LISTING INFORMATION OF

Pinkwood Ltd. PKI-Joist Series

SPEC ID: 34689

Pinkwood Ltd.
5929 6th Street NE
Calgary, AB T2K 5R5
Canada

LISTING INFORMATION

PKI I-Joist Series is a pre-fabricated joist consisting of dimensional or finger joint lumber for flanges and OSB web stock. For I-joists with depths ranging from 9 ½" to 16", 3/8" thick OSB web stock is used and for depths ranging from 18" to 24", 7/16" thick OSB web stock is used (except for PKI 23 – PKI 23 consists of 7/16" thick OSB web). The specific Product Descriptions are presented in the tables below:

Product name	Depth	Lumber grade
PKI 10	9 ½"	Enhanced/Ripped 2x6 no. 2 Structural, SPF Ripped 2x6 1650 1.5E MSR lumber
	11 7/8"	
	14"	
PKI 15	9 ½"	2x3 no. 2 SPF
	11 7/8"	
PKI 20	9 ½"	Enhanced/Ripped 2x6 no. 2 Structural, SPF Ripped 2x6 1650 1.5E MSR lumber
	11 7/8"	
	14"	
	16"	
PKI 23	9 ½"	Enhanced/Ripped 2x6 2100 MSR 1.8E, SPF
	11 7/8"	
	14"	
	16"	
PKI 35 Plus	9 ½"	Enhanced/Ripped 2x8 No. 2 structural, SPF
	11 7/8"	
	14"	
	16"	
PKI 40	9 ½"	Enhanced 2x4 2100 MSR 1.8E, SPF
	11 7/8"	
	14"	
	16"	
	18"	
	20"	
	22"	
	24"	
PKI-50	11 7/8"	ENHANCED 2X4 2400 MSR 2.0E, SPF
	14"	
	16"	
	18"	
	20"	
	22"	
	24"	

FRA and FRB I-Joist Series are PKI series joists with factory applied intumescent coating. The specific Product Descriptions are presented in the tables below:

Product name	Depth	Lumber grade
FRA & FRB 10	9 ½"	Enhanced/Ripped 2x6 no. 2 Structural, SPF Ripped 2x6 1650 1.5E MSR lumber
	11 7/8"	
	14"	

FRA & FRB 20	**9 ½”**	**Enhanced/Ripped 2x6 no. 2 Structural, SPF Ripped 2x6 1650 1.5E MSR lumber**
	11 7/8”	
	14”	
	16”	
FRA & FRB 23	**9 ½”**	**Enhanced/Ripped 2x6 2100 MSR 1.8E, SPF**
	11 7/8”	
	14”	
	16”	
FRA & FRB 35 Plus	**9 ½”**	**Enhanced/Ripped 2x8 No. 2 structural, SPF**
	11 7/8”	
	14”	
	16”	
FRA & FRB 40	**9 ½”**	**Enhanced 2x4 2100 MSR 1.8E, SPF**
	11 7/8”	
	14”	
	16”	
	18”	
	20“	
	22"	
	24“	
FRA & FRB 50	**11 7/8"**	**ENHANCED 2X4 2400 MSR 2.0E, SPF**
	14”	
	16”	
	18”	
	20“	
	22"	
	24“	

Allowable Stress Design of PKI I-Joists

Standard	Joist Series	Joist Depth (in.)Series	Bending Stiffness (10^6 lbf-in.^{2})	Moment Capacity (lbf-ft)	Shear Capacity (lbf)	Uniform Vertical Load Capacity (lbf/ft)	Coefficient of Shear Deflection (10^6 lbf)
ASTM D5055	**PKI 10**	9-1/2	168	2365	1260	2000	4.94
		11-7/8	286	3100	1485	2000	6.18
		14	420	3720	1680	2000	7.28
	PKI 15	9-1/2	136	2320	970	2000	4.50
		11-7/8	243	2850	1070	2000	5.64
	PKI 20	9-1/2	193	2810	1260	2000	4.94
		11-7/8	327	3755	1485	2000	6.18
		14	479	4405	1680	2000	7.28
		16	652	5060	1870	2000	8.32
	PKI 23	9-1/2	208	3330	1585	2000	4.94
		11-7/8	352	4320	1805	2000	6.18
		14	515	5200	2005	2000	7.28
		16	700	6030	2190	2000	8.32

	PKI 35 PLUS	9-1/2	234	3395	1260	2000	4.94
		11-7/8	396	4395	1485	2000	6.18
		14	580	5270	1680	2000	7.28
		16	787	5990	1870	2000	8.32
	PKI 40	9-1/2	328	5390	1340	2000	4.94
		11-7/8	553	6970	1625	2000	6.18
		14	807	8395	1875	2000	7.28
		16	1092	9730	2115	2000	8.32
		18	1421	11005	2535	1800	9.36
		20	1799	12175	2680	1600	10.40
		22	2224	13335	2815	1300	11.44
		24	2698	14480	2945	1100	12.48
	PKI 50	11-7/8	565	7955	2135	2000	6.18
		14	824	9200	2280	2000	7.28
		16	1115	10655	2415	2000	8.32
		18	1453	12770	2535	1800	9.36
		20	1839	14175	2680	1600	10.40
		22	2273	14590	2815	1300	11.44
		24	2757	15845	2945	1100	12.48

Reaction Capacities (Allowable Stress Design) for PKI I-Joists

Standard	**Joist Series**	**Joist Depth (in.)**	**End Reaction (lbf)**				**Intermediate Reaction (lbf)**				**Flange Bearing Capacity (lbf/in.)**
			1-1/2 in. or 2-1/2 in. Brg. Length		**3-1/2 in. or 4 in. Brg. Length**		**3-1/2 in. Brg. Length**		**5-1/2 in. Brg. Length**		
			Without Brg. Stiffeners	**With Brg. Stiffeners**	**Without Brg. Stiffeners**	**With Brg. Stiffeners**	**Without Brg. Stiffeners**	**With Brg. Stiffeners**	**Without Brg. Stiffeners**	**With Brg. Stiffeners**	
ASTM D5055	PKI 10	9-1/2	900	1140	1110	1260	2195	2280	2450	2520	955
		11-7/8	900	1275	1160	1485	2195	2485	2525	2810	
		14	900	1395	1200	1680	2195	2665	2585	2960	
	PKI 15	9-1/2	960	-	970	-	1940	-	1940	-	530
		11-7/8	960	-	1070	-	2000	-	2140	-	
	PKI 20	9-1/2	970	1140	1110	1260	2195	2375	2450	2635	955
		11-7/8	970	1275	1160	1485	2330	2525	2595	2830	
		14	970	1395	1200	1680	2455	2665	2725	3005	
		16	970	1510	1240	1870	2570	2795	2850	3175	
	PKI 23	9-1/2	1050	1430	1350	1500	2410	2770	2850	3210	1180
		11-7/8	1050	1470	1435	1680	2410	2770	2850	3280	
		14	1050	1505	1485	1845	2410	2770	2850	3340	
		16	1050	1540	1500	2000	2410	2770	2850	3400	
	PKI 35 PLUS	9-1/2	900	1140	1110	1260	2195	2280	2450	2520	1380
		11-7/8	900	1275	1160	1485	2195	2485	2525	2810	
		14	900	1395	1200	1680	2195	2665	2585	2960	
		16	900	1510	1240	1865	2195	2880	2645	3105	

