



REVISOR  
 CONSULTANT  
**DEC INC.**  
 2800 SO. RANCHO RD.  
 LAS VEGAS, NEVADA 89102  
 (702) 871-6164

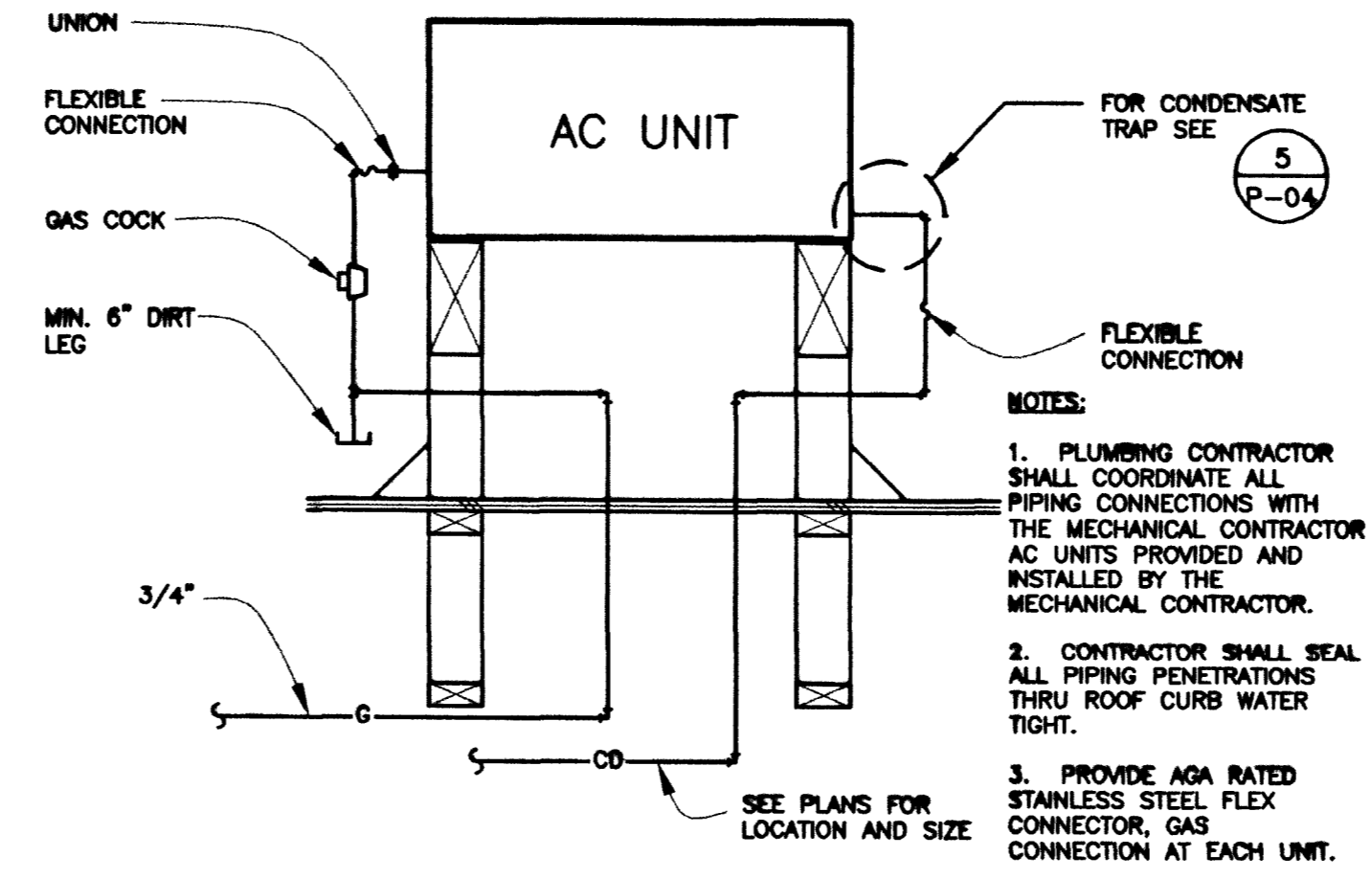
CITY OF LAS VEGAS, NEVADA  
 FIRE STATION #44  
 PLUMBING DETAILS

DEPARTMENT OF PUBLIC WORKS  
 ARCHITECTURAL SERVICES  
 400 EAST STEWART AVENUE  
 LAS VEGAS, NEVADA 89101  
 PHONE: (702) 226-6338  
 FAX: (702) 386-5332  
 TDD: (702) 386-9108

MECHANICAL ENGINEER  
 DEC, INC.

