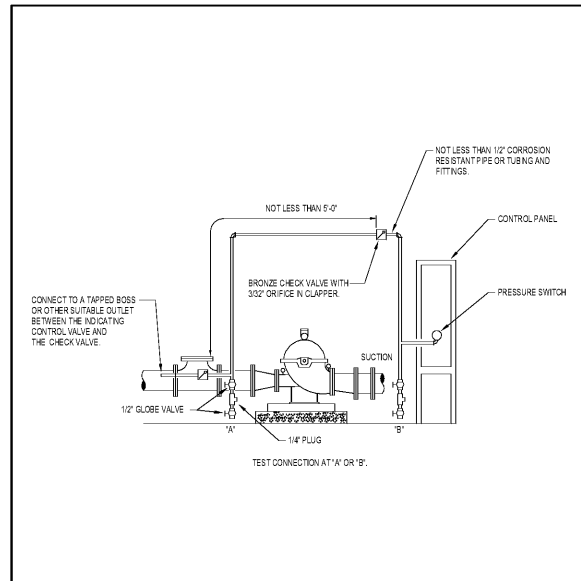
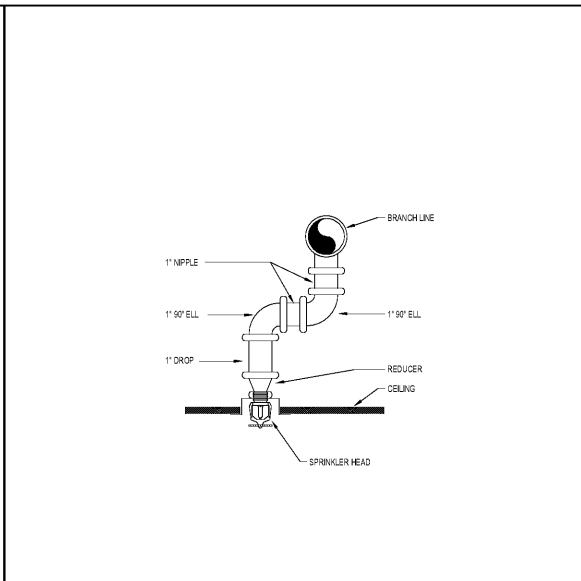


**NOT FOR
CONSTRUCTION**

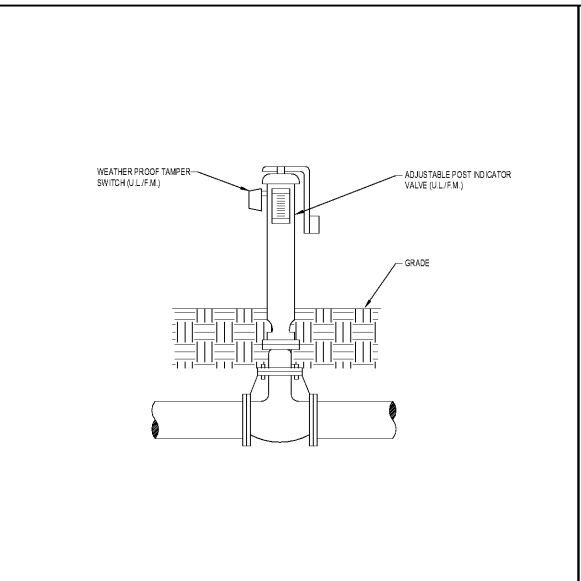
No.	Description	Date
1	ED - GMP	2019-07-03



