SECTION 15440
PLUMBING FIXTURES

PART 1 – GENERAL

1.01 SUMMARY

A. Section Includes: Plumbing fixtures and trim associated with plumbing systems.

B. Related Sections:
   1. Section 12349 – Laboratory Service Fixtures
   2. Section 15010 – Basic Mechanical Requirements
   3. Section 15050 – Basic Mechanical Materials and Methods
   4. Section 15410 – Plumbing Piping
   5. Section 15430 – Plumbing Specialties
   6. Section 15450 – Plumbing Equipment

1.02 SYSTEM DESCRIPTION

A. Design Requirements:
   1. Specify stop valves at all fixtures and equipment and at rough-in locations.
   2. Specify all-white fixtures with acid resisting finish.
   3. Specify rigid anchors behind walls for all supplies and stops to eliminate push or pull movement.
   4. Specify carriers for all wall mounted fixtures. Do not allow wood or metal mounting plates anchored to the wall framing or studs.
   5. Laboratory faucets and cocks shall have vacuum breakers, as well as all devices to which hoses can be connected.
   7. Tub and tile caulk shall be applied under all self-rimming sinks.
8. Specify ½” anchor bolts on all WC carriers, and as specified by manufacturers of lavatories, urinals, and water coolers.

9. All 17 gauge P-traps shall have brass slip nuts. All tubular brass products shall be 12 gauge.

10. IMPORTANT: In all new buildings, specify 1/8” per foot fall/slope for all sanitary-drainage piping. Reason: We are now requiring 1.28 max GPF for water closets.

1.03 QUALITY ASSURANCE

A. Specify all installations in accordance with jurisdictional code and health authorities standards, restrictions and recommendations.

B. Specify contractor to provide all fixtures and trim using a single manufacturer where possible. Allow deviation only where specifications indicate otherwise.

PART 2 – PRODUCTS

2.01 MANUFACTURERS

A. General: Fixtures, manufacturers and catalog numbers specified are shown only to establish type and quality of fixtures required. Other equal products may be selected from the following lists of acceptable manufacturers.

B. Cast iron, and vitreous china (except as noted):

   American Standard
   Kohler
   Toto
   Universal-Rundle
   Zurn

   Urinals: Toto 1/8 GPF Mod. UT105UG

   Housing: Toto water closets and urinals

   LEED WEc3: Water Use Reduction and
   LEED WEc2: Innovative Wastewater Technologies
   Urinals using not more than 1/8 Gallon per flush (Zurn or pre-approved equal)

C. Stainless steel type (302) (304) and (316) 18 gage minimum:

   Bradley
   Elkay
   Just
D. Molded Stone:

   Fiat
   Florestone

E. Terrazzo:

   Bradley
   Fiat
   Florestone

F. Water Fountains:

One of each pair of water fountains or coolers shall have a water-bottle filler spout in addition to a drinking spout. All single water fountains or coolers shall have both.

1. Drinking Fountains:

   Shall have trap outside wall.

   Haws Model 1109 or approved equal.

2. Electric Water Coolers:

   (Infrared-sensing actuation is not acceptable.)

   Elkay Model E EZS8WSLK desired (specify)
   Halsey Taylor
   Haws
   Oasis

G. Emergency Showers and Eye/Face Wash Equipment (Must Meet ANSI Z35.8.1):

   Desert Assembly, Inc.
   Haws
   Sloan
   Water-Saver Co.

Additional Manufacturers listed in UCB Standard Section 12349, 2.1 (A) Manufacturers.

H. Laboratory Faucets and Cocks:

   Chicago Faucet Mod. No. 786-GN2BVB-E3-2-369
   Zurn (equal to Chicago)

I. Water Mixing Valves, Thermostatic or Pressure Balanced, with integral checks:

   Powers (Preferred)
   Simmons
LEED WEc3: Water Use Reduction:
Chicago Faucet Mod. No. 119-NF (Infrared applications.)

J. Faucets, Two Handle, 4-inch center spacing, with ceramic cartridge:
   Chicago 802-CP (802-317CP for ADA) with ceramic cartridge
   Zurn (equal to Chicago)

   Housing:
   Delta model 501 WF 4” cc
   Delta model 100 WF 8” cc

LEED WEc3: Water Use Reduction:
Chicago Faucet Mod. No. 650-4CP (infrared, 110V transformer required)

K. Flush Valves:
   a. Water Closets: 1.28 max. gallon per flush, with dual-flush feature.
      Sloan
      Zurn
   b. Urinals: 1/8 max. gallon per flush.
      Sloan
      Zurn

   Housing: Toto

LEED WEc3: Water Use Reduction and WEc2: Innovative Wastewater Technologies:
If the project is pursuing LEED, use lower flow fixtures.