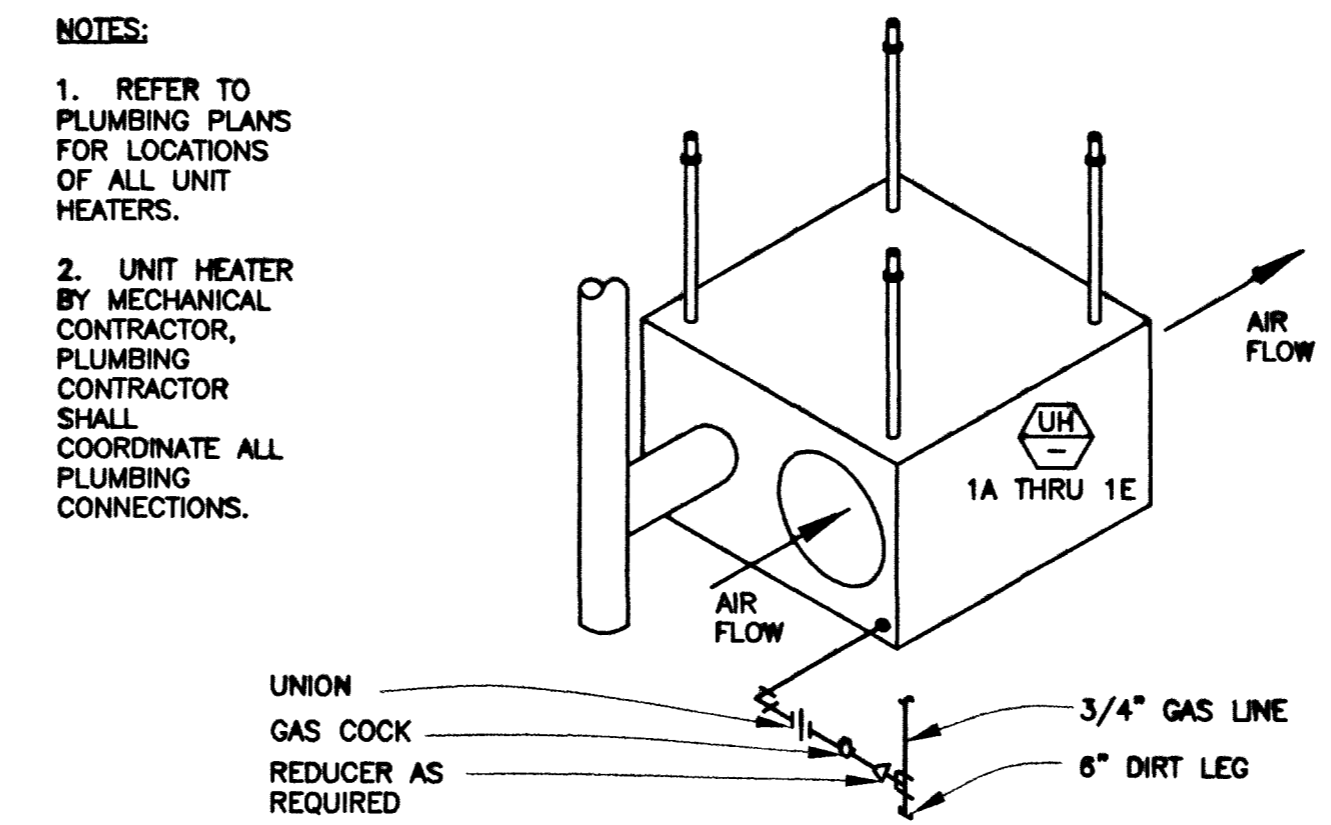
DRAWN: JLB  
 FILE:  
 DATE: 7/2/98 6/1/99  
 SCALE: AS NOTED  
 PROJECT NO.:  
 SHEET NO.: 90 OF 106

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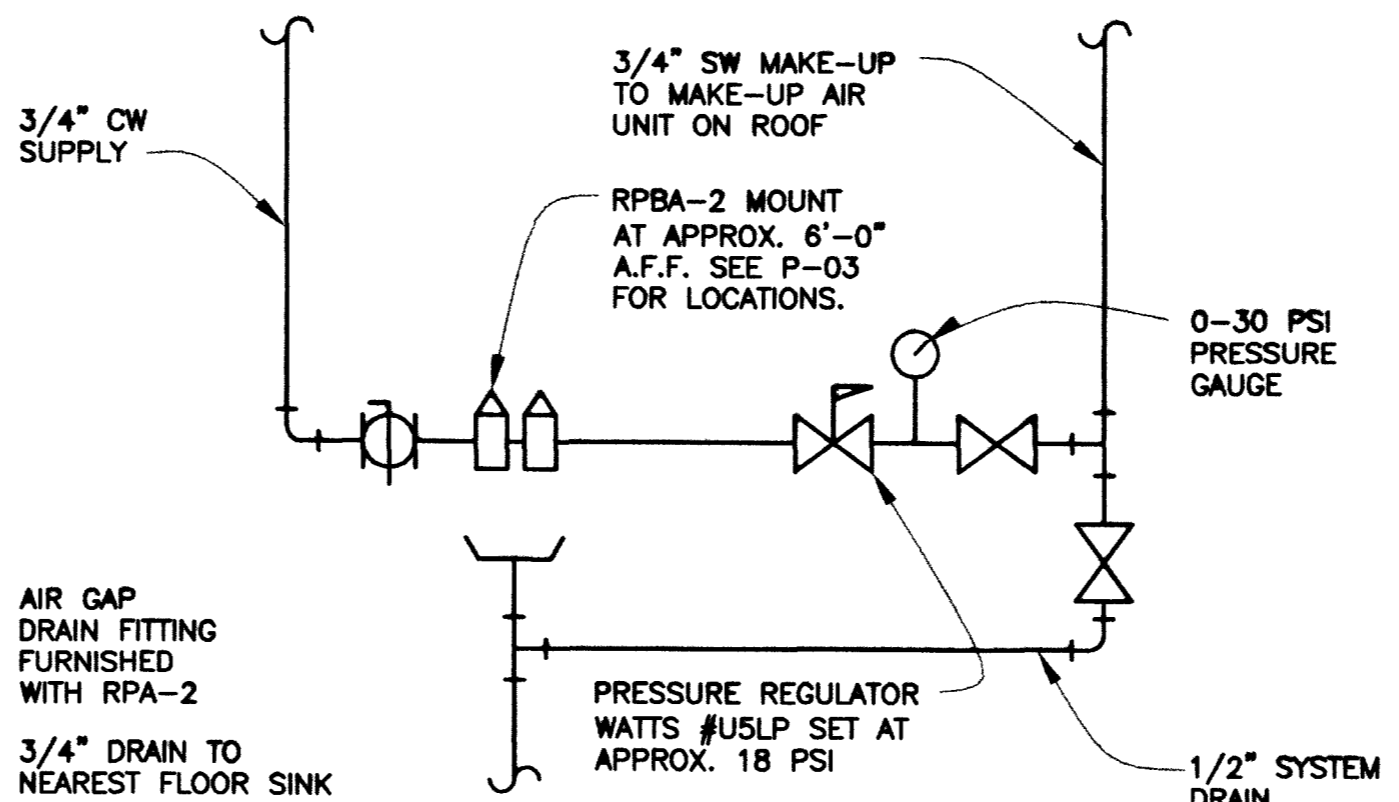
6 AC UNIT PIPING CONNECTION DETAIL  
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4 NOT USED  
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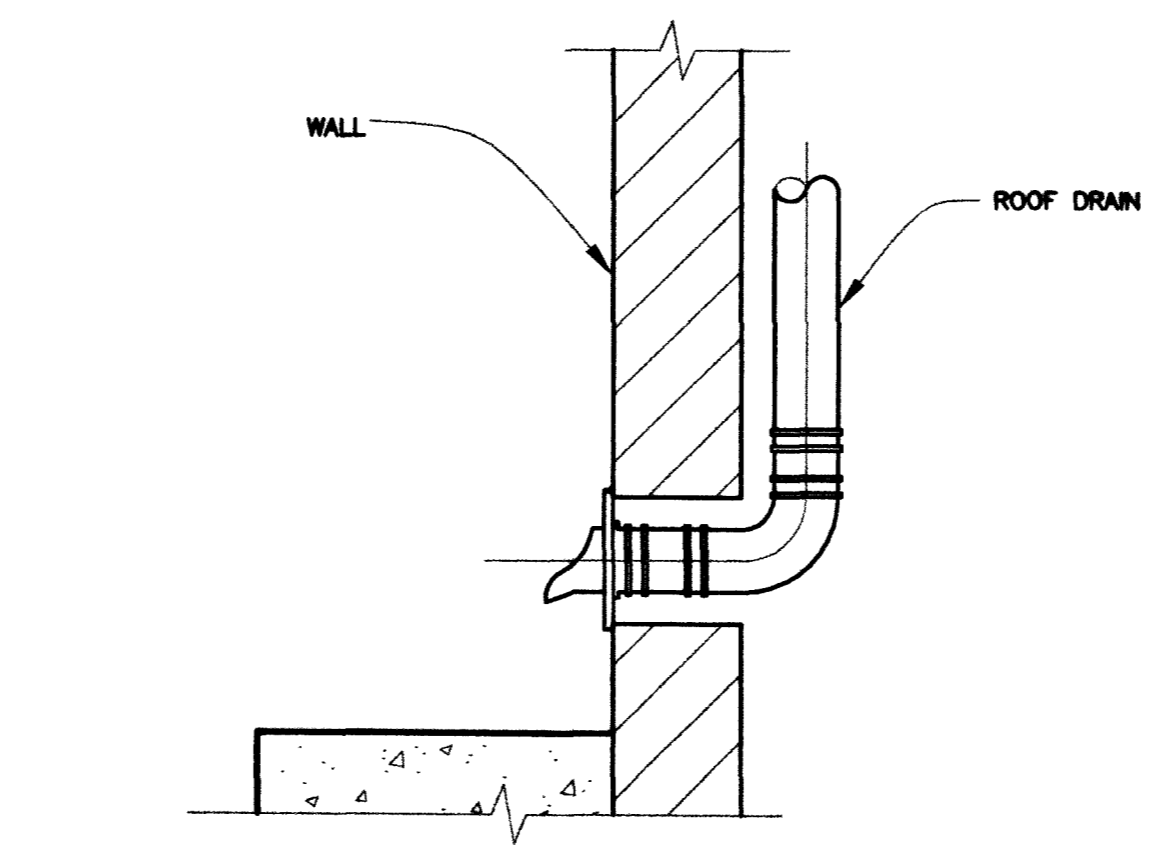