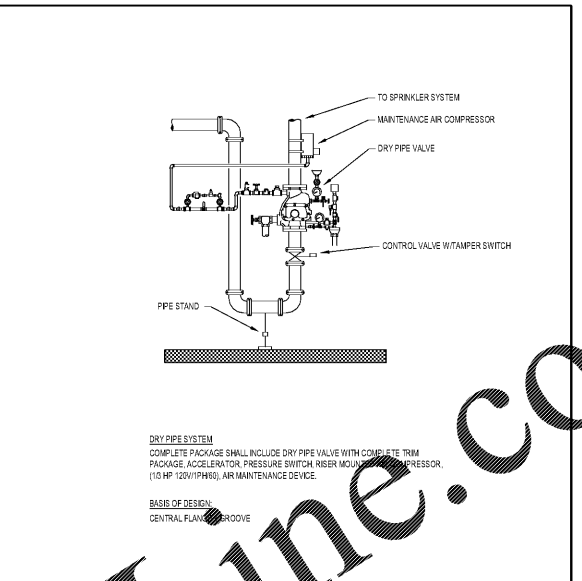
FIRE PUMP - SENSING LINE
No Scale



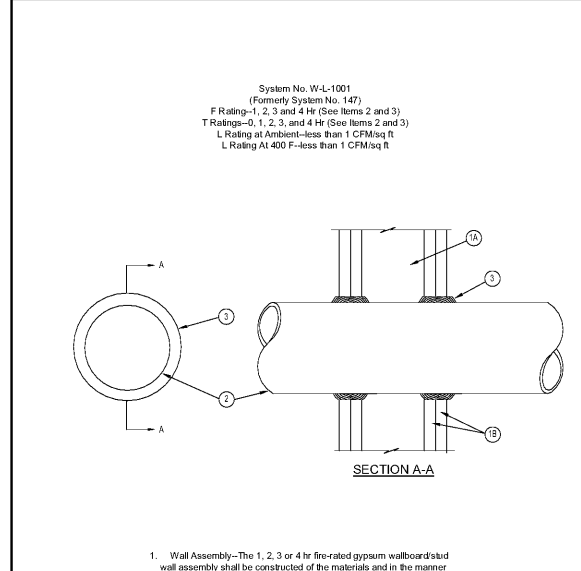
SWING JOINT
No Scale



POST INDICATOR VALVE
No Scale



DRY PIPE RISER
No Scale



1. Wall Assembly—The 1, 2, 3 or 4 hr fire-rated gypsum wallboard/stud wall assembly shall be constructed of the materials and in the manner described in the individual U300 or U400 Series Wall or Partition Designs in the UL Fire Resistance Directory and shall include the following construction features:

A. Studs—Wall framing may consist of either wood studs (max 2 hr fire rated assemblies) or steel channel studs. Wood studs to consist of nom 2 by 4 in. lumber spaced 16 in. OC with nom 2 by 4 in. lumber end plates and cross braces. Steel studs to be min 3-5/8 in. wide by 1-3/8 in. deep channels spaced max 24 in. OC.

B. Wallboard, Gypsum—Nom 1/2 or 5/8 in. thick, 4 ft. wide with square or tapered edges. The gypsum wallboard type, thickness, number of layers, fastener type and sheet orientation shall be as specified in the individual U300 or U400 Series Design in the UL Fire Resistance Directory. Max diam of opening is 13-1/2 in.

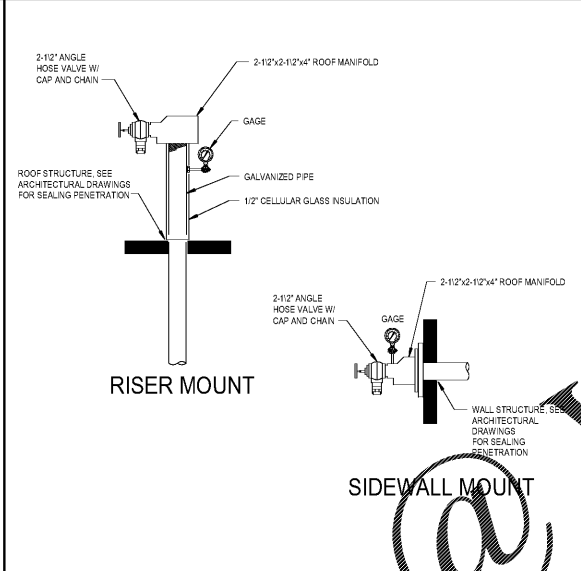
2. Pipe or Conduit—Nom 12 in. diam (or smaller) Schedule 10 (or heavier) steel pipe, nom 12 in. diam (or smaller) service weight (or heavier) cast iron soil pipe, nom 12 in. diam (or smaller) Class 50 (or heavier) ductile iron pressure pipe, nom 6 in. diam (or smaller) steel conduit, nom 4 in. diam (or smaller) steel electrical metallic tubing, nom 6 in. diam (or smaller) Type L or (or heavier) copper tubing or nom 1 in. diam (or smaller) flexible steel conduit. When copper pipe is used, max F Rating of firestop system (Item 3) is 2 hr. Steel pipes or conduits larger than nom 4 in. diam may only be used in walls constructed using steel channel studs. A max of one pipe or conduit is permitted in the firestop system. Pipe or conduit to be installed near center of stud cavity width and to be rigidly supported on both sides of wall assembly.

