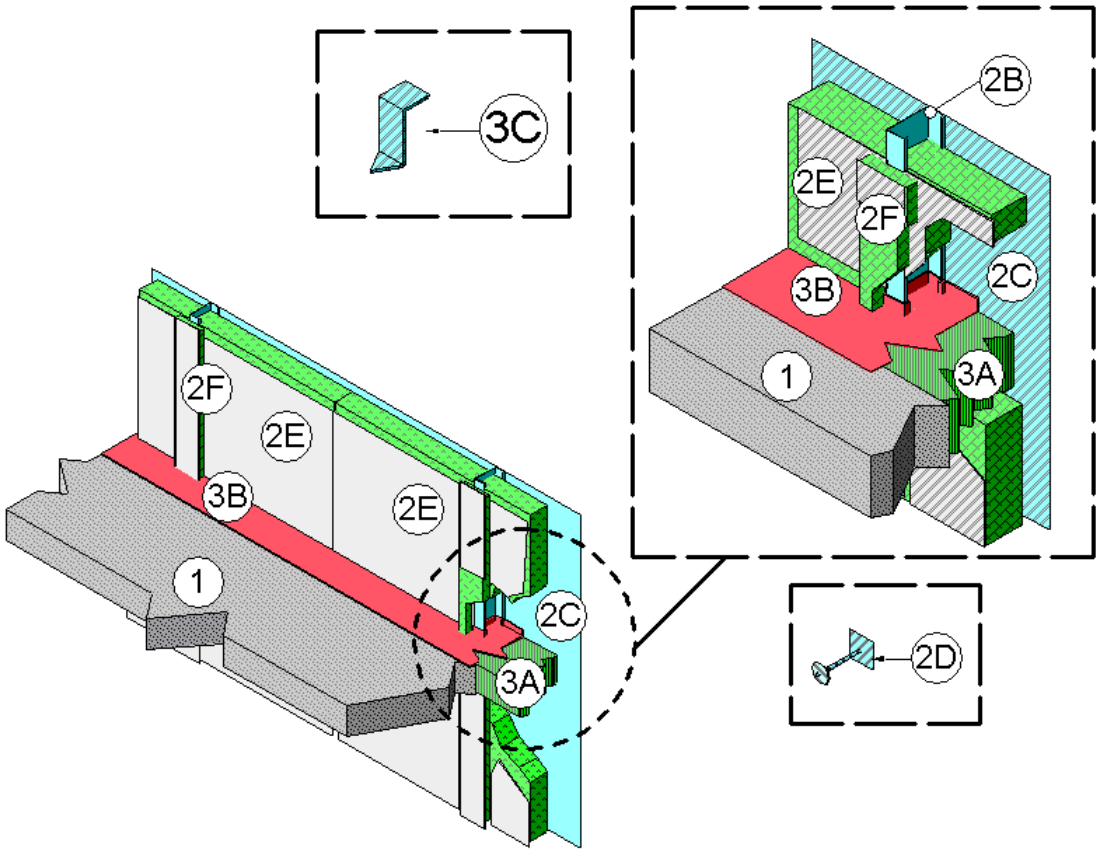
Rectorseal, LLC
Design No. TRC/BP 120-13
Perimeter Fire Barriers
ASTM E2307

	Biostop 750, Biostop 800, Flamesafe FS 3000, Flamesafe FS 4000, Metacaulk 835+ Caulk, Metacaulk 835+ SL, Metacaulk 835+ Spray, Metacaulk 1200 Spray, and Metacaulk 1500 Spray
F-Rating	2 Hour
T-Rating	3/4 Hour
L-Rating (UL 2079)	<1.0 SCFM/LF
Cycling (%) Horizontal	Class IV: ± 15



1. **CONCRETE FLOOR ASSEMBLY:** Two-hour rated concrete floor assembly made from either lightweight or normal weight concrete with a density of 100 to 150 pcf, having a min. thickness of 4-1/2 in. at the joint face. When a longitudinal recess (blockout) is required to contain an architectural joint system, increase concrete floor assembly thickness to maintain a min. thickness of 4-1/2 in. and accommodate depth of blockout formed in the concrete: blockout width unrestricted.

