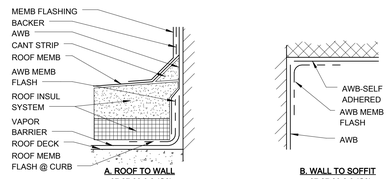
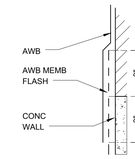
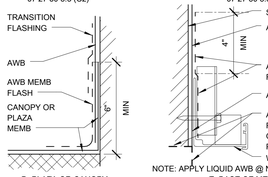


A. ROOF TO WALL
07 27 30 3.3 (C2)

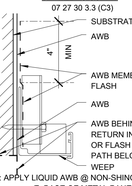
B. WALL TO SOFFIT
07 27 30 3.3 (C3)



C. CONCRETE WALL BASE
07 27 30 3.3 (C4)

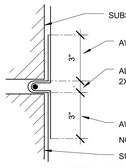


D. PLAZA OR CANOPY
07 27 30 3.3 (C5)

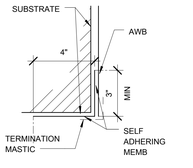


NOTE: APPLY LIQUID AWB @ NON-SHINGLED LAP JOINTS

E. BASE OF METAL PANEL
07 42 15 (2.7,2.9D,3.4D)

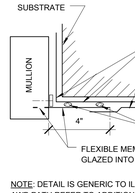


F. CONTROL JOINT
07 27 30 3.3 (C8)

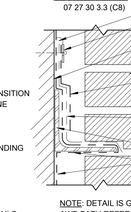


NOTE: DETAIL IS GENERIC TO ILLUSTRATE AWB PATH REFER TO ADDITIONAL PROJECT DETAILS AND CURTAIN WALL SPECIFICATIONS FOR ACTUAL CONDITIONS AND PERFORMANCE REQUIREMENTS

G. ROUGH OPENINGS
07 27 30 3.3 (D)

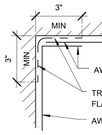


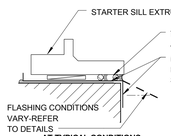
H. CURTAIN WALL JAMB
08 44 13 2.7



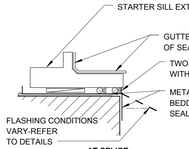
NOTE: DETAIL IS GENERIC TO ILLUSTRATE AWB PATH REFER TO ADDITIONAL PROJECT DETAILS AND MASONRY SPECIFICATION SECTIONS FOR ACTUAL CONDITIONS

J. VENEER WALL
07 27 30 3.3 (D)





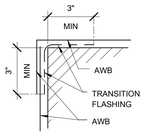
AT TYPICAL CONDITIONS



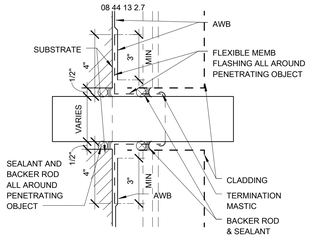
AT SPLICE

NOTE: DETAIL IS GENERIC TO ILLUSTRATE AWB PATH REFER TO ADDITIONAL PROJECT DETAILS AND CURTAIN WALL SPECIFICATIONS FOR ACTUAL CONDITIONS AND PERFORMANCE REQUIREMENTS

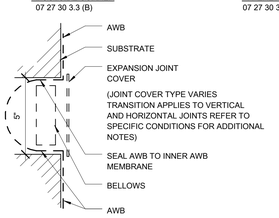
K. INSIDE CORNER
07 27 30 3.3 (B)



L. CURTAIN WALL STARTER SILL
08 44 13 2.7

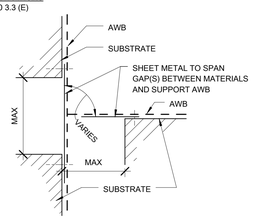


N. OUTSIDE CORNER
07 27 30 3.3 (B)



R. EXPANSION JOINTS
07 27 30 3.3 (C9)

P. PENETRATIONS
07 27 30 3.3 (E)



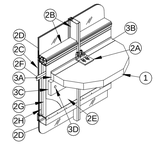
S. MATERIAL GAPS
07 27 30 3.3 (C10)

DETAIL DEFINITIONS AND NOTES:

