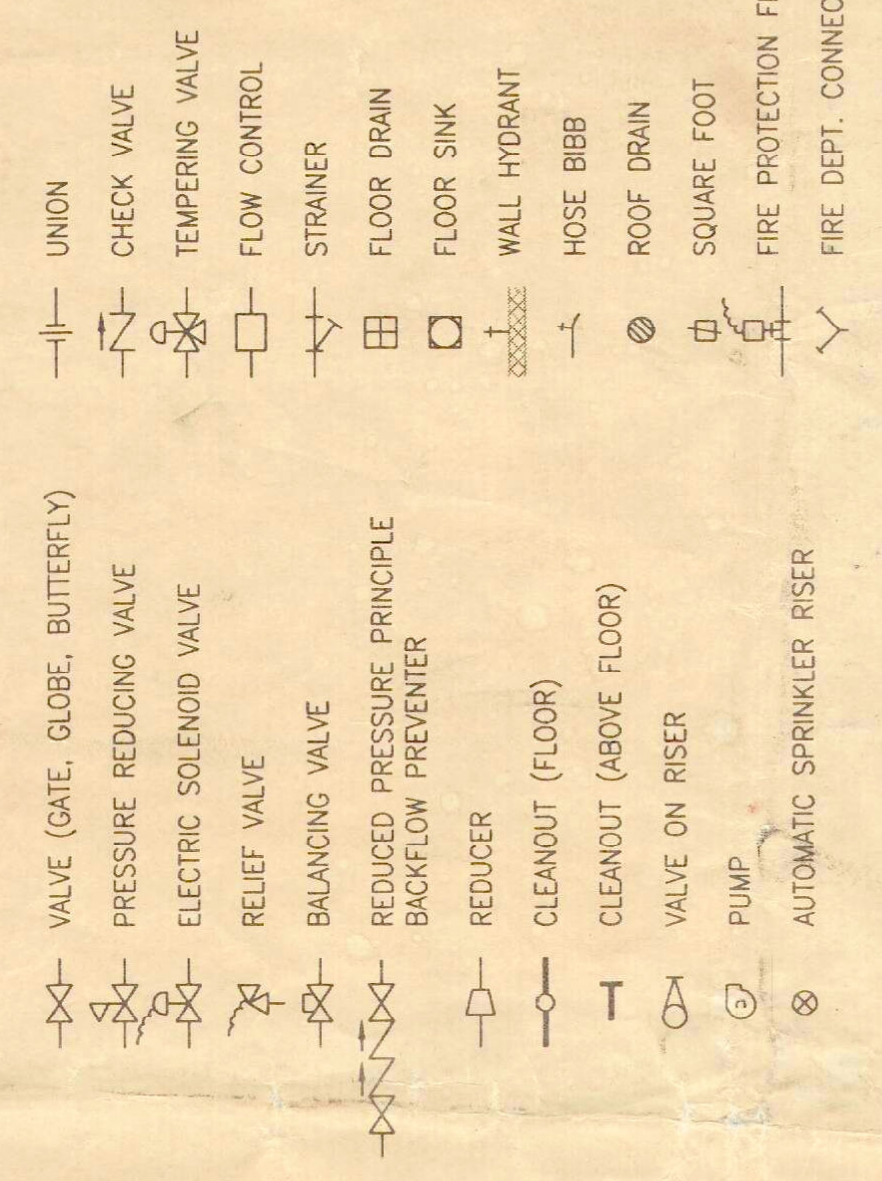




**PLUMBING / FIRE PROTECTION SYMBOLS AND LEGENDS**

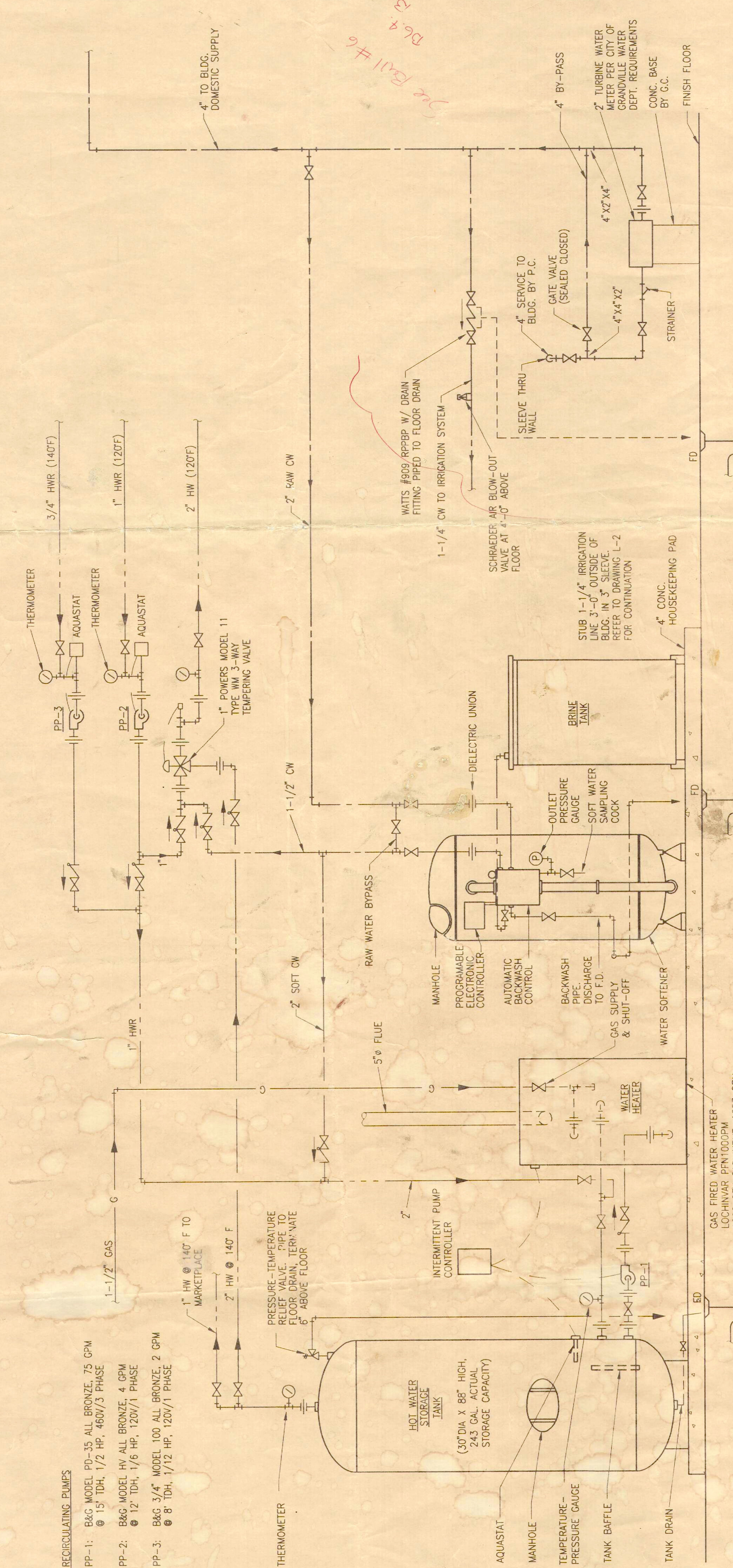


**MINIMUM SIZE CONNECTION