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SECTION 22 40 00_PLUMBING FIXTURES

PART 1 GENERAL

1.1 SUMMARY

- A. Section Includes:
 - 1. Water closets.
 - 2. Urinals.
 - 3. Lavatories.
 - 4. Sinks.
 - 5. Service sinks.
 - 6. Electric water coolers.
 - 7. Showers.
 - 8. Emergency showers.
 - 9. Emergency Eye and Face Wash.
 - 10. Emergency Combination Shower with Eye and Face Wash.

- B. The intent of these standards are to provide input to the design team on the University's preference of manufacturers, design, equipment options and quality assurance to maintain the longevity of its assets.

1.2 Related Sections:

- A. Section 22 05 00 Common Work for Plumbing Systems
- B. Section 22 05 01 Common Requirements for Plumbing Systems
- C. Section 22 11 00 – Domestic Water Systems
- D. Section 22 13 00 – Sanitary Sewer Systems
- E. Section 22 07 00 – Plumbing Insulation.

1.3 Design Requirements

- A. Tank type water closets are not allowed on the University of Delaware Newark Campus. Consult with University Energy and Engineering group if wall mounted water closets cannot be used for the project.

- B. The use of plastic pipe supply tubes is not allowed. Use only chrome plated or braided stainless steel supply tubes.
- C. All plumbing fixtures shall be low consumption type.

1.4 SUBMITTALS

- A. Product Data: Submit catalog illustrations of fixtures, sizes, [rough-in dimensions, utility sizes, trim, and finishes.
- B. Manufacturer's Installation Instructions: Submit installation methods and procedures.

1.5 CLOSEOUT SUBMITTALS

- A. Operation and Maintenance Data: Submit fixture, trim, exploded view and replacement parts lists.

1.6 MOCKUP

- A. Construct mockup of typical bathroom group.
- B. Incorporate accepted mockup as part of Work.

1.7 DELIVERY, STORAGE, AND HANDLING

- A. Accept fixtures on site in factory packaging. Inspect for damage.
- B. Protect installed fixtures from damage by securing areas and by leaving factory packaging in place to protect fixtures and prevent use.

1.8 WARRANTY

- A. Furnish five year manufacturer parts only warranty for plumbing fixtures.

1.9 EXTRA MATERIALS

- A. Furnish two (2) faucet and flush valve rebuild kits per faucet and flush valve supplied.

PART 2 PRODUCTS

2.1 FLUSH VALVE WATER CLOSETS

- A. Acceptable Manufacturers:
 - 1. American Standard Plumbing
 - 2. Kohler Co
- B. Bowl: ASME A112.19.2M; wall hung, siphon jet vitreous china closet bowl, with elongated rim, 1-1/2 inch top spud, china bolt caps.
- C. Wall Mounted Carrier: ASME A112.6.1; adjustable cast iron frame, integral drain hub and vent, adjustable spud, lugs for floor and wall attachment, threaded fixture studs with nuts and washers.

2.2 WALL HUNG URINALS

- A. Acceptable Manufacturers:
 - 1. American Standard Plumbing
 - 2. Kohler Co
- B. Urinal: ASME A112.19.2M; vitreous china, wall hung washout urinal with shields, integral trap, removable stainless steel strainer, top spud, steel supporting hanger.
- C. Wall Mounted Carrier: ASME A112.6.1; cast iron and steel frame with tubular legs, lugs for floor and wall attachment, threaded fixture studs for fixture hanger, bearing studs.

2.3 MANUAL FLUSH VALVES

- A. Manufacturers:
 - 1. Moen Model Number 8310M16
 - 2. Sloan Valve Co. Model Royal.

2.4 AUTOMATED FLUSH VALVES (FOR USE WITH URINALS ONLY)

- A. Manufacturers:
 - 1. Moen Model Number 8315
 - 2. Sloan Optima (hard wired AC powered types only)

2.5 LAVATORY FAUCETS

- A. Acceptable Manufacturers:
 - 1. Chicago Faucets
 - 2. Moen (M-Dura Commercial Products Only)

3. T&S Brass

B. For Residence Hall Projects only the following Lavatory Faucets:

1. Standard Bath Faucet: Moen Model 8216 or Speakman Model SC4072-LD
2. ADA Bath Faucet: Moen Model 8219 or Speakman Model SC4074-LD

2.6 FOOD SERVICE SINK FAUCETS

A. Acceptable Manufacturers:

1. T & S Brass & Bronze Works Inc
2. Moen (M-Dura Commercial Products Only)

B. Single lever "mixing" type food service sink faucets are not allowed at University of Delaware facilities. All food service sink faucets shall have dedicated handles for hot and cold water.

