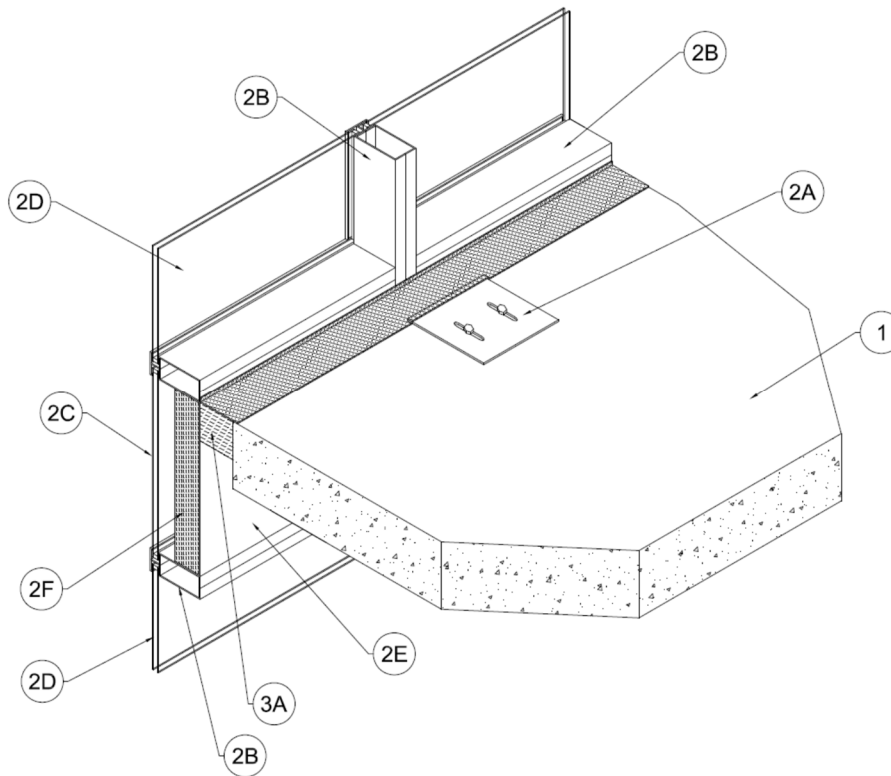

Specified Technologies, Inc.
Design No. STI/BPF 120-07
Perimeter Fire Barrier System – Curtain Wall Assembly
SpecSeal® AS200 Series Elastomeric Spray, or SpecSeal® FastTack® Firestop Spray
ASTM E2307, CAN/ULC-S115
Rating: F-Rating – 2 Hour, T-Rating – 3/4 Hour
UL 2079 L-Rating < 2 SCFM/LF
ASTM E1399 Movement Type = Class IV
Rated for ± 5 % Vertical Movement @ 25% Compression (Item 3A)



- 1. CONCRETE FLOOR ASSEMBLY:** Two hour rated concrete floor assembly made from either lightweight or normal weight concrete with a density of 100-150 pcf, with a min. thickness of 6 in. (152 mm) at the joint face. Concrete floor may be cast with a slot up to 14 in. (356 mm) x 9 in. (229 mm) and 2 in. (51 mm) deep (14 in. dimension parallel to joint) to accommodate the mounting bracket (Item 2A) that is attached to the top of the floor.
- 2. CURTAIN WALL ASSEMBLY:** The curtain wall assembly shall incorporate the following construction features:
 - A. MOUNTING ATTACHMENT -** The mounting attachments to the floor slab shall consist of min. 12 in. (203 mm) wide by 3/4 in. (19 mm) thick extruded aluminum brackets having one nominal 2 in. (51mm) leg with the attachment to the mullion having one leg at least 6 in. (152 mm) longer than the



width of the opening between the concrete floor assembly (Item 1) and the mullion framing (Item 2B). The mounting bracket is attached to the top of the concrete floor assembly (Item 1) in accordance with the curtain wall manufacturer's instructions with two 1/2 in. (13 mm) diameter steel masonry anchors with washer plates as supplied by the anchor manufacturer. Mounting bracket may be attached to the top of the floor or embedded within a cast anchor slot as required.

