SECTION 22 05 00 – COMMON WORK RESULTS FOR PLUMBING

PART 1 – GENERAL

1.01 SECTION INCLUDES

A. General Design Information

1. Following is a brief description of the features which should be incorporated in the specifications for various plumbing materials and equipment. Where a specific product is stated with model number, that product should be used as the basis of design and listed as the first named in the specifications. Manufacturers listed without model number are intended to give the designer input on manufacturers whose products have been found to be acceptable.

B. General Quality Level:

1. Generally, plumbing material and equipment selected should be institutional grade. Long life and simple low-cost maintenance are critical attributes for nearly all University projects. Plumbing fixtures in public areas should also be selected to endure rough use and daily janitorial cleaning.

C. General-Duty Valves Requirements:

1. Isolation Valves: Provide sufficient number of valves for ease of service, and to reduce inconvenience to users due to outages and draining of systems for minor repairs.

2. Ball valve: Provide with stainless steel ball and stem from and from ½”-1.5” and from 2” up either bronze gate valve or epoxy coated resilient wedge iron body gate valve.

3. Relief valves: Daylight to a conspicuous location. Plumb to sewer.

D. Identification for Plumbing Piping and Equipment Requirements:

1. Identification Charts: Location should be reviewed and approved by Project Manager in consultation with Facility Services.

2. Piping Service: Identification Tags: Provide with abbreviated legend on 1st line and pipe size on 2nd line. Locate to be visible from exposed points of observation. Where 2 or more pipes run parallel, place printed legend and other markers in same relative location.

3. Valves Service Identification Tags: Provide with abbreviated legend on 1st line and valve service chart number on 2nd line. Identification Charts: Provide two (2) satin
finished extruded aluminum frames with rigid clear plastic glazing; 8-1/2 x 11 inches, minimum for each chart. In addition, provide electronic copy of each chart.

E. Keys for Cabinets and Padlocks:
   1. Cabinets and Equipment: Provide 2 keys per panel. Coordinate with Section 08 06 05 - Key Schedule.
   2. Padlocks: Coordinate with Section 08 06 05 - Key Schedule.
   3. Closeout Submittal: Provide panel keys separated and labeled. Provide location, room number, quantity, manufacturer name and model numbers of keys, and coordinate closeout submittal with Section 08 06 05 - Key Schedule.

F. Testing
   1. All new piping shall be tested prior to tie in to existing systems.
   2. Do not test against existing valves when connecting into an existing system. Provide a slip blind at the valve flange or other suitable isolation.
   3. Test gauges shall have 3' minimum dial, with oil fill and gauge cock. Gauge calibration shall be verified to the satisfaction of the University’s Inspector prior to commencing testing.
   4. Domestic and Industrial Hot & Cold Water Piping
   5. 150 PSIG test pressure for a period of 4 hours using a test medium of water.
   6. 200 PSIG test pressure for a period of 4 hours using a test medium of water for portions of the system which serve both the fire suppression system and the domestic water.
   7. Drain, Waste & Vent Piping Including Lab Waste: 10 feet of head for a period of 1 hour using a test medium of Water.
   8. Natural Gas Piping: 50 PSIG test pressure for a period of 4 hours using a test medium of air.
   9. Compressed Air Piping: 150 PSIG test pressure for a period of 4 hours using a test medium of air.
   10. Pure Water Piping Systems: 100 PSIG test pressure for a period of 4 hours using a test medium of purified water. See 22 05 19 Meters and Gages for Plumbing Piping
       a. Water meters for domestic water should be nutating disk type sufficiently accurate to record the lowest expected flow (typically the flush of a single low
flush toilet). Provide compound metering if necessary to accommodate a large range of flows.

b. Provide a permanently piped full size meter bypass on all domestic water services 3" and larger. Valving should be arranged so that the meter can be removed without a disruption of water service.

c. All water meters should record in cubic feet.

d. Meters for irrigation may be either nutating disk or turbine type depending on expected flow.

END OF SECTION 22 05 00