Specified Technologies, Inc.
Design No. STI/PF 120-03
Through Penetration
SpecSeal® LCI Intumescent Firestop Sealant
ASTM E814, CAN/ULC-S115
Rating: See Table 1
Pressure Differential: Positive, 0.01 in. w.g. (2.5 Pa)

TABLE 1. RATINGS

	ASTM E814	CAN/ULC-S115
F-Rating	**2 Hr**	**2 Hr**
T-Rating	**1/2 Hr***	**NA**
FT-Rating	**NA**	**1/2 Hr***
FH-Rating	**NA**	**2 Hr**
FTH Rating	**NA**	**1/2 Hr***

*T, FT, and FTH Ratings apply only to 4 in. cable bundle with maximum number of cables and sizes as permitted. Smaller cable bundles with fewer cables have not been evaluated for these ratings.

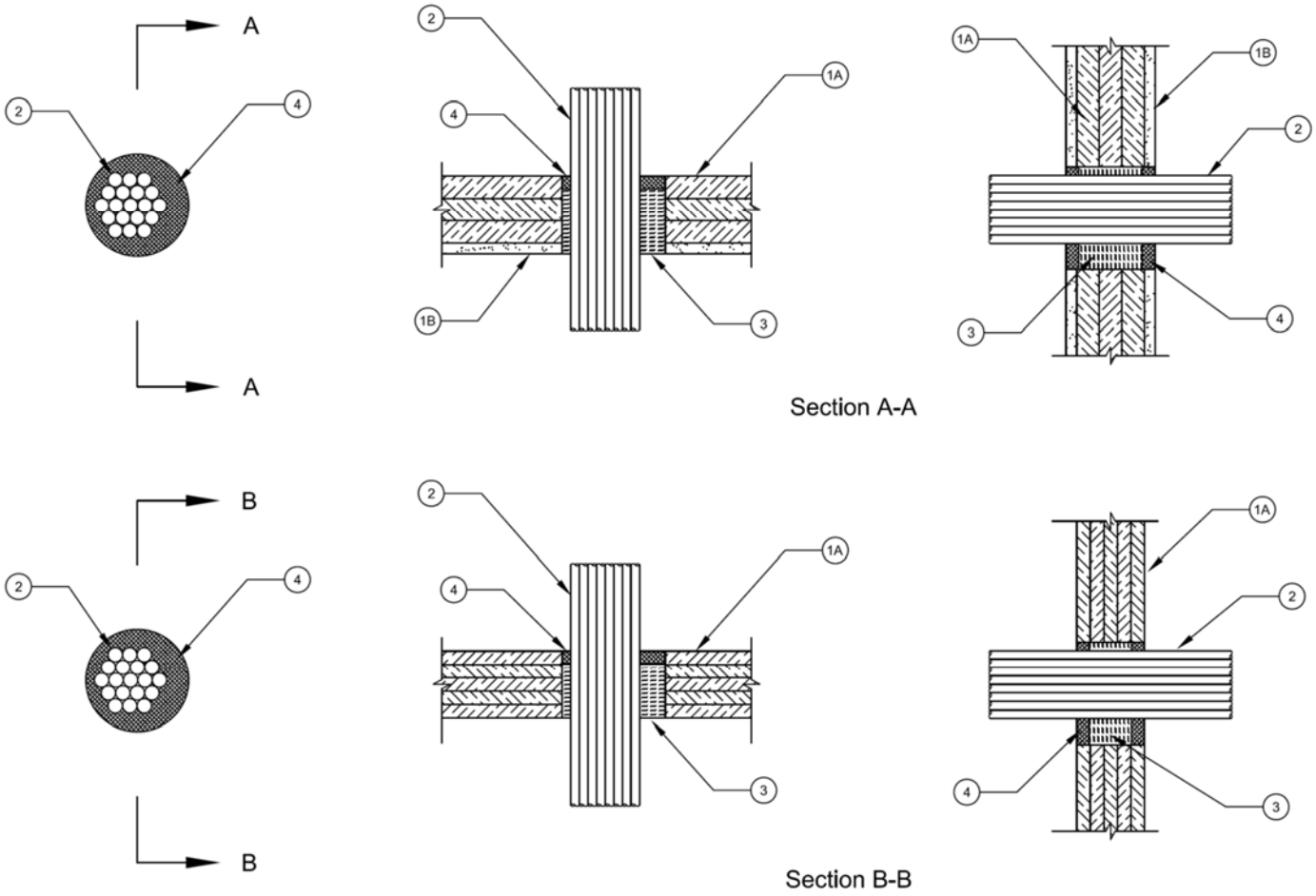

Figure 1. Through Penetration

1. **SUPPORTING CONSTRUCTION:** Use Cross-laminated timber (CLT) certified in accordance with ANSI/APA PRG 320 (2018 or later). Use a min. 2 hour fire-rated floor/ceiling assembly or wall assembly constructed in accordance with its listed or prescribed fire-rated design requirements that has a max. through opening diameter of 6 in. (152 mm) and meets the following minimum construction requirements:

   A. Cross Laminated Timber (CLT): Use min. 3-15/16 in. (100 mm) thick CLT with a min. of 3 plies when gypsum board (Item 1B) is applied. As an option use a min. 5-15/16 in. (132-mm) thick CLT with a min. of 5 plies when gypsum board (Item 1B) protection is not applied. A minimum individual ply thickness of 1-3/16 in. (30 mm) applies in all cases.

B. Gypsum Board: For all CLT having a thickness less than 5-15/16 in. (132 mm), use minimum one layer of 5/8 in. (16 mm) thick Type X gypsum board applied directly to the underside of CLT floor/ceiling assemblies or on both sides of CLT wall assemblies. For CLT thickness 5-15/16 in. (132 mm) or greater, and minimum of 5 plies, gypsum wallboard application is optional. Use min. #8 Type S drywall screws, spaced max. 12 in. on center. Screw length shall be as required for min. of 2-3/8 in. penetration into CLT. Increase the fastening requirements if needed to comply with local code requirements.