SCHEDULE**

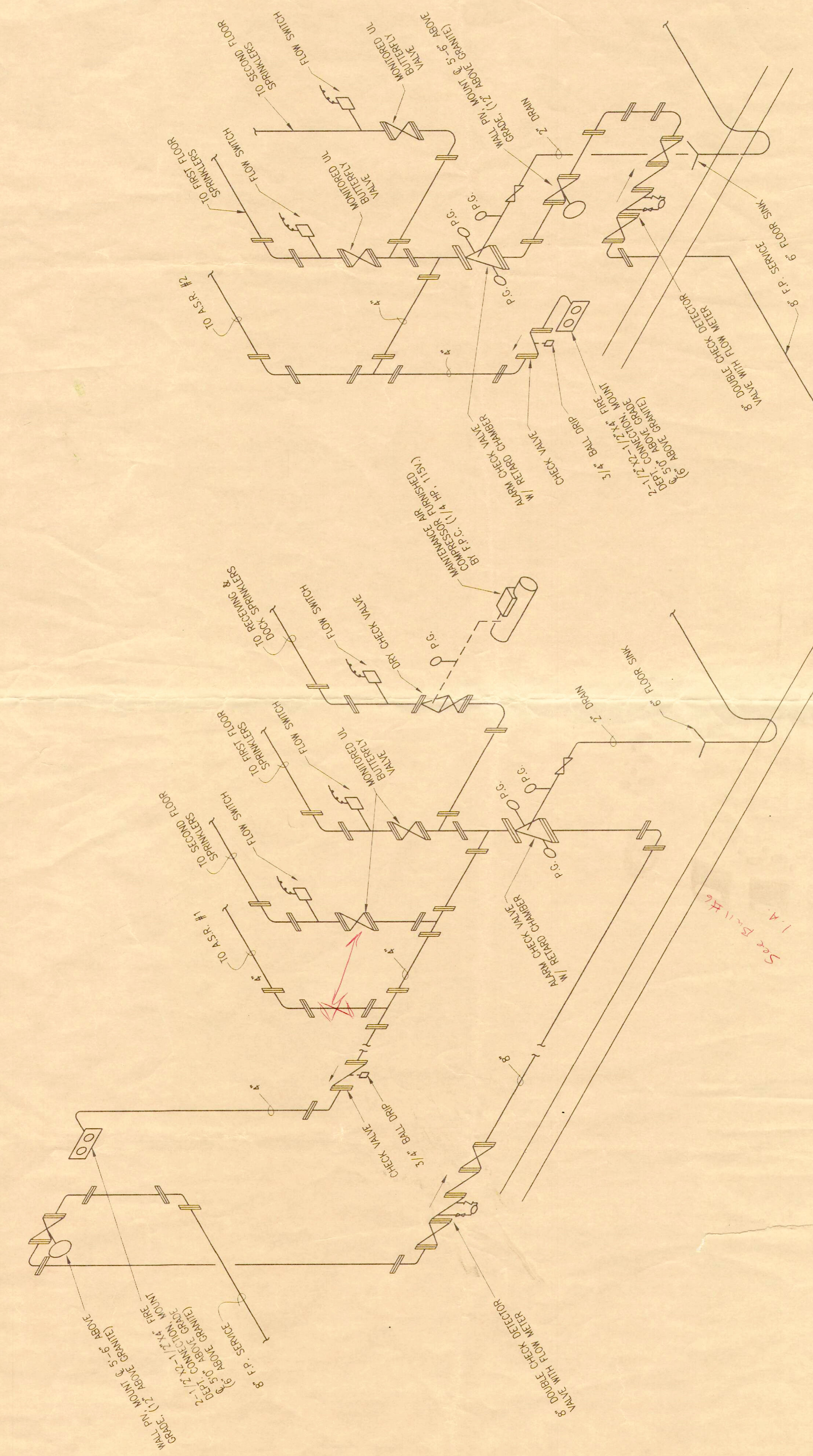
FEATURE	C.W.	H.W.	S.W.	VENT
WATER CLOSET (WC) - FLUSH VALVE	1"	1"	1"	2"
URINAL (UR)	1"	1"	1"	1-1/2"
LAVATORY (L)	1/2"	1/2"	1/2"	1-1/2"
SINK (S)	1/2"	1/2"	1/2"	1-1/2"
SERVICE SINK (SS)	3/4"	3/4"	3/4"	1-1/2"
ELEC. WTR. CLR. (EWC)	1/2"	1/2"	1/2"	1-1/4"
WALL HOBDRANT (WH)	3/4"	3/4"	3/4"	---

