

SECTION 22 30 00  
PLUMBING EQUIPMENT  
Design Standard

PART 1 GENERAL

1.1 PURPOSE:

Plumbing equipment are essential elements of the plumbing systems and subsystems. This design standard has the purpose of creating a consistent application of plumbing equipment requirements throughout the San Mateo County Community College District. The intent is to create a standard of quality for maintenance, water efficiency, and reliability throughout all renovation and new building projects.

PART 2 PRODUCTS

2.1 PLUMBING EQUIPMENT

Design and specify work to include materials and installation of water heaters, circulation pumps, storage tanks, sump pumps, grease interceptors, and accessories for a complete and operable system.

- A. Pumps: Design, manufacture and install pumps in accordance with HI (Hydraulic Institute Standards).
- B. Water Heaters: Gas type with atmospheric vent. Commercial type water heater, with minimum 92% efficiency and a 5 year commercial warranty.
- C. Circulation Pumps: Provide in-line factory tested pumps, cleaned, and painted with enamel prior to shipment. Provide pumps of same type by same manufacturer.
- D. Sump Pumps: Submersible, heavy duty cast iron, float operated, visual/audible alarm/control panel. SMCCCD requires that each sump pit has 2 pumps with a small height differential setting. This creates a purposeful system redundancy, in the event one of the pumps fails to operate properly. In addition, high water alarms are to be interconnected to the BMS system for alarm notification.
- E. The contractor shall install all water and gas flow meters along with any other plumbing metering equipment specified and provided in Section 25 01 00 in addition to any other metering equipment provided in this Section. The contractor shall assist in commissioning activities as required to test all equipment installed. Refer to Section 25 55 00 for commissioning activities related to these meters.
- F. Consider rainwater and grey water collection and filtration for use on providing water supplies for irrigation, water closets and urinals. If this system is utilized, provide all necessary components to facilitate the use of this recycled water (dual pipe system to water closets and urinals and a purple pipe system to ensure systems requiring potable water is not connected to the recycled piping system; dual pipe capabilities on water closets and urinals).
- G. Grease Interceptors:
  - 1. Prefabricated reinforced concrete grease interceptor structure in accordance with state and local agency code standards.
  - 2. Coated cast iron grease interceptor with coated steel extension. Gasketed nonskid locking cover.

- H. Storage Tanks: Factory fabricated steel, glass lined, vertical tank with mounting supports.
- I. High Efficiency Water Heater:
  - 1. Condensing water heater
  - 2. Tankless water heater

2.2 APPROVED MANUFACTURERS:

- A. Water Heaters (Gas, Storage):
  - 1. Rheem, Ruud
  - 2. A. O. Smith
  - 3. State
  - 4. Bradford-White
  - 5. PVI
- B. Water Heaters (Gas, Instantaneous):
  - 1. Takagi
  - 2. A.O. Smith
  - 3. Aerco
- C. Circulation Pumps:
  - 1. Amtrol
  - 2. Armstrong
  - 3. Bell & Gossett
  - 4. Grundfos
  - 5. Paco
  - 6. Taco
- D. Sump Pumps:
  - 1. Paco
  - 2. Hydromatic
  - 3. Aurora
  - 4. Grundfos
  - 5. Peerless

PART 3 EXECUTION

3.1 SUBSTITUTES ALLOWED?

Yes, if performance and quality equivalency can be evidenced.

3.2 ASSOCIATED DESIGN STANDARDS AND CONSTRUCTION SPECIFICATIONS:

22 05 12 – Plumbing Pipe and Fittings Design Standard

22 11 13 – General Plumbing Piping Systems Design Standard

END OF SECTION