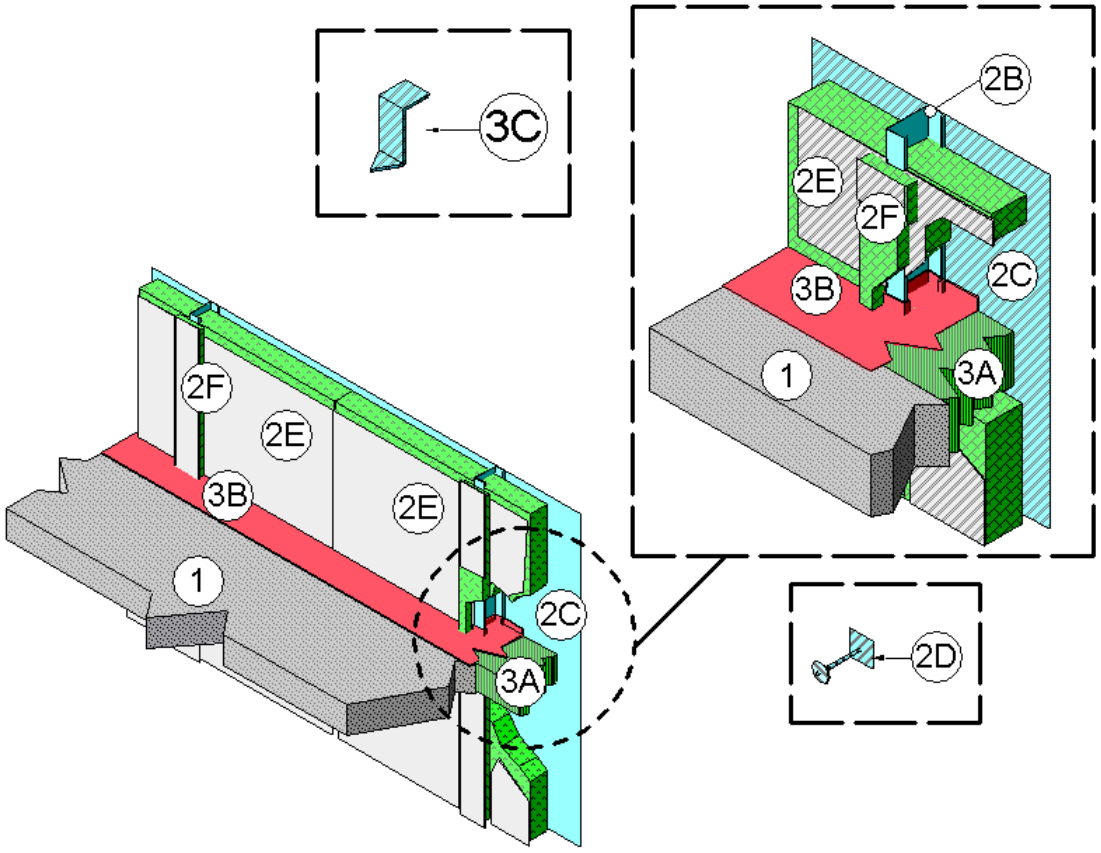
Division 07 Thermal Protection
07 84 00 Firestopping
07 84 53 Building Perimeter Firestopping

Design Number TRC/BP 120-13
PERIMETER FIRE BARRIERS
Rectorseal Corporation
Biostop 750, Biostop 800, FlameSafe FS 3000, FlameSafe FS 4000, Metacaulk 1200 Spray, and Metacaulk 1500 Spray
ASTM E 2307
T-Rating 3/4 hr
F-Rating 2 hr
ASTM E 2307/ASTM E 1399 Cycling
Class IV: 500 cycles @ 30 cpm
± 15% horizontal movement
UL 2079
L-Rating- <1.0 SCFM/LF



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 (Item 2B) 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 (Item 1) 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 (Item 2B) according to the curtain wall system manufacturer's guidelines.

D. Impaling Pins: When used with curtain wall insulation (Item 2E) and framing covers (Item 2F), 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 inch by 2 in. long angle; or can be directly attached to the steel stud framing (Item 2B) 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 (Item 2E) so that its interior face is flush with the interior face of the steel framing (Item 2B).

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 (Item 3), install by fitting in each stud cavity between steel stud framing (Item 2B). Locate curtain wall insulation above and below the surfaces of the perimeter joint protection (Item 3). Completely fill the recess of the "C-shaped" steel stud framing (Item 2B) 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 (Item 2B) and secure using impaling pins (Item 2D). Do not pass framing covers through the perimeter joint protection (Item 3). Allow framing covers to abut top and bottom surfaces of the perimeter joint protection (Item 3) 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 (Item 1) and curtain wall assembly (Item 2). 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 (Item 1). 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 (Item 1). 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. CERTIFIED MANUFACTURER: Rectorseal Corporation

CERTIFIED PRODUCT: Biostop, FlameSafe, Metacaulk

MODEL: Biostop 750, Biostop 800, FlameSafe FS 3000, FlameSafe FS 4000, Metacaulk 1200 Spray, or Metacaulk 1500 Spray

Fill, Void or Cavity Material: Apply either spray coating or sealant over the packing material (Item 3A) as follows:
Spray Coating – Spray apply the liquid to cover the exposed top surface of the packing material (Item 3A) compressed and installed in the perimeter joint. Apply a min. wet film thickness of 1/8 inch and overlap the spray coating a min. 1/2 in. onto the adjacent curtain wall assembly (Item 2) and concrete floor assembly (Item 1). 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 (Item 3A) compressed and installed in the perimeter joint. Apply min. 1/4 in. thickness non-sag or self leveling sealant over the packing material (Item 3A) and finish flush with the top surface of the concrete floor assembly (Item 1).

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 inch wide by 3 in. high with a 2 in. upper leg and a 3 in. lower leg.