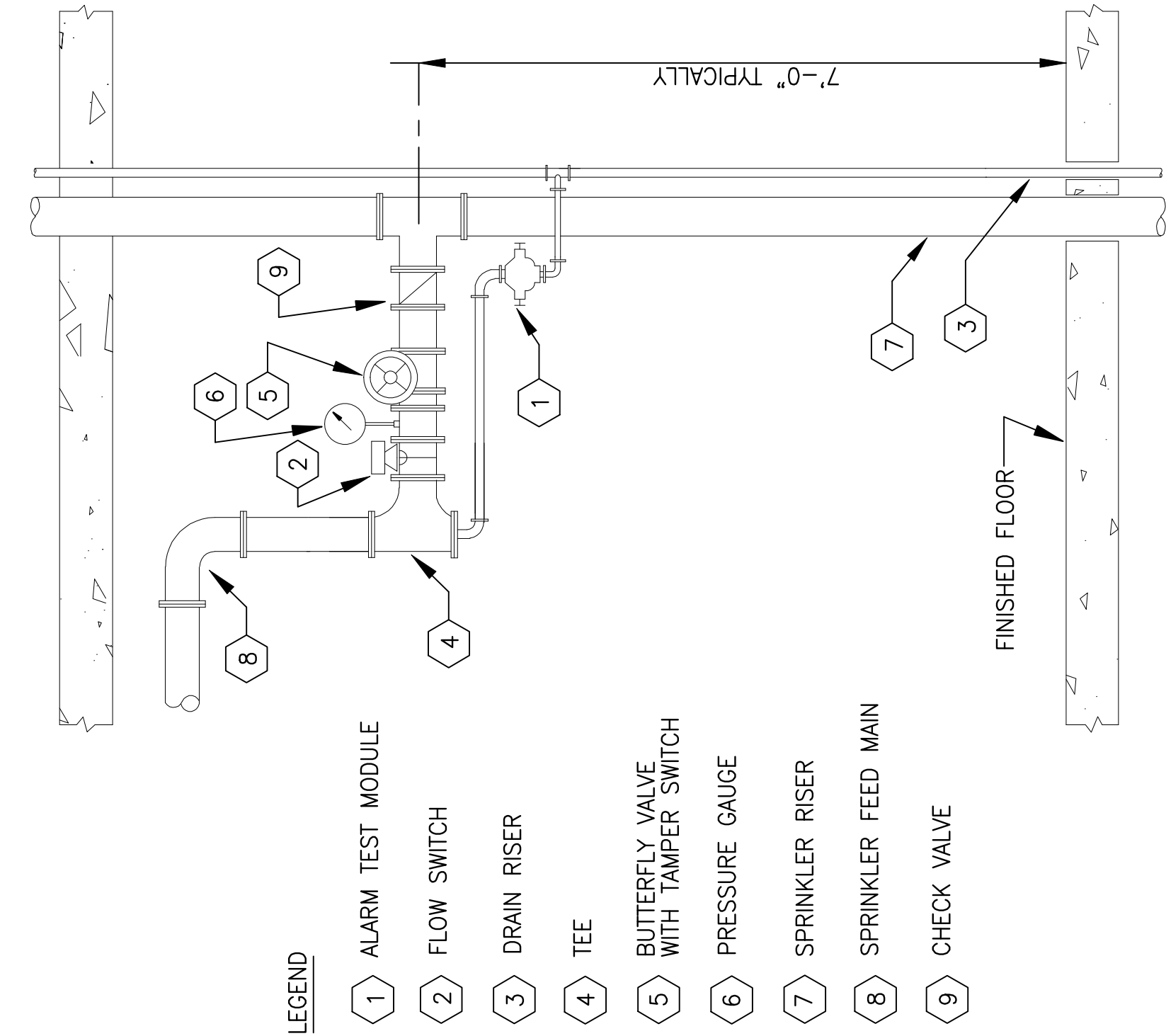


NOTES:
 MAINTAIN A MINIMUM OF 8" CLEARANCE BETWEEN THE INCOMING WATER SERVICE AND THE WALL.
 MAINTAIN A MINIMUM 30" CLEARANCE INFRONT OF THE BACKFLOW PREVENTER.
 ALL VALVES NOT PROVIDED WITH THE BACKFLOW PREVENTERS SHALL BE BUTTERFLY VALVES.
 ALL FLOW AND TAMPER SWITCHES SHALL BE TIED INTO THE FIRE ALARM SYSTEM.