B. ALUMINUM FRAMING — Aluminum framing is as supplied by the curtain wall manufacturer as a one or two-piece rectangular unit and sized according to the curtain wall manufacturer's guidelines. Min. overall dimensions of the extruded framing sections are 0.100 in. (2.5 mm) thick aluminum with a min. 6 in. (152 mm) depth and a min. 3 in. (76 mm) width. Vertical mullions are to be spaced a min. 60 in. (1.52 m) on center (oc). For the spandrel region, horizontal transoms are to be spaced a min. 20-1/2 in. (52 cm) oc and the upper transom shall be located such that the underside shall be flush with the top of the concrete floor assembly (Item 1).

C. SPANDREL PANELS — The spandrel panels shall consist of one or more of the following types:

1. **GLASS PANELS** – Min. 1/4 in. (6 mm) thick transparent or opaque heat-strengthened glass or min. 1 in. (25 mm) thick insulated glass units with two layers of nominal 1/4 in. (6 mm) thick heat-strengthened glass separated by a min. 1/2 in. (13 mm) air space. Each panel secured in position with aluminum pressure plates in conjunction with

glazing gaskets and steel screws or with structural silicone installed in accordance with the manufacturer's instructions.

2. **ALUMINUM PANELS (Not Shown)** – Min. 1/8 in. (3 mm) thick aluminum panels with nom 1/4 in. (6 mm) thick edges. Each panel secured in position with aluminum pressure plates in conjunction with gaskets and steel screws or with structural silicone installed in accordance with the manufacturer's instructions.

3. **STONE PANELS (Not Shown)** - Nominal 1-3/16 in. (30 mm) thick polished granite spandrel panels with 1 in. (25 mm) thick gauged edges. Each panel secured in position with aluminum pressure plates in conjunction with gaskets and steel screws or with structural silicone installed in accordance with the manufacturer's instructions.

4. **ALUMINUM COMPOSITE PANELS (Not Shown)** – Min. 1/8 in. (3 mm) thick aluminum composite comprised of min. 0.02 in. (0.5 mm) aluminum skin with LDPE or mineral-filled Fire- Resistant core. Each panel secured in position with steel furring channels in conjunction with gaskets and steel screws or with structural silicone installed in accordance with the manufacturer's instructions.

5. **METAL COMPOSITE PANELS (Not Shown)** – Min. 1 in. (25 mm) thick, comprised of 0.032 in. (0.8 mm) smooth aluminum exterior skin, 0.157 in. (4 mm) thick mineral fiber cement board exterior stabilizer, 5/8 in. (16 mm) thick Micore



300 mineral fiberboard insulation core, 0.157 in. (4 mm) thick mineral fiber cement board interior stabilizer, and a 0.032 in. (0.8 mm) smooth aluminum interior skin. Each panel secured in position with aluminum pressure plates in conjunction with glazing gaskets and steel screws or with structural silicone installed in accordance with the manufacturer's instructions.

- D. VISION PANELS - Nominal 1/4 in. (6 mm) thick transparent heat-strengthened glass or nominal 1 in. (25 mm) thick insulated glass units with two layers of nominal 1/4 in. (6 mm) thick transparent heat-strengthened glass separated by a 1/2 in. (13 mm) air space. Each panel secured in position with aluminum pressure plates in conjunction with glazing gaskets and steel screws or with structural silicone installed in accordance with the manufacturer's instructions.
- E. STEEL BACKPAN – Min. 22 GA (min 0.031 in. or 0.79 mm thick) galvanized steel panels installed behind Spandrel Panel (Item 2C) between mullions and transoms within the spandrel. Backpan provided with min. 3 in. (75 mm) wide flange around all four sides. Backpan installed flush with interior face of framing and screw-attached to mullions and transom along all sides with min. No. 10 by 1/2 in. (13 mm) long self-drilling, self-tapping steel screws spaced max. 8 in. (203 mm) oc. As an option, the backpan flanges may be positioned with up to a 3/8 in. (10 mm) gap between the pan and the aluminum framing. When the backpan is installed with such a gap around the perimeter, nominal 5/16 in. (8 mm) wide by 5/16 in. (8 mm) thick adhesive backed polyurethane foam glazing tape may be