1. AWB=AIR WEATHER BARRIER AS SPECIFIED IN 072730
2. TRANSITIONS OCCUR THROUGHOUT SYSTEMS AND ARE NOT LIMITED TO SPECIFICATION SECTIONS REFERENCED ABOVE
3. SUBSTRATES VARY-ADHESIVES, SEALANTS AND SELF ADHERING FLASHINGS TO BE COMPATIBLE WITH ADJACENT MATERIALS PROVIDE TRANSITION MEMBRANES AND/OR ADDITIONAL FLASHING MATERIALS WHERE REQUIRED TO INSURE COMPATABILITY
4. CONDITIONS SHOWN ARE GENERIC TO ILLUSTRATE DESIGN INTENT AND CLARIFY PATH OF AWB. REFER TO SPECIFIC DETAILS FOR EXACT MATERIALS & CONDITIONS
5. APPLY ALL MATERIALS TO INSURE COMPLETE AWB CONTINUITY THROUGH SYSTEMS

F5 TYPICAL AWB TRANSITION AREAS
SCALE: 3" = 1'-0"

System No. CW-S-0002
F Rating - 2 Hr
T Rating - 1/2 Hr
Linear Opening Width - 2 In. Max



1. Floor Assembly - Min 4-1/2 in. (114 mm) thick reinforced lightweight or normal weight (100-150 pcf or 1600-2400 kg/m3) structural concrete.
2. Curtain Wall Assembly - The factory-assembled curtain wall assembly shall incorporate the following construction features:
   A. Mullion Mounting Brackets - Min 8 in. (203 mm) wide by 3/4 in. (19 mm) thick extruded aluminum Halfen mounting brackets with one nom 2 in. (51 mm) high leg for support and attachment of mullion and with one leg at least 6 in. (152 mm) longer than the width of linear opening between floor assembly and mullion. Mounting bracket attached to top of floor with two min 1/2 in. (13 mm) diam steel masonry anchors in conjunction with washer plates supplied with mounting bracket.

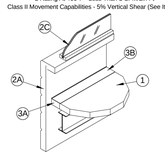
   B. Framing - The one or two-piece rectangular tubing mullions (vertical members) and transoms (horizontal members) shall be min 2-1/2 in. (64 mm) wide by 5 in. (127 mm) deep and shall be formed from min 0.100 in. (2.5 mm) thick aluminum. Mullions spaced max 60 in. (1.52 m) OC and secured to mullion mounting anchors (item 2A) at each floor level in conjunction with extruded aluminum clips bolted to the sides of the mullions and designed to engage the vertical leg of the Halfen mullion mounting bracket in conjunction with an extruded aluminum hook/leveling connector. Interior face of mullions to be max 2 in. (51 mm) from edge of floor assembly. Transoms to be spaced min 36 in. (0.91 m) OC. Sill of vision panel to be located min 6 in. (152 mm) above top surface of floor assembly.

   C. Spandrel Panels - The spandrel panels shall consist of one of the following types:
      a. Glass Panels - Min 1/4 in. (6 mm) thick opaque heat-strengthened glass or min 1 in. (25 mm) thick insulated glass units with two layers of nom 1/4 in. (6 mm) thick heat-strengthened glass separated by a min 1/2 in. (25 mm) air space. Each panel secured in position with aluminum pressure plates in conjunction with glazing gaskets and steel screws.
      b. Aluminum Panels - 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.
      c. Stone Panels - Nom 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.

