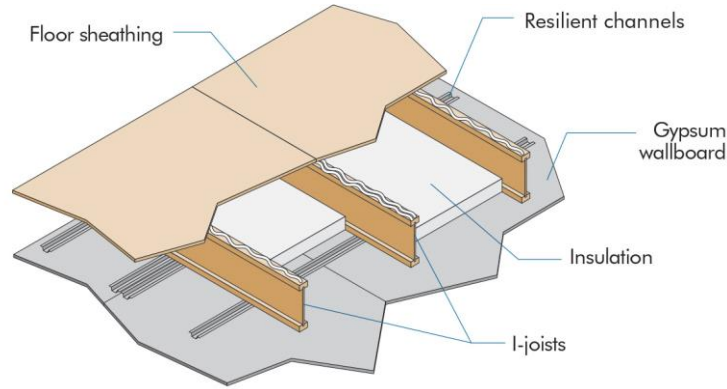


Pacific Woodtech Assembly PWC1.2

One-Hour Fire Resistance Rated Floor/Ceiling Assembly*

This fire resistance design is listed in accordance with the International Building Code (IBC) and American Wood Council's Design for Code Acceptance (DCA) 3

PWI-90 I-Joists



A. BASIC ASSEMBLIES

- 1) Floor Topping (Optional): Varies (reference sound ratings if applicable).
- 2) Floor Sheathing: Min. 23/32-inch (18-mm) T&G Wood Structural Panel. A construction adhesive must be applied to the top of the joists prior to placing sheathing. The sheets shall be installed with their long edge perpendicular to the joists with end joints centered over the top flange of joists. Floor sheathing must be installed per code requirements.
- 3) Insulation: Min. 1-1/2-inch (38-mm) Mineral Wool Insulation Batts (min. 2.5 pcf). Installed adjacent to the bottom flange of the I-joist and supported by the resilient channels.
- 4) Structural Members: Min. 9-1/4 inches (235 mm) Deep I-Joists. Max. 24 inches (610 mm) on center spacing. Min. flange thickness of 1-1/2 inches (38 mm) and each flange area of at least 5.25 inches² (3,387 mm²). Min. web thickness of 7/16 inch (11 mm).
- 5) Resilient Channels: Min. 0.019-inch (0.5-mm) Galvanized Resilient Channels. Attached perpendicular to the bottom flange of the I-joist with 1-5/8-inch (41-mm) Type S drywall screws. Channels are spaced a max. of 16 inches (406 mm) on center, are doubled at each wallboard end joint, and extend to the next joist beyond each joint.
- 6) Ceiling: One layer of 5/8-inch (16-mm) Type C Gypsum Wallboard. Installed with long dimension perpendicular to resilient channels and fastened with min. 1-inch (25-mm) Type S drywall screws spaced at 12 inches (305 mm) on center on intermediate joists and 8 inches (203 mm) on center at end joints, and 3/4 inch (19 mm) from wallboard edges and ends.
 - a) Finish: The face layer joints must be covered with tape and coated with joint compound. Screw heads must also be covered with joint compound.

B. SOUND RATING^(a)

Components	STC	IIC
Base Assembly with cushioned vinyl	51	46
Base Assembly with Carpet and Padding	51	64
Base Assembly with cushioned vinyl, Gypsum Concrete	60	50
Base Assembly with Carpet and Padding, Gypsum Concrete	60	65

^(a) Sound ratings from the American Wood Council publication Design for Code Acceptance (DCA) 3. Available from www.awc.org/publications/DCA/DCA3/DCA3.pdf.

C. SIMILAR ASSEMBLIES

- 1) 2012/2015/2018 IBC Table 721.1(3) Item 25-1.1, and DCA 3 WIJ-1.2

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

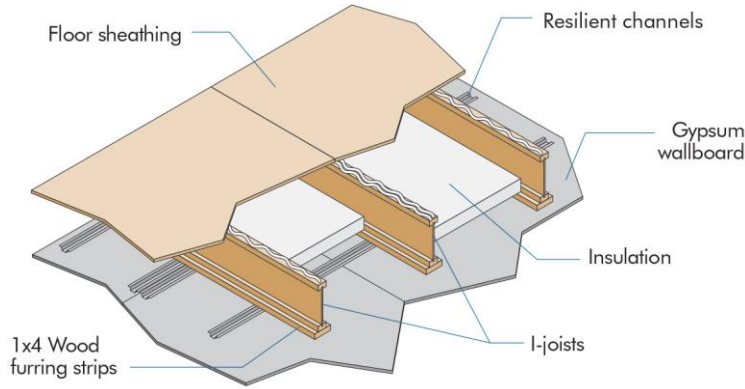
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Pacific Woodtech Assembly PWC1.3

One-Hour Fire Resistance Rated Floor/Ceiling Assembly*

This fire resistance design is listed in accordance with the International Building Code (IBC) and American Wood Council's Design for Code Acceptance (DCA) 3
PWI-20, PWI-30, PWI-40, PWI-45, PWI-50, PWI-60, PWI-70, PWI-77, PWI-77w, and PWI-90 I-Joists



A. BASIC ASSEMBLIES

- 1) Floor Topping (Optional): Varies (reference sound ratings if applicable).
- 2) Floor Sheathing: Min. 23/32-inch (18-mm) T&G Wood Structural Panel. The sheets shall be installed with their long edge perpendicular to the joists with end joints centered over the top flange of joists. Floor sheathing must be installed per code requirements.
- 3) Insulation: Min. 2-inch (51-mm) Mineral Wool Insulation Batts (min. 3.5 pcf). Installed adjacent to the bottom flange of the I-joist and supported by 1x4 wood furring strip spacer.
- 4) Structural Members: Min. 9-1/4 inches (235 mm) Deep I-Joists. Max. 24 inches (610 mm) on center spacing. Min. flange thickness of 1-5/16 inches (33 mm) and each flange area of at least 2.25 inches² (1,452 mm²). Min. web thickness of 3/8 inch (9.5 mm).
- 5) Wood Furring Strip Spacers: Min. nominal 1 inch (25 mm) x 4 inches (102 mm) attached with 1-1/2-inch (38-mm) long drywall screws at 24 inches (610 mm) on center along the bottom of the bottom flange of each I-joist.
- 6) Resilient Channels: Min. 0.019-inch (0.5-mm) Galvanized Resilient Channels (1/2-inch or 13-mm deep single leg). Attached perpendicular to the wood furring strip and bottom flange of the I-joist with 1-7/8 inch (48-mm) Type S drywall screws. Channels are spaced a max. of 16 inches (406 mm) on center, are doubled at each wallboard end joint, and extend to the next joist beyond each joint.
- 7) Ceiling: One layer of 5/8-inch (16-mm) Type C Gypsum Wallboard. Installed with long dimension perpendicular to resilient channels and fastened with min. 1-1/8-inch (29-mm) Type S drywall screws spaced at 7 inches (178 mm) on center, and 3/4 inch (19 mm) from wallboard edges and ends. The end joints of the wallboard must be staggered.
 - a) Finish: The face layer joints must be covered with tape and coated with joint compound. Screw heads must also be covered with joint compound.

