

PART 1 - GENERAL

- 1.1 Toilet rooms and utility rooms to have floor drains at lowest point.
- 1.2 Utilize Exposed Flushometers.
- 1.3 Wall hung toilet room fixtures. Urinals for handicapped may be stall type.
- 1.4 White water closets, lavatories, and urinals unless approved in advance by Facilities Services.
- 1.5 Install recessed freeze proof 1-inch hose bibs on exterior building walls to provide an outside water source. Provide a minimum of one bib per side of building, maximum of 150 LF between bibs. Provide isolation valve in supply piping and label within 5 feet of hose bib. Pitch pipe from valve to drain.
- 1.6 Provide one exterior freeze proof hose bib per 20,000 square feet of roof area. Locate on or in penthouse or other appropriate location.
- 1.7 Provide 3/4" CW supply to each bib and integral vacuum breaker, JR Smith, Series 5509, or equal.
- 1.8 Provide wall hung, ADA approved stainless steel drinking fountains with water chillers, dual height for both ADA and standard access..
- 1.9 Water hammer arresters: PDI certified. Isolation valves not required if fixture or group of fixtures are suitably isolated.
- 1.10 Flushometer valves: automatic infrared sensor type in high use areas. Battery operated valves (120 volt hard wired not allowed). Back up flush buttons for all water closets and urinals. May be manual oscillating handle type in low use areas.

PART 2 - PRODUCTS

- 2.1 Acceptable manufacturers - Base all designs on latest models similar to below:
 - A. Fixtures - general:
 - 1 American Standard.
 2. Kohler.
 3. Crane.
 4. Mansfield floor mounted flush tank in student residences only.

B Flush valves:

2. Flushometer Valve Body: Sloan Royal, No alternate brands, No substitutions allowed
a. Model 110 for Water Closets

b. Model 186 for Urinals

1. Automatic Operators:

a. Sloan Optima EBV-89-A

b. Zurn ZERK-CP

c. No alternate brands, No substitutions allowed

C. Water closet seats:

1. Church.

2. Bemis.

3. Olsonite.

D. Fixture carriers:

1. Smith.

2. Zurn.

3. Wade.

E. Fixture trim:

1. Moen.

2. Chicago Faucet .

F. Mixing valves (pressure balanced):

1. Bradley.

2. Powers.

3. Symmons.

G. Electric water coolers:

1. Halsey Taylor.
2. Haws.
3. Oasis.
4. Elkay.

H. Faucets:

1. Lab and classroom sinks: Chicago.
2. Tub, shower, lavatory, and kitchen: Moen Legend Series, One Handle, No alternate brands, No substitutions allowed
3. Janitor and service sinks: Chicago 897 with smooth chrome finish, No alternate brands, No substitutions allowed

J. Eyewash Shower:

1. Guardian.
2. Watersaver.
3. Haws.

2.2 Water closet - wall mounted:

- A. Bowl: wall hung siphon jet vitreous china closet bowl, with elongated bowl rim, 1-1/2 inch spud, china bolt caps.
- B. Flush valve: exposed chrome plated, diaphragm type, escutcheon, seat bumper, integral screwdriver stop and vacuum breaker.
- C. Seat: Solid white plastic, open front, extended back, brass bolts, without cover.
- D. Wall mounted carrier: adjustable cast iron frame, integral drain hub and vent, adjustable spud. Lugs for floor and wall attachment, threaded fixture studs with nuts and washers.

2.3 Water closet (floor/elongated).

- A. Bowl: Floor mounted. Siphon jet vitreous china elongated bowl & vitreous china flush tank.

B. Flush tank: with ball cock/flapper flush assembly, supply tube and stop valve.

C. Seat: Solid white plastic, open front, extended back, brass bolts, without cover.

2.4 Water closet (floor/round):

A. Siphon jet vitreous china round bowl & vitreous china flush tank.

B. Flush tank: with ball cock/flapper flush assembly, supply tube and stop valve.

C. Seat: Solid white plastic, open front, extended back, brass bolts, without cover.

2.5 Urinal:

A. Urinal: vitreous china, wall hung, siphon jet urinal with shields, integral trap, 3/4 inch top spud, steel supporting hanger, 14" depth.

B. Flush valve: exposed chrome plated, diaphragm type, escutcheon, integral screwdriver stop, vacuum breaker.

C. Wall mounted carrier: cast iron and steel frame with tubular legs, lugs for floor and wall attachment, threaded fixture studs for fixture hanger, bearing studs.

2.6 Lavatory (in counter):

A. Lavatory: vitreous china self-rimming counter top lavatory, 20" X 17" oval, 4 inch centers for trim, front overflow, seal of putty, caulking, or concealed vinyl gasket. Solid surface may be used on approval by the FS DDC Project Manager

B. Trim: chrome plated combination supply fitting waste, water economy aerator, single lever handle, pop-up drain for residential. Grid drains for public.

2.7 Lavatory - wall hung:

A. Lavatory: Vitreous china, wall hung, size as appropriate, 4 inch centers for trim, overflow.

B. Trim: chrome plated combination supply fitting with waste, water economy aerator, single lever handle. Pop-up drains for residential, grid drains for public.