2. **CURTAIN WALL ASSEMBLY:** Incorporate the following construction features:
   A. MOUNTING ATTACHMENT: (Not shown) Attach steel stud framing to the structural framing according to the curtain wall manufacturer's instructions. When required, connect the mounting attachments to the joint face of the concrete floor assembly according to the curtain wall manufacturer's instructions. Limit distance between mounting attachments to max. 48 in.
   B. STEEL STUD FRAMING: Use min. 3-5/8 in. by 1-5/8 in., 18 GA, C-shaped steel studs as vertical framing. Attach according to the curtain wall system manufacturer's guidelines. Limit distance between steel stud framing to max. 48 in. When required, install horizontal framing members according to the curtain wall system manufacturer's guidelines.
   C. STEEL PANELS: Install min. 20 GA steel panels with max. dimensions of 48 in. by 144 in. to steel stud framing according to the curtain wall system manufacturer's guidelines.
   D. IMPALING PINS: When used with curtain wall insulation and framing covers locate, size, and install impaling pins according to the curtain wall system manufacturer's guidelines, or be a min. 4-1/2 in. long, 12 GA pin attached to one of the following: a nominal 2 in. by 2 in. plate; a nominal 2 in. by 2 in. by 2 in. long angle; or can be directly attached to the steel stud framing using a stud gun. Space impaling pins a max. of 12 in. on center (oc). Install impaling pins around the periphery of the curtain wall insulation so that its interior face is flush with the interior face of the steel framing.
   E. CURTAIN WALL INSULATION: Use nominal 24 in. wide, 4 in. thick, 4 pcf mineral wool batt insulation, sealed on one side with aluminum foil scrim (vapor retarder), which faces the room interior. Use only Intertek certified products meeting the above min. requirements. After installing perimeter joint protection, install by fitting in each stud cavity between steel stud framing. Locate curtain wall insulation above and below the surfaces of the perimeter joint protection. Completely fill the recess of the C-shaped steel stud framing with curtain wall insulation.
   F. FRAMING COVERS: Make from strips of 1 in. thick by 4 in. wide, 8 pcf density, mineral wool batt insulation faced on one side with aluminum foil scrim (vapor retarder), which is exposed to the room interior. Use only Intertek certified products meeting the above min. requirements. Center framing covers over all steel stud framing and secure using impaling pins. Do not pass framing covers through the perimeter joint protection. Allow framing covers to abut top and bottom surfaces of the perimeter joint protection provided that no deformation occurs.

3. **PERIMETER JOINT PROTECTION:** Do not exceed an 8 in. nominal joint width (joint width at installation). Incorporate the following construction features for the perimeter joint protection (also known as perimeter fire barrier system):

A. PACKING MATERIAL: Use a min. 4 in. thick, 4 pcf density, mineral wool batt insulation installed with the fibers running parallel to the edge of concrete floor assembly and curtain wall assembly. Cut packing material width to achieve 50% compression when installed in the nominal joint width. Compress the packing material into the perimeter joint. When a spray coating is used, locate the top surface of the packing material flush with the top surface of the concrete floor assembly. When the non-sag or self-leveling silicone sealant is used, recess the top surface of the packing material 1/4 in. from the top surface of the concrete floor assembly. Tightly compress together splices (butt joints) in the lengths of packing material by using min. 1/4 in. compression per piece of packing material. Use only Intertek certified products meeting the above min. requirements.

B. JOINT SEALANT: Rectorseal, LLC Biostop 750, Biostop 800, FlameSafe FS 3000, FlameSafe FS 4000, Metacaulk 835+ Caulk, Metacaulk 835+ SL, Metacaulk 835+ Spray, Metacaulk 1200 Spray, or Metacaulk 1500 Spray

FILL, VOID OR CAVITY MATERIAL: Apply either spray coating or sealant over the packing material as follows:

Spray Coating – spray apply the liquid to cover the exposed top surface of the packing material compressed and installed in the perimeter joint. Apply a min. wet film thickness of 1/8 in. and overlap the spray coating a min. 1/2 in. onto the adjacent curtain wall assembly and concrete floor assembly. When the spraying process is stopped and the applied spray coating cures to an elastomeric film before installation process is restarted, then overlap the edge of the cured spray coating at least 1/8 in. with the liquid spray coating.

Sealant – apply non-sag or self-leveling sealant to cover the exposed surface of the packing material compressed and installed in the perimeter joint. Apply min. 1/4 in. thickness non-sag or self-leveling sealant over the packing material and finish flush with the top surface of the concrete floor assembly.

C. SUPPORT CLIPS: (Optional) Recommended for installations subject to vertical shear movement. Use standard 20 GA galvanized steel Z-shaped clips having the following nominal dimensions: 1 in. wide by 3 in. high with a 2 in. upper leg and a 3 in. lower leg.

* Before testing, the test specimen was subjected to ±15% horizontal movement through a min. of 500 times at 30 cpm, for horizontal cycling per ASTM E1399.

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.