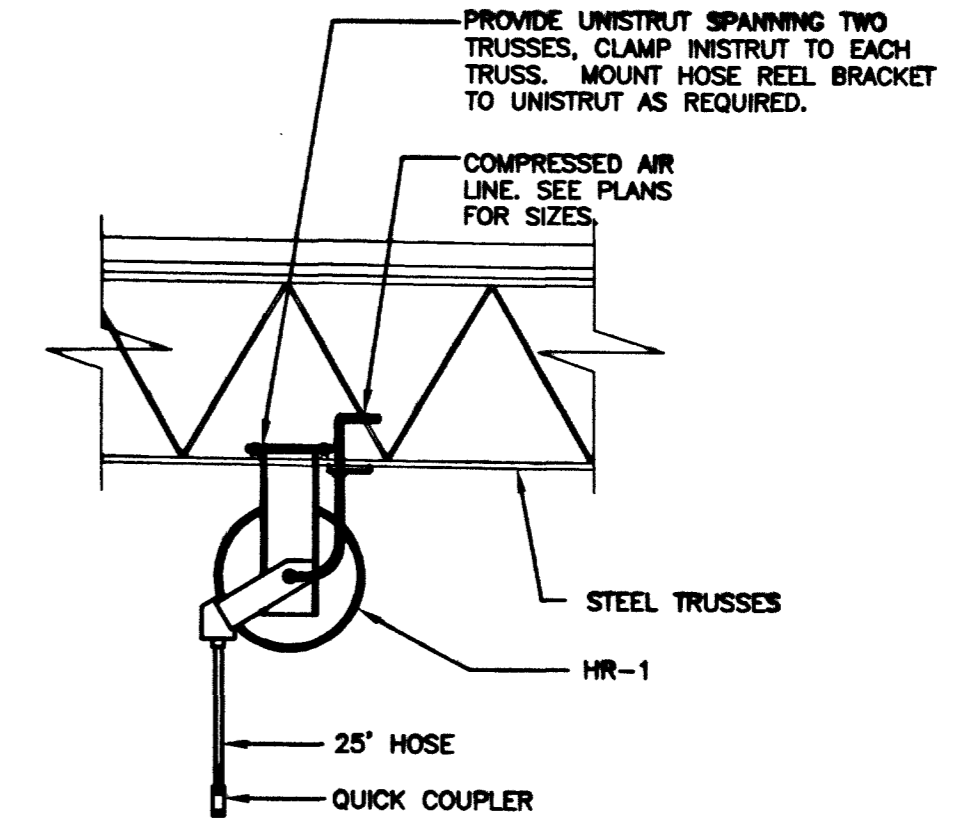
7 UNIT HEATER DETAIL  
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3 NOT USED  
 P-08

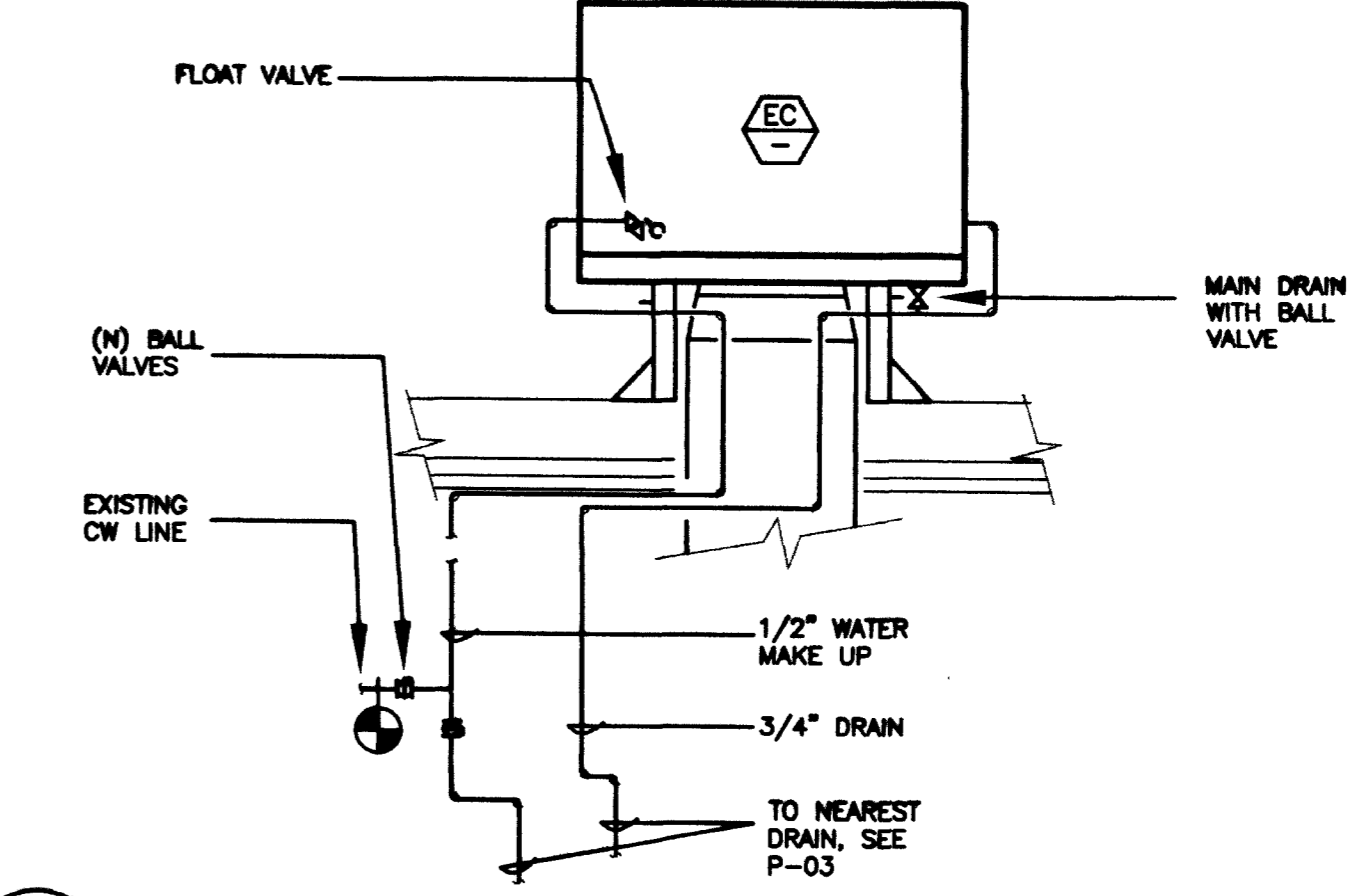


6 EVAP. COOLER COOLING WATER MAKE-UP  
 P-08

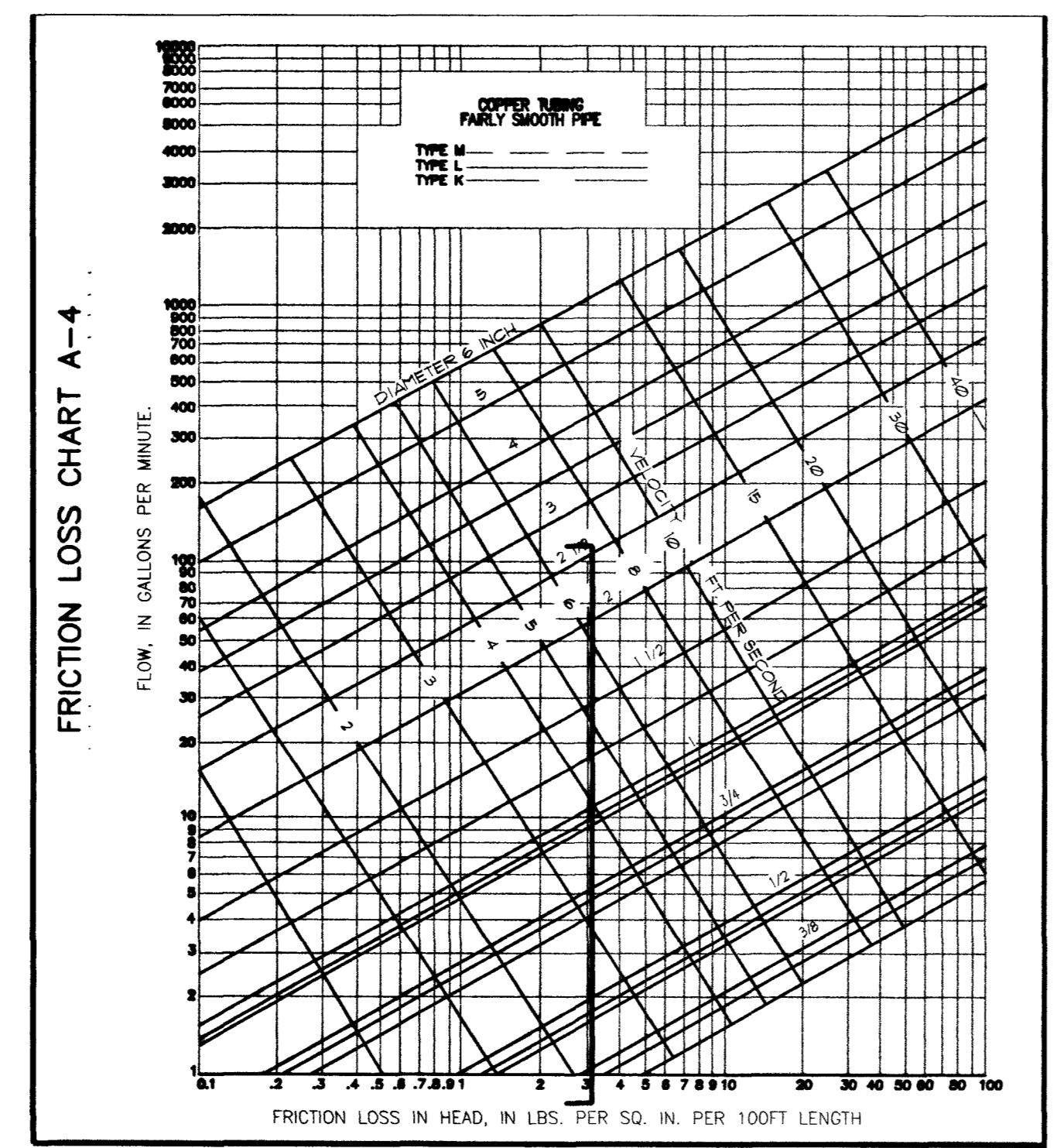
2 HOSE REEL DETAIL  
 P-08 1" = 1'-0"



5 ROOF DRAIN DISCHARGE DETAIL  
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1 EVAPORATIVE COOLER PIPING  
