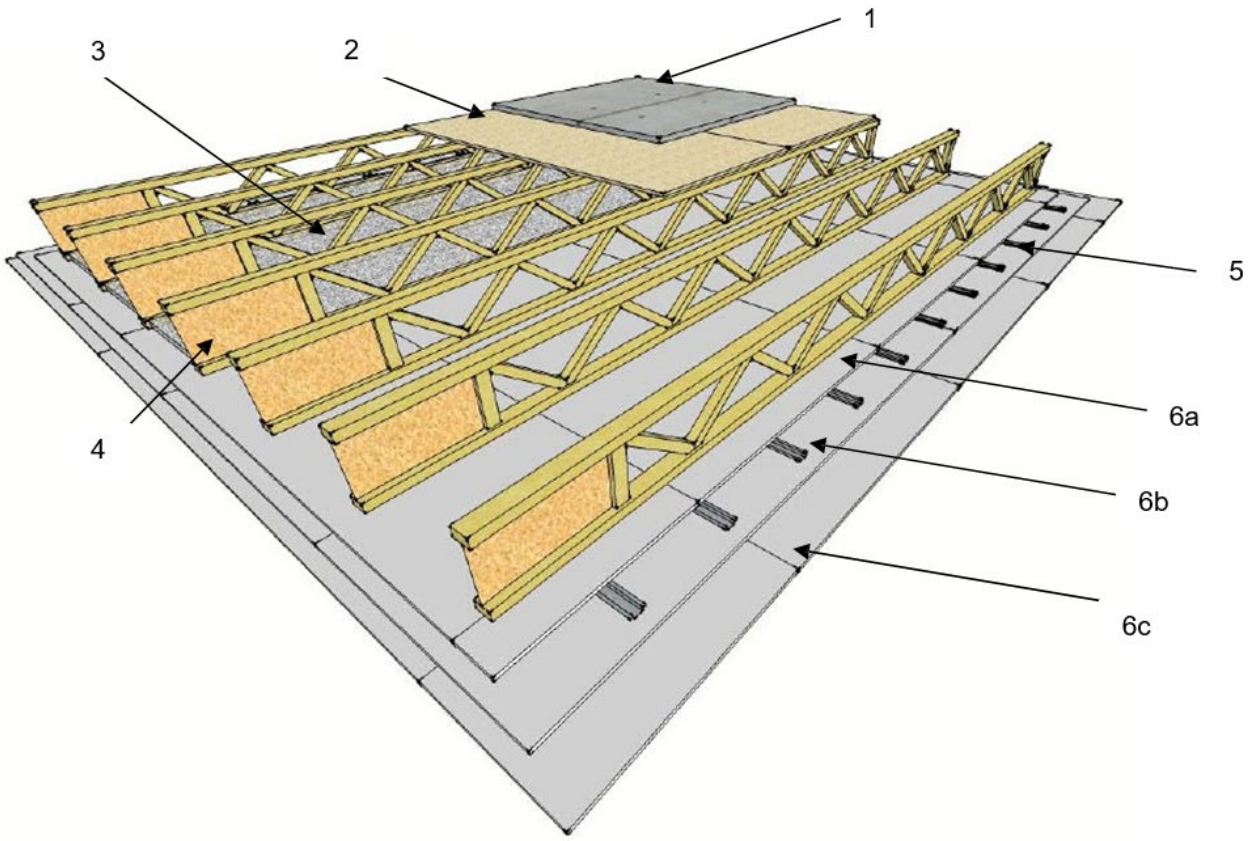
Barrette Structural Inc.
Design No. BS/SFWT 120-01
Load Bearing Fire Resistance Rated Roof/Ceiling, Floor/Ceiling Assembly
Open Joist TRIFORCE® Joist Series
ASTM E119 and CAN/ULC S101
Rating: 2 Hour



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, installed per Code requirements. When used as a roof assembly, min. 1/2 in. thick wood sheathing may be used, installed per Code requirements.

3. **INSULATION (Optional):** When installed, insulation shall be 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® joists spaced a max. of 24 in. on center (oc), (min. 2 x 3 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 16 in. oc (channels installed after the first layer and used to support the second and third layers of gypsum wallboard).

6. **GYPSUM WALLBOARD:** Three layers of min. 5/8 in. thick 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 spacing 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.