B. SOUND RATING^(a)

Components	STC	IIC
Base Assembly with cushioned vinyl	51	46
Base Assembly with Carpet and Padding	52	66
Base Assembly with cushioned vinyl, Gypsum Concrete	60	48
Base Assembly with Carpet and Padding, Gypsum Concrete	60	60

^(a) Sound ratings from the American Wood Council publication Design for Code Acceptance (DCA) 3. Available from www.awc.org/publications/DCA/DCA3/DCA3.pdf.

C. SIMILAR ASSEMBLIES

- 1) 2012/2015/2018 IBC Table 721.1(3) Item 23-1.1, and DCA 3 WIJ-1.3

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

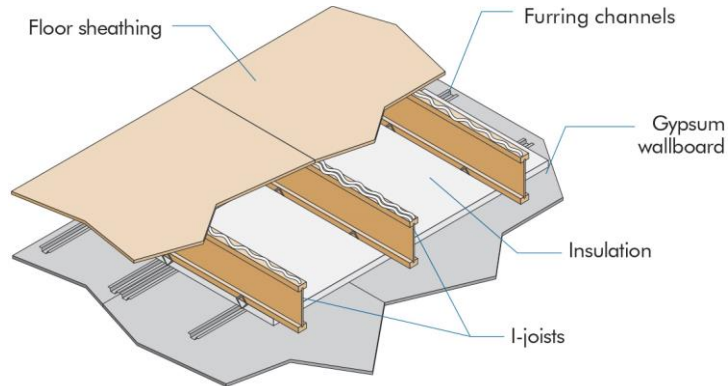
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Pacific Woodtech Assembly PWC1.4

One-Hour Fire Resistance Rated Floor/Ceiling Assembly*

This fire resistance design is listed in accordance with *American Wood Council's Design for Code Acceptance (DCA) 3*
PWI-70, PWI-77, PWI-77w, and PWI-90 I-Joists



A. BASIC ASSEMBLIES

- 1) Floor Topping (Optional): Varies (reference sound ratings if applicable).
- 2) Floor Sheathing: Min. 23/32-inch (18-mm) T&G Wood Structural Panel. The sheets shall be installed with their long edge perpendicular to the joists with end joints centered over the top flange of joists. Floor sheathing must be installed per code requirements.
- 3) Insulation: Min. 1-inch (25-mm) Mineral Wool Insulation Batts (min. 6 pcf) with width equal to on-center spacing of the I-joists. Installed below the bottom flange of the I-joint and on top of furring channels with sides butted against support clips. The ends of the batts shall be centered over furring channels with batts tightly butted at all joints.
- 4) Structural Members: Min. 9-1/4 inches (235 mm) Deep I-Joists. Max. 24 inches (610 mm) on center spacing. Min. flange thickness of 1-1/2 inches (38 mm) and each flange area of at least 3.45 inches² (2,226 mm²). Min. web thickness of 3/8 inch (9.5 mm).
- 5) Furring Channels: Min. 0.019-inch (0.5-mm) Hat Shaped Galvanized Steel Channels attached perpendicular to the bottom flange of the I-joint with Simpson Type CSC support clips at each intersection with the I-joists. Clips nailed to the side of bottom flange with one 1-1/2-inch (38-mm) long No. 11 gage nail. Channels are spaced a max. of 24 inches (610 mm) on center, are doubled at each wallboard end joint, and extend to the next joist beyond each joint. At channel splices, adjacent pieces overlapped a minimum of 6 inches (152 mm) and tied with a double strand of No. 18 gage galvanized steel wire at each end of the overlap. A row of furring channel located on each side of wallboard end joints and spaced 2-1/4 inches (57 mm) from the end joint (4-1/2 inches or 114 mm on center).
- 6) Ceiling: One layer of 1/2-inch (13-mm) Type C Gypsum Wallboard. Installed with long dimension perpendicular to furring channels and fastened with min. 1-inch (25-mm) Type S drywall screws spaced at 12 inches (305 mm) on center on intermediate joists, 6 inches (152 mm) on center at end joints, and 3/4 inch (19 mm) from wallboard edges and ends. The end joints of the wallboard must be staggered and the furring channels must extend a min. of 6 inches (152 mm) beyond each end of the joint.
 - a) Finish: The face layer joints must be covered with tape and coated with joint compound. Screw heads must also be covered with joint compound.

B. SOUND RATING^(a)

Components	STC	IIC
Base Assembly with Carpet and Padding	46	68
Base Assembly with cushioned vinyl, Gypsum Concrete	51	47
Base Assembly with Carpet and Padding, Gypsum Concrete	50	73

^(a) Sound ratings from the *American Wood Council publication Design for Code Acceptance (DCA) 3*. Available from www.awc.org/publications/DCA/DCA3/DCA3.pdf.

C. SIMILAR ASSEMBLIES

- 1) DCA 3 WIJ-1.4

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

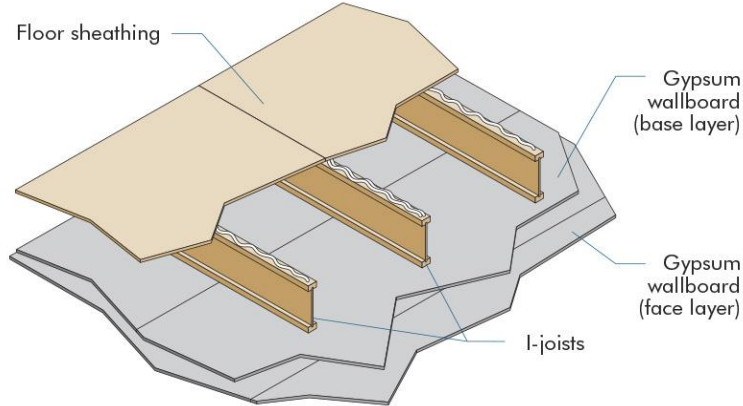
REPRESENTING THE ENGINEERED WOOD INDUSTRY



Pacific Woodtech Assembly PWC1.5

One-Hour Fire Resistance Rated Floor/Ceiling Assembly*

This fire resistance design is listed in accordance with *American Wood Council's Design for Code Acceptance (DCA) 3*
PWI-30, PWI-50, PWI-70, PWI-77, PWI-77w, and PWI-90 I-Joists



