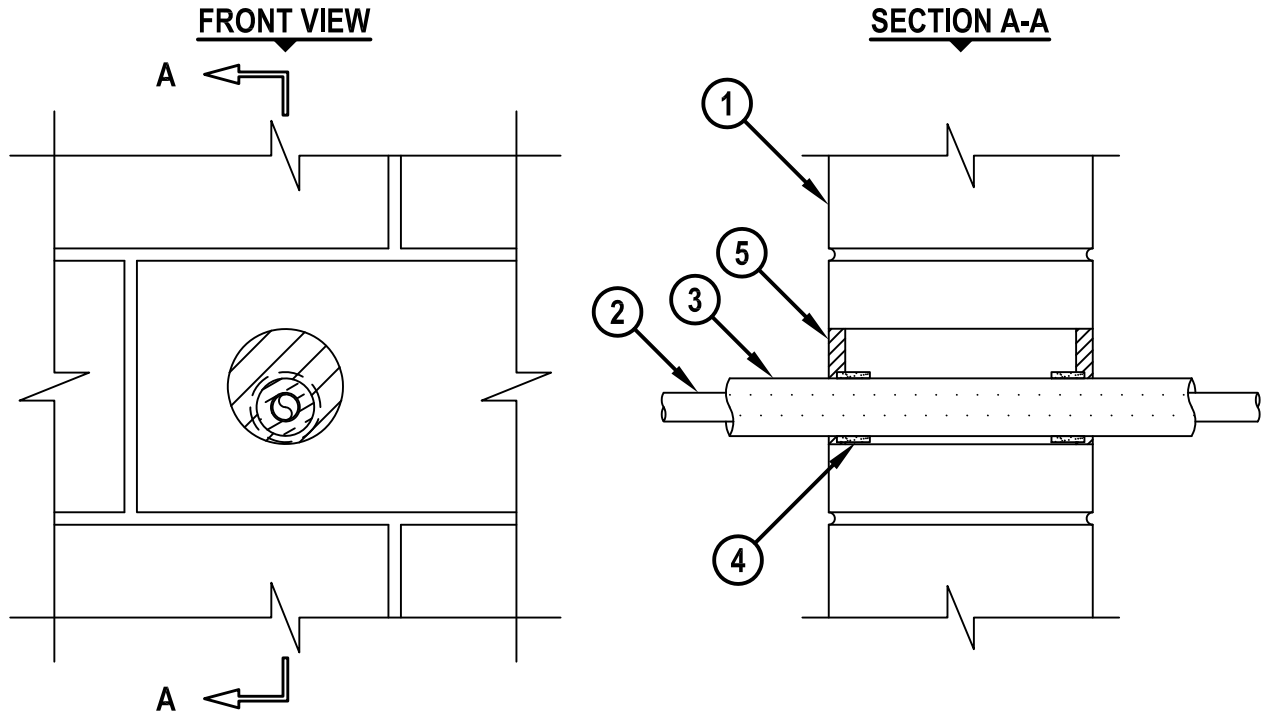


**INSULATED METAL PIPE THROUGH CONCRETE WALL OR CONCRETE BLOCK WALL ASSEMBLY**

F-RATING = 2-HR.  
T-RATING = 1/2-HR.

WJ5193b.090618



1. CONCRETE WALL ASSEMBLY (2-HR. FIRE-RATING) :
  - A. LIGHTWEIGHT OR NORMAL WEIGHT CONCRETE WALL (MINIMUM 6" THICK).
  - B. ANY UL CLASSIFIED CONCRETE BLOCK WALL.
2. MAXIMUM 7/8" NOMINAL DIAMETER STREAMLINE® ACR-TYPE L COPPER TUBING.
3. NOMINAL 1/2" THICK STREAMLINE DURAGUARD™ POLYETHYLENE TUBING INSULATION.
4. HILTI CP 648E WRAP STRIP (NOMINAL 3/16" THICK x 1" WIDE) CONTINUOUSLY WRAPPED AROUND THE OUTER CIRCUMFERENCE OF THE PIPE, COVERING ONE TIME, WITH ENDS BUTTED AND HELD IN PLACE WITH TAPE. WRAP STRIP TO BE INSERTED INTO ANNULAR SPACE AND RECESSED 1/4" FROM WALL SURFACES.
5. MINIMUM 1/2" DEPTH HILTI FS-ONE MAX INTUMESCENT FIRESTOP SEALANT FLUSH WITH BOTH SURFACES OF WALL. FS-ONE MAX TO BE NOMINAL 1/4" DEPTH AT AREA WHERE WRAP STRIP IS INSTALLED.

NOTES : 1. MAXIMUM DIAMETER OF OPENING = 3-1/2".  
2. ANNULAR SPACE = MINIMUM 1/4", MAXIMUM 1-1/2".



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Sheet	1 of 1
Scale	11/64" = 1"
Date	Sep. 06, 2018

Drawing No.  
**WJ**  
**5193b**