

HYDRAULIC-SYSTEM
THIS BUILDING IS PROTECTED BY A HYDRAULICALLY DESIGNED AUTOMATIC SPRINKLER SYSTEM.

LOCATION: 3RD ATTIC

No. OF SPRINKLERS: 12
(CALCULATED)

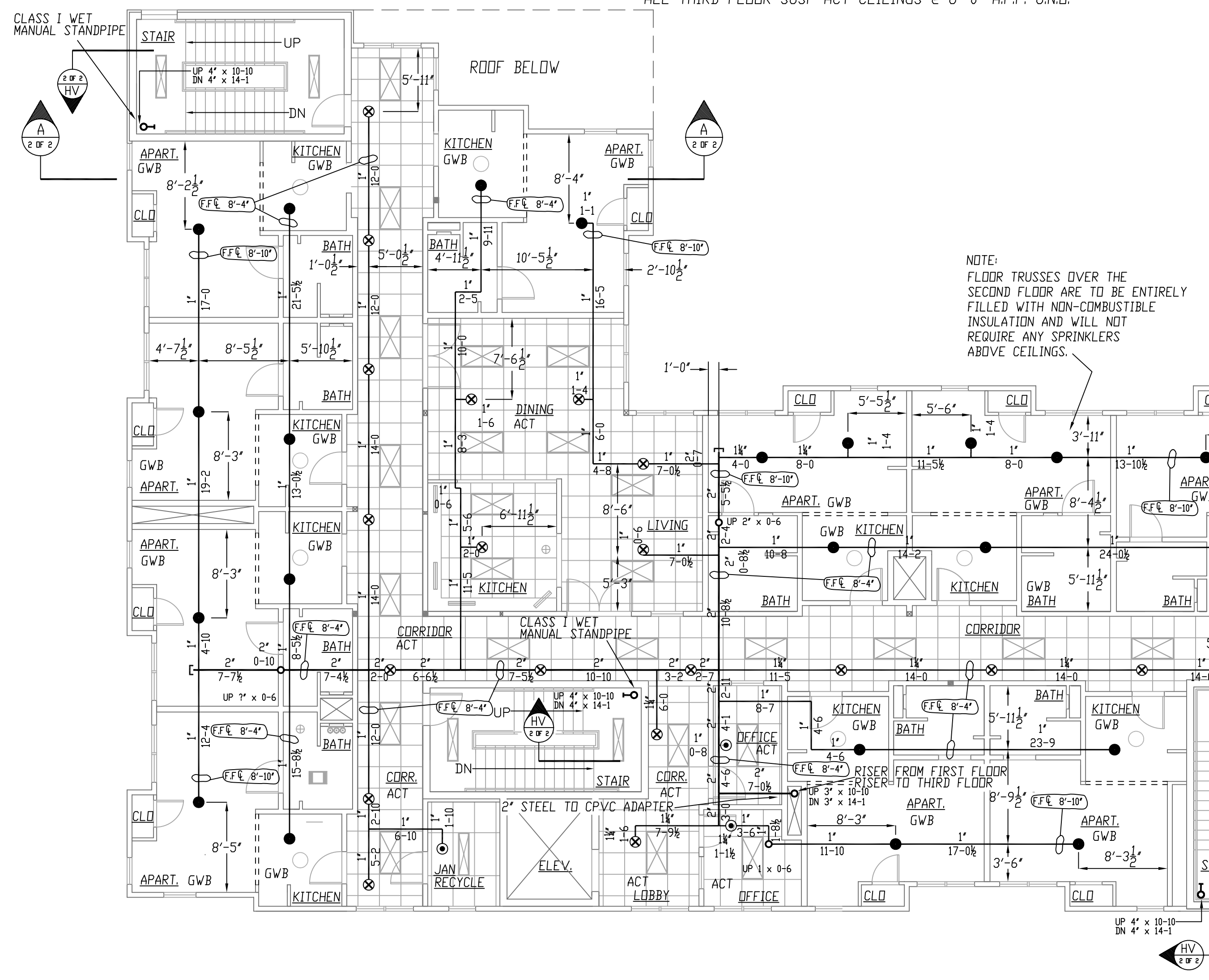
BASIS OF DESIGN:
1. DENSITY (GPM/SQ.FT.) .1
2. DESIGNED AREA OF DISCHARGE (SQ.FT.) 1034

SYSTEM DEMAND:
1. WATER FLOW RATE (GPM) 170
2. RESIDUAL PRESSURE AT THE BASE OF THE RISER 74 (PSI)

HYDRAULIC DATA NAMEPLATE
= INDICATES HYDRAULIC REFERENCE POINTS.