INCOMING FIRE SERVICE PIPING DETAIL

NOT TO SCALE

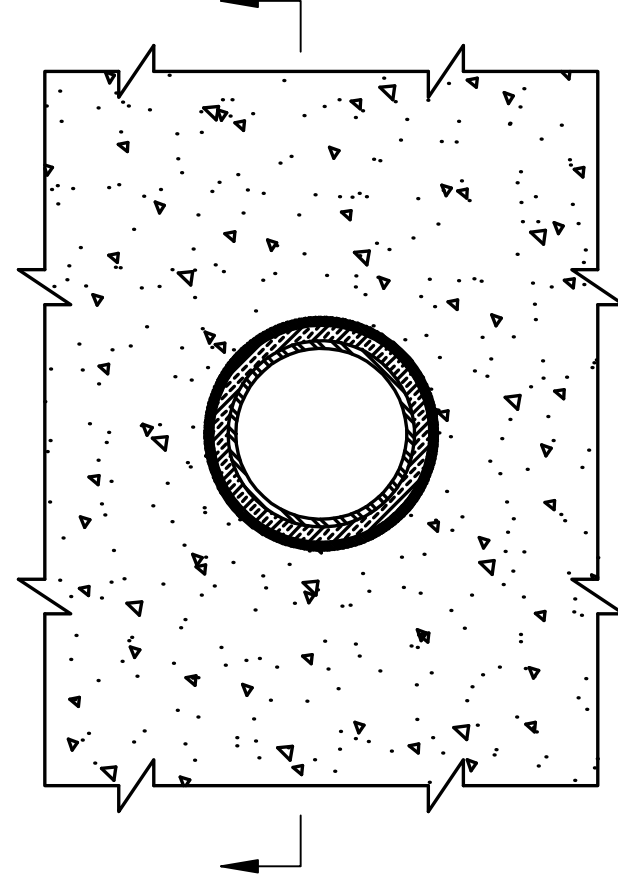


LEGEND

- 1 ALARM TEST MODULE
- 2 FLOW SWITCH
- 3 DRAIN RISER
- 4 TEE
- 5 BUTTERFLY VALVE WITH TAMPER SWITCH
- 6 PRESSURE GAUGE
- 7 SPRINKLER RISER
- 8 SPRINKLER FEED MAIN
- 9 CHECK VALVE

TYPICAL FLOOR CONTROL ASSEMBLY

NOT TO SCALE



1. CONCRETE FLOOR OR WALL ASSEMBLY (2-HR. FIRE-RATING):
 A. LIGHTWEIGHT OR NORMAL WEIGHT CONCRETE FLOOR OR WALL (MINIMUM 4-1/2" THICK).
 B. ANY UL/ULC CLASSIFIED CONCRETE BLOCK WALL.
2. OPTIONAL: MAXIMUM 20" NOMINAL DIAMETER STEEL PIPE SLEEVE (SCHEDULE 10 OR HEAVIER).
3. PENETRATION ITEM TO BE ONE OF THE FOLLOWING:
 A. MAXIMUM 12" NOMINAL DIAMETER STEEL PIPE (SCHEDULE 10 OR HEAVIER).
 B. MAXIMUM 6" NOMINAL DIAMETER COPPER PIPE.
4. MAXIMUM 2" THICK GLASS FIBER INSULATION.
5. MINIMUM 4" THICKNESS MINERAL WOOL (MIN. 4 PCF DENSITY) TIGHTLY PACKED.
6. MINIMUM 1/2" DEPTH HILTI FS-ONE INTUMESCENT FIRESTOP SEALANT.

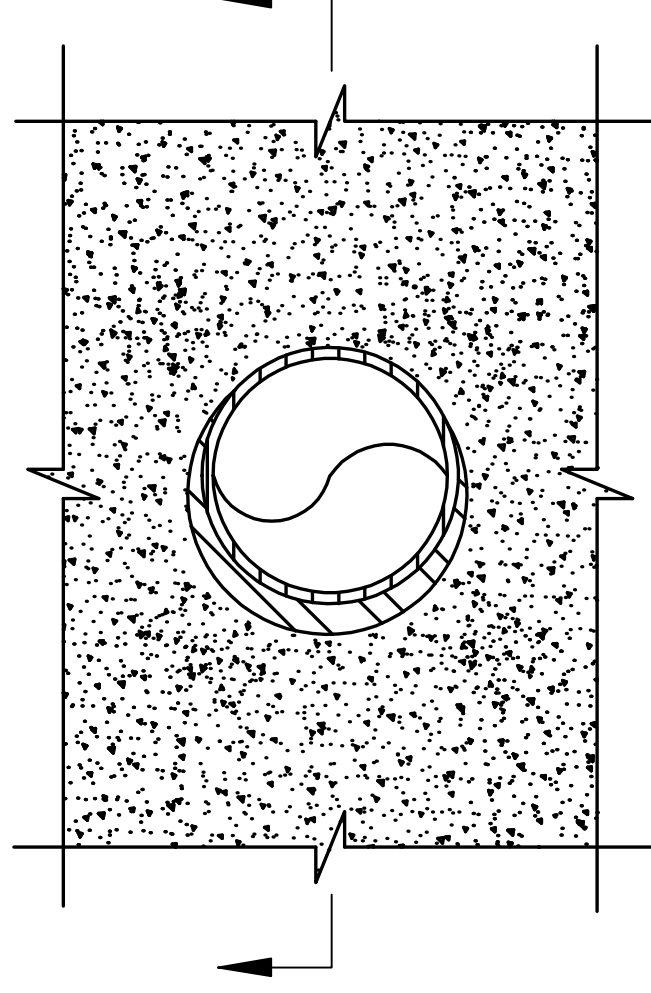
- NOTES:
1. MAXIMUM DIAMETER OF OPENING = 20"
 2. ANNULAR SPACE = MINIMUM 1/2" MAXIMUM 2-1/4"
 3. MINIMUM 1/2" DEPTH HILTI FS-ONE INTUMESCENT FIRESTOP SEALANT IS REQUIRED ON BOTH SIDES OF A WALL.

