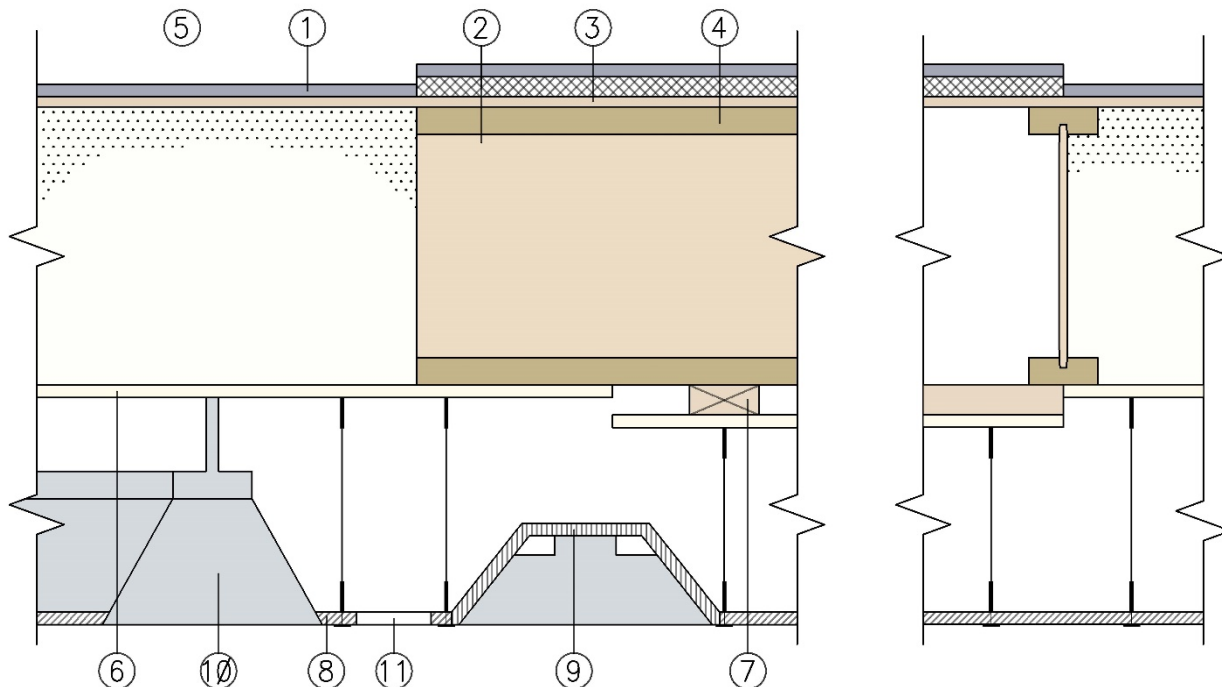


Weyerhaeuser NR Company
Design No. WNR/RCA 60-01
Wood I-Joists
TJI® Joists
ASMT E119, CAN/ULC S101
Rating: 45 minutes Roof /Ceiling Assembly



- 1. Roof Covering:** Suitable materials intended for built-up roof covering which provides Class A, B, C covering on combustible wood decks for fire resistant assemblies equivalent to this roof/ceiling assembly.
- 2. Roof Insulation:** Sheathing material and adhesive products found suitable for use in one hour rated fire assemblies equivalent to this roof/ceiling assembly. (Not required if blown loose glass fiber insulation used.)
- 3. Sheathing:** Minimum 15/32 in. square edge plywood or oriented strand board (OSB) sheathing designed and installed per Code requirements, H clips midway between joists or as per code requirements

4. STRUCTURAL MEMBERS: Wood I-Joists

- A. CERTIFIED PRODUCT:** Weyerhaeuser NR Company: TJI® Series Joists: TJI 560, TJI 560D.

Minimum depth: 14 in. Maximum spacing: 48 in. oc.

- B. Code Compliant** Weyerhaeuser Timberstand LSL, Microllam LVL, or Parallam PSL Certified to ASTM D5456:

Minimum thickness: 1.5 in. Minimum depth: 9-1/2 in. Maximum spacing: 24 in. oc.



5. **Insulation (Optional):** Blown loose glass fiber insulation placed at a depth of 14 in. and at a density of 0.77 pcf to achieve an insulation value of R30.
6. **Gypsum Board:** One layer minimum 1/2 in. Type X gypsum board. Maximum board width is 48 in. Taping and finishing only of joints required. Taping and finished not required if blown insulation is used.

Applied to joists or furring with long edge perpendicular to supports and with end joints butted over supports. Adjacent end joints staggered minimum 24 in. Attached Type W screws spaced 12 in. oc on intermediate supports and 6 in. oc at end supports. Screws must penetrate minimum 1 in. into wood member.

7. **Wood Furring:** 2 x 4 wood furring, minimum Standard & Better grade, placed perpendicular to joists and spaced maximum 24 in. oc, attached to each joist with one minimum 3 in. Type W screw or two 3 in. long common nails. Required to install gypsum board when joist spacing exceeds 24 in. oc.
8. **Ceiling System:** Suitable fire rated suspended ceiling system located a minimum distance of 12 in. below the gypsum board. The grid system is suspended with No. 12 SWG galvanized steel

wire fastened to the joists or wood furring with 1.5 in. long flat head hanger screws. Acoustical ceiling panels are 24 in. x 48 in. x 5/8 in. rated for use as a component of an equivalent fire resistant assembly with a minimum finish rating of 15 minutes. Hold down clips are required for acoustical ceiling panels weighing less than 1 psf.

9. **Fire Protection:** Suitable flush mounted fire rated fluorescent fixtures up to 24 in. x 48 in. x up to 5 in. deep, protected by a five-sided box with up to 6 in. wide pieces of ceiling panels, 48 in. long for the sides, and 24 in. long for the ends, and a full grid panel placed on top. Top panel spaced to allow minimum 1 in. air space from top of fixture. Assemble panels with 3 in. nails spaced 6 in. oc. Strips of panel 6 in. wide over joints of light fixture boxes when two fixtures are butted end to end. Aggregate area of fixture not to exceed 10 sq.ft. per 215 sq.ft. of ceiling.
10. **Duct:** 4 in. x 18 in. galvanized steel duct with a maximum 12 in. diameter steel diffusion opening and spaced at least 84 in. apart.
11. **Return Opening:** A maximum 6 in. x 12 in. return air opening permitted for each 215 sq.ft. of ceiling and spaced at least 84 in. apart.

Consult the listing report on the Directory of Building Products (<https://bpdirectory.intertek.com>) for the edition of the standard(s) evaluated.

Compliance of the assembly described in this Design Listing with the referenced standard relies on verification that the assembly constructed in the field is consistent with that described herein. Intertek certified products may be verified by the approved Intertek label; other products must be verified by the Authority Having Jurisdiction as meeting the specifications stated herein.