2.7 RESIDENCE HALL KITCHEN SINK FAUCETS

A. Acceptable Manufacturers:

1. Moen model 8227

2.8 SHOWERS VALVES

A. Acceptable Manufacturers:

1. Speakman SentinelPro SM5010
2. Speakman SentinelPro SM5080-ADA (For ADA Showers)

2.9 ELECTRIC WATER COOLERS

A. Acceptable Manufacturers:

1. Elkay

B. Fountain:

1. ARI 1010; recessed or handicapped mounted electric water cooler with stainless steel top, stainless steel body, elevated anti-squirt bubbler with stream guard, automatic stream regulator, push button, mounting bracket, refrigerated with integral air cooled condenser and stainless steel grille.
2. Fountain must be capable of supplying water at 50 degrees Fahrenheit.

2.10 MOP SINKS

A. Acceptable Manufacturers:

1. Pro Flo

- B. Bowl: 36 x 24 x 10 inch high white molded stone, floor mounted, with one inch wide shoulders, vinyl bumper guard and stainless steel strainer.
- C. Trim: ASME A112.18.1 exposed wall type supply with lever handles, spout wall brace, vacuum breaker, hose end spout, strainers, eccentric adjustable inlets, integral screwdriver stops with covering caps and adjustable threaded wall flanges.
- D. Accessories:
 - 1. 5 feet of 1/2 inch diameter plain end reinforced rubber hose.
 - 2. Hose clamp hanger.
 - 3. Mop hanger.

2.11 EMERGENCY SHOWER

- A. Acceptable Manufacturers:
 - 1. Speakman Company
- B. Refer to safety equipment standard for further requirements

2.12 EMERGENCY EYE AND FACE WASH

- A. Acceptable Manufacturers:
 - 1. Speakman Company
- B. Refer to safety equipment standard for further requirements

2.13 EMERGENCY COMBINATION SHOWER WITH EYE AND FACE WASH

- A. Acceptable Manufacturers:
 - 1. Speakman Company
- B. Refer to safety equipment standard for further requirements

2.14 LAVATORY INSULATION KIT

- A. Product Description: Where Lavatories are noted to be insulated for ADA compliance, furnish the following: Safety Covers conforming to ANSI A177.1 and consisting of insulation kit of molded closed cell vinyl construction, 3/16 inch thick, for insulating tailpiece, P-trap, valves, and supply piping. Furnish with weep hole and angle valve access covers.

PART 3 EXECUTION

3.1 EXAMINATION

- A. Verify walls and floor finishes are prepared and ready for installation of fixtures.
- B. Verify electric power is available and of correct characteristics.
- C. Confirm millwork is constructed with adequate provision for installation of counter top lavatories and sinks.

3.2 PREPARATION

- A. Rough-in fixture piping connections in accordance with minimum sizes indicated in fixture rough-in schedule for particular fixtures.

3.3 INSTALLATION

- A. Install each fixture with trap, easily removable for servicing and cleaning.
- B. Provide chrome plated rigid or flexible supplies to fixtures with loose key stops, reducers, and chrome escutcheons.
- C. Install components level and plumb.
- D. Install and secure fixtures in place with wall carriers and bolts.
- E. Seal fixtures to wall and floor surfaces with sealant
- F. For ADA accessible water closets, install flush valve with handle to wide side of stall.

3.4 INTERFACE WITH OTHER PRODUCTS

- A. Review millwork shop-drawings. Confirm location and size of fixtures and openings before rough in and installation.

3.5 ADJUSTING

- A. Adjust stops or valves for intended water flow rate to fixtures without splashing, noise, or overflow.

3.6 CLEANING

- A. Clean plumbing fixtures and equipment.

3.7 PROTECTION OF INSTALLED CONSTRUCTION

- A. Do not permit use of fixtures before final acceptance.

END OF SECTION