NOTE: ALL 1" TO 2" SPRINKLER PIPE AT SECOND AND THIRD FLOORS TO BE CONCEALED CPVC PIPE & FITTINGS (C=150)
ALL SPRINKLER PIPE AT SECOND AND THIRD FLOORS TO BE RUN BELOW G.W.B. ATTACHED TO FLOOR TRUSSES WITH SPRIG-UPS INTO ATTIC TRUSS SPACE AT THIRD FLR



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SET AND CURE TIMES
Solvent cement set and cure times are a function of pipe size, temperature, relative humidity, and tightness of fit. Drying time is faster for drier environments, smaller pipe sizes, high temperatures, and tighter fits. The assembly must be allowed to set, without any stress on the joint, for 1 to 5 minutes, depending on the pipe size and temperature. Following the initial set period, the assembly can be handled carefully avoiding significant stresses to the joint. Refer to the cure time tables for minimum cure times prior to pressure testing.

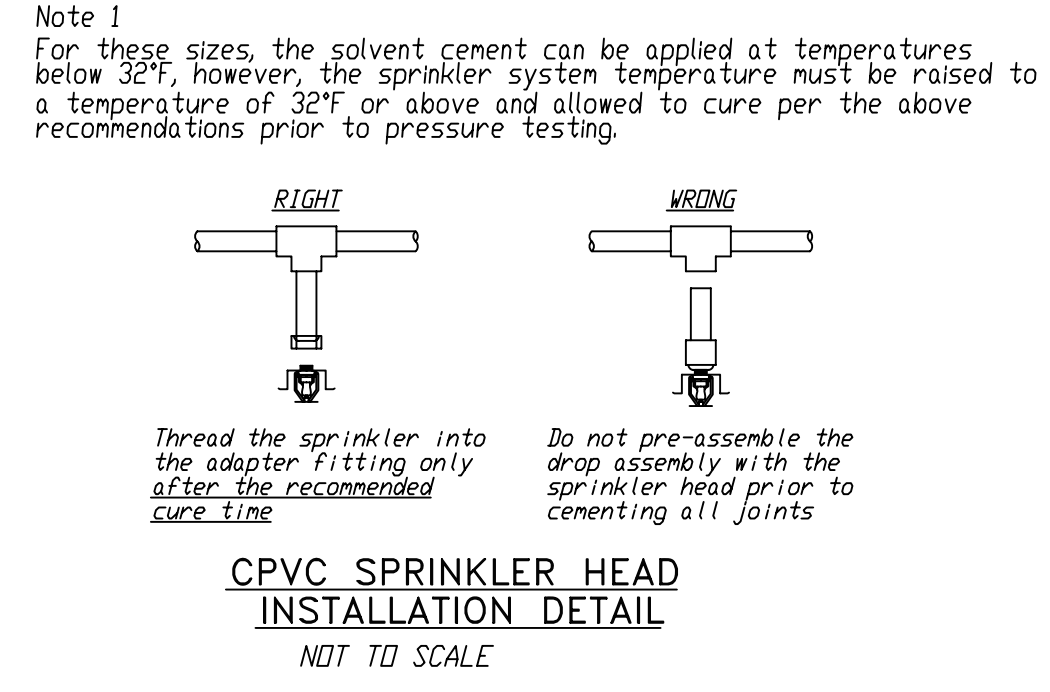
Once an installation is completed and cured, per the appropriate table, the system should be tested at 200 psi for 2 hours, or at 50 psi in excess of the maximum pressure when the maximum pressure to be maintained in the system is in excess of 150 psi, in accordance with the requirements established by NFPA 13. Sprinkler systems in one and two family dwellings and mobile homes may be tested at line pressure in accordance with the requirements established by NFPA 13D. When pressure testing the sprinkler system shall be filled with water and air bled from the highest and farthest sprinkler head before test pressure is applied. Air or compressed gas should never be used for pressure testing. If a leak is found, the fitting must be cut out and discarded. A new section can be installed using couplings or a union. Unions should be used in accessible areas only.

