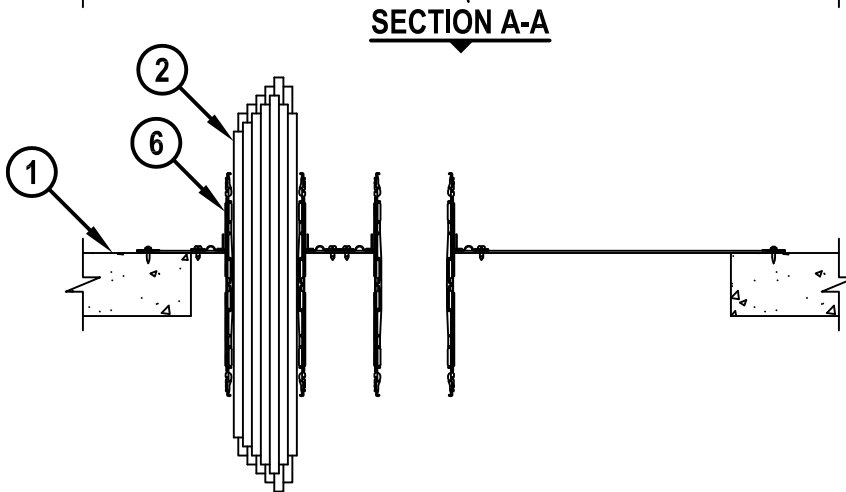
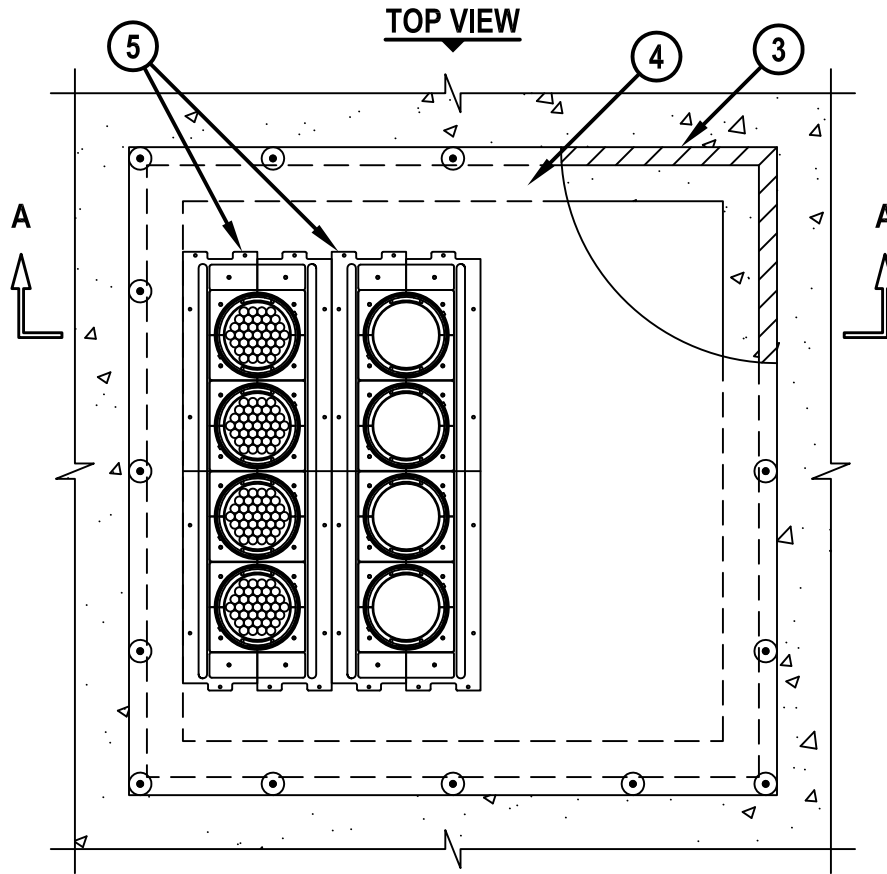


**CABLE BUNDLES THROUGH CONCRETE FLOOR/WALL OR BLOCK WALL ASSEMBLY**

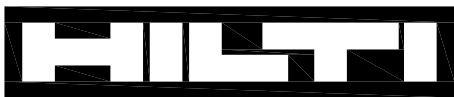
F-RATING = 2-HR.  
T-RATING = 0-HR.

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**1. CONCRETE FLOOR OR WALL ASSEMBLY (2-HR. FIRE-RATING) :**

- A. LIGHTWEIGHT OR NORMAL WEIGHT CONCRETE FLOOR OR WALL (MINIMUM 3-1/2" THICK).
- B. STEEL FLOOR UNIT/FLOOR ASSEMBLY - LIGHTWEIGHT OR NORMAL WEIGHT CONCRETE FLOOR (MINIMUM 2-1/2" THICK) OVER METAL DECKING (UL CLASSIFIED D700 OR D900).
- C. ANY UL/cUL CLASSIFIED CONCRETE BLOCK WALL.



