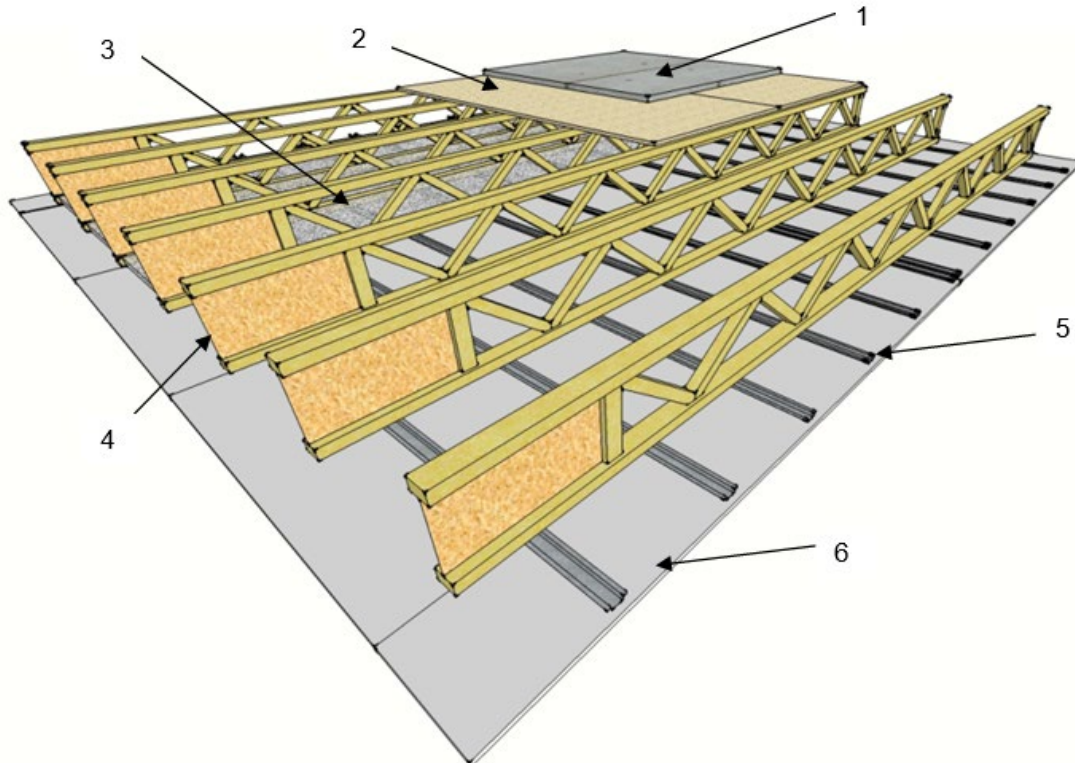

Barrette Structural Inc.
Design No. BS/SFWT 45-01
Load Bearing Fire Resistance Rated Roof/Ceiling, Floor/Ceiling Assembly
Open Joist TRIFORCE® Joist Series
ASTM E119 and CAN/ULC S101
Rating: 3/4 Hour



- 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 (Optional):** When installed, insulation shall be installed above the joist flanges and supported by stay wires spaced 12 in. on center (oc).
- 4. CERTIFIED MANUFACTURER:** Barrette Structural Inc.
CERTIFIED MODEL: Open Joist TRIFORCE® Joist Series
Min. 9-1/2 in. deep TRIFORCE® Joist Series spaced a max. 24 in. oc, installed in accordance with the Code.



- 5. RESILIENT CHANNELS:** Min. 0.019 in. thick galvanized steel resilient channels attached perpendicular to the bottom flange of the joists with one 1-5/8 in. drywall screw. 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.
- 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.

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. | Yes | 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 | No | 53 | 72 |
| | Yes | Yes | No | Yes | 53 | 50 |
| 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 | |
| No | Yes | No | Yes | 52 | 43 | |



| I-Joist Height | Insulation | Gypcrete | Carpet | Vinyl | STC | IIC | |
|----------------|------------|----------|--------|-------|-----|-----|----|
| 16 in. | 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 | Yes | No | 53 | 68 |
| | No | Yes | No | 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)