WARNING
Sprinkler heads shall be installed only after all the CPVC pipe and fittings, including the sprinkler head adapters, are solvent welded to the piping and allowed to cure for a minimum of 30 minutes. Sprinkler head fittings should be visually inspected and probed with a wooden dowel to insure that the water way and threads are clear of any excess cement. It is an unacceptable practice to thread the sprinkler head into the adapter fitting prior to cementing the adapter to the drop, as cement can block opening.

CURE TIMES WITH ONE STEP SOLVENT CEMENT
200 PSI (MAXIMUM) TEST PRESSURE

PIPE SIZE INCHES	Ambient Temperature During Cure Period		
	60°F to 120°F	40°F to 59°F	0°F to 39°F
3/4"	45 min.	1.5 hr.	24 hr.
1"	45 min.	1.5 hr.	24 hr.
1-1/4"	1.5 hr.	16 hr.	120 hr.
1-1/2"	1.5 hr.	16 hr.	120 hr.
2"	6 hr.	36 hr.	See Note 1
2-1/2"	8 hr.	72 hr.	See Note 1
3"	8 hr.	72 hr.	See Note 1

Note 1: For these sizes, the solvent cement can be applied at temperatures below 32°F, however, the sprinkler system temperature must be raised to a temperature of 32°F or above and allowed to cure per the above recommendations prior to pressure testing.



MINIMUM ALLOWABLE HANGERS PER LENGTH OF PIPE

PIPE SIZE INCHES	Pipe Length		
	1 Hanger	2 Hangers	3 Hangers
3/4"	0'-0" to 5'-6"	5'-7" to 11'-0"	11'-1" to 16'-6"
1"	0'-0" to 6'-0"	6'-1" to 12'-0"	12'-1" to 18'-0"
1-1/4"	0'-0" to 6'-6"	6'-7" to 13'-0"	13'-1" to 19'-6"
1-1/2"	0'-0" to 7'-0"	7'-1" to 14'-0"	14'-1" to 21'-0"
2"	0'-0" to 8'-0"	8'-1" to 16'-0"	16'-1" to 24'-0"
2-1/2"	0'-0" to 9'-0"	9'-1" to 18'-0"	18'-1" to 27'-0"
3"	0'-0" to 10'-0"	10'-1" to 20'-0"	20'-1" to 30'-0"