   D. Vision Panels - Min 1/4 in. (6 mm) thick transparent heat-strengthened glass or min 1 in. (25 mm) thick insulated glass units with two layers of nom 1/4 in. (6 mm) thick transparent heat-strengthened glass separated by a min 1/2 in. (25 mm) air space. Each panel secured in position with aluminum pressure plates in conjunction with glazing gaskets and steel screws.
E. **Steel Backpan -** No. 22 gauge (min 0.031 in. or 0.79 mm thick) galv steel panels installed between mullions and transoms within spandrel panel area. Steel backpan provided with min 1/2 in. (13 mm) wide lip around all four sides. Steel backpan installed flush with interior face of framing and screw-attached to mullions and transom along all sides with min No. 8 by 1/2 in. (13 mm) long self-drilling, self-tapping steel screws spaced max 8 in. (203 mm) OC.
F. **Stiffener Tee -** Nom 1-1/2 in. deep by 3in. wide T-shaped stiffener formed of No. 22 gauge (min 0.031 in. or 0.79 mm thick) galv steel welded to exterior surface of steel backpan. Stiffener tee installed with its stem at an elevation 2 in. (51 mm) below the top surface of the floor such that, upon installation of the safing insulation (Item 3A), the stiffener channel will be located at the mid-depth of the safing insulation. The spot or stitch welds securing the stiffener tee to the backpan shall be spaced max 8 in. (203 mm) OC along the length of the tee with welds alternating between the top and bottom of the tee.
G. **Curtain Wall Insulation*** - Min 2 in. (51 mm) thick mineral wool batt insulation faced on one side with aluminum foil/scrim vapor retarder. Insulation batts to be installed as a continuous piece with no seams, partially kerfed on one face to receive stem of stiffener tee. Insulation panels tightly-fitted between vertical mullions and the transoms and secured to steel backpan with No. 12 gauge steel weld pins with steel clinch shields or with cup head weld pins (Item 3D) spaced max 12 in. (305 mm) OC.
   ROXUL ASIA SDN BHD - CURTAINROCK 80
   ROXUL INC - CURTAINROCK 80
   THERMAFIBER INC - FIRESPAN 90
H. **Aluminum Sandwich Panel -** (Optional) - Min 1/8 in. (3 mm) solid aluminum panel or aluminum composite panel installed on exterior surface of curtain wall insulation (Item 2G).
3. **Safing System -** The safing system shall incorporate the following construction features:
   A. **Forming Material* -** Nom 4 pcf (64 kg/m3) density mineral wool batt insulation. Batt sections cut to a width equal to the thickness of the floor and stacked to a thickness which is min 50 percent greater than the width of the linear gap between the curtain wall insulation and the edge of the concrete floor slab. The forming material is compressed min 33 percent and inserted cut-edge-first into the linear gap such that it is flush with the top and bottom surfaces of the floor assembly. Adjoining lengths of forming material to be tightly butted with butted seams spaced min 24 in. (610 mm) OC. Forming material to be continuous beneath mullion mounting brackets (Item 2A).
   ROXUL ASIA SDN BHD - Safe
   ROXUL INC - Safe
   THERMAFIBER INC - SAF
   B. **Fill, Void or Cavity Material* -** Min 1/8 in. (3 mm) wet thickness (1/16 in. or 1.5 mm dry thickness) of fill material spray-applied over top of forming material and lapping min 1/2 in. (13 mm) onto the top surface of the floor and onto the steel backpan.
   SPECIFIED TECHNOLOGIES INC - SpecSeal AS200 Elastomeric Spray or SpecSeal Fast Tack Spray
   C. **Safing Shelf - Curtain Wall Insulation* -** Nom 2 in. (51 mm) thick mineral wool batt insulation faced on one side with aluminum foil/scrim vapor retarder. Min 8 in. (203 mm) wide strips butted tightly against bottom of safing insulation (Item 3A), continuous over the steel backpans and mullions, and secured to the steel backpan with cup head weld pins (Item 3D) spaced max 12 in. (305 mm) OC.
   ROXUL ASIA SDN BHD - CURTAINROCK 80
   ROXUL INC - CURTAINROCK 80
   THERMAFIBER INC - FIRESPAN 90
   D. **Weld Pin -** Nom 2 in. (51 mm) long No. 12 gauge galv steel weld pin with nom 1-3/16 in. (30 mm) diam galv steel cup head used to secure curtain wall insulation (Item 3C) to steel backpan.
   *Bearing the UL Classification Mark

C4 CURTAIN WALL UL CW-S-0002
SCALE: 12" = 1'-0"

System No. CW-D-2005
F Rating - 3 Hr
T Rating - 1/4 Hr
Linear Opening Width - 8 In. Max
L Rating At Ambient - Less Than 1 CFM/Lin Ft
L Rating At 400°F - Less Than 1 CFM/Lin Ft
Class II Movement Capabilities - 5% Vertical Shear (See Item 3)