PKI 40	9-1/2	1185	1340	1305	1340	2900	3095	2940	3195	1705
	11-7/8	1245	1510	1595	1625	3025	3340	3120	3515	
	14	1295	1660	1595	1875	3085	3565	3280	3805	
	16	1310	1800	1595	2115	3145	3775	3435	4080	
	18	1310	2060	1680	2550	2850	4285	3435	4970	
	20	1310	2185	1680	2640	2850	4410	3435	4970	
	22	1310	2310	1680	2735	2850	4530	3435	4970	
	24	1310	2440	1680	2830	2850	4640	3435	4970	
PKI 50	11-7/8	1245	1510	1595	1625	3025	3340	3120	3515	1995
	14	1280	1660	1595	1875	3085	3565	3280	3805	
	16	1295	1800	1595	2115	3145	3775	3435	4080	
	18	1310	2060	1680	2550	2850	4285	3435	4970	
	20	1310	2185	1680	2640	2850	4410	3435	4970	
	22	1310	2310	1680	2735	2850	4530	3435	4970	
	24	1310	2440	1680	2830	2850	4640	3435	4970	

FIRE RESISTANCE RATINGS

Standard	Rating	Design Number
ASTM E119 CAN/ULC S101	45-Minute	PWL/SFSW 45-01
	60-Minute	PWL/SFSW 60-01
	60-Minute	PWL/SFSW 60-02
	60-Minute	PWL/SFSW 60-03
	60-Minute	PWL/SFSW 60-04
	90-Minute	PWL/SFSW 90-01
	120-Minute	PWL/SFSW 120-01

QUALITY ASSURANCE

This specification confirms the products are manufactured under a program of follow-up inspections conducted by Intertek. The inspections verify the products are manufactured in a manner consistent with the submitted quality system documentation. Pinkwood's WEBShield panel is also under Intertek's follow-up inspections:

Product	Evaluation Report
WEBShield Panel	IAPMO ER-0431 IAPMO ER-0653

Attribute	Value
Criteria	CAN / ULC S101 (2007)
Criteria	ASTM E119 (2012a)
Criteria	ASTM D5055 (2012)
Criteria	ASTM D5055 (2016)
CSI Code	06 17 33 Wood I-Joists

Intertek Services	Certification
Intertek Services	Quality Assurance
Listed or Inspected	LISTED
Listing Section	PREFABRICATED JOISTS
Spec ID	34689

DRAWING INDEX

PWL/SFSW 45-01

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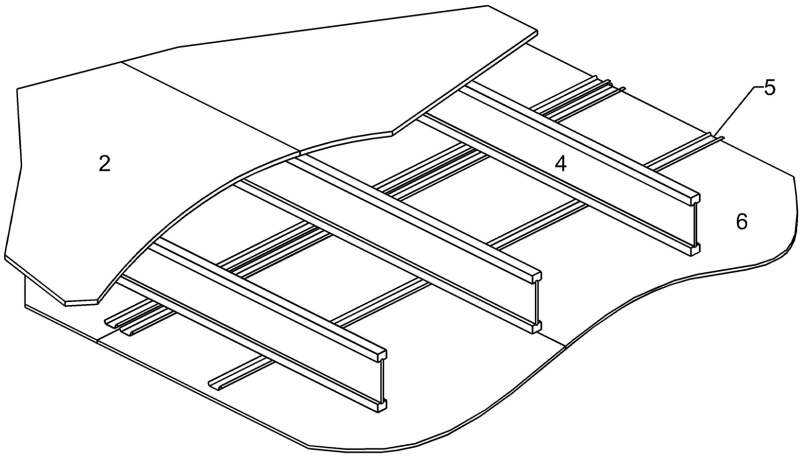
Division 06 – Wood, Plastics, and Composites
06 17 00 Shop Fabricated Structural Wood
06 17 33 Wood I-Joists

Pinkwood Ltd.
Design Number PWL/SFSW 45-01
FRA, FRB, and UNCOATED PKI 10, PKI 15, PKI 20, PKI 23, PKI 35 PLUS, PKI 40, and PKI 50 I-JOIST SERIES
Load Bearing Fire Resistance Rated Roof/Ceiling, Floor/Ceiling Assembly
ASTM E119 and CAN/ULC S101
Rating: 3/4 Hour



1. **FLOOR TOPPING:** (Optional, Not Shown) Gypsum concrete, lightweight or normal concrete topping. When used as a roof assembly, materials for a built-up roof covering that are described in an assembly that provides a Class A, B, or C rating on combustible wood decks may be used.

2. **FLOOR SHEATHING:** Min. 5/8 in. thick wood sheathing, designed and installed per Code requirements. When used as a roof assembly, min. 1/2 in. thick wood sheathing may be used, when designed and installed per Code requirements.

3. **INSULATION:** (Optional, Not Shown) When installed, insulation shall be installed above the joist flanges and supported by stay wires spaced 12 in. on center (oc).

4. **CERTIFIED COMPANY:** Pinkwood Ltd.

   CERTIFIED PRODUCT: Wood I-Joists

   CERTIFIED MODELS: FRA, FRB, and Uncoated PKI 10, PKI 15, PKI 20, PKI 23, PKI 35 PLUS, PKI 40, and PKI 50 I-joist Series

   9-1/2 in. min. deep joists spaced a max. of 24 in. oc. Installed in accordance with the Code.

5. **RESILIENT CHANNELS:** Min. 0.019 in. thick galvanized steel resilient channel attached perpendicular to the bottom flange of the joists with one 1-5/8 in. drywall screw. Channels spaced 16 in. oc. max. Additional channels are required at gypsum board end joints so that each board is attached to a separate channel.

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Division 06 – Wood, Plastics, and Composites
06 17 00 Shop Fabricated Structural Wood
06 17 33 Wood I-Joists

These additional channels shall extend to the next joist on each side of the board end joint.