F RATING = 2-HR.
 T RATING = 1-HR.
 L RATING AT AMBIENT = LESS THAN 1 CFM/SQ. FT.
 L RATING AT 400°F = LESS THAN 1 CFM/SQ. FT.

UL/ULC SYSTEM NO. CAJ5091

INSULATED METAL PIPE THRU CONCRETE FLR./WALL OR BLOCK WALL

NOT TO SCALE



1. CONCRETE FLOOR OR WALL ASSEMBLY (2-HR. FIRE-RATING):
 A. ANY LIGHTWEIGHT OR NORMAL WEIGHT FLOOR OR WALL (MINIMUM 4-1/2" THICK).
 B. ANY UL/ULC CLASSIFIED CONCRETE BLOCK WALL.
2. PENETRATING ITEM TO BE ONE OF THE FOLLOWING:
 A. MAXIMUM 10" NOMINAL DIAMETER STEEL PIPE (SCHEDULE 10 OR HEAVIER).
 B. MAXIMUM 4" NOMINAL DIAMETER COPPER PIPE.
 C. MAXIMUM 4" NOMINAL DIAMETER STEEL CONDUIT.
 D. MAXIMUM 4" NOMINAL DIAMETER EMT.
3. MINIMUM 3" THICKNESS MINERAL WOOL (MIN. 4 PCF DENSITY) TIGHTLY PACKED FOR NOMINAL 4" DIAMETER (AND SMALLER), AND MINIMUM 4" THICKNESS MINERAL WOOL (MIN. 4 PCF DENSITY) TIGHTLY PACKED FOR PIPES GREATER THAN NOMINAL 4" DIAMETER.
4. MINIMUM 1/2" DEPTH HILTI FS-ONE INTUMESCENT FIRESTOP SEALANT, CP 606 FLEXIBLE FIRESTOP SEALANT OR CP 601S ELASTOMERIC FIRESTOP SEALANT.
5. MINIMUM 1/2" CROWN HILTI FS-ONE INTUMESCENT SEALANT, CP 606 FLEXIBLE FIRESTOP SEALANT OR CP 601S ELASTOMERIC FIRESTOP SEALANT APPLIED AT POINT OF CONTACT.

NOTES:

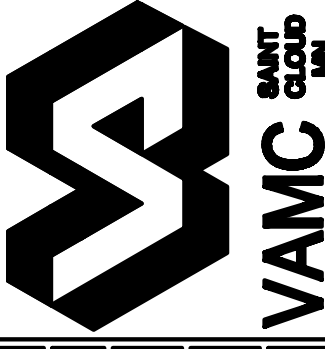
1. MAXIMUM DIAMETER OF OPENING = 12"
2. ANNULAR SPACE = MINIMUM 3/8" MAXIMUM 1-1/4"
 MINIMUM 1/2" DEPTH HILTI FS-ONE INTUMESCENT SEALANT, CP 606 FLEXIBLE FIRESTOP SEALANT OR CP 601S ELASTOMERIC FIRESTOP SEALANT IS REQUIRED ON BOTH SIDES OF A WALL ASSEMBLY.
3. L-RATING ONLY APPLY WHEN HILTI FS-ONE INTUMESCENT FIRESTOP SEALANT IS USED.

F RATING = 2-HR.
 T RATING = 0-HR.
 L RATING AT AMBIENT = LESS THAN 1 CFM/SQ. FT.
 L RATING AT 400°F = 4 CFM/SQ. FT.

UL/ULC SYSTEM NO. CAJ11149

METAL PIPE THROUGH CONCRETE FLOOR/WALL OR BLOCK WALL

NOT TO SCALE

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