1. **Floor Assembly -** Min 4-1/2 in. thick steel-reinforced lightweight or normal weight (100-150 pcf) structural concrete. Floor assembly to be supported at perimeter edges by spandrel beams having a Restrained or Unrestrained Beam Rating of 3 hr.
2. **Curtain Wall Assembly -** The curtain wall assembly shall incorporate the following construction features:
   A. **Spandrel Panels -** Min 36 in. high by min 4 in. thick steel-reinforced lightweight or normal weight (100-150 pcf) structural concrete spandrel panels. Wall may also consist of min 4 in. thick steel-reinforced lightweight or normal weight concrete tilt-up panels with a min 36 in. vertical separation between window openings. Panels provided with steel dead load anchors welded to steel reinforcing bars embedded in the concrete for attachment to the steel columns and spandrel beams. Panels also provided with steel lateral anchors or braces. The dead load anchors which are located in the linear gap between the concrete floor slab and the spandrel panel or tilt-up panel are to be spaced max 72 in. OC. The top of the dead load anchor is to be recessed min 1/2 in. from top surface of floor.
   B. **Joint System -** (Not Shown) - Vertical joints between spandrel panels or tilt-up panels to be protected using Joint System No. WW-S-0038 or WW-S-0049.
   C. **Framed Window -** Metal framed window with nom 1/4 in. thick heat-strengthened glass. Sill of window to be min 6 in. above top of floor.
3. **Safing System - Max separation between edge of floor assembly and concrete spandrel or tilt-up panel is 8 in. The safing system is designed to accommodate vertical shear movement between dead load anchors up to a max of 5 percent of its installed width.** The safing system shall incorporate the following construction features:
   A. **Forming Material* -** Nom 4 in. thick mineral wool batt safing material to be installed between the concrete spandrel or tilt-up panel and the edge of the concrete floor slab. Safing material to be cut to a min 4 in. width and stacked to a thickness which is at least 25 percent greater than the width of the linear gap between the concrete spandrel or tilt-up panel and the edge of the concrete floor slab. The safing material is compressed and inserted cut-edge-first into the linear gap such that its top surface is flush with the top surface of the floor assembly. A max of one tightly-butted seam is permitted between dead load anchors. An additional min 1/2 in. thick piece of mineral wool batt safing material to be installed to cover top surface of each dead load anchor.
   THERMAFIBER INC - SAF
   B. **Fill, Void or Cavity Material* -** Min 1/8 in. wet thickness (1/16 in. dry thickness) of fill material spray-applied over top of forming material and lapping min 1/2 in. onto the top surface of the concrete floor and onto the concrete spandrel panel or tilt-up panel.
   SPECIFIED TECHNOLOGIES INC - SpecSeal AS200 Elastomeric Spray or SpecSeal Fast Tack Spray
   *Bearing the UL Classification Mark

F4 PRECAST UL CW-D-2005
SCALE: 12" = 1'-0"

Design No. STI/JS 120-01
OPL Design No. CEJ 322 P
F Rating - 2 HOUR
L Rating - <1 SCFM/LF
Rated for ±6% horizontal movement @ 33% Compression (See ITEM 3A)
Rated for ±3% vertical shear movement @ 33% Compression (See ITEM 3A)