6. **GYPSUM WALLBOARD:** Min. 5/8 in. thick Type X gypsum wallboard installed with long dimension perpendicular to resilient channels and fastened to each channel with min. 1-1/8 in. long Type S drywall screws. Fasteners spaced 12 in. oc in the field of the wallboard, 8 in. oc at wallboard end joints, and 1-1/2 in. from panel edges and ends. Edge joints shall be centered on joists. End joints of wallboard staggered a min. of one channel spacing.

7. **FINISH SYSTEM:** (Not Shown) Face layer joints covered with tape and coated with joint compound. Screw heads covered with joint compound.

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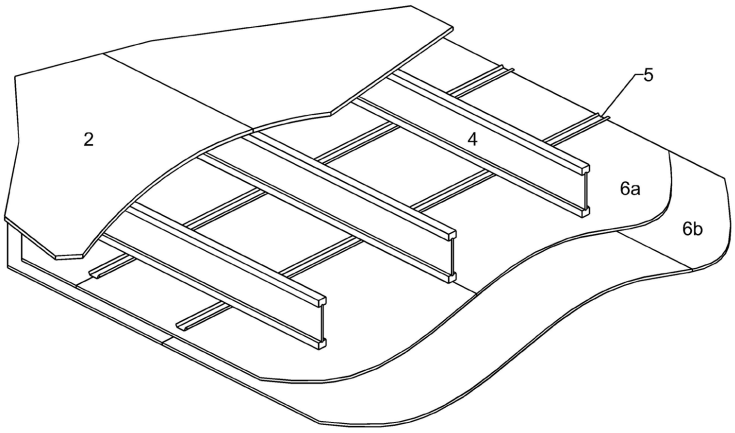
Division 06 – Wood, Plastics, and Composites
06 17 00 Shop Fabricated Structural Wood
06 17 33 Wood I-Joists

Pinkwood Ltd.
Design Number PWL/SFSW 60-01
FRA, FRB, and UNCOATED PKI 10, PKI 15, PKI 20, PKI 23, PKI 35 PLUS, PKI 40, and PKI 50 I-JOIST SERIES
Load Bearing Fire Resistance Rated Roof/Ceiling, Floor/Ceiling Assembly
ASTM E119 and CAN/ULC S101
Rating: 1 Hour (See Table 1 for STC and IIC Ratings)



1. **FLOOR TOPPING:** (Optional, Not Shown) Gypsum concrete, lightweight or normal concrete topping. When used as a roof assembly, materials for a built-up roof covering that are described in an assembly that provides a Class A, B, or C rating on combustible wood decks may be used.

2. **FLOOR SHEATHING:** Min. 5/8 in. thick wood sheathing, designed and installed per Code requirements. When used as a roof assembly, min. 1/2 in. thick wood sheathing may be used, when designed and installed per Code requirements.

3. **INSULATION:** (Optional, Not Shown) When installed, insulation shall be installed above the joist flanges and supported by stay wires spaced 12 in. on center (oc).

4. **CERTIFIED COMPANY:** Pinkwood Ltd.

   CERTIFIED PRODUCT: Wood I-Joist

   CERTIFIED MODELS: FRA, FRB, and Uncoated PKI 10, PKI 15, PKI 20, PKI 23, PKI 35 PLUS, PKI 40, and PKI 50 I-joist Series

   9-1/2 in. min. deep joists spaced a max. of 24 in. oc. Installed in accordance with the Code. The max. spacing may be increased to 48 in. oc, when the ceiling is applied to stripping spaced a max. of 24 in. oc. The stripping must be a nominal 2×4 construction-grade lumber attached to the joists bottom flange using two 10d nails.

5. **RESILIENT CHANNELS:** (Optional) Min. 0.019 in. thick galvanized steel resilient channel attached perpendicular to the bottom flange of

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Division 06 – Wood, Plastics, and Composites
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06 17 33 Wood I-Joists

the joists with one 1-1/4 in. drywall screw. Channels spaced a max. of 16 in. oc. The max. channel spacing may be increased to 24 in. oc when joists are spaced a max. of 16 in. oc.

6. **GYPSUM WALLBOARD:** Two layers of min. 1/2 in. Type X gypsum wallboard attached with the long dimension perpendicular to the resilient channels (or joists) as follows:

   6a. WALLBOARD BASE LAYER – Base layer of wallboard attached to resilient channels (or joists) using 1-1/4 in. Type S drywall screws at 12 in. oc. When resilient channels are installed, edge joints shall be centered on joists. End joints of wallboard staggered a min. of one channel (or joist) spacing.

   6b. WALLBOARD FACE LAYER – Face layer of wallboard attached to resilient channels (or joists) through base layer using 1-5/8 in. Type S drywall screws spaced 12 in. oc. Edge joints of wallboard face layer offset a distance equal to the joist spacing, from those of base layer. End joints shall be offset from base layer joints by a min. of one channel (or joist) spacing and shall be centered in-between channel (or joist) spacing. Additionally, wallboard face layer attached to base layer with 1-1/2 in. Type G drywall screws spaced 8 in. oc, placed 1-1/2 in. from face layer end joints.

7. **FINISH SYSTEM:** (Not Shown) Face layer joints covered with tape and coated with joint compound. Screw heads covered with joint compound.

Table 1 – STC and IIC Ratings

Components	STC Rating	IIC Rating	Acoustic Mat	Floor Topping	Insulation Thickness
Ceramic tile bonded with thinset adhesive	65	53	5 mm Recycled Rubber Underlayment	1 in. thick Gypsum Concrete	1-1/2 in. thick mineral wool insulation
Ceramic tile bonded with thinset adhesive	66	54	5 mm Recycled Rubber Underlayment	1-1/2 in. thick lightweight concrete	1-1/2 in. thick mineral wool insulation
Ceramic tile bonded with thinset adhesive	55	49	5 mm Recycled Rubber Underlayment	None	1-1/2 in. thick mineral wool insulation
Hardwood	65	55	2 mm Foam Underlayment	1 in. thick Gypsum Concrete	1-1/2 in. thick mineral wool insulation
Hardwood	66	56	2 mm Foam Underlayment	1-1/2 in. thick lightweight concrete	1-1/2 in. thick mineral wool insulation
Hardwood	55	47	2 mm Foam Underlayment	None	1-1/2 in. thick mineral wool insulation
Cushioned Vinyl	65	55	None	1 in. thick Gypsum Concrete	1-1/2 in. thick mineral wool insulation
Cushioned Vinyl	66	56	None	1-1/2 in. thick lightweight concrete	1-1/2 in. thick mineral wool insulation
Cushioned Vinyl	55	46	None	None	1-1/2 in. thick mineral wool insulation
Carpet with Pad	65	59	None	1 in. thick Gypsum Concrete	1-1/2 in. thick mineral wool insulation
Carpet with Pad	66	62	None	1-1/2 in. thick lightweight concrete	1-1/2 in. thick mineral wool insulation
Carpet with Pad	55	48	None	None	1-1/2 in. thick mineral wool insulation

NOTE: The STC and IIC ratings are estimated by Swallow Acoustic Consultants Ltd. The ratings apply to assemblies with 19/32 in. thick subfloor or thicker.

