

## PART 1: GENERAL

### 1.01 Purpose:

- A. This standard is intended to provide useful information to the Professional Service Provider (PSP) to establish a basis of design. The responsibility of the engineer is to apply the principles of this section such that the University may achieve a level of quality and consistency in the design and construction of their facilities. Deviations from these guidelines must be justified through LCC analysis and submitted to the University for approval.

### 1.02 Codes and Standards:

- A. Plumbing Code Compliance: Comply with applicable portions of International Plumbing Code pertaining to selection and installation of Plumbing materials and products.
- B. Plumbing and Drainage Institute: ~~W~~201.
- C. ASSE 1013 – Performance Requirements for Reduced Pressure Principle Backflow Preventers.
- D. ASSE 1003 – Performance Requirements for Water Pressure Reducing Valves.
- E. ASME Boiler and Pressure Vessel Code
- F. HI Compliance: Design, manufacture, and install plumbing pumps in accordance with "Hydraulic Institute Standards".
- G. UL Compliance: Design, manufacture, and install plumbing pumps in accordance with UL 778 "Motor Operated Water Pumps".
- H. SSPMA Compliance: Test and rate sump and sewage pumps in accordance with SUMP and Sewage Pump Manufacturers Association (SSPMA) and provide certified rating seal.
- I. ANSI 21.22 – Relief Valves for Hot Water Supply Systems

### 1.03 Requirements:

- A. Provide water hammer arrestors, complete with accessible isolation valve, in hot and cold water lines at the end of each battery of plumbing fixtures and at each plumbing fixture location remote from a battery of fixtures. Size in accordance with PDI ~~201~~.
- B. Isolate domestic water lines for building services from cross connection by means of approved backflow preventer. Provide additional backflow prevention devices in process water connections off the main building service.



- B. Pipe sizes 3" to 6" shall be Type K copper with soldered silver phosphate connections. Copper piping 4" and larger may be joined using roll grooved fittings and rubber rings joined using a hydraulic compression tool. NO 2 1/2" Pipe Allowed
- C. Piping larger than 6" shall be ASTM A53 galvanized steel pipe, schedule 40 with rolled grooved ends and mechanical couplings. NO SEAMED PIPE
- D. Exterior below grade or below concrete slab equipment or fixture supply feeds: Piping shall be Type K copper, soft annealed temper, with wrought copper fittings and lead free joint. Residence Life Maintenance will not allow below grade under slab water supply.
- E. Below building concrete slab: Tube size 3/4" and larger: type "K" soft - annealed copper coil tubing.



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DIVISION 22 PLUMBING

5. Cover: Cast iron or steel circular cover with manhole or hand opening, depending on