NATIONAL SANITATION FOUNDATION (NSF) APPROVED FOR USE WITH POTABLE WATER

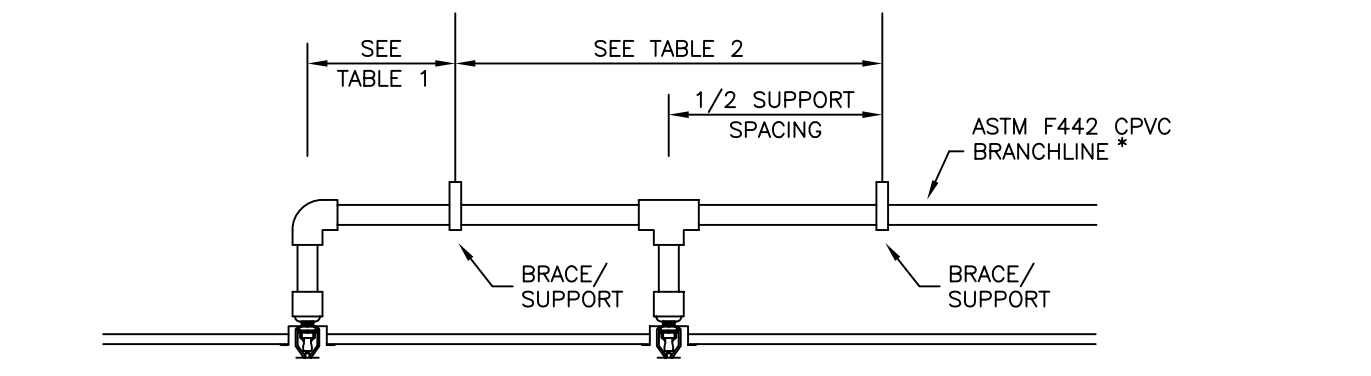
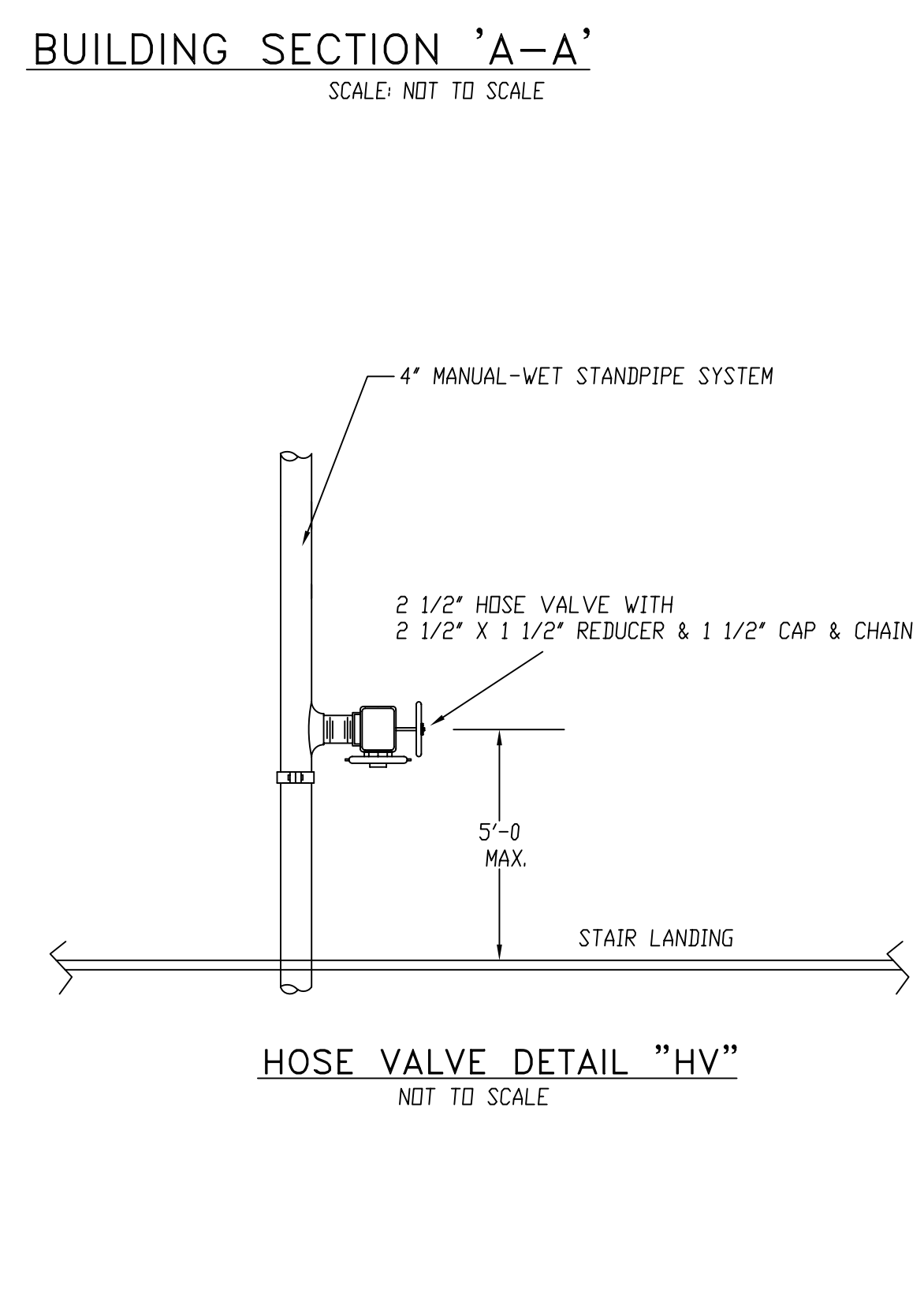
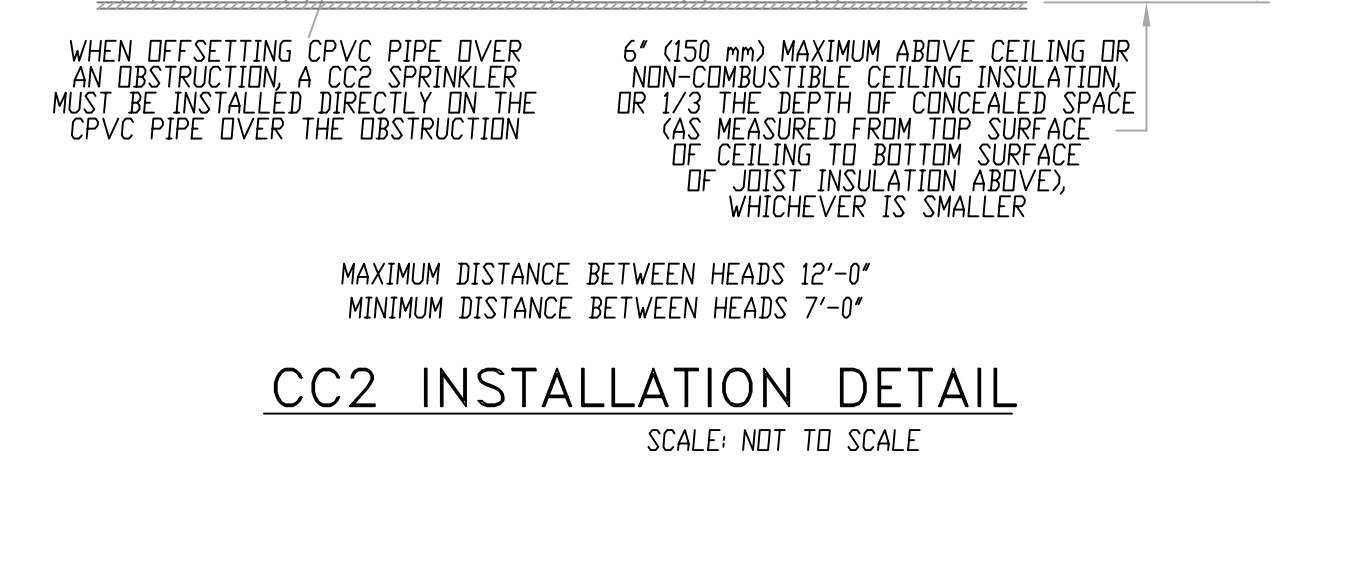