PWL/SFSW 60-02

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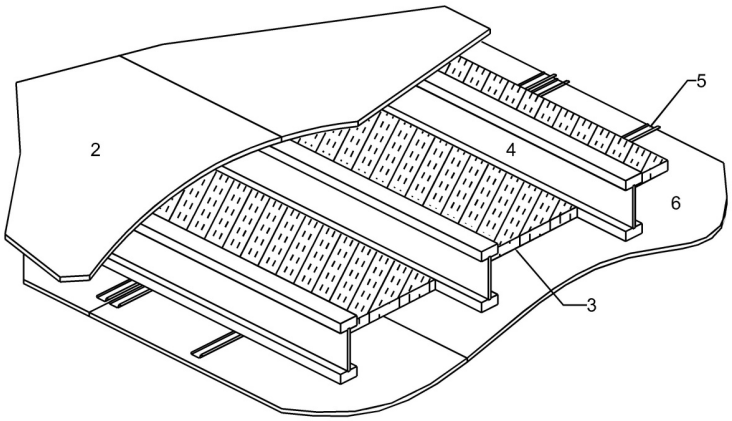
Division 06 – Wood, Plastics, and Composites
06 17 00 Shop Fabricated Structural Wood
06 17 33 Wood I-Joists

Pinkwood Ltd.
Design Number PWL/SFSW 60-02
FRA, FRB, and UNCOATED PKI 15, PKI 35 PLUS, PKI 40, and PKI 50 I-JOIST SERIES
Load Bearing Fire Resistance Rated Roof/Ceiling, Floor/Ceiling Assembly
ASTM E119 and CAN/ULC S101
Rating: 1 Hour (See Table 1 for STC and IIC Ratings)



1. **FLOOR TOPPING:** (Optional, Not Shown) Gypsum concrete, lightweight or normal concrete topping. When used as a roof assembly, materials for a built-up roof covering that are described in an assembly that provides a Class A, B, or C rating on combustible wood decks may be used.

2. **FLOOR SHEATHING:** Min. 5/8 in. thick wood sheathing, designed and installed per Code requirements. When used as a roof assembly, min. 1/2 in. thick wood sheathing may be used, when designed and installed per Code requirements.

3. **INSULATION:** Min. 1-1/2 in. thick mineral wool insulation batts – 2.5 pcf (min.), friction fitted between the bottom flanges of the joists and supported by resilient channels. Ends of batts shall be centered over resilient channels and tightly butted.

4. **CERTIFIED COMPANY:** Pinkwood Ltd.

   CERTIFIED PRODUCT: Wood I-Joists

   CERTIFIED MODELS: FRA, FRB, and Uncoated PKI 15, PKI 35 PLUS, PKI 40, and PKI 50 I-joist Series

   9-1/2 in. min. deep joists spaced a max. of 24 in. on center (oc) (min. 1-1/2 in. × 3-1/2 in. bottom flange dimensions). Installed in accordance with the Code. The max. spacing may be increased to 48 in. oc, when the ceiling is applied to stripping spaced a max. of 24 in. oc. The stripping must be a nominal 2×4 construction-grade lumber attached to the joists bottom flange using two 10d nails.

5. **RESILIENT CHANNELS:** Min. 0.019 in. thick galvanized steel resilient channels, attached perpendicular to joists using 1-5/8 in. long

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drywall screws. Resilient channels spaced a max. of 16 in. oc. Additional channels are required at gypsum board end joints so that each board is attached to a separate channel. These additional channels shall extend to the next joist on each side of the board end joint.

6. **GYPSUM WALLBOARD:** Min. 5/8 in. thick Type C gypsum wallboard installed with long dimension perpendicular to resilient channels and fastened to each channel with min. 1 in. long Type S drywall screws. Fasteners spaced 12 in. oc in the field of the wallboard, 8 in. oc at wallboard end joints, and 1-1/2 in. from panel edges and ends. Edge joints shall be centered between joists. End joints shall be staggered one channel spacing.

7. **FINISH SYSTEM:** (Not Shown) Face layer joints covered with tape and coated with joint compound. Screw heads covered with joint compound.

Table 1 – STC and IIC Ratings

Components	STC Rating	IIC Rating	Acoustic Mat	Floor Topping	Insulation Thickness
Ceramic tile bonded with thinset adhesive	62	50	5 mm Recycled Rubber Underlayment	1 in. thick Gypsum Concrete	1-1/2 in. thick mineral wool insulation
Ceramic tile bonded with thinset adhesive	63	52	5 mm Recycled Rubber Underlayment	1-1/2 in. thick lightweight concrete	1-1/2 in. thick mineral wool insulation
Ceramic tile bonded with thinset adhesive	51	47	5 mm Recycled Rubber Underlayment	None	1-1/2 in. thick mineral wool insulation
Hardwood	62	53	2 mm Foam Underlayment	1 in. thick Gypsum Concrete	1-1/2 in. thick mineral wool insulation
Hardwood	64	54	2 mm Foam Underlayment	1-1/2 in. thick lightweight concrete	1-1/2 in. thick mineral wool insulation
Hardwood	51	45	2 mm Foam Underlayment	None	1-1/2 in. thick mineral wool insulation
Cushioned Vinyl	62	52	None	1 in. thick Gypsum Concrete	1-1/2 in. thick mineral wool insulation
Cushioned Vinyl	63	55	None	1-1/2 in. thick lightweight concrete	1-1/2 in. thick mineral wool insulation
Cushioned Vinyl	51	44	None	None	1-1/2 in. thick mineral wool insulation
Carpet with Pad	62	57	None	1 in. thick Gypsum Concrete	1-1/2 in. thick mineral wool insulation
Carpet with Pad	63	60	None	1-1/2 in. thick lightweight concrete	1-1/2 in. thick mineral wool insulation
Carpet with Pad	51	46	None	None	1-1/2 in. thick mineral wool insulation
None	51	N/A	None	None	1-1/2 in. thick mineral wool insulation

NOTE: The STC and IIC ratings are estimated by Swallow Acoustic Consultants Ltd. The ratings apply to assemblies with 19/32 in. thick floor sheathing or thicker.