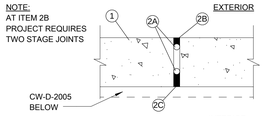
1. Concrete Floor Assembly - Two-hour rated concrete floor assembly made from either lightweight or normal weight concrete with a density of 100-150 pcf, with a min. thickness of 4 in. at the joint face. Overall slab thickness may vary to accommodate various blockout depths (longitudinal recesses) formed in the concrete, to house the architectural cover plate. The blockout width may also vary without restriction.
2. Curtain Wall Assembly - The curtain wall assembly shall incorporate the following construction features:
   A. Mounting Attachment - (Not Shown) The mounting attachments to the floor slab shall be connected to the joint face of the floor slab, in accordance with the curtain wall manufacturer's instructions. Attachments are to be secured to each mullion in the perimeter joint protection region at a max. spacing of 60 in. o.c.
   B. Aluminum Framing - Size rectangular aluminum tubing mullions and transoms, according to the curtain wall system manufacturer's guidelines. Min. overall dimensions of the extruded framing sections are 0.100 in. thick aluminum with a minimum 3-3/4 in. depth and a minimum of 2-1/2 in. width. Mullion and transom covers are added to the external side of the framing, giving the framing system a total depth of nominal 5-1/4 in. Mullions are to be spaced a minimum 60 in. o.c. and spandrel transoms are to be spaced a min. 10 in. o.c. For the spandrel region, the lower transom must be placed a min. of 5-1/2 in. below the concrete floor (as measured from the underside of the floor to the top side of the transom) and the upper transom (as measured from the top surface of the floor to the underside of the transom) may be located flush with the top surface of the floor, while maintaining the min. 10 in. spandrel height.
   C. Vision Glass Panels - Size and install panels to curtain wall framing according to the curtain wall system manufacturer's guidelines. Use min. 1/4 in. thick, clear heat-strengthened (HS) glass or tempered glass with a max. width and height less than the aluminum framing o.c. spacing, which allows the glass to be secured between the notched shoulder of the aluminum framing and pressure bar. Panels are secured with a thermal break (rubber extrusion), pressure bar (aluminum extrusion), min 1/4-20 x 5/8 in. long screws, and a snap face (aluminum extrusion).
   E. Perimeter Spandrel Panels - Min. 20 GA 1-1/2 in. x 1-1/2 in. galvanized steel angle is placed around the entire inside
perimeter of the spandrel framing and is secured to the aluminum wall framing (Item 2B) with 3/4 in. long hex-head self-drilling self-tapping sheet metal screws spaced max. 8 in. o.c.
   F. Reinforcing Angle - At the horizontal butt joints of thecurtain wall insulation (Item 2H) in the spandrel area, place two 1-1/2 in. by 1-1/2 in. by 20 GA steel angles back-to-back to form a "T". Locate the "T" reinforcing angle at the horizontal centerline of the perimeter joint protection and secure the "T" angle to the perimeter spandrel angles (Item 2E) with 3/4 in. long hex-shaped self-drilling self-tapping sheet metal screws spaced max. 8 in. o.c.
   G. Perimeter Fire Barrier Reinforcement Angle - Constructed of min. 20 GA 1-1/2 in. x 1-1/2 in. steel angle. The horizontal leg of the angle is fully embedded inside the packing material (Item 3A) at the centerline of the perimeter fire barrier, and the vertical leg is secured to the interior side of every vertical aluminum wall framing (Item 2B) member with at least two min. 1/2 in. long, No. 10 sheet metal screws, spaced max. 1 in. o.c. The angle is to be continuous along the length of the perimeter fire barrier. Where joints are required, overlap the angle 12 in. and secure the adjoining angle with at least three min. 1/2 in. long, No. 10 sheet metal screws spaced max. 4 in. o.c., placed in both the vertical and horizontal legs of the angle.
   H. Curtain Wall Insulation - A nom. 2 in. thick, 8 pcf density mineral wool batt insulation, faced on one side with aluminum foil scrim (vapor retarder) which faces the room interior, is installed to all cavities of the spandrel region between the framing. The batt is to be fitted tightly to the framing with the perimeter spandrel angle (Item 2E) and impaling screws (Item 2I). Seal all meeting edges of insulation with nom. 4 in. wide pressure sensitive aluminum foil faced tape centered over the junction so that approximately 2 in. of tape covers each edge of the adjacent insulation. Place a horizontal seam at the centerline of the perimeter joint protection and reinforce with angle (Item 2F). Install the 24 in. wide batts without vertical seams, spanning the full length between the vertical curtain wall framing members. The interior face of the batt insulation is, if required compressed, flush with the interior face of the curtain wall framing creating a min. 1-in. air space between the insulation and the glass.
   I. Impaling Screws - (Not Shown) Attach curtain wall insulation to the perimeter spandrel angle (Item 2E) with min. No. 8 bugle-head self-drilling self-tapping screws, with a 1-1/2 in. diameter galvanized speed clip spaced max. 8 in. o.c. at the centerline of the flange. Screws should be sized in accordance with the curtain wall insulation thickness, to maintain a firm attachment to the perimeter spandrel angle. Screws shall be installed so that the interior face of the curtain wall insulation is flush with the interior face of the framing.
   J. Framing (Mullion) Covers - (Not Shown) Nominal 8 pcf mineral wool batt insulation, faced on one side with aluminum foil scrim (vapor retarder) which faces the room interior. Framing covers are below the perimeter joint treatment and are nominal 2 in. thick, 7 in. wide and 5 in. tall. Framing covers above the perimeter joint treatment are nominal 2 in. thick, 7 in. wide and 2-1/2 in. tall. Center framing covers, over each vertical framing member and secure to the member with No. 8 bugle-head self-drilling self-tapping screws, with a 1-1/2 in. diameter galvanized speed clip spaced a min. 1 in. from each edge. Encapsulate the framing covers with nom. 4 in. wide pressure sensitive aluminum foil faced tape. Overlap the tape approximately 2 in. onto the adjacent aluminum framing. Framing covers do not pass through the perimeter joint treatment. They are butted to top and bottom surfaces of the perimeter joint treatment.
3. Perimeter Joint Protection - The perimeter joint (linear opening) is not to exceed an 8 in. nom. joint width (joint width at installation). The perimeter joint treatment shall incorporate the following construction features:
   A. 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. After the perimeter fire barrier reinforcement angle (Item 2G) is installed, compress the packing material 33% in the nominal joint width. Compress the batt insulation into the perimeter joint flush with the top surface of the concrete floor slab (Item 1) and its mid depth is compressed against the interior surface of the curtain wall insulation (Item 2H) which is supported by the 20 GA steel reinforcing angle (Item 2F). Splices (butt joints) in the lengths of mineral wool batt insulation are to be tightly compressed together.
   B. 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.