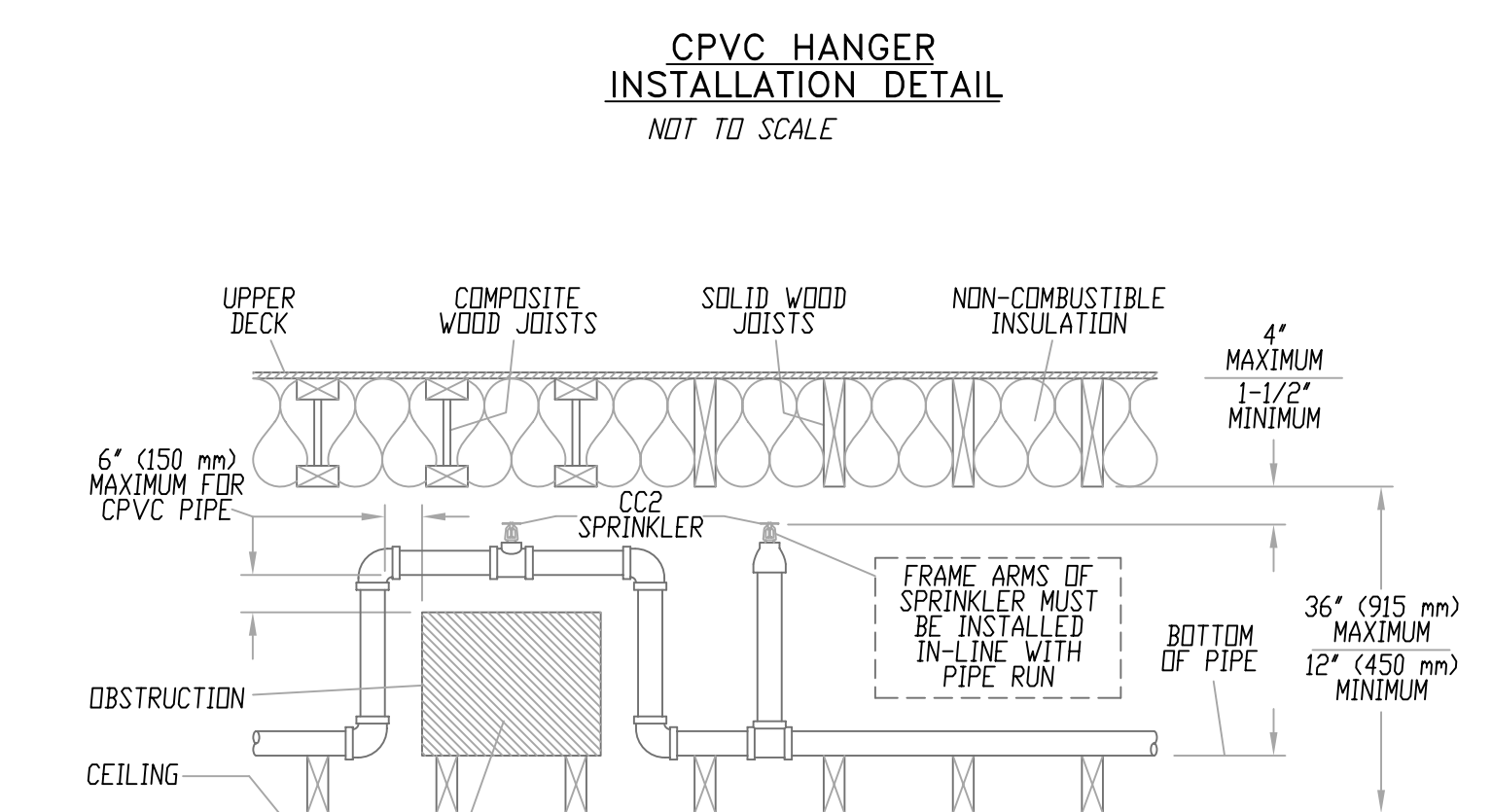
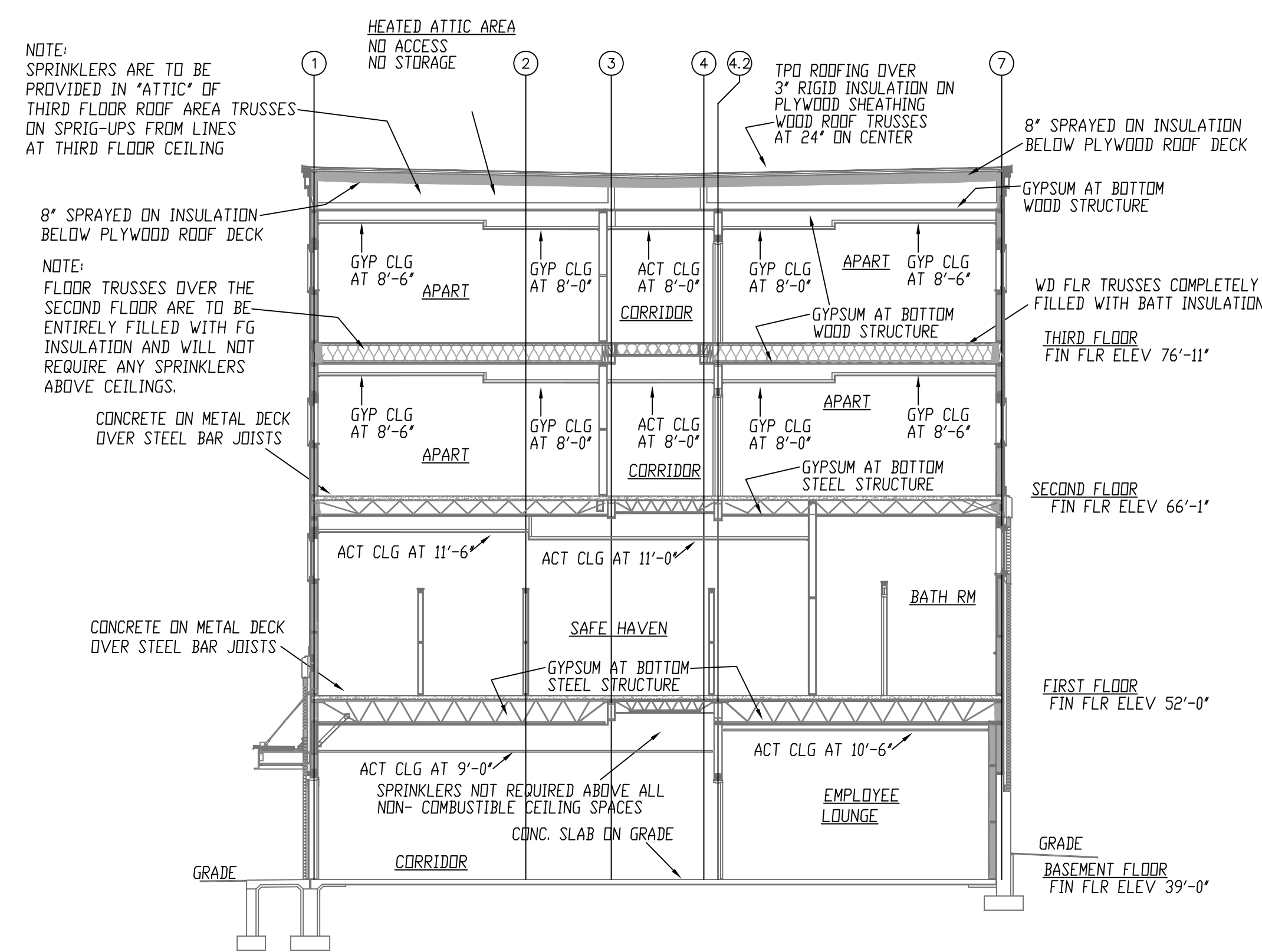