**REGULATING PUMPS**

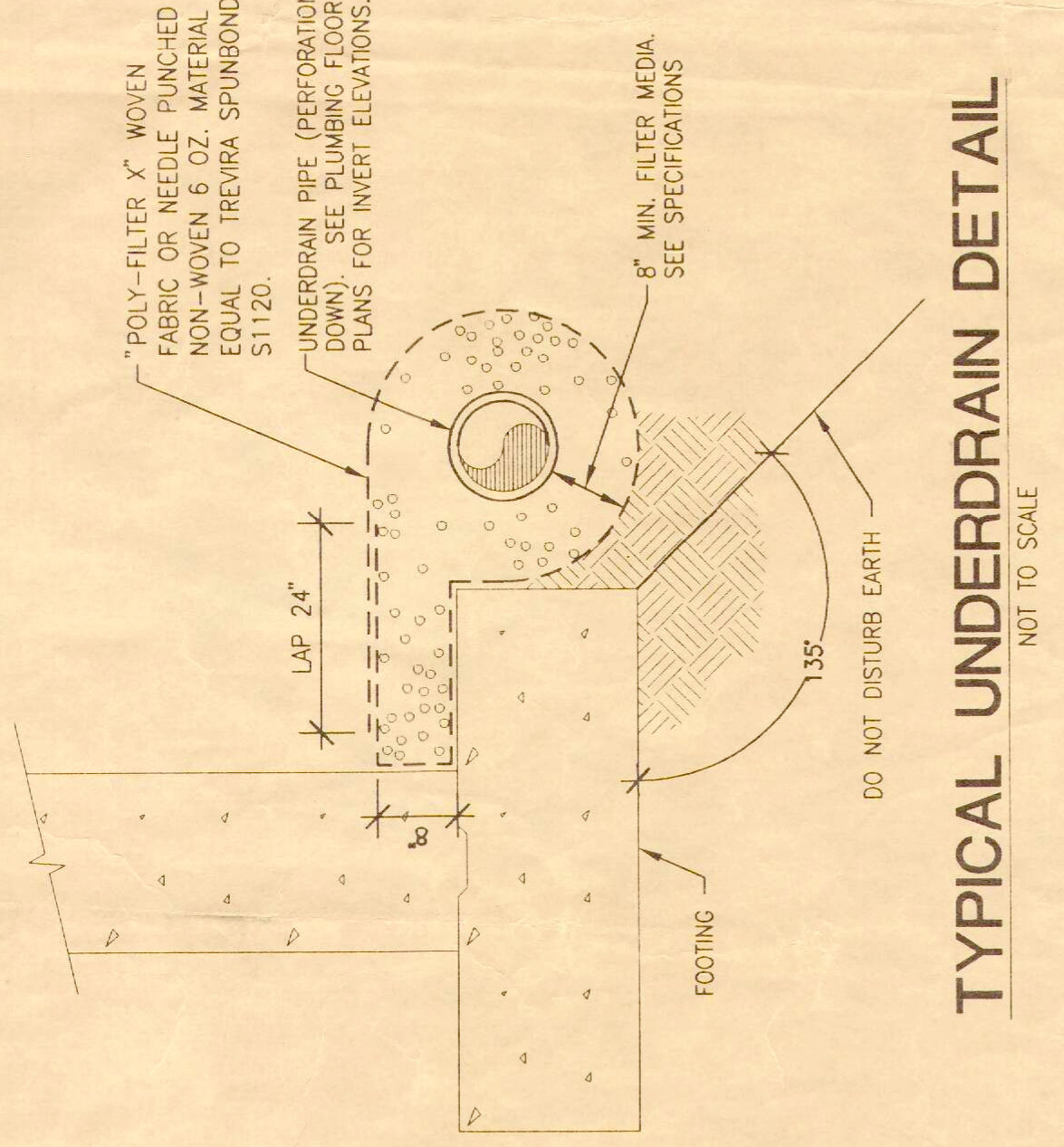
PP-1 - BAG MODEL PP-15 ALL BRONZE, 15 GPM @ 15' TDH, 1/2 HP, 460/3 PHASE  
 PP-2 - BAG MODEL PP-15 ALL BRONZE, 4 GPM @ 12' TDH, 1/6 HP, 120/1 PHASE  
 PP-3 - BAG 3/4" MODEL 100 ALL BRONZE, 2 GPM @ 8' TDH, 1/12 HP, 120/1 PHASE