PWL/SFSW 60-03

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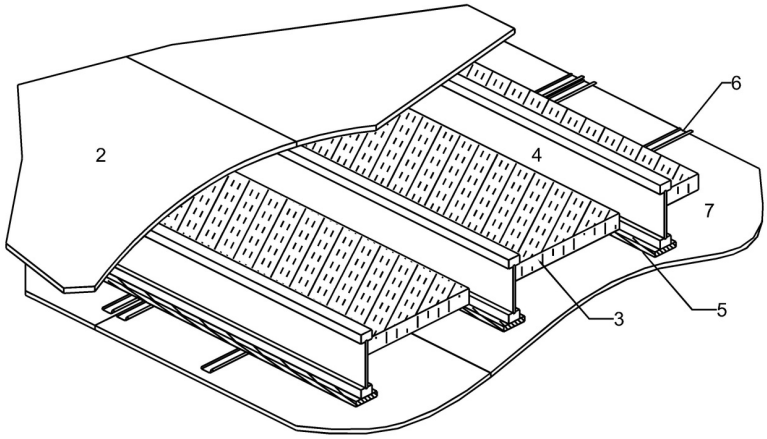
Division 06 – Wood, Plastics, and Composites
06 17 00 Shop Fabricated Structural Wood
06 17 33 Wood I-Joists

Pinkwood Ltd.
Design Number PWL/SFSW 60-03
FRA, FRB, and UNCOATED PKI 10, PKI 15, PKI 20, PKI 23, PKI 35 PLUS, PKI 40, and PKI 50 I-JOIST SERIES
Load Bearing Fire Resistance Rated Roof/Ceiling, Floor/Ceiling Assembly
ASTM E119 and CAN/ULC S101
Rating: 1 Hour (See Table 1 for STC and IIC Ratings)



1. **FLOOR TOPPING:** (Optional, Not Shown) Gypsum concrete, lightweight or normal concrete topping. When used as a roof assembly, materials for a built-up roof covering that are described in an assembly that provides a Class A, B, or C rating on combustible wood decks may be used.

2. **FLOOR SHEATHING:** Min. 5/8 in. thick wood sheathing, designed and installed per Code requirements. When used as a roof assembly, min. 1/2 in. thick wood sheathing may be used, when designed and installed per Code requirements.

3. **INSULATION:** Min. 2 in. thick mineral wool insulation batts – 3.5 pcf (min.), supported by setting strip edges, friction-fitted between the sides of the joist flanges. Ends of batts shall be centered over resilient channels and tightly butted.

4. **CERTIFIED COMPANY:** Pinkwood Ltd.

   CERTIFIED PRODUCT: Wood I-Joists

   CERTIFIED MODELS: FRA, FRB, and Uncoated PKI 10, PKI 15, PKI 20, PKI 23, PKI 35 PLUS, PKI 40, and PKI 50 I-joist Series

   9-1/2 in. min. deep joists spaced a max. of 24 in. on center (oc). Installed in accordance with the Code.

5. **SETTING STRIPS:** Min. 1×4 (nominal) wood setting strips attached with 1-1/2 in. long drywall screws at 24 in. oc along the bottom flange of joist creating a ledge to support insulation.

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Division 06 – Wood, Plastics, and Composites
06 17 00 Shop Fabricated Structural Wood
06 17 33 Wood I-Joists

6. **RESILIENT CHANNELS:** Min. 0.019 in. thick galvanized steel resilient channels, attached perpendicular to joists using 1-5/8 in. long drywall screws. Resilient channels spaced 16 in. oc. Additional channels are required at gypsum board end joints so that each board is attached to a separate channel. These additional channels shall extend to the next joist on each side of the board end joint.

7. **GYPSUM WALLBOARD:** Min. 5/8 in. thick Type C gypsum wallboard installed with long dimension perpendicular to resilient channels and fastened to each channel with min. 1-1/8 in. long Type S drywall screws. Fasteners spaced 7 in. oc and 1-1/2 in. from panel edges and ends. Edge joints shall be centered between joists. End joints shall be staggered one channel spacing.

8. **FINISH SYSTEM:** (Not Shown) Face layer joints covered with tape and coated with joint compound. Screw heads covered with joint compound.

Table 1 – STC and IIC Ratings

Components	STC Rating	IIC Rating	Acoustic Mat	Floor Topping	Insulation Thickness
Ceramic tile bonded with thinset adhesive	62	50	5 mm Recycled Rubber Underlayment	1 in. thick Gypsum Concrete	1-1/2 in. thick mineral wool insulation
Ceramic tile bonded with thinset adhesive	64	52	5 mm Recycled Rubber Underlayment	1-1/2 in. thick lightweight concrete	1-1/2 in. thick mineral wool insulation
Hardwood	62	53	2 mm Foam Underlayment	1 in. thick Gypsum Concrete	1-1/2 in. thick mineral wool insulation
Hardwood	64	54	2 mm Foam Underlayment	1-1/2 in. thick lightweight concrete	1-1/2 in. thick mineral wool insulation
Cushioned Vinyl	62	52	None	1 in. thick Gypsum Concrete	1-1/2 in. thick mineral wool insulation
Cushioned Vinyl	64	55	None	1-1/2 in. thick lightweight concrete	1-1/2 in. thick mineral wool insulation
Carpet with Pad	62	57	None	1 in. thick Gypsum Concrete	1-1/2 in. thick mineral wool insulation
Carpet with Pad	64	60	None	1-1/2 in. thick lightweight concrete	1-1/2 in. thick mineral wool insulation

NOTE: The STC and IIC ratings are estimated by Swallow Acoustic Consultants Ltd. The ratings apply to assemblies with 19/32 in. thick floor sheathing or thicker.