A. BASIC ASSEMBLIES

- 1) Floor Topping (Optional): Varies (reference sound ratings if applicable).
- 2) Floor Sheathing: Min. 23/32-inch (18-mm) T&G Wood Structural Panel. The sheets shall be installed with their long edge perpendicular to the joists with end joints centered over the top flange of joists. Floor sheathing must be installed per code requirements.
- 3) Structural Members: Min. 9-1/4 inches (235 mm) Deep I-Joists. Max. 24 inches (610 mm) on center spacing. Min. flange thickness of 1-1/2 inches (38 mm) and each flange area of at least 2.25 inches² (1,452 mm²). Min. web thickness of 3/8 inch (9.5 mm).
- 4) Ceiling: Two layers of 1/2-inch (13-mm) Type C Gypsum Wallboard.
 - a) Base Layer: Install with long dimension perpendicular to joist length. Attach to the bottom flange of the joists using 1-inch (25-mm) Type S drywall screws at 12 inches (305 mm) on center. The end joints of the wallboard must be centered on the bottom flange of the joist and must be staggered.
 - b) Face Layer: Install with long dimension perpendicular to joist length. Attach to the bottom flange of the joists through the base layer using 1-5/8-inch (41-mm) Type S drywall screws spaced at 12 inches (305 mm) on center on intermediate joists and 8 inches (203 mm) on center at end joints. The longitudinal joints of this layer must be offset 24 inches (610 mm) from those of the base layer. The end joints must be centered on the bottom flange of the joists and offset a min. of 48 inches (1219 mm) from those of the base layer. Additionally, face layer end joints are attached to the base layer with 1-1/2-inch (38-mm) Type G drywall screws at 8 inches (203 mm) on center with a 4-inch (102-mm) stagger, placed 6 inches (152 mm) either side of the joint.
 - c) Finish: The face layer joints must be covered with tape and coated with joint compound. Screw heads must also be covered with joint compound.

B. SOUND RATING^(a)

Components	STC	IIC
Base Assembly with Carpet and Padding, Gypsum Concrete	49	55

^(a) Sound ratings from the American Wood Council publication *Design for Code Acceptance (DCA) 3*. Available from www.awc.org/publications/DCA/DCA3/DCA3.pdf.

C. SIMILAR ASSEMBLIES

- 1) DCA 3 WIJ-1.5

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

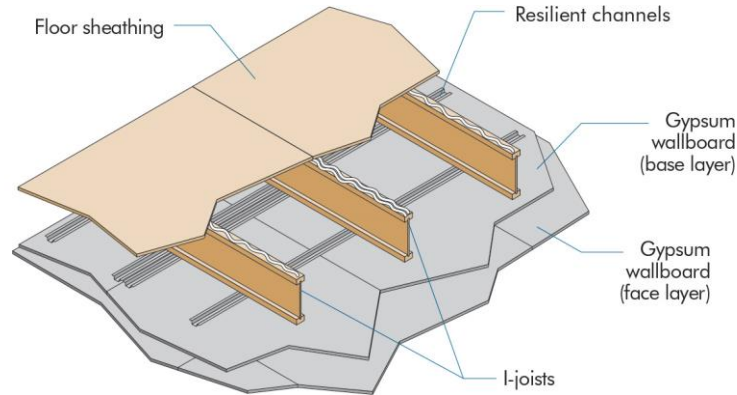
REPRESENTING THE ENGINEERED WOOD INDUSTRY



Pacific Woodtech Assembly PWC1.6

One-Hour Fire Resistance Rated Floor/Ceiling Assembly*

This fire resistance design is listed in accordance with the International Building Code (IBC) and American Wood Council's Design for Code Acceptance (DCA) 3
Min. 9-1/2 inches (241 mm) Deep: PWI-20, PWI-30, PWI-40, PWI-45, PWI-50, PWI-60, PWI-70, PWI-77, PWI-77w, and PWI-90 I-Joists



A. BASIC ASSEMBLIES

- 1) Floor Topping (Optional): Varies (reference sound ratings if applicable).
- 2) Floor Sheathing: Min. 23/32-inch (18-mm) T&G Wood Structural Panel. The sheets shall be installed with their long edge perpendicular to the joists with end joints centered over the top flange of joists. Floor sheathing must be installed per code requirements.
- 3) Structural Members: Min. 9-1/2 inches (241 mm) Deep I-Joists. Max. 24 inch (610 mm) on center spacing. Min. flange thickness of 1-5/16 inches (33 mm) and each flange area of at least 1.95 inches² (1,258 mm²). Min. web thickness of 3/8 inch (9.5 mm).
- 4) Resilient Channels[†]: Min. 0.019-inch (0.5-mm) Galvanized Resilient Channels. Attached perpendicular to the bottom flange of the I-joist with 1-1/4-inch (32-mm) Type S drywall screws. Channels are spaced a max. of 16 inches (406 mm) on center (24 inches or 610 mm when I-joists are spaced a max. of 16 inches or 406 mm on center), are doubled at each base layer wallboard end joint, and extend to the next joist beyond each joint.
- 5) Ceiling: Two layers of 1/2-inch (13-mm) Type X Gypsum Wallboard.
 - a) Base Layer: Install with long dimension perpendicular to resilient channels. Attach to the resilient channels using 1-1/4 inch (32-mm) Type S drywall screws at 12 inches (305 mm) on center. The end joints of the wallboard must be staggered.
 - b) Face Layer: Install with long dimension perpendicular to resilient channels. Attach to the resilient channels through the base layer using 1-5/8-inch (41-mm) Type S drywall screws spaced at 12 inches (305 mm) on center. The longitudinal joints of this layer must be offset 24 inches (610 mm) from those of the base layer. Additionally, face layer end joints are attached to the base layer with 1-1/2-inch (38-mm) Type G drywall screws at 8 inches (203 mm) on center placed 1-1/2 inches (38 mm) either side of the joint.
 - c) Finish: The face layer joints must be covered with tape and coated with joint compound. Screw heads must also be covered with joint compound.

B. SOUND RATING^(a)

Components	STC	IIC
Base Assembly with Carpet and Padding	54	68
Base Assembly with Carpet and Padding, Gypsum Concrete	58	55

^(a) Sound ratings from the American Wood Council publication Design for Code Acceptance (DCA) 3. Available from www.awc.org/publications/DCA/DCA3/DCA3.pdf.

C. SIMILAR ASSEMBLIES

- 1) 2012/2015/2018 IBC Table 721.1(3) Item 27-1.1, and DCA 3 WIJ-1.6

* This assembly may also be used in a fire-rated roof/ceiling assembly, but only when constructed exactly as described.
[†] Direct attachment of gypsum wallboard in lieu of attachment to resilient channels is typically deemed acceptable. When gypsum wall board is directly attached to the I-joists, the wallboard shall be installed with the long dimension perpendicular to the I-joists and sound rating for PWC1.5 Assembly shall be used.