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WATER CALCULATIONS	
BASED ON THE 1991 UNIFORM PLUMBING CODE APPENDIX 'A'	
WATER CLOSET (FV)	5 x 2.5 F.U. = 12.5 F.U.
URINAL (FV)	3 x 5 F.U. = 15 F.U.
LAVATORY	6 x 1 F.U. = 6 F.U.
DRINKING FOUNTAIN	2 x 0.5 F.U. = 1 F.U.
SINK	6 x 2 F.U. = 12 F.U.
MOP SINK	1 x 3 F.U. = 3 F.U.
HOSE BIBB	9 x 2.5 F.U. = 22.5 F.U.
DISHWASHER	1 x 1 F.U. = 1 F.U.
SHOWER	5 x 2 F.U. = 10 F.U.
TOTAL FIXTURE UNITS	= 83 F.U.
83 FIXTURE UNITS = 65 GALLONS PER MINUTE (GPM)	
MECH. EQUIP. WATER EVAP. COOLERS (5 qty x 1.5 GPM) = 7.5 TOTAL GPM	
PEAK BUILDING DEMAND GALLONS PER MINUTE	= 72.5 GPM
	ALLOW 80GPM
FIXTURE DEMAND	
STATIC LOSS	
RISE STREET MAIN TO BUILDING PAD	8'
RISE TO HIGHEST OUTLET	4'
STATIC BUILDING LOSS (12 ft. x 0.43 psi/ft.)	= 5.2 psi
DEVELOPED PIPE LENGTH	
PIPE LENGTH TAP TO METER	5 FEET
PIPE LENGTH METER TO BUILDING	305 FEET