PWL/SFSW 60-04

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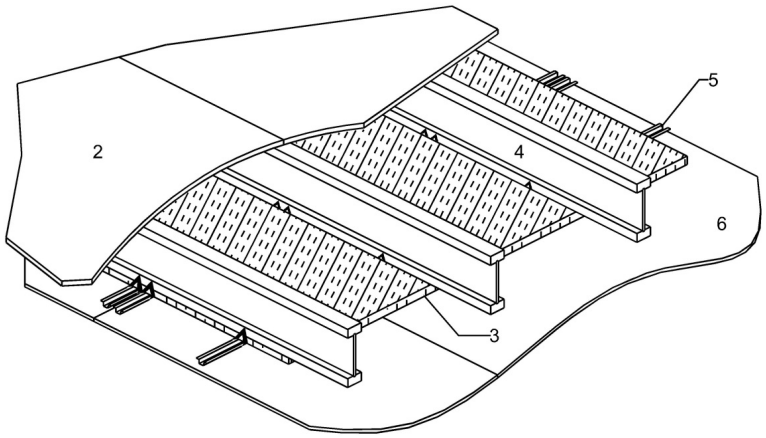
Division 06 – Wood, Plastics, and Composites
06 17 00 Shop Fabricated Structural Wood
06 17 33 Wood I-Joists

Pinkwood Ltd.
Design Number PWL/SFSW 60-04
FRA, FRB, and UNCOATED PKI 10, PKI 15, PKI 20, PKI 23, PKI 35 PLUS, PKI 40, and PKI 50 I-JOIST SERIES
Load Bearing Fire Resistance Rated Roof/Ceiling, Floor/Ceiling Assembly
ASTM E119 and CAN/ULC S101
Rating: 1 Hour (See Table 1 for STC and IIC Ratings)



1. **FLOOR TOPPING:** (Optional, Not Shown) Gypsum concrete, lightweight or normal concrete topping. When used as a roof assembly, materials for a built-up roof covering that are described in an assembly that provides a Class A, B, or C rating on combustible wood decks may be used.

2. **FLOOR SHEATHING:** Min. 23/32 in. thick tongue-and-groove wood sheathing, designed and installed per Code requirements. When used as a roof assembly, min. 1/2 in. thick wood sheathing may be used, when designed and installed per Code requirements.

3. **INSULATION:** Min. 1 in. thick mineral wool insulation batts – 6 pcf (min.). Batts installed on top of furring channels and under bottom flange of joists with the sides butted against support clips. The ends of the batts shall be centered over furring channels and tightly butted.

4. **CERTIFIED COMPANY:** Pinkwood Ltd.

   CERTIFIED PRODUCT: Wood I-Joists

   CERTIFIED MODELS: FRA, FRB, and Uncoated PKI 10, PKI 15, PKI 20, PKI 23, PKI 35 PLUS, PKI 40, and PKI 50 I-joist Series

   9-1/2 in. min. deep joists spaced a max. of 24 in. on center (oc) (min. 1-1/2 in. × 2-1/2 in. bottom flange dimensions). Installed in accordance with the Code.

5. **FURRING CHANNELS:** Min. 0.0179 in. thick galvanized steel hat-shaped furring channels, attached perpendicular to joists spaced 24 in. oc. Channels secured to I-joists with Simpson Type CSC support clips at each intersection

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with the joists. Clips nailed to the side of joist bottom flange with one 1-1/2 in. long No 11 GA nail. Additional channels are required at gypsum board end joints so that each board is attached to a separate channel. These additional channels shall extend to the next joist on each side of the board end joint.

6. **GYPSUM WALLBOARD:** Min. 1/2 in. thick Type C gypsum wallboard. Wallboard installed with long dimension perpendicular to furring channels and fastened to each channel with min. 1 in. long Type S drywall screws. Fasteners spaced 12 in. oc in the field of the wallboard, 6 in. oc at wallboard end joints, and 1-1/2 in. from panel edges and ends. Edge joints shall be centered between joists. End joints shall be staggered one channel spacing and offset from insulation joints by a min. of one channel spacing.

7. **FINISH SYSTEM:** (Not Shown) Face layer joints covered with tape and coated with joint compound. Screw heads covered with joint compound.

Table 1 – STC and IIC Ratings

Components	STC Rating	IIC Rating	Acoustic Mat	Floor Topping	Insulation Thickness
Ceramic tile bonded with thinset adhesive	55	39	5 mm Recycled Rubber Underlayment	1 in. thick Gypsum Concrete	1 in. thick mineral wool insulation
Ceramic tile bonded with thinset adhesive	56	41	5 mm Recycled Rubber Underlayment	1-1/2 in. thick lightweight concrete	1 in. thick mineral wool insulation
Ceramic tile bonded with thinset adhesive	44	43	5 mm Recycled Rubber Underlayment	None	1 in. thick mineral wool insulation
Hardwood	55	42	2 mm Foam Underlayment	1 in. thick Gypsum Concrete	1 in. thick mineral wool insulation
Hardwood	56	43	2 mm Foam Underlayment	1-1/2 in. thick lightweight concrete	1 in. thick mineral wool insulation
Hardwood	44	44	2 mm Foam Underlayment	None	1 in. thick mineral wool insulation
Cushioned Vinyl	55	42	None	1 in. thick Gypsum Concrete	1 in. thick mineral wool insulation
Cushioned Vinyl	56	43	None	1-1/2 in. thick lightweight concrete	1 in. thick mineral wool insulation
Cushioned Vinyl	44	43	None	None	1 in. thick mineral wool insulation
Carpet with Pad	55	48	None	1 in. thick Gypsum Concrete	1 in. thick mineral wool insulation
Carpet with Pad	56	50	None	1-1/2 in. thick lightweight concrete	1 in. thick mineral wool insulation
Carpet with Pad	44	44	None	None	1 in. thick mineral wool insulation

NOTE: The STC and IIC ratings are estimated by Swallow Acoustic Consultants Ltd.

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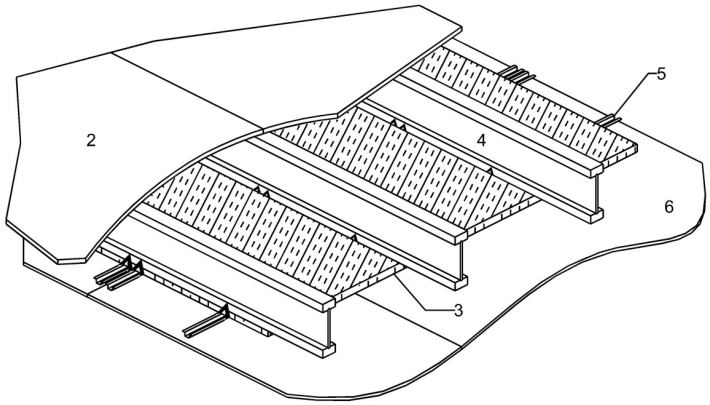
Division 06 – Wood, Plastics, and Composites
06 17 00 Shop Fabricated Structural Wood
06 17 33 Wood I-Joists

Pinkwood Ltd.
Design Number PWL/SFSW 60-05
FRA, FRB, and UNCOATED PKI 10, PKI 15, PKI 20, PKI 23, PKI 35 PLUS, PKI 40, and PKI 50 I-JOIST SERIES
Load Bearing Fire Resistance Rated Roof/Ceiling, Floor/Ceiling Assembly
ASTM E119 and CAN/ULC S101
Rating: 1 Hour (See Table 1 for STC and IIC Ratings)



1. **FLOOR TOPPING:** (Optional, Not Shown) Gypsum concrete, lightweight or normal concrete topping. When used as a roof assembly, materials for a built-up roof covering that are described in an assembly that provides a Class A, B, or C rating on combustible wood decks may be used.