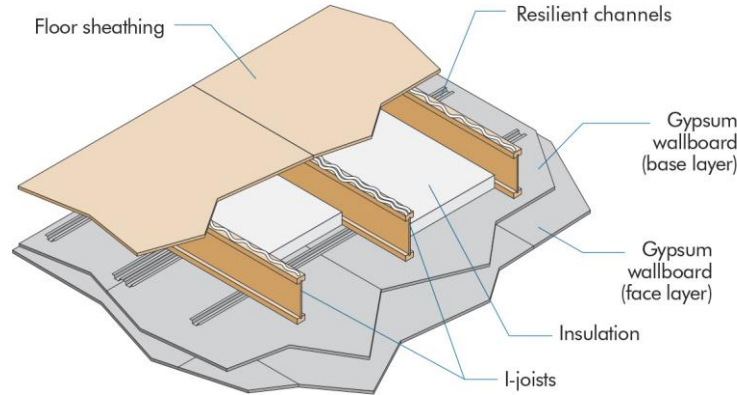
REPRESENTING THE ENGINEERED WOOD INDUSTRY



Pacific Woodtech Assembly PWC1.7

One-Hour Fire Resistance Rated Floor/Ceiling Assembly*

This fire resistance design is listed in accordance with the International Building Code (IBC) and American Wood Council's Design for Code Acceptance (DCA) 3
PWI-30, PWI-50, PWI-70, PWI-77, PWI-77w, and PWI-90 I-Joists



A. BASIC ASSEMBLIES

- 1) Floor Topping (Optional): Varies (reference sound ratings if applicable).
- 2) Floor Sheathing: Min. 23/32-inch (18-mm) T&G Wood Structural Panel. The sheets shall be installed with their long edge perpendicular to the joists with end joints centered over the top flange of joists. Floor sheathing must be installed per code requirements.
- 3) Insulation: Glass Fiber Insulation. Installed between I-joists and supported by resilient channels.
- 4) Structural Members: Min. 9-1/2 inches (241 mm) Deep I-Joists. Max. 24 inches (610 mm) on center spacing. Min. flange thickness of 1-1/2 inches (38 mm) and each flange area of at least 2.25 inches² (1,452 mm²). Min. web thickness of 3/8 inch (9.5 mm).
- 5) Resilient Channels: Min. 0.019-inch (0.5-mm) Galvanized Resilient Channels. Attached perpendicular to the bottom flange of the I-joist with 1-1/4 inch (32-mm) Type S drywall screws. Channels are spaced a max. of 16 inches (406 mm) on center (24 inches or 610 mm when I-joists are spaced a max. of 16 inches or 406 mm on center), are doubled at each base layer wallboard end joint, and extend to the next joist beyond each joint.
- 6) Ceiling: Two layers of 1/2-inch (13-mm) Type X Gypsum Wallboard.
 - a) Base Layer: Install with long dimension perpendicular to resilient channels. Attach to the resilient channels using 1-1/4 inch (32-mm) Type S drywall screws at 12 inches (305 mm) on center. The end joints of the wallboard must be staggered.
 - b) Face Layer: Install with long dimension perpendicular to resilient channels. Attach to the resilient channels through the base layer using 1-5/8-inch (41-mm) Type S drywall screws spaced at 12 inches (305 mm) on center. The longitudinal joints of this layer must be offset 24 inches (610 mm) from those of the base layer. Additionally, face layer end joints are attached to the base layer with 1-1/2-inch (38-mm) Type G drywall screws at 8 inches (203 mm) on center placed 1-1/2 inches (38 mm) either side of the joint.
 - c) Finish: The face layer joints must be covered with tape and coated with joint compound. Screw heads must also be covered with joint compound.

B. SOUND RATING^(a)

Components	STC	IIC
Base Assembly with cushioned vinyl	59	50
Base Assembly with Carpet and Padding	55	68
Base Assembly with cushioned vinyl, Gypsum Concrete	65	51
Base Assembly with Carpet and Padding, Gypsum Concrete	63	65

^(a) Sound ratings from the American Wood Council publication Design for Code Acceptance (DCA) 3. Available from www.awc.org/publications/DCA/DCA3/DCA3.pdf.

C. SIMILAR ASSEMBLIES

- 1) 2015/2018 IBC Table 721.1(3) Item 30-1.1 and DCA 3 WIJ-1.7

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

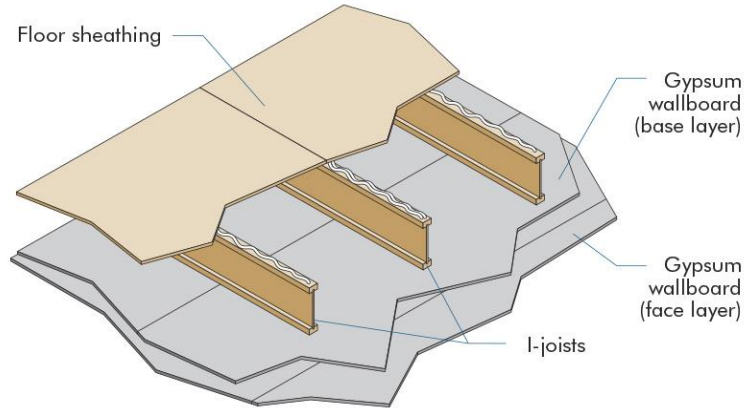
REPRESENTING THE ENGINEERED WOOD INDUSTRY



Pacific Woodtech Assembly PWC1.8

One-Hour Fire Resistance Rated Floor/Ceiling Assembly*

This fire resistance design is listed in accordance with the International Building Code (IBC)
PWI-30, PWI-50, PWI-70, PWI-77, PWI-77w, and PWI-90 I-Joists



A. BASIC ASSEMBLIES

- 1) Floor Topping (Optional): Varies (reference sound ratings if applicable).
- 2) Floor Sheathing: Min. 23/32-inch (18-mm) T&G Wood Structural Panel. The sheets shall be installed with their long edge perpendicular to the joists with end joints centered over the top flange of joists. Floor sheathing must be installed per code requirements.
- 3) Structural Members: Min. 9-1/4 inches (235 mm) Deep I-Joists. Max. 24 inches (610 mm) on center spacing. Min. flange thickness of 1-1/2 inches (38 mm) and each flange area of at least 2.25 inches² (1,452 mm²). Min. web thickness of 3/8 inch (9.5 mm).
- 4) Ceiling: Two layers of 1/2-inch (13-mm) Type X Gypsum Wallboard.
 - a) Base Layer: Install with long dimension perpendicular to joist length. Attach to the bottom flange of the joists using 1-5/8-inch (41-mm) Type S drywall screws at 12 inches (305 mm) on center. The end joints of the wallboard must be centered on the bottom flange of the joist and must be staggered the equivalent of two joist spacings with those of adjacent sheets.
 - b) Face Layer: Install with long dimension perpendicular to joist length. Attach to the bottom flange of the joists through the base layer using 2-inch (51-mm) Type S drywall screws spaced at 12 inches (305 mm) on center on intermediate joists and 8 inches (203 mm) on center at end joints. Face layer end joint must not occur on the same joist as base layer end joints. The longitudinal joints of this layer must be offset 24 inches (610 mm) from those of the base layer. Additionally, face layer end joints are attached to the base layer with 1-1/2-inch (38-mm) Type G drywall screws at 8 inches (203 mm) on center placed 6 inches (152 mm) either side of the joint.
 - c) Finish: The face layer joints must be covered with tape and coated with joint compound. Screw heads must also be covered with joint compound.

B. SOUND RATING

Information not available.