3. Filler, Void or Cavity Material—Caulk—Caulk fill material to completely fill annular space between pipe or conduit and wallboard and with a min 1/4 in. diam bead of caulk applied to perimeter of pipe or conduit at its egress from the wall. Caulk installed symmetrically on both sides of wall assembly. The hourly fire rating of the firestop is dependent upon the hourly fire rating of the wall assembly in which it is installed, as specified in the UL Fire Resistance Directory. The size of the firestop system and the hourly fire rating of the wall assembly in which it is installed, as tabulated below:

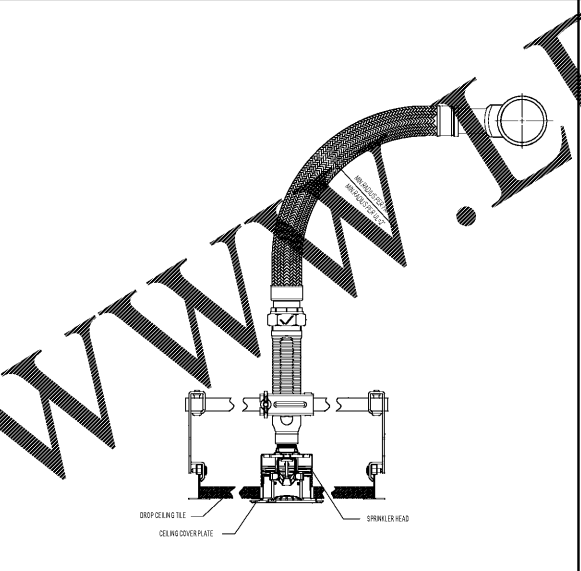
Max pipe or Conduit Diam in.	Annular Space	F Rating	T Rating
1	to 3/16	1 or 2	0+ 1 or 2
1	1/2	3 or 4	3 or 4
4	0	1 or 2	0
6	1/4 to 1/2	3 or 4	3 or 4
12	3/16 to 3/8	1 or 2	0

+When copper is used, T Rating is 0.
Minnesota Mining & Mfg. Co.—Types FB-2000, FB-2000+.
*Bearing the UL Classification Marking

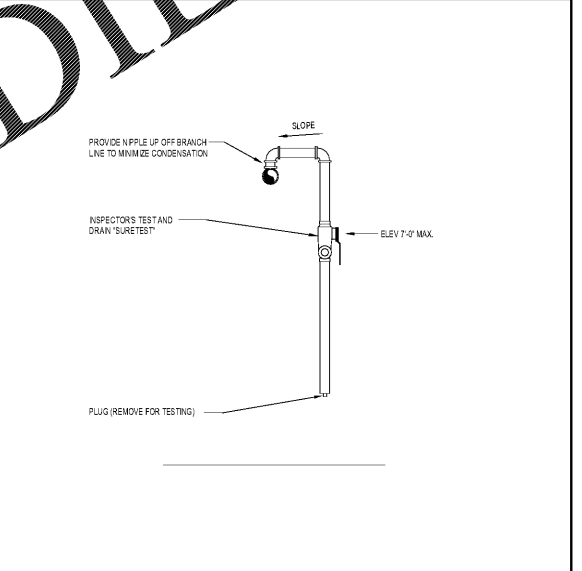
WALL - DRYWALL - PIPE - 1/2/3/4 HR
System No. W-L-1001