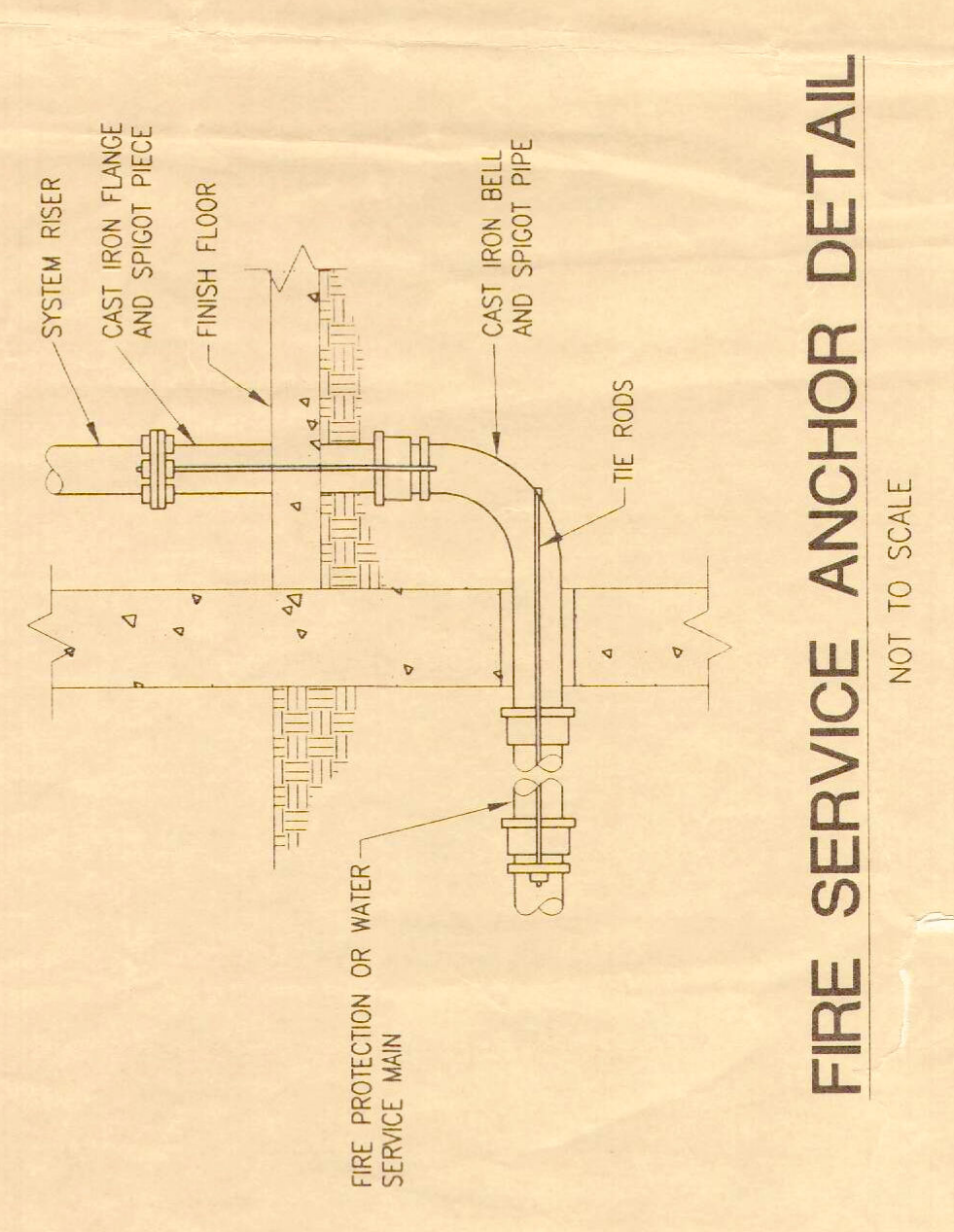
**WATER HEATER / WATER SOFTENER / WATER METER PIPING SCHEMATIC**



**FIRE PROTECTION RISER NO. 1 DIAGRAM**



**TYPICAL UNDERDRAIN DETAIL**



**FIRE SERVICE ANCHOR DETAIL**

**FIRE PROTECTION NOTES**

- THE FIRE PROTECTION CONTRACTOR (F.P.C.) SHALL BE RESPONSIBLE FOR HAVING HIS DESIGN AND INSTALLATION APPROVED BY THE CITY OF GRANDVILLE INSPECTOR'S OFFICE.
- THE F.P.C. SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS FROM THE CITY OF GRANDVILLE INSPECTOR'S OFFICE ON SHOP DRAWINGS PRIOR TO SUBMITTAL TO ARCHITECT/ENGINEER FOR APPROVAL.
- ALL WORK AND MATERIALS SHALL CONFORM TO THE STANDARDS AS SET FORTH IN THE LATEST EDITION OF N.F.P.A. AND DEVICES SHALL BE UL LISTED.
- SPRINKLER SYSTEMS SHALL BE DESIGNED TO PROVIDE ORDINARY HAZARD COVERAGE EXCEPT A CALCULATED DENSITY OF 0.18 GPM PER SQ. FT. SHALL BE PROVIDED OVER THE MOST REMOTE 100 SQ. FT. THERE ARE ANY DISCREPANCIES THE F.P.C. SHALL ADVISE THE ARCHITECT/ENGINEER 7 DAYS PRIOR TO BID DATE.
- A STATIC PRESSURE OF 42 PSI CAN BE EXPECTED AT THE BASE OF THE RISERS WITH ELEC. WTR. CLR. (EWC) WITHIN THE CITY OF GRANDVILLE, MICHIGAN WATER DEPARTMENT PRIOR TO CALCULATING.
- ENTIRE BUILDING TO BE TOTALLY SPRINKLERED. REFER TO REFLECTED CEILING PLANS FOR SPRINKLER HEAD LAYOUTS IN AREAS WITH CEILINGS.
- THE F.P.C. SHALL COORDINATE HIS WORK WITH THE MECHANICAL, PLUMBING, AND ELECTRICAL CONTRACTORS PRIOR TO FABRICATION AND DURING INSTALLATION TO AVOID CONFLICTS WITH DUCTWORK, LIGHTS, AND PIPING.