2. **FLOOR SHEATHING:** Min. 23/32 in. thick tongue-and-groove wood sheathing, designed and installed per Code requirements. When used as a roof assembly, min. 1/2 in. thick wood sheathing may be used, when designed and installed per Code requirements.

3. **INSULATION:** Min. 1-1/2 in. thick mineral wool insulation batts – 6 pcf (min.). Batts installed on top of furring channels and under bottom flange of joists with the sides butted against support clips. The ends of the batts shall be centered over furring channels and tightly butted.

4. **CERTIFIED COMPANY:** Pinkwood Ltd.

   CERTIFIED PRODUCT: Wood I-Joists

   CERTIFIED MODELS: FRA, FRB, and Uncoated PKI 10, PKI 15, PKI 20, PKI 23, PKI 35 PLUS, PKI 40, and PKI 50 I-joist Series

   9-1/2 in. min. deep joists spaced a max. of 24 in. on center (oc) (min. 1-1/2 in. × 2-1/2 in. bottom flange dimensions). Installed in accordance with the Code.

5. **FURRING CHANNELS:** Min 0.0218 in. thick galvanized steel hat-shaped furring channels, attached perpendicular to joists spaced 24 in. oc. Channels secured to I-joists with PAC International RSIC-1 EXT04. The clips shall be attached with #8 × 1-1/2 in. min. size coarse thread screw (#12 or #10×1/2 in. hex-head recommended). The clips shall be attached at a spacing to support max. acoustical design load

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of 36 lbs. (refer to the PAC International Inc. product specifications for recommended clip spacing). The metal "L" bracket must be tight to the framing member. Locate the first row of RSIC-1 EXT04 clips within 8 in. of the wall at each end of a run. Snap in the furring channel into the RSIC-1 clip at right angles (perpendicular or parallel).

6. **GYPSUM WALLBOARD:** Min. 5/8 in. thick Type C gypsum wallboard. Wallboard installed with long dimension perpendicular to furring channels and fastened to each channel with min. 1 in. long Type S drywall screws. Fasteners spaced 12 in. oc in the field of the wallboard, 6 in. oc at wallboard end joints, and 1-1/2 in. from panel edges and ends. Edge joints shall be centered between joists. End joints shall be staggered one channel spacing and offset from insulation joints by a min. of one channel spacing.

7. **FINISH SYSTEM:** (Not Shown) Face layer joints covered with tape and coated with joint compound. Screw heads covered with joint compound.

Table 1 – STC and IIC Ratings

Components	STC Rating	IIC Rating	Acoustic Mat	Floor Topping	Insulation Thickness
Ceramic Tile bonded with thinset adhesive	59	51	5 mm recycled rubber underlayment	1 in. Gypsum Concrete	1.5 in. Mineral wool insulation
Ceramic Tile bonded with thinset adhesive	60	54	5 mm recycled rubber underlayment	1-1/2 in. Lightweight Concrete	1.5 in. Mineral wool insulation
Ceramic Tile bonded with thinset adhesive	56	51	5 mm recycled rubber underlayment	None	1.5 in. Mineral wool insulation
Hardwood	59	54	2 mm foam underlayment	1 in. Gypsum Concrete	1.5 in. Mineral wool insulation
Hardwood	60	56	2 mm foam underlayment	1-1/2 in. Lightweight Concrete	1.5 in. Mineral wool insulation
Hardwood	56	48	2 mm foam underlayment	None	1.5 in. Mineral wool insulation
Cushioned Vinyl	59	53	None	1 in. Gypsum Concrete	1.5 in. Mineral wool insulation
Cushioned Vinyl	60	56	None	1-1/2 in. Lightweight Concrete	1.5 in. Mineral wool insulation
Cushioned Vinyl	56	47	None	None	1.5 in. Mineral wool insulation
Carpet with pad	59	58	None	1 in. Gypsum Concrete	1.5 in. Mineral wool insulation
Carpet with pad	60	61	None	1-1/2 in. Lightweight Concrete	1.5 in. Mineral wool insulation
Carpet with pad	56	49	None	None	1.5 in. Mineral wool insulation

NOTE: The STC and IIC ratings are estimated by Swallow Acoustic Consultants Ltd.

PWL/SFSW 90-01

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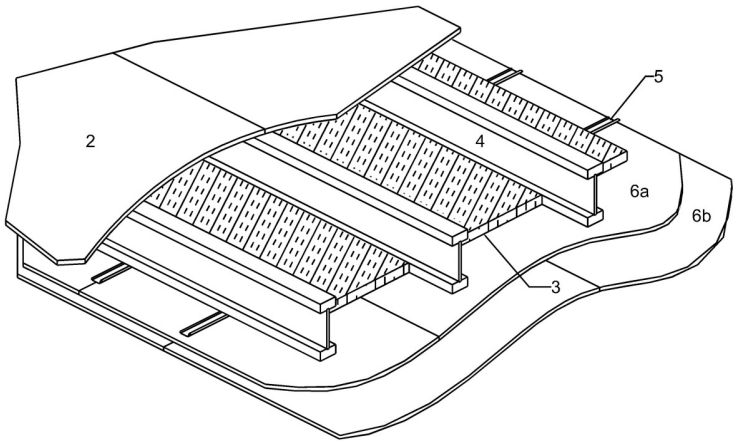
Division 06 – Wood, Plastics, and Composites
06 17 00 Shop Fabricated Structural Wood
06 17 33 Wood I-Joists

Pinkwood Ltd.
Design Number PWL/SFSW 90-01
FRA, FRB, and UNCOATED PKI 10, PKI 15, PKI 20, PKI 23, PKI 35 PLUS, PKI 40, and PKI 50 I-JOIST SERIES
Load Bearing Fire Resistance Rated Roof/Ceiling, Floor/Ceiling Assembly
ASTM E119 and CAN/ULC S101
Rating: 1-1/2 Hour



1. **FLOOR TOPPING:** (Optional, Not Shown) Gypsum concrete, lightweight or normal concrete topping. When used as a roof assembly, materials for a built-up roof covering that are described in an assembly that provides a Class A, B, or C rating on combustible wood decks may be used.

2. **FLOOR SHEATHING:** Min. 5/8 in. thick wood sheathing, designed and installed per Code requirements. When used as a roof assembly, min. 1/2 in. thick wood sheathing may be used, when designed and installed per Code requirements.

3. **INSULATION:** Min. 1-1/2 in. thick mineral wool insulation batts – 2.5 pcf (min.). Batts installed on top of resilient channels with the sides butted against the sides of the joists. The ends of the batts shall be centered over resilient channels and tightly butted.

