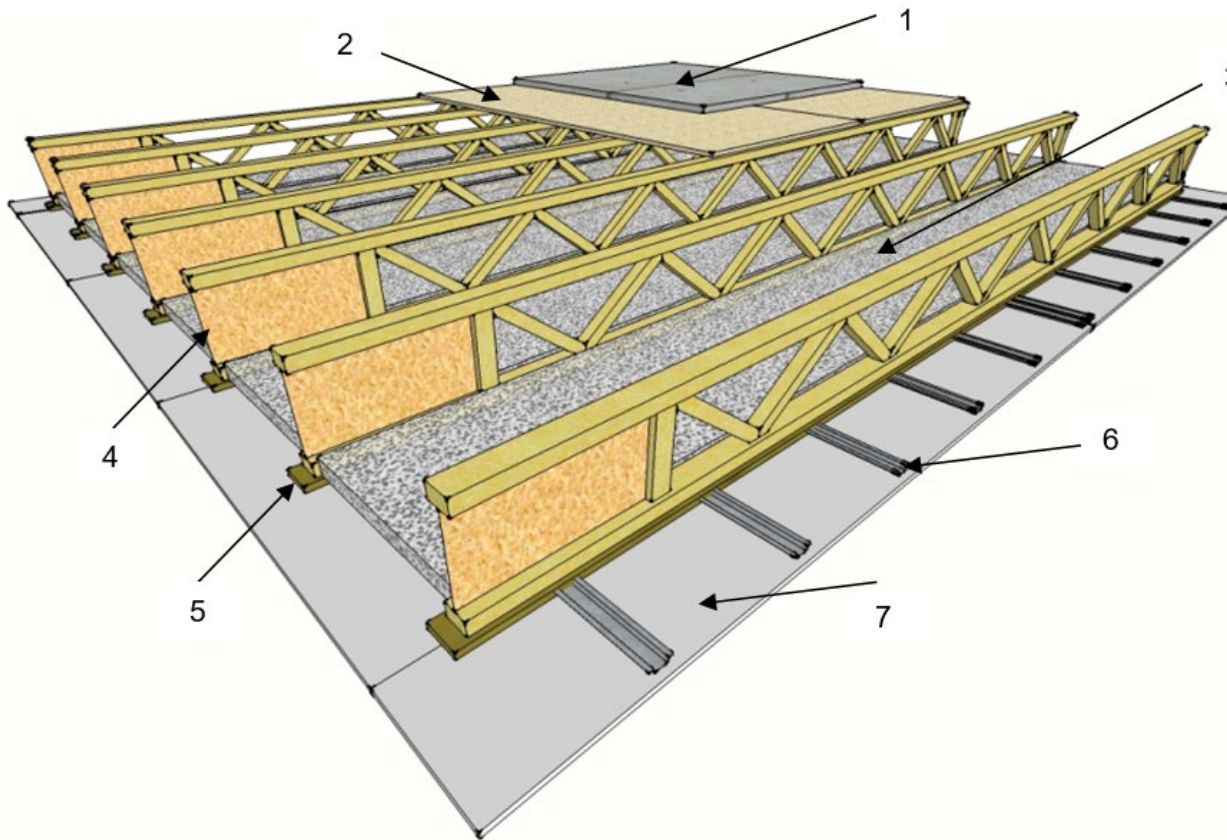


**Barrette Structural Inc.**  
**Design No. BS/SFWT 60-03**  
**Load Bearing Fire Resistance Rated Roof/Ceiling, Floor/Ceiling Assembly**  
**Open Joist TRIFORCE® Joist Series**  
**ASTM E119 and CAN/ULC S101**  
**Rating: 1 Hour**



- 1. FLOOR TOPPING (Optional):** 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 MANUFACTURER:** Barrette Structural Inc.  
**CERTIFIED MODEL:** Open Joist TRIFORCE® Joist Series



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

5. **SETTING STRIPS:** Min. 1x4 (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.
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 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.

7. **GYPHUM 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 6 in. oc and 1-1/2 in. 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.

**Acoustic Performance**

I-Joist Height	Insulation	Gypcrete	Carpet	Vinyl	STC	IIC
9-1/2 in. and 9-3/8 in.	Yes	No	No	No	42	38
	Yes	No	Yes	No	42	66
	Yes	No	No	Yes	42	44
	Yes	Yes	No	No	44	42
	Yes	Yes	Yes	No	44	70
	Yes	Yes	No	Yes	44	50
	No	No	No	No	41	35
	No	No	Yes	No	41	63
	No	No	No	Yes	41	41
	No	Yes	No	No	44	32
11-7/8 in.	No	Yes	Yes	No	44	60
	No	Yes	No	Yes	44	38
	Yes	No	No	No	46	39
	Yes	No	Yes	No	46	67
	Yes	No	No	Yes	46	45
	Yes	Yes	No	No	53	44
	Yes	Yes	Yes	No	53	72
	Yes	Yes	No	Yes	53	50
	No	No	No	No	46	30
	No	No	Yes	No	46	65
13 in.	No	No	No	Yes	46	43
	No	Yes	No	No	52	37
	No	Yes	Yes	No	52	67
	No	Yes	No	Yes	52	43
	Yes	No	No	No	47	40
	Yes	No	Yes	No	47	68
Yes	No	No	Yes	47	46	
Yes	Yes	No	No	53	44	
Yes	Yes	Yes	Yes	53	72	
Yes	Yes	No	Yes	53	50	



I-Joist Height	Insulation	Gypcrete	Carpet	Vinyl	STC	IIC
13 in.	No	No	No	No	46	30
	No	No	Yes	No	46	65
	No	No	No	Yes	46	43
	No	Yes	No	No	52	37
	No	Yes	Yes	No	52	67
16 in.	No	Yes	No	Yes	52	43
	Yes	No	No	No	48	41
	Yes	No	Yes	No	48	69
	Yes	No	No	Yes	48	47
	Yes	Yes	No	No	53	45
	Yes	Yes	Yes	No	53	73
	Yes	Yes	No	Yes	53	51
	No	No	No	No	47	31
	No	No	Yes	No	47	65
	No	No	No	Yes	47	43
	No	Yes	No	No	53	38
No	Yes	Yes	No	53	68	
No	Yes	No	Yes	53	44	

**Note:**

- Carpet and pad are 37 oz., 7/8 in. carpet with woven polypropylene backing and 40 oz. felt pad
- Vinyl flooring: Armstrong Starstep
- 3/4 in. Gypcrete 2000
- Insulation: 5-1/2 in. thick cellulose material (1.6 pcf density)