C. SIMILAR ASSEMBLIES

- 1) 2012/2015/2018 IBC Table 721.1(3) Item 26-1.1

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

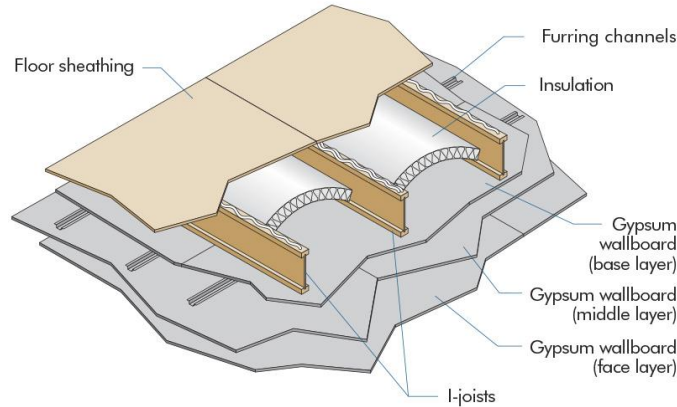
REPRESENTING THE ENGINEERED WOOD INDUSTRY



Pacific Woodtech Assembly PWC2.1

Two-Hour Fire Resistance Rated Floor/Ceiling Assembly*

This fire resistance design is listed in accordance with the International Building Code (IBC) and American Wood Council's Design for Code Acceptance (DCA) 3
PWI-30, PWI-50, PWI-70, PWI-77, PWI-77w, and PWI-90 I-Joists



A. BASIC ASSEMBLIES

- 1) Floor Topping (Optional): Varies (reference sound ratings if applicable).
- 2) Floor Sheathing: Min. 23/32-inch (18-mm) T&G Wood Structural Panel. The sheets shall be installed with their long edge perpendicular to the joists with end joints centered over the top flange of joists. Floor sheathing must be installed per code requirements.
- 3) Insulation: 3-1/2-inch (89-mm) Unfaced Glass Fiber Insulation. Friction fitted between I-joists and supported by stay wires spaced 12 inches (305 mm) on center along the top of the I-joint bottom flange.
- 4) Structural Members: Min. 9-1/4 inches (235 mm) Deep I-Joists. Max. 24 inches (610 mm) on center spacing. Min. flange thickness of 1-1/2 inches (38 mm) and each flange area of at least 2.25 inches² (1,452 mm²). Min. web thickness of 3/8 inch (9.5 mm).
- 5) Furring Channels: Min. 0.0179-inch (0.45-mm) Hat Shaped Galvanized Steel Channels attached perpendicular to the bottom flange of the I-joint with 1-5/8-inch (41-mm) Type S drywall screws penetrating through the wallboard base layer into each I-joint flange. Channels are spaced a max. of 16 inches (406 mm) on center, are doubled at each base layer wallboard end joint, and extend to the next joist beyond each joint.
- 6) Ceiling: Three layers of 5/8-inch (16-mm) Type C Gypsum Wallboard.
 - a) Base Layer: Install with long dimension perpendicular to joist length. Attach to the bottom flange of the joists using 1-5/8-inch (41-mm) Type S drywall screws at 12 inches (305 mm) on center. The end joints of the wallboard must be centered on the bottom flange of the I-joint and must be staggered.
 - b) Middle Layer: Attached to furring channels using 1-inch (25-mm) Type S drywall screws at 12 inches (305 mm) on center with the long dimension perpendicular to furring channels. End joints must be staggered from end joints of adjacent sheets and end joints on the face layer.
 - c) Face Layer: Attached to furring channels through the middle layer using 1-5/8-inch (41-mm) Type S drywall screws spaced at 8 inches (203 mm) on center with long dimension perpendicular to furring channel. End joints must be staggered from end joints of adjacent sheets and staggered from end joints on the middle layer. Edge joints (long dimension) must be offset 24 inches (610 mm) from those of the middle layer.
 - d) Finish: The face layer joints must be covered with tape and coated with joint compound. Screw heads must also be covered with joint compound.

B. SOUND RATING^(a)

Components	STC	IIC
Base Assembly with Carpet and Padding	49	54
Base Assembly with cushioned vinyl, Gypsum Concrete	58	45
Base Assembly with Carpet and Padding, Gypsum Concrete	58	64

^(a) Sound ratings from the American Wood Council publication Design for Code Acceptance (DCA) 3. Available from www.awc.org/publications/DCA/DCA3/DCA3.pdf.

C. SIMILAR ASSEMBLIES

- 1) 2012/2015/2018 IBC Table 721.1(3) Item 28-1.1, and DCA 3 WIJ-2.1

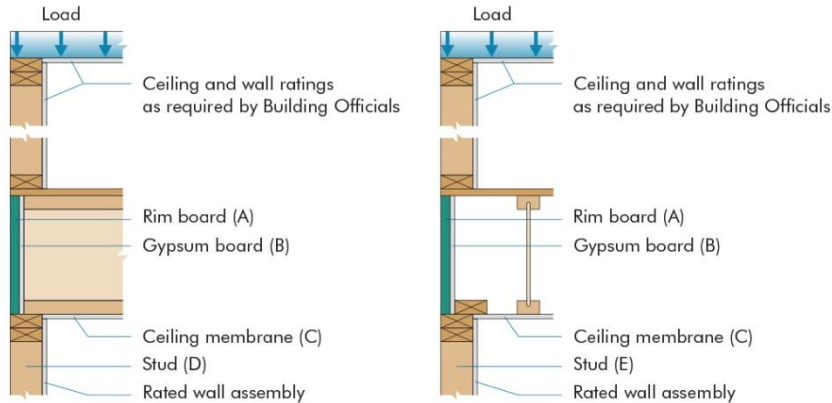
* This assembly may also be used in a fire-rated roof/ceiling assembly, but only when constructed exactly as described.

REPRESENTING THE ENGINEERED WOOD INDUSTRY



Pacific Woodtech Assembly RB1
Fire Resistance Rated Rim Board Assembly

This fire resistance design is listed in accordance with ASTM E119 and CAN/ULC S101



End Wall Configuration Base Assembly

Rim Board Thickness, in.	Rim Board Protection	Ceiling Membrane Req. for 1-hr. Rim Assembly	Ceiling Membrane Req. for 2-hr. Rim Assembly	Stud Size	Stud Size
A	B	C		D	E
1-1/4	Unprotected	1-hour Fire-rated Assembly	2-hour Fire-rated Assembly	2x4	2x4
	(1) 1/2" Type X	5/8" Type X	2-hour Fire-rated Assembly	2x4	2x4
	(1) 5/8" Type X	1/2" Type X	90-min Fire-rated Assembly	2x6	2x4
	(2) 1/2" Type X	No Ceiling Required	1-hour Fire-rated Assembly	2x6	2x4
	(2) 5/8" Type X	No Ceiling Required	5/8" Type X	2x6	2x4