4. **CERTIFIED COMPANY:** Pinkwood Ltd.

   CERTIFIED PRODUCT: Wood I-Joists

   CERTIFIED MODELS: FRA, FRB, and Uncoated PKI 10, PKI 15, PKI 20, PKI 23, PKI 35 PLUS, PKI 40, and PKI 50 I-joist Series

   9-1/2 in. min. deep joists spaced a max. of 24 in. on center (oc) (min. 1-1/2 in. × 2-5/16 in. flange dimensions). Installed in accordance with the Code.

5. **RESILIENT CHANNELS:** Min. 0.019 in. thick galvanized steel resilient channels, attached perpendicular to joists using 1-5/8 in. long drywall screws. Resilient channels spaced 12 in. oc.

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Division 06 – Wood, Plastics, and Composites
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6. **GYPSUM WALLBOARD:** Two layers of min. 5/8 in. thick Type C gypsum wallboard as follows:

   6a. WALLBOARD BASE LAYER – Base layer of wallboard attached to resilient channels using 1-1/4 in. Type S drywall screws at 12 in. oc. Edge joints shall be centered between joists. End joints shall be staggered one channel spacing.

   6b. WALLBOARD FACE LAYER – Face layer of wallboard attached to resilient channels through base layer using 1-5/8 in. Type S drywall screws spaced 12 in. oc, 6 in. oc at wallboard end joints, and 1-1/2 in. from panel edges and ends. Edge joints of wallboard face layer offset a distance equal to one joist spacing from those of base layer. End joints shall be offset from base layer joints by a min. of one channel spacing. Additionally, wallboard face layer attached to base layer with 1-1/2 in. Type G drywall screws spaced 8 in. oc, placed 1-1/2 in. from face layer end joints.

7. **FINISH SYSTEM:** (Not Shown) Face layer joints covered with tape and coated with joint compound. Screw heads covered with joint compound.

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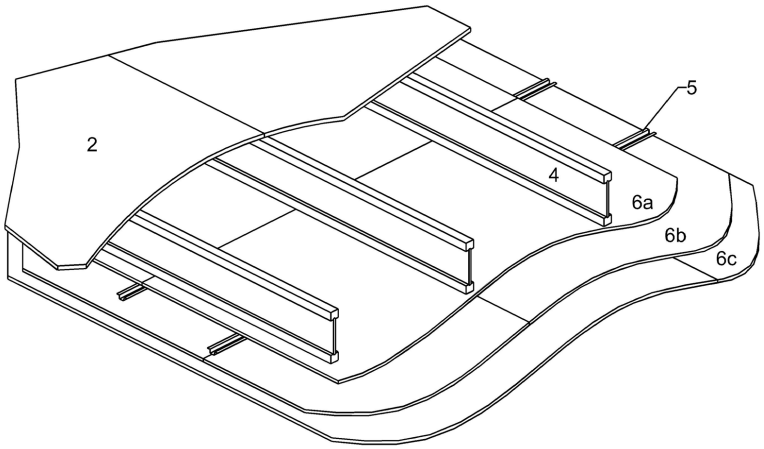
Division 06 – Wood, Plastics, and Composites
06 17 00 Shop Fabricated Structural Wood
06 17 33 Wood I-Joists

Pinkwood Ltd.
Design Number PWL/SFSW 120-01
FRA, FRB, and UNCOATED PKI 10, PKI 15, PKI 20, PKI 23, PKI 35 PLUS, PKI 40, and PKI 50 I-JOIST SERIES
Load Bearing Fire Resistance Rated Roof/Ceiling, Floor/Ceiling Assembly
ASTM E119 and CAN/ULC S101
Rating: 2 Hour



1. **FLOOR TOPPING:** (Optional, Not Shown) Gypsum concrete, lightweight or normal concrete topping. When used as a roof assembly, materials for a built-up roof covering that are described in an assembly that provides a Class A, B, or C rating on combustible wood decks may be used.

2. **FLOOR SHEATHING:** Min. 5/8 in. thick wood sheathing, designed and installed per Code requirements. When used as a roof assembly, min. 1/2 in. thick wood sheathing may be used, when designed and installed per Code requirements.

3. **INSULATION:** (Optional) When installed, insulation shall be installed above the joist flanges and supported by stay wires spaced 12 in. on center (oc).

4. **CERTIFIED COMPANY:** Pinkwood Ltd.

   CERTIFIED PRODUCT: Wood I-Joists

   CERTIFIED MODELS: FRA, FRB, and Uncoated PKI 10, PKI 15, PKI 20, PKI 23, PKI 35 PLUS, PKI 40, and PKI 50 I-joist Series

   9-1/2 in. min. deep joists spaced a max. of 24 in. oc. Installed in accordance with the Code.

5. **RESILIENT CHANNELS:** Min. 0.019 in. thick galvanized steel resilient channels, attached perpendicular to joists using 1-5/8 in. long drywall screws. Resilient channels spaced 16 in. oc (channels installed after the first layer and used to support the second and third layers of gypsum wallboard).

PWL-SFSW 120-01 (2 OF 2)

Division 06 – Wood, Plastics, and Composites
06 17 00 Shop Fabricated Structural Wood
06 17 33 Wood I-Joists

6. **GYPSUM WALLBOARD:** Three layers of min. 5/8 in. Type C gypsum wallboard as follows:

   6a. WALLBOARD BASE LAYER – Base layer of wallboard installed perpendicular to the joists and directly attached to the bottom flange using 1-5/8 in. Type S drywall screws at 12 in. oc. End joints of wallboard centered on bottom flange and staggered a min. of one joist spacing.

   6b. WALLBOARD MIDDLE LAYER – Middle layer of wallboard attached to furring channels using 1 in. Type S drywall screws spaced 12 in. oc, with the long dimension of wallboard perpendicular to furring channels. Edge joints shall be centered on the joists and offset a min. of one joist space from base layer end joints. End joints staggered a min. of one channel spacing and offset from the edge joints in the base layer a min. of one channel spacing.

   6c. WALLBOARD FACE LAYER – Face layer of wallboard attached to channels through middle layer using 1-5/8 in. Type S drywall screws spaced 8 in. oc. Edge joints of face layer of wallboard shall be centered on the joists and offset a min. distance equal to the joist spacing from those of middle layer. End joints of face layer of wallboard staggered a min. of one channel spacing with respect to the middle layer end joint and base layer edge joint.

7. **FINISH SYSTEM:** (Not Shown) Face layer joints covered with tape and coated with joint compound. Screw heads covered with joint compound.