2.8 Sink:

A. Bowl: single compartment size as appropriate, 18 gauge thick, Type 18-8 stainless steel,

self-rimming with undercoating, ledgeback drilled for trim.

- B. Trim: chrome plated brass supply with swing spout, water economy aerator, single lever handle; chrome plated 17 gauge brass P-trap and arm with escutcheon, 3-1/2 inch crumb cup and stainless steel drain.

2.9 Shower:

- A. Provide 2" drains with stainless steel strainers integral with base provided by Division 10 Compartments and Cubicles.
- B. See Section 10150 for receptors and for compartment walls.
- C. Mixing Faucet & shower head:
 - 1. Rotary faucet shower valve: chrome plated with memory stop, pressure balanced & adjustable limit stops and integral stop valves.
 - 2. Shower head: chrome plated with 2 ½ GPM flow restrictor.
- D. ADA accessories: where designated with in-line vacuum breaker with wall and hand held shower head with minimum 69" flexible stainless steel hose, wall connection with flange and two hooks.

2.10 Electric water cooler - ADA:

- A. Fountain: ARI 1010; ADA accessible, wall mounted electric water cooler with stainless steel top and grille, recessed chiller, elevated anti-squirt bubbler with stream guard, automatic stream regulator, mounting bracket, refrigerated with integral air cooled condenser; capacity of 8 gph of 50° F water with inlet at 80° F and room temperature of 80° F, 1/5 hp compressor.

2.11 Electric water cooler - Recessed:

- A. Fountain: ARI 1010; Fully recessed electric water cooler with stainless steel top and grille, recessed chiller, elevated anti-squirt bubbler with stream guard, automatic stream regulator, mounting bracket, refrigerated with integral air cooled condenser; capacity of 8 gph of 50° F water with inlet at 80° F and room temperature of 80° F, 1/5 hp compressor.

2.12 Janitor mop sink:

- A. Bowl: 30 x 30 x 10 inch high heat molded resin/stone basin, floor mounted, with one inch wide shoulders, stainless steel strainer. Stainless steel basin may also be accepted subject to project manager approval.

- B. Trim: exposed wall type supply with cross handles, spout wall brace, vacuum breaker,

hose end spout, strainers, eccentric adjustable inlets, integral screwdriver stops with covering caps and adjustable threaded wall flanges; 2-1/2 feet of 1/2 inch diameter plain end reinforced plastic hose, hose clamp, mop hanger.

2.13 Counter mount sinks:

- A. Bowl: Single compartment, 18 gauge, 18 - 8 stainless steel, self rimming, 20 x 17 x 4½ - 6½ inch outside dimensions, ADA compliant, satin finish, radius corners.
- B. Trim: chrome plated brass supply with swing spout, water economy aerator, single lever handle; chrome plated 17 gauge brass P-trap and arm with escutcheon, 3-1/2 inch crumb cup and stainless steel drain.

2.14 Sink:

- A. Bowl: single compartment 15 x 15 x 6 inch outside dimensions, 18 gauge thick, Type 302 stainless steel, self-rimming with undercoating, ledgeback drilled for trim.
- B. Trim: chrome plated brass supply with swing spout, water economy aerator, single lever handle; chrome plated 17 gauge brass P-trap and arm with escutcheon, 3-1/2 inch crumb cup and stainless steel drain.

2.15 Service sink:

- A. Bowl: 22 x 18 x 12 inch deep, porcelain enameled (inside only) cast iron roll-rim sink, with 9 inch high back, concealed hanger, chrome plated strainer, cast iron P-trap with adjustable floor flange.
- B. Trim: exposed wall type supply with lever handles, vacuum breaker, hose end spout, strainers, eccentric adjustable inlets, integral screwdriver stops with covering caps and adjustable threaded wall flanges; 5 feet of 1/2 inch diameter plain end reinforced plastic hose, hose clamp, mop hanger.

2.16 Safety shower:

- A. Overhead shower mount. Flush mounted with ceiling tile if possible.
- B. Provide controls integral with eyewash station in most locations. Recessed or semi-recessed: Guardian, HAWS, or Water Saver Faucet Co, no substitutes, no alternate brands.
- C. Provide floor drain in the vicinity of the shower.

2.17 Eyewash:

- A. Sprays with cover caps.

- B. Valve: Individual tempering valve or a water tempering station for serving multiple eyewash stations.
- C. Redundant sensors fail safe.
- D. Circulating pump for multiple eyewash stations manifolded off of a single water tempering station.
- E. Maintain code compliant (adjustable) water temp within 5 seconds of opening safety device valve.
- F. Install with integral safety shower in most locations. Recessed or semi-recessed, Guardian, HAWS, or Water Saver Co, no substitutes, no alternate brands.

PART 3 - EXECUTION

- 3.1 Provide backflow preventers at all laboratory plumbing and all faucets with hose thread connections.
- 3.2 Provide accessible isolation valves for services to each isolated fixture or battery of plumbing fixtures.
- 3.3 Provide trap primers and associated isolation valves. Install on walls in mechanical spaces, and behind wall-mounted access doors in public spaces.

END OF SECTION