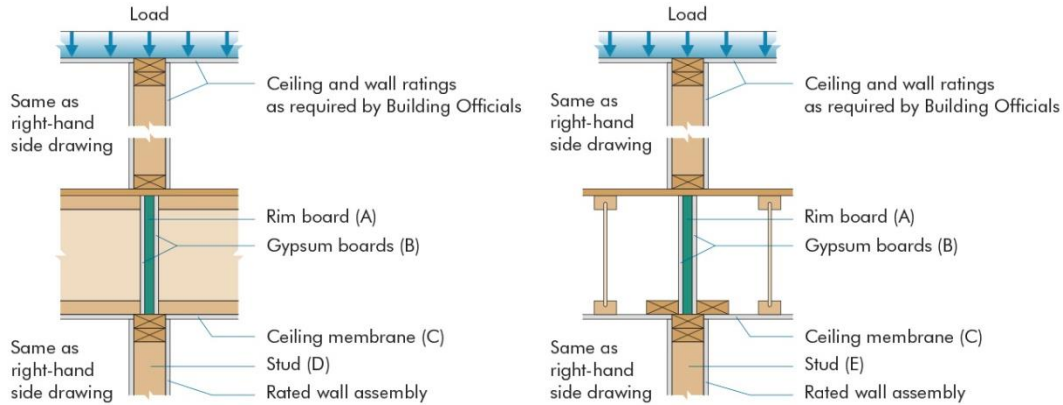
- 1) Rim assembly for fire from inside of structure.
- 2) Gypsum wallboard shown on the ceiling is to protect the Rim Board only. It does not necessarily cause the floor assembly to be rated.
- 3) Attach 1-layer Type X (1/2 or 5/8-inch) gypsum wallboard to Rim Board with 1-1/2-inch Type W drywall screws spaced 12 inches o.c.
- 4) Attach 2-layer Type X (1/2 or 5/8-inch) gypsum wallboards to Rim Board with 2-inch Type W drywall screws spaced 12 inches o.c.
- 5) Provide min. 1-3/4-inch bearing for I-joint.
- 6) Use only fire rated gypsum wallboard. Type C may be substituted for Type X.
- 7) Rim Board and gypsum wallboard thickness are shown as minimums. Thicker Rim Board and gypsum wallboard may be substituted.
- 8) When 2-layer gypsum wallboards are used, I-joint end nails shall be 16d box (0.135 inch x 3-1/2 inches) nails.
- 9) Rim board needs to be sized for vertical and lateral loads.
- 10) Stud size may be reduced if the gypsum protection is discontinuous, provided that other requirements in the code are satisfied.

REPRESENTING THE ENGINEERED WOOD INDUSTRY



**Pacific Woodtech Assembly RB2
Fire Resistance Rated Rim Board Assembly**

This fire resistance design is listed in accordance with ASTM E119 and CAN/ULC S101



Single Wall Configuration Base Assembly

Rim Board Thickness, in.	Rim Board Protection	Ceiling Membrane Req. for 1-hr. Rim Assembly	Ceiling Membrane Req. for 2-hr. Rim Assembly	Stud Size	Stud Size
A	B	C	C	D	E
1-1/4	Unprotected	5/8" Type X	2-hour Fire-rated Assembly	2x6	2x4
	(1) 1/2" Type X	1/2" Regular	90-min Fire-rated Assembly	2x8	2x6
	(1) 5/8" Type X	1/2" Regular	90-min Fire-rated Assembly	2x8	2x6
	(2) 1/2" Type X	No Ceiling Required	1/2" Type X	2x8	2x6
	(2) 5/8" Type X	No Ceiling Required	1/2" Regular	2x8	2x6

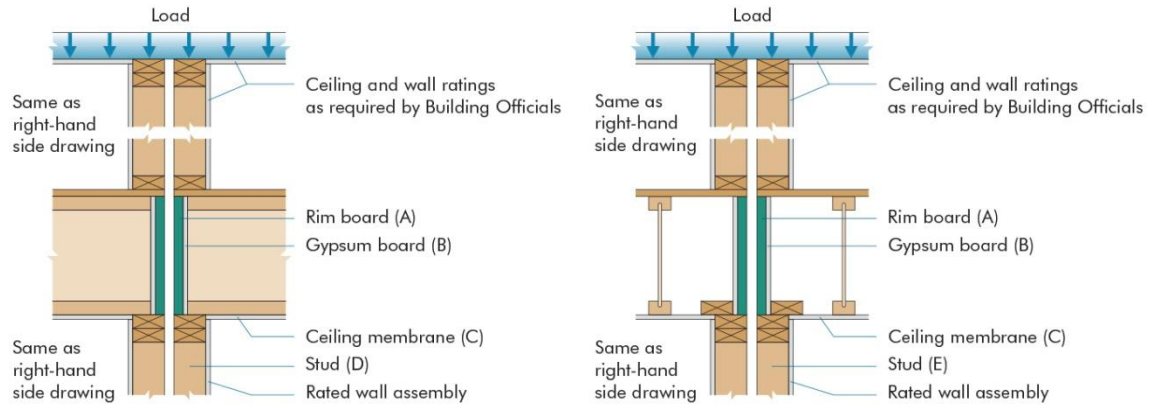
- 1) Rim assembly for fire from either side of wall.
- 2) Gypsum wallboard shown on the ceiling is to protect the Rim Board only. It does not necessarily cause the floor assembly to be rated.
- 3) Attach 1-layer Type X (1/2 or 5/8-inch) gypsum wallboard to Rim Board with 1-1/2-inch Type W drywall screws spaced 12 inches o.c.
- 4) Attach 2-layer Type X (1/2 or 5/8-inch) gypsum wallboards to Rim Board with 2-inch Type W drywall screws spaced 12 inches o.c.
- 5) Provide min. 1-3/4-inch bearing for I-joint.
- 6) Use only fire rated gypsum wallboard. Type C may be substituted for Type X.
- 7) Rim Board and gypsum wallboard thickness are shown as minimums. Thicker Rim Board and gypsum wallboard may be substituted.
- 8) Toe nailing from the I-joint flange to the rim is permitted. When 2-layer (or more) gypsum wallboards are used, I-joint end nails shall be 16d box (0.135 inch x 3-1/2 inches) nails.
- 9) Rim board needs to be sized for vertical and lateral loads.
- 10) Stud size may be reduced if the gypsum protection is discontinuous, provided that other requirements in the code are satisfied.

