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## 222400 PLUMBING FIXTURES

### Part 1 – GENERAL

#### 1.1 Description

A. This section details the guidelines and expectations for design and installation of all plumbing fixtures for new construction or renovation on Johns Hopkins University Homewood Campus. Project conditions and requirements vary, thus precluding the absolute adherence to the items identified herein in all cases. However, unless there is adequate written justification and approval from the JHFRE Engineering and Energy Department, it is expected that these guidelines will govern the design and specifications.

#### 1.2 Submittals

N/A

#### 1.3 Quality Assurance

N/A

#### 1.4 Delivery and storage

A. Material deliveries and storage areas to be approved by Owner.

B. Material storage to comply with manufacturer's recommendations.

### Part 2 – PRODUCTS

#### 2.1 General

A. Plumbing fixtures for restrooms shall be as indicated in the restroom design guidelines.

B. Ball valves shall be installed at each fixture.

C. Hydro-pneumatic water hammer arresters shall be installed on any piping where flush valves or any quick-acting automatic valves are used.

#### 2.2 Water Closets

A. Toilets shall be wall hung, white, vitreous China, elongated bowl, siphon jet action, with a 1.5" top spud.

B. Toilet seats shall be open front, no cover, white, with concealed stainless steel check hinge.

C. On new construction, pressure assisted water closets are not allowed. They may only be used when replacing older tank style units.

D. Provide externally adjustable, side mounted, a hard-wired sensor operated flush valve with mechanical manual overrides for all work. Flush shall be dual flush with 1.1/1.6gpm.

E. Allowable flushometer brands: Sloan or Zurn.

## 2.3 Urinals

A. Urinals shall be wall hung, white, vitreous China, 0.75" top spud, with 2" outlet and operate at 0.125 gallons per flush.

B. Urinals shall flush by sensor activated, hard-wired flushometer rated at 0.125gpf.

C. No waterless urinals will be used or considered.

D. Allowable flushometer brands: Sloan or Zurn.

## 2.4 Lavatories

A. Lavatories shall be wall hung, white, vitreous China, front overflow, institutional style with concealed hangers.

B. Supply and drain lines should come from the wall and not the floor to allow for easier cleaning.

C. Faucets in dormitory restrooms shall be two-handle manually operated.

D. Faucets in public restrooms shall be: Sloan, Moen, Delta or American Standard. The faucets are electronic sensor activated powered by A/C hardwired. Aerator shall be 0.5gpm. Sensors shall be hard-wired.

E. Provide one ADA manual faucet with gooseneck per group of lavatories.

## 2.5 Hose Bibs

A. Wall hydrants shall be encased with a lockable door and a vacuum breaker. One non-freeze hydrant shall be located adjacent to all building entrances or at least one on each of the four exterior walls.

B. At least one hydrant shall be provided in all restrooms and mechanical areas.

## 2.6 Showers

A. Shower heads shall be institutional level of build, chrome plated, pressure compensating, adjustable spray and 100% brass. They shall flow 1.8gpm maximum.

B. Shower controls shall be thermostatic temperature controlled to prevent scalding. Controls shall be chrome plated with one handle for volume and another for temperature.

C. Hospital grade shower heads or an auto drain system shall be used for any building that does not have a chlorine injection system installed.

## 2.7 Mop Service Basin

A. Basins shall be stainless-steel with garbage disposer. Size: minimum 24" x 24" with 10" high shoulders and a 3" drain connection.

B. Basin fittings shall have a bucket hook, wall brace, threaded hose connection, chrome plated, vacuum breaker, and 100% brass.

## 2.8 Laboratory Sinks

A. Laboratory sinks shall be epoxy under mount type, with stainless steel grid strainer, flexible supply and polypropylene tailpiece and trap. Faucets shall be gooseneck with vacuum breaker and serrated nozzle. Handles shall be coordinate with user/department preference.

## 2.9 Floor Drains

A. Install floor drains in custodial rooms, laundry rooms, mechanical rooms, restrooms and other rooms with similar uses.

B. In mechanical rooms, laundries, terraces and similar locations shall have perforated sediment bucket with integral auxiliary drainage rim so designed that grate cannot be set in place until bucket is in position. Drains shall have a minimum 2" outlet.

C. All floor drains shall be fitted with a trap guard or trap primer.

## 2.10 Water Coolers and Filling Stations

A. Integrated bottle filling stations shall be ADA compliant and include water filters with visual LED filter monitor to indicate when replacement is necessary with automatic filter reset. The Basis of Design product shall be Halsey Taylor model# HTHB- HAC8WF, Elkay model# LZS8WSSP or approved equal. The finish shall be platinum vinyl or equivalent. Refrigerated unit shall provide 8 GPH capacity cooled to 50°F at 90°F ambient air temperature.

B. Equipment must utilize a filter sized to 0.5-micron or finer. Filter must be tested and certified to NSF 42 and 53.

## Part 3 – EXECUTION

3.1 Any non-filtered drinking fountains or bottle filling stations shall be replaced and updated to the designated JHU choice during any renovation or buildout.

3.2 No fitting shall be less than 1' away from floor or wall.