C. Floor Topping (For floor configuration only, Optional, Not Shown) – Use a code compliant floor topping when acceptable for use in the listed or prescribed fire rated floor/ceiling design.

2. PENETRATING ITEM: Install one max 4 in. (102 mm) diameter cable bundle centered or offset within the opening to accommodate a max 44% visual fill of cables within the opening. The annular space and offset shall range from min. 1/2 in. (13 mm) to max. 1-1/2 in. (38 mm) within the opening. Cable bundle to be tightly bundled and may consist of the following:

- Max. 100 pair No. 24 AWG telephone cable with PVC jacketing.
- Max. one 7/C No. 12 AWG copper conductor control cable with PVC jacketing and insulation.
- Max. one 4/0 AWG Type THHN ground cable.
- Max. four pair No. 24 AWG Cat 5E computer cable.
- Max four pair No. 23 AWG Cat 6 computer cable.
- Max. one RG/U coaxial cable.
- Max. one 1/2 in. (13 mm) diameter fiber-optic cable (24 fiber) with PVC jacketing and insulation.
- Max. one 3/C No. 12 AWG metal clad cable.

3. PACKING MATERIAL: Use only packing material bearing an Intertek Certified Label and meeting the following minimum requirements. Install min. 4 pcf (64 kg/m^3) mineral wool insulation in the annular space of the opening in the floor/ceiling assembly or wall assembly (Item 1) to the full depth of the supporting construction except recessed nominal 3/4 in. (19 mm) from the top of the CLT floor/ceiling assembly or both sides of the CLT wall assembly. Tightly pack the insulation (compress min. 50%) around the penetrating item (Item 2).

4. FILL, VOID, OR CAVITY MATERIAL: Apply the following material in accordance with manufacturer's instructions and in compliance with the requirements below:

Certified Product: Specified Technologies, Inc. SpecSeal® LCI Intumescent Firestop Sealant

Apply nominal 3/4 in. (19 mm) depth of SpecSeal® LCI Intumescent Firestop Sealant over the packing material (Item 3) to fill the annular space so that it is flush with the top side of the CLT floor assembly, or with both sides of the CLT wall assembly.

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.