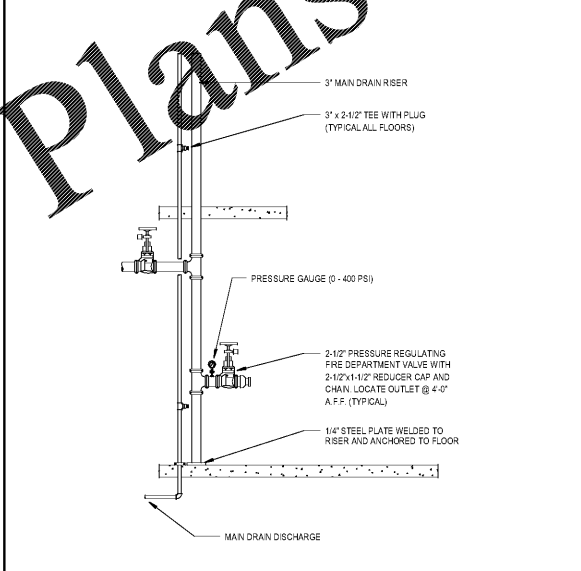
ROOF MANIFOLD
No Scale



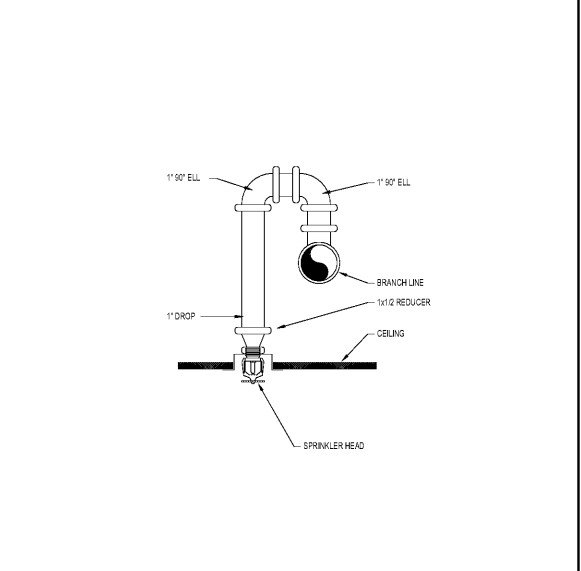
FLEX PIPE TO SPRINKLER
No Scale



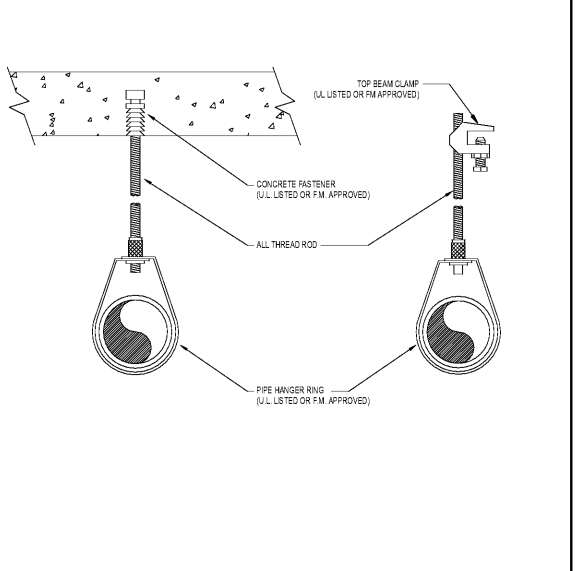
INSPECTOR'S TEST - DRY PIPE SYSTEM
No Scale



STANDPIPE - HIGH PRESSURE
No Scale



RETURN BEND
No Scale



HANGER - CONCRETE / STEEL
No Scale