   Specified Technologies - SpecSeal AS Elastomeric Firestop Spray
   *Before testing, the test specimen was cycled 500 times at 30 cpm according to ASTM E1399.

2 CURTAIN WALL AT FLOOR UL CEJ322P
SCALE: 12" = 1'-0"

System No. WW-S-0049
Assembly Rating - 3 Hr
Joint Width - 1/2 in. Max
L Rating At Ambient - Less Than 1 CFM/Lin ft
L Rating At 400 F - Less Than 1 CFM/Lin ft

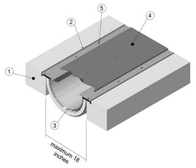
NOTE:
AT ITEM 2B
PROJECT REQUIRES
TWO STAGE JOINTS



1. **Wall Assembly -** Min 4 in. (102 mm) thick reinforced lightweight or normal weight (100-150 pcf (1600-2400 kg/m3) structural concrete. Wall may also be constructed of any UL Classifie**Concrete Blocks***.
   See **Concrete Blocks** (CAZT) category in the Fire Resistance Directory for names of manufacturers.
2. **Joint System -** Max width of joint is 1/2 in. (13 mm). The joint system shall consist of forming and fill materials, as follows:
   A. **Packing Material -** Open or closed cell polyethylene or polyurethane foam backer rod installed as a permanent form. Packing material to be recessed from both surfaces of wall to accommodate the required thickness of fill material.
   B. **Fill, Void or Cavity Material* - Sealant -** Min 1/2 in. (13 mm) thickness of fill material applied within the joint on exterior of wall, flush with wall surfaces.
   DOW CORNING CORP - 790 Sealant, 795 Sealant
   PECORA CORP - Dynatrol II Caulk, 864 Silicone Caulk
   SPECIFIED TECHNOLOGIES INC - Pensil 300 Sealant
   C. **Fill, Void or Cavity Material* - Sealant -** Min 1 in. (25 mm) thickness of fill material applied within the joint on interior of wall, flush with wall surfaces.
   SPECIFIED TECHNOLOGIES INC - SpecSeal ES Sealant or Pensil 300 Silicone Sealant
   *Bearing the UL Classification Mark

F3 PRECAST VERTICAL JOINT UL WW-S-0049
SCALE: 12" = 1'-0"

Design Number MM/EJH 120-01
(formerly OPL Design No. CEJ 501 F)
FLOOR EXPANSION JOINT (Horizontal)
MM Systems Corporation
Pyro-Flex®
ASTM E 1966 / UL 2079
2 Hours
UL 2079
L-Rating = 0 SCFM/LF
ASTM E 1399 / ASTM E 1966 / UL 2079
Cycling = Class IV
± 50% Horizontal Movement