installed between the pan and the framing. Tape is recessed nominal 1/4 in. (6 mm) to accommodate one-part silicone sealant to be applied at nominal 1/4 in. (6 mm) depth over the recessed tape, around the perimeter of the pan. Any gap that exists between the backpan and the aluminum framing of the spandrel shall be filled with nominal 4 pcf (64 kg/m³) density mineral wool batt insulation (Item 3A) at the floor line to a min. depth of 2 in. (51 mm) below the anchor system component of the Mounting Attachment (Item 2A) that is mounted to the wall panel.

- F. **CERTIFIED MANUFACTURER:** Thermafiber

CERTIFIED PRODUCT: Mineral Wool

CERTIFIED MODEL: Firespan 90

CURTAIN WALL INSULATION – A min. 3 in. (76mm) thick, min. 8 pcf density unfaced mineral wool batt insulation is installed as a continuous piece, or with vertical seams. The batt is to be fitted tightly between the flanges of the backpan and secured with No. 12 gauge steel weld pins, having sufficient length to accommodate the insulation thickness (min. 3-1/2 in. long). Two rows of pins shall be fitted with nominal 1-3/16 in. (30 mm) diameter galvanized steel cup heads and spaced a max. 12 in. (305 mm) oc. In addition, if vertical seams are required, a min. of two pins shall be used in each section of curtain wall insulation.

- G. ALUMINUM SANDWICH PANEL (Optional, Not Shown) – Min. 1/8 in. (3 mm) solid aluminum panel or aluminum composite panel may be installed on exterior surface of curtain wall insulation (Item 2F) to cover the insulation for aesthetic purposes.



3. PERIMETER JOINT PROTECTION: The perimeter joint (linear opening) is not to exceed a 4 in. (102 mm) nominal joint width (joint width at installation). The perimeter joint treatment shall incorporate the following construction features:

A. **CERTIFIED MANUFACTURER:** Thermafiber

CERTIFIED PRODUCT: Mineral Wool

CERTIFIED MODEL: Safing

PACKING MATERIAL - Install min. 4 in. thick, 4 pcf density, mineral wool batt insulation installed with the fibers running parallel to the slab edge and curtain wall. Cut and stack additional batt sections as needed so that the total thickness is min. 33% greater than linear opening. Compress the packing material 25% in the nominal joint width. Install the batt insulation into the perimeter joint flush with the top surface of the concrete floor slab (Item 1). Splices (butt joints) in the lengths of mineral wool batt insulation are to be tightly compressed together. At mounting bracket locations, maintain continuous insulation beneath brackets by increasing insulation to a min. 6

in. depth for a min. of 4 in. on each side of the bracket, and having a min. 2 in. depth below the bracket.

B. **CERTIFIED MANUFACTURER:** Specified Technologies, Inc.

CERTIFIED PRODUCT: Joint Sealant Spray

CERTIFIED MODEL: SpecSeal® AS200 Elastomeric Firestop Spray (AS205 series), SpecSeal® FastTack® Firestop Spray

FILL, VOID, OR CAVITY MATERIAL - Apply a min. wet film thickness of 1/8 in. over the packing material (Item 3A) and overlap the liquid spray material a min. 1/2 in. onto the adjacent curtain wall framing (Item 2B) and concrete floor slab assembly (Item 1). If the spraying process is stopped and the applied liquid spray material cures to an elastomeric film before process is restarted, then overlap the edge of the cured spray material at least 1/8 in. with the liquid spray material.

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.