PIPE LENGTH BLDG. TO LAST FIXTURE	315 FEET
TOTAL PIPE LENGTH	615 FEET
TOTAL DEVELOPED LENGTH (615 Ft. x 1.2 loss for fittings)	= 738 FEET
BUILDING LOSS	
2" METER AT 80 GPM	6
2-1/2" REDUCED PRESSURE PRINCIPAL BACKFLOW PREVENTER	14
STATIC	5.2
FLUSH VALVE FIXTURE	15
TOTAL BUILDING LOSS (PSI)	40.2
FRICION LOSS	
PRESSURE AT POC	63 PSI
BUILDING LOSS	40.2 PSI
DIFFERENCE	22.8 PSI
22.8 / 738 x 100 = 3.1 MAX. PSI DROP ALLOWABLE PER 100 FT. OF PIPE	
2-1/2" MAIN LINE AFTER BACKFLOW PREVENTER. PSI DROP/100' = 2"	
PIPE SIZE TABLE	
PIPE SIZE	1/2" 3/4" 1" 1-1/4" 1-1/2" 2" 2-1/2"
MAX. GPM	1.5 3.8 7.2 15 22 42 80
MAX. FLUSH TANK F.U.	1 6 10 20 35 90 260
MAX. FLUSH VALVE F.U.	0 0 0 8 10 32 150
VELOCITY (FT/S)	1.8 2.5 2.8 3.4 3.8 4.8 5.6

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9 WATER SUPPLY CALCULATIONS  
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