L. Automatic Flush Valves for Urinals: Shall not exceed 1/8-gallon per flush. Shall be
   battery-operated.
   Zurn
   Sloan

M. Shower Equipment: (Shall not exceed 2.5 gallons per minute). Single handle, pressure-
   compensating:
   Delta (Preferred)
   Kohler
   Leonard

N. Shower Equipment: (Shall not exceed 1.25 gallons per minute at 60-80 PSI). Single
   handle, pressure-compensating:
Bricor (Preferred) – Request UCB price
Delta*
Kohler*
Leonard*

Housing – Bricor

*Once tested and approved

**LEED WEc3: Water Use Reduction:**
If project is pursuing LEED, use a tamper-proof 2.0 gpm flow restrictor where feasible.

O. Garbage Disposers:

   Insinkerator Evolution Pro Essential
   Waste King

P. Traps, Stops (all metal), Supplies, Airgaps, Drains:

   American Standard
   Brasscraft
   Eljer
   Kohler
   Proflo

Q. Chair Carriers (4-Bolt):

   Josam
   J. R. Smith
   Wade
   Zurn

R. Faucets, Two-Handle, lever style:

   Chicago
   Zurn

   Housing – Delta model 501 WF 4”cc
   Delta model 100 WF 8”cc

S. Kitchen Faucet and Trim:

   Kitchen: Chicago single-handle faucet

   Housing: Delta, with Single Handle (long) Mod. 100-WFELHHDF

T. Mop Sink Faucets:
2.02 WATER CLOSETS

A. Wall Hung, Siphon Jet, Valve Operated, Water Saver, 5" rough with open front seat and no lid. Shall be certified by an approved agency for operation not exceeding 1.28 gallons per flush. Provide dual-flush flushometer.

LEED WEc3: Water Use Reduction and WEc2: Innovative Wastewater Technologies: For projects pursuing LEED, use reduced gpf flush valves where feasible. Discuss this option with University Facilities Operations.

B. Equals by American Standard, Kohler, Toto, Universal-Rundle or Zurn.

C. For Housing: Toto

2.03 URINALS

A. White, vitreous china blow-out urinal with flushing rim, trap and 3/4” top spud inlet, 2" outlet and wall hangers. Shall be certified by an approved agency for operation not exceeding 1/8-gallon per flush.

Toto or pre-approved equal.

LEED WEc3: Water Use Reduction and WEc2: Innovative Wastewater Technologies: For projects pursuing LEED, use reduced gpf flush valves.

B. For Housing: Toto

2.04 LAVATORIES

A. White, cast iron, self rimming countertop, 19" round lavatory. C.P. all brass 1-1/4" trap, supply and waste fitting, vandal resistant aerator to limit flow to 0.5 GPM. Provide closed-cell pipe insulation on the waste pipes and hot water pipes below each lavatory for the handicapped.

Plane Code: L-1
Make: American Standard Model 3301-025
Style: Self Rimming
Size: 19" Dia.
Trap: 1-1/4"
Faucets: See 2.01J

LEED WEc3: Water Use reduction: For projects Pursuing LEED certification, use infrared faucets as listed in 2.01J. Set the run-time to 5 seconds.
Design Note: Where tempered water is used, tempered water must flow within 5 cycles of lavatory use.

B. Equals by Kohler, Crane, Universal-Rundle

2.05 MOP SERVICE BASIN

A. Pre-cast terrazzo, stainless-steel drain, stainless-steel caps on all curbs.

2.06 WATER-MIXING VALVE FOR EYE WASHERS AND EMERGENCY SHOWERS

A. Shall meet ASSE 1071

2.07 COFFEE-BAR SINKS

A. Stainless-steel sink with drainboard (Elkay ILRG-4322 or equal). Single-handle faucet with goose-neck spout (Delta 711HDF).

PART 3 – EXECUTION

3.01 INSTALLATION

A. In general, for project specifications, remove "Design Requirements" in Part 1, Paragraph A, Paragraph 1.02, "System Description" of this Design Guide and use list to expand on specific requirements of installation for each fixture specified.

B. Drinking Fountains and Water Coolers: 36" max. installation height to drinking spout.

C. Urinals - To meet ADA requirements, set one urinal per restroom with a rim height of 17” and the flushometer handle to 44”.

D. Water closets and urinals: Caulk wall-mounted fixtures along the top only.

E. Emergency Showers and Eye/Face Wash Equipment

1. Installation shall meet ANSI Z358.1 and UCB Standard Section 12349.

F. Mid-height supports within walls are to be installed for all pipes supplying plumbing fixtures.

END OF SECTION 15440