REPRESENTING THE ENGINEERED WOOD INDUSTRY



**Pacific Woodtech Assembly RB3
Fire Resistance Rated Rim Board Assembly**

This fire resistance design is listed in accordance with ASTM E119 and CAN/ULC S101



Double Wall Configuration with Load Transfer Base Assembly

Rim Board Thickness, in.	Rim Board Protection	Ceiling Membrane Req. for 1-hr. Rim Assembly	Ceiling Membrane Req. for 2-hr. Rim Assembly	Stud Size	Stud Size
A	B	C	C	D	E
1-1/4	Unprotected	1/2" Regular	90 min Fire-rated Assembly	2x4	2x4
	(1) 1/2" Type X	No Ceiling Required	45-min Fire-rated Assembly	2x4	2x4
	(1) 5/8" Type X	No Ceiling Required	5/8" Regular	2x6	2x4
	(2) 1/2" Type X	No Ceiling Required	No Ceiling Required	2x6	2x4
	(2) 5/8" Type X	No Ceiling Required	No Ceiling Required	2x6	2x4

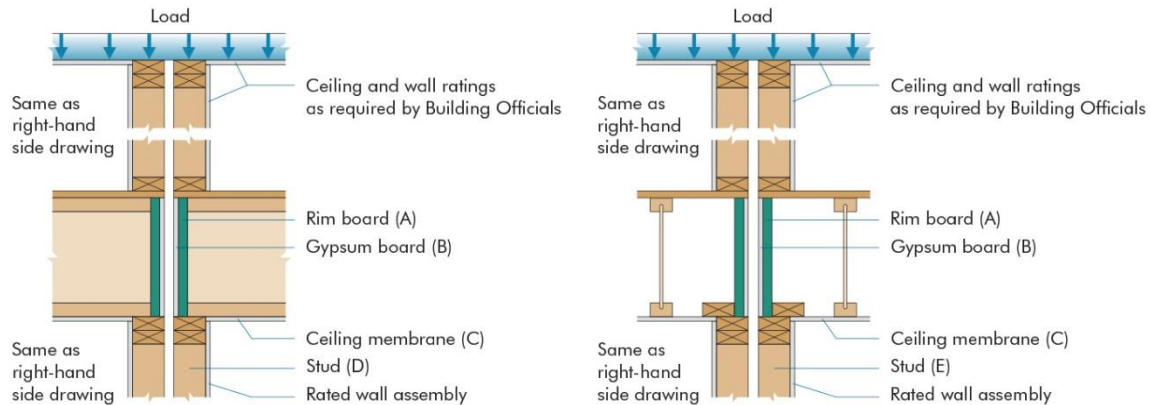
- 1) Rim assembly for fire from either side of wall. "With load transfer" assumes load transfers to the adjacent rim board if the fire exposed rim board fails.
- 2) Gypsum wallboard shown on the ceiling is to protect the Rim Board only. It does not necessarily cause the floor assembly to be rated.
- 3) Attach 1-layer Type X (1/2 or 5/8-inch) gypsum wallboard to Rim Board with 1-1/2-inch Type W drywall screws spaced 12 inches o.c.
- 4) Attach 2-layer Type X (1/2 or 5/8-inch) gypsum wallboards to Rim Board with 2-inch Type W drywall screws spaced 12 inches o.c.
- 5) Provide min. 1-3/4-inch bearing for I-joist.
- 6) Use only fire rated gypsum wallboard. Type C may be substituted for Type X.
- 7) Rim Board and gypsum wallboard thickness are shown as minimums. Thicker Rim Board and gypsum wallboard may be substituted.
- 8) Toe nailing from the I-joist flange to the rim is permitted. When 2-layer gypsum wallboards are used, I-joist end nails shall be 16d box (0.135 inch x 3-1/2 inches) nails.
- 9) Rim board needs to be sized for vertical and lateral loads.
- 10) Stud size may be reduced if the gypsum protection is discontinuous, provided that other requirements in the code are satisfied.

REPRESENTING THE ENGINEERED WOOD INDUSTRY



**Pacific Woodtech Assembly RB4
Fire Resistance Rated Rim Board Assembly**

This fire resistance design is listed in accordance with ASTM E119 and CAN/ULC S101



Double Wall Configuration with Load Transfer Base Assembly

Rim Board Thickness, in.	Rim Board Protection	Ceiling Membrane Req. for 1-hr. Rim Assembly	Ceiling Membrane Req. for 2-hr. Rim Assembly	Stud Size	Stud Size
A	B	C	C	D	E
1-1/4	Unprotected	1/2" Regular	90 min Fire-rated Assembly	2x4	2x4
	(1) 1/2" Type X	No Ceiling Required	1-hour Fire-rated Assembly	2x4	2x4
	(1) 5/8" Type X	No Ceiling Required	45-min Fire-rated Assembly	2x6	2x4
	(2) 1/2" Type X	No Ceiling Required	1/2" Regular	2x6	2x4
	(2) 5/8" Type X	No Ceiling Required	No Ceiling Required	2x6	2x4

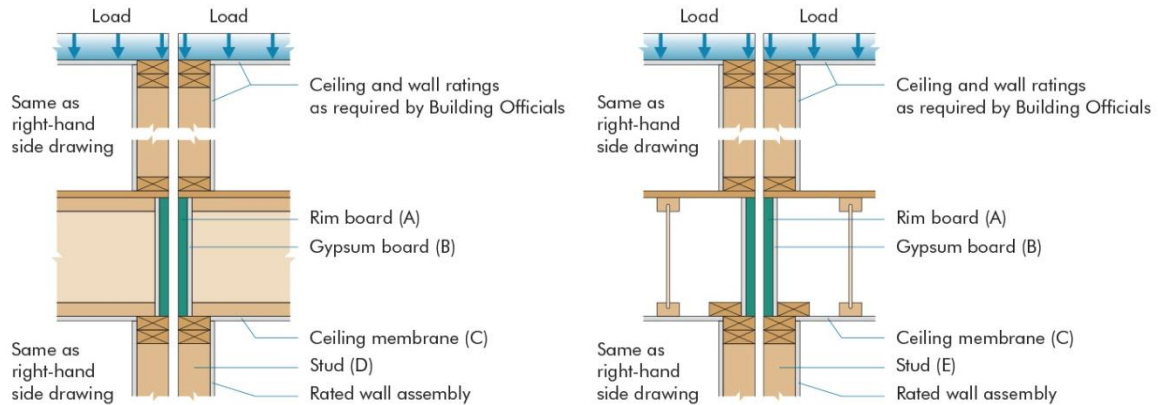
- 1) Rim assembly for fire from either side of wall. "With load transfer" assumes load transfers to the adjacent rim board if the fire exposed rim board fails.
- 2) Gypsum wallboard shown on the ceiling is to protect the Rim Board only. It does not necessarily cause the floor assembly to be rated.
- 3) Attach 1-layer Type X (1/2 or 5/8-inch) gypsum wallboard to Rim Board with 1-1/2-inch Type W drywall screws spaced 12 inches o.c.
- 4) Attach 2-layer Type X (1/2 or 5/8-inch) gypsum wallboards to Rim Board with 2-inch Type W drywall screws spaced 12 inches o.c.
- 5) Provide min. 1-3/4-inch bearing for I-joist.
- 6) Use only fire rated gypsum wallboard. Type C may be substituted for Type X.
- 7) Rim Board and gypsum wallboard thickness are shown as minimums. Thicker Rim Board and gypsum wallboard may be substituted.
- 8) Toe nailing from the I-joist flange to the rim is permitted. When 2-layer gypsum wallboards are used, I-joist end nails shall be 16d box (0.135 inch x 3-1/2 inches) nails.
- 9) Rim board needs to be sized for vertical and lateral loads.
- 10) Stud size may be reduced if the gypsum protection is discontinuous, provided that other requirements in the code are satisfied.