TABLE 1
MAXIMUM SUPPORT SPACING DISTANCE END LINE SPRINKLER HEAD DROP ELBOW

PIPE SIZE INCHES	SYSTEM PRESSURE < 100 PSI	SYSTEM PRESSURE > 100 PSI
3/4"	9'	4'
1"	12'	5'
1-1/4"	16'	6'
1-1/2"-3"	24'	12'

TABLE 2
MAXIMUM SUPPORT SPACING DISTANCE INLINE SPRINKLER HEAD DROP TEE

PIPE SIZE INCHES	SYSTEM PRESSURE < 100 PSI	SYSTEM PRESSURE > 100 PSI
3/4"	4'	3'
1"	5'	4'
1-1/4"	6'	5'
1-1/2"-3"	7'	7'



<p>GENERAL NOTES</p> <p>SPRINKLER SYSTEM INSTALLATION TO COMPLY WITH NFPA PAMPHLET # 13, 2007, SPECIFICATION SECTION 15.500</p> <p>BASEMENT BRANCH LINE PIPING TO BE BLACK SCHEDULE 40 JOINED BY THREADED DUCTILE IRON FITTINGS (C=120)</p> <p>ALL 2 1/2" & 4" MAIN PIPING TO BE SCHEDULE # 10 BLACK WITH GROOVED ENDS & WELDED OUTLETS JOINED BY MECHANICAL COUPLINGS (C=120)</p> <p>ALL OTHER SPRINKLER PIPE AT FIRST, SECOND AND THIRD FLOORS TO BE CONCEALED CPVC PIPE JOINED WITH GLUED CPVC FITTINGS (C=150) BY BLAZEMASTER</p> <p>OWNER TO PROVIDE SUFFICIENT HEAT THROUGHOUT BUILDING TO PREVENT FREEZING OF WATER FILLED SPRINKLER PIPING AND EQUIPMENT. (40°F)</p>	DATE	REVISIONS	REQUIRED APPROVALS	<p>FLORENCE HOUSE APARTMENTS 190 VALLEY ST., PORTLAND, MAINE</p> <p>CONTRACT WITH: GANNETTIN CONSTRUCTION PROJECT # 677</p> <p>EASTERN FIRE PROTECTION AUBURN/LEWISTON INDUSTRIAL AIRPARK, AUBURN, MAINE 04210</p>	<p>FIRE SPRINKLER PLANS & DETAILS</p> <p>DWG NO. 2 OF 2</p> <p>JOB NUMBER AU-4336-08</p> <p>SCALE AS NOTED</p> <p>DATE 03/30/09</p>	
			OWNER / ARCHITECT			
			STATE FIRE MARSHAL			
			PORTLAND FIRE DEPARTMENT			
		DRAWN BY WAF				
		NCET LEVEL III CERT# 095574				
		CHECKED BY RCB				
		NCET LEVEL III CERT# 069581				
		CONTRACTOR LICENSE # 101				
		CONTRACTOR RMS # 368				