1. CONCRETE FLOOR ASSEMBLY:
Construct a two-hour-rated concrete floor assembly made from either lightweight or normal weight concrete with a density of 100 - 150 pounds per cubic foot, with a minimum thickness of 4-1/2 inches 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 minimum thickness of 4-1/2 inches and accommodate depth of blockout formed in the concrete: blockout width unrestricted.
2. GROUT: Mix masonry grout in accordance with instructions on packaging. Apply and fill blockout with
masonry grout. Screed the grout flush
with wearing surface of concrete floor assembly (Item 1) and architectural cover (Item 4).
3. CERTIFIED MANUFACTURER: MM Systems Corporation CERTIFIED PRODUCT: Pyro-Flex® Fire Barriers SERIES: PF-2018F-SC Series
JOINT TREATMENT: Construct a fire barrier composed of layered fabric or metallic sheets and fibrous components mechanically attached to the concrete floor assembly (Item 1). Refer to Table 1 for maximum joint widths and corresponding minimum joint widths and movements related to specific model number. Joint treatment's total movement (contraction + expansion) occurs between the maximum joint width and minimum joint width. Install joint treatment in accordance with certified manufacturer's joint treatment installation instructions.
4. CERTIFIED MANUFACTURER: MM Systems Corporation CERTIFIED PRODUCT: Metallic and Elastomeric Joint Systems
SERIES: EJA and EJP Product Section ARCHITECTURAL COVER: Use either a metal or elastomeric architectural or commercial cover meeting the following
requirements. The thickness of the metal architectural cover varies with joint width and load requirements. Use a metal architectural cover with a minimum thickness of 0.125 inches, formed of aluminum, brass, bronze or 24-gauge galvanized steel or stainless steel. Or, when required, use an elastomeric joint seal constructed of Santoprene, EPDM or PVC elastomer. Install the metal or elastomeric architectural cover in accordance with certified manufacturer's installation instructions.
5. FASTENERS: Use minimum 1/4-inch by 2-3/4-inch-long concrete fasteners spaced maximum 24 inches on center to secure the joint treatment (Item 2) to the concrete floor assembly (Item 1).

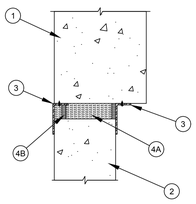
Model Number: PF-2018F-SC 5-2.5 MAX WIDTH: 7.5", MIN WIDTH: 2.5", MOVEMENT CAPABILITY 5"

B2 EXPANSION JOINT LISTING MM/EJH 120-01
SCALE: 12" = 1'-0"

