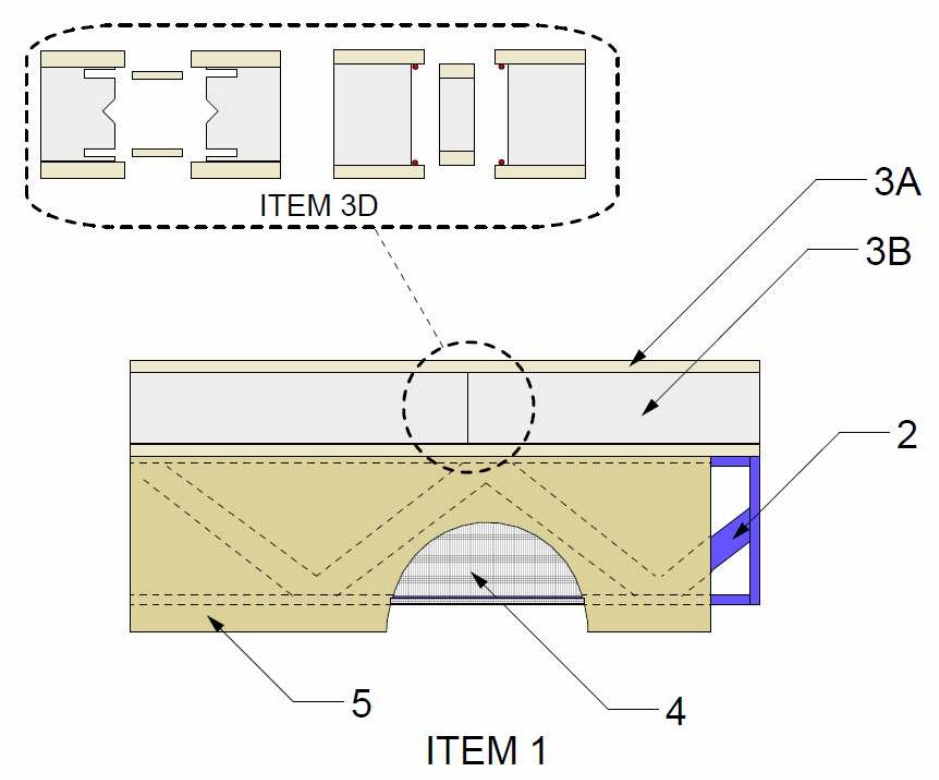
Design Number: TPC/CRP 60-02
ROOF-CEILING SYSTEMS
Timberline Panel Company, LLC
Timberline 4½ to 10½ in. Structural Insulated Panels
ASTM E 119 – 2012 Edition
CAN/ULC S 101 – 2007 Edition
Rating – 1 Hour
Restricted Superimposed Load: See Item 1



ITEM 1

1. CEILING ASSEMBLY: Construct ceiling assembly using the elements described in Items 2 through 6 with a maximum restricted superimposed load of 57% of the allowable capacity of the panel.

2. STEEL JOIST: Use minimum Type 10K1 open-web steel joist constructed and spaced in accordance with manufacturer's design specifications and building code requirements.

3. CERTIFIED COMPANIES: Timberline Panel Company, LLC

   CERTIFIED PRODUCT: Timberline Structural Insulated Panels

   ROOF PANELS: Install Timberline Structural Insulated Panels consisting of the following elements:

   A. FACING: Nominal 7/16 in. thick OSB skins factory bonded to interior and exterior sides of EPS foam core (Item 3A) conforming and identified as meeting DOC PS 2-04, Exposure 1, Rated Sheathing with a span index of 24/16 and/or CAN/CSA

O325.0, Exterior Grade Sheathing with a span index of 1R24/2F16.

B. CORE: Use ASTM C578 compliant and Listed Type I EPS (min. 0.9 pcf) with a flame spread rating not exceeding 75 and smoke-developed rating not exceeding 450 per ASTM E84 and/or CAN/ULC S701 compliant and Listed Type 1 EPS with a flame spread rating not exceeding 500 per CAN/ULC S102.2.

C. ADHESIVE (Not Shown): Facing materials are adhered to the core material using a structural adhesive. The adhesive is applied during the lamination procedure in accordance with the in-plant quality system documentation.

D. SPLINE: Structural Insulated Panels are interconnected with surface splines or block splines.

Surface splines typically consist of 3 in. wide by 7/16 in. thick OSB. At each panel joint, one surface spline is inserted into each of two tight-fitting slots in the core. The slots in the core are located just inside the facing.

Block splines are manufactured in the same manner as the SIP except with an overall thickness that is 1 in. less than the overall thickness of the panel to be joined.

4. METAL LATH: Install 3/8 in. expanded galvanized steel mesh weighing 3.4 lb/yd. to cover the exposed side of the steel joist (Item 2). Secure the lath using No. 20 SWG steel tie wire at the mid-point of alternate web members. Install the lath on the bottom of the roof panels (Item 3) using 1-1/2 in. deep x 15/16 in. wide C-pint staples spaced 7 in. on center (oc).

5. SPRAY APPLIED FIBER: Apply to the wetted surfaces of steel joist and panels, a minimum 11 pcf dry density Listed spray applied fiber (CAFCO BLAZE-SHIELD Type DC-F) to the metal lath (Item 6). Apply at a minimum thickness of 2-1/4 in. to all mesh surfaces. Please reference the CAFCO BLAZE-SHIELD Type DC-F Code Evaluation Report for more details.

6. ROOF COVERING (Not Shown): Use a Class A, B, or C hot mopped or cold applied roof covering, or use a ballasted, adhered or mechanically attached single ply roofing membrane.