REPRESENTING THE ENGINEERED WOOD INDUSTRY



Pacific Woodtech Assembly RB5
Fire Resistance Rated Rim Board Assembly

This fire resistance design is listed in accordance with ASTM E119 and CAN/ULC S101



Double Wall Configuration with No Load Transfer Base Assembly

Rim Board Thickness, in.	Rim Board Protection	Ceiling Membrane Req. for 1-hr. Rim Assembly	Ceiling Membrane Req. for 2-hr. Rim Assembly	Stud Size	Stud Size
A	B	C	C	D	E
1-1/4	Unprotected	5/8" Type X	2-hour Fire-rated Assembly	2x4	2x4
	(1) 1/2" Type X	1/2" Regular	90-min Fire-rated Assembly	2x4	2x4
	(1) 5/8" Type X	1/2" Regular	90-min Fire-rated Assembly	2x6	2x4
	(2) 1/2" Type X	No Ceiling Required	5/8" Regular	2x6	2x4
	(2) 5/8" Type X	No Ceiling Required	1/2" Regular	2x6	2x4

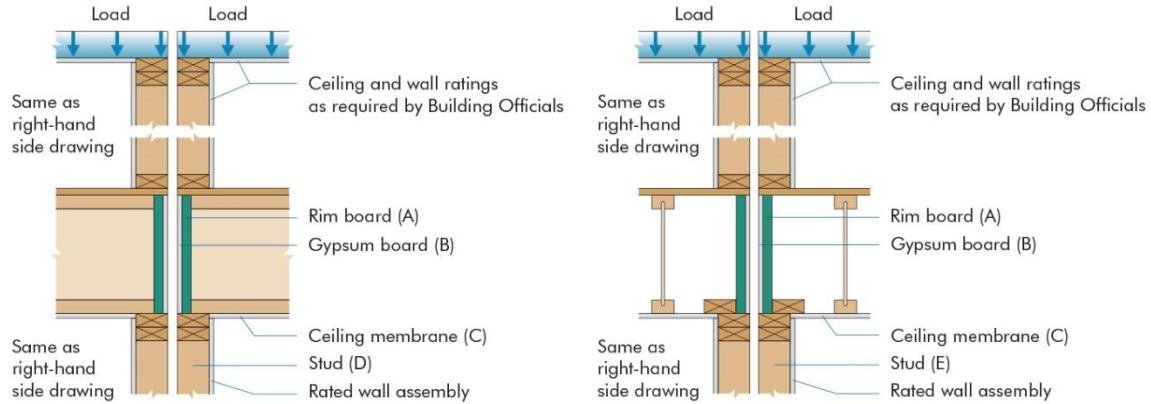
- 1) Rim assembly for fire from either side of wall. "With no load transfer" assumes no load transfers to the adjacent rim board if the fire exposed rim board fails.
- 2) Gypsum wallboard shown on the ceiling is to protect the Rim Board only. It does not necessarily cause the floor assembly to be rated.
- 3) Attach 1-layer Type X (1/2 or 5/8-inch) gypsum wallboard to Rim Board with 1-1/2-inch Type W drywall screws spaced 12 inches o.c.
- 4) Attach 2-layer Type X (1/2 or 5/8-inch) gypsum wallboards to Rim Board with 2-inch Type W drywall screws spaced 12 inches o.c.
- 5) Provide min. 1-3/4-inch bearing for I-joist.
- 6) Use only fire rated gypsum wallboard. Type C may be substituted for Type X.
- 7) Rim Board and gypsum wallboard thickness are shown as minimums. Thicker Rim Board and gypsum wallboard may be substituted.
- 8) Toe nailing from the I-joist flange to the rim is permitted. When 2 layer gypsum wallboards are used, I-joist end nails shall be 16d box (0.135 inch x 3-1/2 inches) nails.
- 9) Rim board needs to be sized for vertical and lateral loads.
- 10) Stud size may be reduced if the gypsum protection is discontinuous, provided that other requirements in the code are satisfied.

REPRESENTING THE ENGINEERED WOOD INDUSTRY



**Pacific Woodtech Assembly RB6
Fire Resistance Rated Rim Board Assembly**

This fire resistance design is listed in accordance with ASTM E119 and CAN/ULC S101



Double Wall Configuration with No Load Transfer Base Assembly

Rim Board Thickness, in.	Rim Board Protection	Ceiling Membrane Req. for 1-hr. Rim Assembly	Ceiling Membrane Req. for 2-hr. Rim Assembly	Stud Size	Stud Size
A	B	C	C	D	E
1-1/4	Unprotected	5/8" Type X	2-hour Fire-rated Assembly	2x4	2x4
	(1) 1/2" Type X	1/2" Regular	90-min Fire-rated Assembly	2x4	2x4
	(1) 5/8" Type X	No Ceiling Required	1-hour Fire-rated Assembly	2x6	2x4
	(2) 1/2" Type X	No Ceiling Required	1/2" Type X	2x6	2x4
	(2) 5/8" Type X	No Ceiling Required	1/2" Regular	2x6	2x4

- 1) Rim assembly for fire from either side of wall. "With no load transfer" assumes no load transfers to the adjacent rim board if the fire exposed rim board fails.
- 2) Gypsum wallboard shown on the ceiling is to protect the Rim Board only. It does not necessarily cause the floor assembly to be rated.
- 3) Attach 1-layer Type X (1/2 or 5/8-inch) gypsum wallboard to Rim Board with 1-1/2-inch Type W drywall screws spaced 12 inches o.c.
- 4) Attach 2-layer Type X (1/2 or 5/8-inch) gypsum wallboards to Rim Board with 2-inch Type W drywall screws spaced 12 inches o.c.
- 5) Provide min. 1-3/4-inch bearing for I-joist.
- 6) Use only fire rated gypsum wallboard. Type C may be substituted for Type X.
- 7) Rim Board and gypsum wallboard thickness are shown as minimums. Thicker Rim Board and gypsum wallboard may be substituted.
- 8) Toe nailing from the I-joist flange to the rim is permitted. When 2-layer gypsum wallboards are used, I-joist end nails shall be 16d box (0.135 inch x 3-1/2 inches) nails.
- 9) Rim board needs to be sized for vertical and lateral load.
- 10) Stud size may be reduced if the gypsum protection is discontinuous, provided that other requirements in the code are satisfied.

REPRESENTING THE ENGINEERED WOOD INDUSTRY

APA – The Engineered Wood Association is an approved national standards developer accredited by American National Standards Institute (ANSI). APA publishes ANSI standards and Voluntary Product Standards for wood structural panels and engineered wood products. APA is an accredited certification body under ISO/IEC 17065 by Standards Council of Canada (SCC), an accredited inspection agency under ISO/IEC 17020 by International Code Council (ICC) International Accreditation Service (IAS), and an accredited testing organization under ISO/IEC 17025 by IAS. APA is also an approved Product Certification Agency, Testing Laboratory, Quality Assurance Entity, and Validation Entity by the State of Florida, and an approved testing laboratory by City of Los Angeles.

**APA – THE ENGINEERED WOOD ASSOCIATION
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