- ALL PIPING 2" AND SMALLER SHALL BE SCHEDULE 40 BLACK STEEL PIPE.
- THE F.P.C. SHALL PROVIDE AND INSTALL AN INSPECTOR'S TEST CONNECTION FOR EACH SPRINKLER SYSTEM. THE ARE SHALL BE SIZES 1" IF BRANCH LINE IS LESS THAN 10'-0" FROM DROP, AND 1-1/4" WHEN DISTANCE FROM DROP EXCEEDS 10'-0".
- MECHANICAL "F.I.T." FAST INSTALLATION TEES AND HOOKER TYPE FITTINGS WILL NOT BE PERMITTED ON THIS PROJECT.
- INSPECTOR TEST CONNECTIONS SHALL BE RUN TO SERVICE SINKS OR DRAINS. DO NOT RUN THROUGH EXTERIOR WALLS.
- ALL FIRE HOSE LOCATIONS SHALL BE VERIFIED WITH THE OWNER BEFORE PROCEEDING WITH ANY INSTALLATION.
- IT IS THE SOLE RESPONSIBILITY OF THE FIRE PROTECTION CONTRACTOR TO BE FAMILIAR WITH HUDSON'S AND AMERICAN RISK CONSULTANTS RULES AND INSTALLATION TECHNIQUES ON THIS PROJECT.
- F.P.C. IS RESPONSIBLE FOR COORDINATING WITH OWNER-APPROVED INTERIOR FINISH CONTRACTOR LAYOUT PRIOR TO SPRINKLER FABRICATION.
- THE F.P.C. SHALL PROVIDE UPRIGHT SPRINKLER HEADS OF THE CORRECT TEMPERATURE RATING, BELOW ALL DUCTWORK GREATER THAN 48" WIDE IN AREAS WHERE THERE IS NO CEILING.
- THE FIRE ALARM SYSTEM TO BE INSTALLED IN ACCORDANCE WITH ALL APPLICABLE CODES BY THE OWNER'S SEPARATE CONTRACTOR.

ISSUED FOR

DATE	BY	REVISION
11-18-03	DR	OWNER REVIEW
11-18-03	DR	OWNER REVIEW
11-18-03	DR	OWNER REVIEW
11-18-03	DR	OWNER REVIEW
11-18-03	DR	OWNER REVIEW

