



Division 22. Plumbing

22 00 00. Plumbing

22 05 00. *Common Work Results for Plumbing*

22 05 05. General Requirements for Plumbing

1. Owner training shall be included for all equipment and systems and training shall be scheduled and take place.
2. As-built record drawings shall be kept up to date on the job site, and turned over to the A/E prior to final pay requests. The drawings must be prepared by the A/E in a clear AutoCAD format and turned over to the UW PM at Close Out.

22 10 00. Plumbing Piping and Pumps

22 11 00. *Facility Water Distribution*

22 11 05. General Requirements for Facility Water Distribution

1. A drain shall be provided under recessed walk-off mats only in very heavily used entries. The need for an indirect drain or trap primer shall be considered in this instance. The drain shall be sufficiently sized and includes a sediment basket to retain the sandy debris that will accumulate. In most campus buildings, it is preferred to provide a recessed mat with no drain in the pan.
2. Acid dilution basins shall be used for new buildings, do not use acid neutralization basins on acid waste piping systems. Acid neutralization basins shall only be used in rare circumstances with unusually heavy acid use, and then, only after a review by UW Safety and Plumbing.
3. Tee-drilling of water supply branches shall not be allowed.
4. 1 ½ inch meter test pipe shall be installed to outside of building, this can also be used to supply building with water during main interruptions.
5. The contractor shall turn over, to the UW PM, the initial registration and testing report required for backflow preventers and other cross connection control devices regulated by the Wisconsin Department of Safety and Professional Services.
6. Frost-proof hose bibs shall be provided where there is need for watering of landscaping including green roof areas, near a loading dock, and at roof level for window washing equipment.
7. Hose bibs shall be located such that the need to run hoses across sidewalks to water planting beds is avoided.
8. All parking ramps shall be designed with 1 ½ inch female connection and the valves shall be marked NON-POTABLE WATER or UNSAFE WATER. Connections shall be located in areas accessible for semi-annual flushing of concrete coatings. Connections shall be spaced no more than 100 feet for coverage with a 50 foot hose. Refer to *Division 34 09 04 Parking Structures*.



22 11 16. Domestic Water Piping

1. For 4 inch diameter or greater underground domestic water, ductile iron piping shall be used. For less than 4 inch diameter, copper piping shall be used. PVC shall be used only in very rare circumstances where there is a proven history of corrosive soil conditions.
2. Refer to *Division 21 Fire Suppression* for dual water service and dual valve requirements for entry piping.

22 14 00. Facility Storm Drainage

22 14 29. Sump Pumps

1. Detail and install sewage ejection pumps and other sump-mounted equipment so that isolation valves check valves, etc. are located above the sump or in a dry well next to the sump in an area where they are more serviceable.
2. All utility pits are to be provided with a sump pump basin to receive a sump pump when needed. A GFI outlet for the pump and an additional convenience outlet, as well as appropriate lighting for work shall be provided.

22 16 00. Valves

Ball valves 3” and smaller should be bronze-body with stainless steel ball and stem.

22 40 00. Plumbing Fixtures

22 42 00. Commercial Plumbing Fixtures

22 42 05. General Requirements for Commercial Plumbing Fixtures

1. Black fixtures shall not be used, as they are difficult to keep clean.
2. A minimum of one mop sink shall be provided on every floor, preferably near toilet rooms. The mop sink rim shall be a maximum of 6 inches high to allow for ease of use by custodians to drain equipment.
3. At least one bottle filler shall be included within each campus building.

22 42 16. Commercial Water Closets, Urinals, and Faucets

1. Battery operated or low voltage infrared sensors shall be provided on all urinals. The power source shall be determined on a project by project basis. Sloan SMO (side mount operator) or similar battery operated flush valves shall be provided on urinals only. The campus preferred faucet is the Chicago Faucets, for ease of repair. Dual handle models that meet ADAAG shall be provided. Sensor faucets are high maintenance and not preferred, but can be discussed for use in specific situations. Urinals shall be wall hung with one floor mounted urinal per building.
2. Drinking fountains shall comply with ADA requirements and campus standards, if bottle filler is used, the unit must be installed on the “Low” fountain. The bottle filler mechanism shall be hands free operation, and shall not require the use of an activation button. The campus preferred model is Elkay EZ H2O.
3. Plumbing connections shall be coordinated for all owner furnished specialty equipment such as water polishers, ice machines, etc.



22 45 00. Emergency Plumbing Fixtures

22 45 36. Emergency Fixture Water-Tempering Equipment

1. Emergency eyewash and showers must supply tempered water in a temperature range of 75-90 degrees Fahrenheit. Tempered water shall be provided using a pumped loop and fail-safe tempering valve. Campus recommends using the same loop to supply hand washing water to restrooms to keep water fresh. Individual tempering valves that serve a single eyewash or shower shall be prohibited.
2. Drains under all emergency showers shall be provided. In large spaces, where multiple showers are required, one drain shall be centrally located.