DETAIL GENERAL NOTES

1. GENERAL NOTES APPLY TO ALL #AS500 DRAWINGS
2. REFER TO SHEETS 8AS501-505 FOR EXTERIOR WALL TYPES
3. AWB TRANSITION AREAS AS SHOWN ON THIS SHEET ARE TYPICAL CONDITIONS AND MAY NOT BE REFERENCED FROM SPECIFIC DETAILS
4. MULLION PROFILES ARE SHOWN FOR INTENT ONLY. REFER TO SPECIFICATIONS FOR PERFORMANCE, BLAST AND WIND LOAD REQMNTS FOR CURTAIN WALL SYSTEMS
5. TYPICAL CURTAIN WALL IS STRUCTURALLY GLAZED WITH NO SNAP CAPS. FINS OR EXTENDED MULLIONS WHERE SHOWN IN DETAILS ARE STRUCTURALLY INTEGRAL TO UNITIZED FRAMING OF CURTAIN WALL SYSTEMS.
6. REFER TO STRUCTURAL DRAWINGS FOR REINFORCING STEEL AT CMU WALLS.
7. STRUCTURAL FIRE PROOFING IS TYPICALLY NOT SHOWN IN DETAILS FOR CLARITY REFER TO SPECIFICATIONS FOR FIRE PROOFING TYPES AND LOCATIONS
8. REFER TO SPECIFICATIONS FOR MISSION CRITICAL AND LIFE SAFETY PROTECTED BLAST REQUIREMENTS FOR ALL FACADE ELEMENTS
9. REFER TO ELEVATIONS FOR GLASS TYPES
10. THE TERMS METAL STUD, METAL STUD FRAMING, OR LIGHT GUAGE FRAMING WHERE USED REFERS TO DIVISION 05 40 00 COLD FORMED MTL FRAMING FOR ALL EXTERIOR WALL ASSEMBLIES
11. PERIMETER FIRE PROTECTION ASSEMBLIES ARE NOT LIMITED TO THOSE INDICATED ON THIS SHEET REFER TO SPECIFICATIONS AND COORDINATE FINAL ASSEMBLY WITH PRODUCT SUPPLIERS AND CONSTRUCTION MANAGER
12. PROVIDE EXTRUDED ALUMINUM SILL EXTENSIONS AT ALL CURTAINWALL SILLS. TWO PIECE CONSTRUCTION PERMITTED REFER TO F4/8AS505
13. REFER TO INTERIOR DETAILS FOR INTERIOR PARTITIONS, SOFFITS AND CEILINGS WHERE SHOWN IN EXTERIOR WALL DETAILS
14. REFER TO DETAIL F5 THIS SHEET AND SPECIFICATIONS SECTION 072730 FOR AWB INTENT AND CONTINUITY OF PRIMARY WEATHER BARRIER CLOSURE
15. DETAIL F5 THIS SHEET IS TO CLARIFY CONDITIONS IN DETAILS REFER TO ACTUAL CONDITIONS FOR GEOMETRY AND DIMENSIONS REQUIRED AT TRANSITIONS
16. ISOLATE DISSIMILAR METALS WITH SELF ADHERED MEMBRANE OR EXTRUDED SILICONE BEDDED IN SEALANT AS REQUIRED BY PROJECT CONDITIONS AND/OR DESCRIBED IN SPECIFICATIONS
17. EXTERIOR COLORS WHERE CRITICAL TO DETAILS ARE DESIGNATED AS EXTC=EXTERIOR COATINGS, AND EXTP=EXTERIOR PAINT REFER TO SPECIFICATIONS FOR PRODUCT, MATERIAL AND APPLICATION REQUIREMENTS, SECTION 09 06 00 - 'SCHEDULE FOR FINISHES' FOR SCHEDULE.
18. SEALANT PLANE WHERE SHOWN ON DETAILS IS FOR INTENT OF ALIGNMENT ONLY-PRECAST AND CURTAIN WALL SUPPLIERS TO COORDINATE RELATIONSHIP OF JOINT/DRAINAGE PLANE FOR EACH SYSTEM
19. WHERE INTERIOR CEILINGS/SOFFITS ARE LOWER THAN BOTTOM OF UPPER MULLION 9'-0" AFF TYP TO BOTTOM (10'-6" IN SOME AREAS) AT BUILDING PERIMETER REFER TO A1/8AS21 SIM FOR CLOSURE PANEL
20. ALL CURTAINWALL END DAMS TO BE MECHANICALLY FASTENED TO STARTER SILLS
21. AWB SUPPLIER TO COORDINATE WITH CURTAIN WALL MANUFACTURER FOR TRANSITIONS IN AWB AT CURTAIN WALL STACK JOINTS. TRANSITIONS TO MAINTAIN CONTINUITY OF AWB TYPICAL.

ENGINEERING JUDGMENT FIRESTOP DETAIL
F Rating - 2 HR



1. **Beam Assembly (2 Hr) -** Min 12" wide concrete beam.
2. **Wall Assembly (1 or 2 Hr) -** Min 8" thick concrete or concrete block wall. Max separation between bottom of beam and top of wall is 2".
3. **Steel Angle -** Min 14 ga steel angle attached to concrete beam and overlapping min 2" onto wall assembly.
4. **Firestop System -** The firestop system shall consist of the following:
   A. **Packing Material -** Max 1" depth of min 4 pcf mineral wool batt insulation tightly packed into joint flush with inaccessible side of the wall. After first application of sealant (Item 3B), mineral wool batt insulation compressed 50% and installed into joint to remaining depth of wal recessed from accessible side of wall to accommodate sealant (Item 3B).
   B. **Sealant -** Min 1/2" thickness of SpecSeal® ES Elastomeric or LC Sealant applied over each installation of mineral wool. Second application of sealant shall be flush with accessible side of wall surface.
   C. **Spray (Not Shown) -** As an alternate to sealant SpecSeal® AS200 applied over both installations of packing material to a min 1/8" wet thickness, overlapping substrates by min 1/2".

   Notes: 1 - T rating may not equal F rating per UL2079.

HEAD OF EXTERIOR CMU