**Hilti Firestop Systems**

HILTI, Inc.  
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Scale	3/32" = 1"
Date	Oct. 21, 2016

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**CABLE BUNDLES THROUGH CONCRETE FLOOR/WALL OR BLOCK WALL ASSEMBLY**

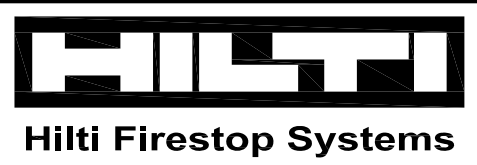
F-RATING = 2-HR.  
T-RATING = 0-HR.

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2. CABLE BUNDLES TO BE A COMBINATION OF ANY OF THE FOLLOWING AND LOCATED WITHIN EACH FIRESTOP DEVICE (ITEM 6) (SEE NOTE NO. 5 BELOW) :
  - A. MAXIMUM 100 PAIR NO. 24 AWG TELEPHONE CABLE WITH PVC JACKET.
  - B. MAXIMUM 7/C NO. 12 AWG COPPER CONDUCTOR CONTROL CABLE WITH PVC OR XLPE JACKET AND INSULATION.
  - C. MAXIMUM 4/0 AWG TYPE RHH GROUND CABLE.
  - D. MAXIMUM 4 PAIR NO. 22 AWG CAT 5 OR 6 COMPUTER CABLE.
  - E. MAXIMUM RG 6/U COAXIAL CABLE WITH FLUORINATED ETHYLENE INSULATION AND JACKETING.
  - F. MAXIMUM 1/2" DIAMETER FIBER-OPTIC CABLE (24 FIBER) WITH PVC OR PE JACKET AND INSULATION.
  - G. MAXIMUM 3/C NO. 12 AWG METAL CLAD CABLE.
3. ONE LAYER HILTI CP 619T FIRESTOP PUTTY ROLL OR MINIMUM 1/2" BEAD HILTI FS-ONE MAX INTUMESCENT FIRESTOP SEALANT APPLIED UNDER COMPOSITE SHEET AROUND PERIMETER OF OPENING.
4. HILTI CFS-COS FIRESTOP COMPOSITE SHEET CUT TO OVERLAP FLOOR OR WALL A MINIMUM OF 3". COMPOSITE SHEET INSTALLED WITH THE ALUMINUM FOIL FACING AGAINST THE FLOOR OR WALL AND SECURED WITH MINIMUM 3/16" x 1-1/4" LONG STEEL ANCHOR SCREWS WITH 1-1/4" DIAMETER STEEL FENDER WASHERS OR 1-1/16" LONG HILTI X-GN 27 MX NAILS IN CONJUNCTION WITH MINIMUM 1-1/4" DIAMETER STEEL FENDER WASHERS INSTALLED AT EACH CORNER AND MAXIMUM 4" C/C (SEE NOTE NO. 6 BELOW).
5. HILTI CFS-SL GP 24" FIRESTOP GANGPLATE (MAX. QTY. = 2) SECURED TO HILTI CFS-COS FIRESTOP COMPOSITE SHEET WITH NO. 10 x 3/4" LONG SELF-DRILLING STEEL SCREWS THROUGH ALL PRE-PUNCHED HOLES AROUND PERIMETER OF GANGPLATES.
6. HILTI CP 653 (BA) 4" SPEED SLEEVE TO BE INSTALLED WITHIN EACH CIRCULAR OPENING PORT OF THE HILTI CFS-SL GP FIRESTOP GANGPLATE AND CENTERED WITHIN FLOOR/WALL. THE TWO INTEGRAL SET SCREWS ARE TO BE TIGHTENED TO FIRMLY BEAR AGAINST EACH DEVICE TO RETAIN IT IN POSITION. THE INNER FABRIC SEAL SHOULD BE TWISTED CLOSED.

**NOTES :**

1. MAXIMUM SIZE OF OPENING = 30" x 30".
2. ANNULAR SPACE BETWEEN CFS-SL GP FIRESTOP GANGPLATES AND BETWEEN CFS-SL GP AND PERIPHERY OF OPENING = MINIMUM 0".
3. MAXIMUM OPENING SIZE IN CFS-COS FIRESTOP COMPOSITE SHEET FOR THE INSTALLATION OF THE FIRESTOP DEVICES = 20" x 4-1/2".
4. HILTI CFS-COS FIRESTOP COMPOSITE SHEET, CFS-SL GP FIRESTOP GANGPLATE, AND FS-ONE MAX INTUMESCENT FIRESTOP SEALANT/CP 619T FIRESTOP PUTTY ROLL ARE REQUIRED ON BOTH SIDES OF A WALL.
5. CABLES MAY REPRESENT 0% TO 100% VISUAL FILL OF DEVICE.
6. IN FLOORS AND WALLS 4-1/2", OR GREATER, THE REQUIRED CFS-COS FIRESTOP COMPOSITE SHEET OVERLAP ONTO FLOOR/WALL SURFACES MAY BE REDUCED TO 2" WHEN CONCRETE SCREW ANCHORS ARE USED.



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