

**SECTION 22 4000
PLUMBING FIXTURES**

PART 1 GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 1 Specification Sections, apply to this Section.

1.2 SECTION INCLUDES

- A. Water closets.
- B. Urinals.
- C. Lavatories.
- D. Bottle filling fountains.

1.3 RELATED REQUIREMENTS

- A. Section 07 9200 - Joint Sealants: Sealing joints between fixtures and walls and floors.
- B. Section 22 1005 - Plumbing Piping.

1.4 REFERENCE STANDARDS

- A. ADA Standards - Americans with Disabilities Act (ADA) Standards for Accessible Design; 2010.
- B. ASME A112.6.1M - Supports for Off-the-Floor Plumbing Fixtures for Public Use; 1997 (Reaffirmed 2017).
- C. ASME A112.18.1 - Plumbing Supply Fittings; 2018.
- D. ASME A112.19.2 - Ceramic Plumbing Fixtures; 2013.
- E. ASME A112.19.5 - Flush Valves and Spuds for Water Closets, Urinals, and Tanks; 2017.
- F. CSA B45.8/IAPMO Z403 - Terrazzo, concrete, composite stone, and natural stone plumbing fixtures; 2018.
- G. NSF 61 - Drinking Water System Components - Health Effects; 2017.
- H. NSF 372 - Drinking Water System Components - Lead Content; 2016.

1.5 SUBMITTALS

- A. See Section 01 3000 - Administrative Requirements, for submittal procedures.
- B. Product Data: Provide catalog illustrations of fixtures, sizes, rough-in dimensions, utility sizes, trim, and finishes.
- C. Manufacturer's Instructions: Indicate installation methods and procedures.
- D. Maintenance Data: Include fixture trim exploded view and replacement parts lists.
- E. Warranty: Submit manufacturer warranty and ensure forms have been completed in Village of Ardsley's name and registered with manufacturer.

1.6 QUALITY ASSURANCE

- A. Manufacturer Qualifications: Company specializing in manufacturing the type of products specified in this section, with minimum three years of documented experience.

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. See Section 01 7800 - Closeout Submittals, for additional warranty requirements.

PART 2 PRODUCTS

2.1 GENERAL REQUIREMENTS

- A. Potable Water Systems: Provide plumbing fittings and faucets that comply with NSF 61 and NSF 372 for maximum lead content; label pipe and fittings.
- B. Water Efficiency: EPA WaterSense label is required for all water closets, urinals, lavatory faucets, and showerheads.

2.2 REGULATORY REQUIREMENTS

- A. Comply with applicable codes for installation of plumbing systems.
- B. Perform work in accordance with local health department regulations.

2.3 FLUSH VALVE WATER CLOSETS

- A. Water Closets: Vitreous china, ASME A112.19.2, wall hung, siphon jet flush action.
 - 1. Vitreous china, ASME A112.19.2, wall hung, siphon jet flush action.
 - 2. Bowl: ASME A112.19.2; 16.5 inches high with elongated rim.
 - 3. Flush Valve: Exposed (top spud).
 - 4. Flush Operation: Sensor operated.
 - 5. Handle Height: 44 inches or less.
 - 6. Supply Size: 1-1/2 inches.
 - 7. Outlet Size: 2 inches.
 - 8. Color: White.
 - 9. Manufacturers:
 - a. American Standard, Inc; Aftwall Millennium: www.americanstandard-us.com.
- B. Flush Valves: ASME A112.18.1, complete with vacuum breaker stops and accessories.
 - 1. Valve Supply Size: 1 inch.
 - 2. Valve Outlet Size: 1-1/2 inches.
 - 3. Sensor-Operated Type: Solenoid operator, low voltage hard-wired, infrared sensor and manual over-ride push button.
 - a. Proximity System with universal sensor.
 - b. State-of-the-Art Electronics prevent ghost flushing
 - 4. Fail-Safe: Valve automatically closes upon loss of power or water pressure and does not need to be reset.
 - 5. Adjustable Sanitary Flush cleans the fixture & maintains the trap seal.
 - 6. Chemical Resistant EPDM Seals for extended life.
 - 7. Includes Class 2 UL certified universal hard-wired AC transformer
 - 8. Cover plate.
 - 9. Provide all accessories for complete installation.
 - 10. Exposed Type: Chrome plated, escutcheon, integral screwdriver stop.
 - 11. 1.6 gpf or less.
 - 12. Manufacturers:
 - a. Sloan Valve Company; Royal 111 ESS: www.sloanvalve.com/#sle.
 - b. _____.
- C. Seats:
 - 1. Plastic: Solid, black finish, elongated shape, open front, slow-closing hinged seat cover, and brass bolts with covers.
- D. Water Closet Carriers:
 - 1. ASME A112.6.1M; adjustable cast iron frame, integral drain hub and vent, adjustable spud, lugs for floor and wall attachment, threaded fixture studs with nuts and washers.

2.4 WALL HUNG URINALS

- A. Wall Hung Urinal Manufacturers:
 - 1. American Standard, Inc; Washbrook: www.americanstandard-us.com/#sle.
- B. Urinals: Vitreous china, ASME A112.19.2, wall hung with side shields and concealed carrier.
 - 1. Flush Volume: 1.0 gallons, maximum.
 - 2. Flush Style: Washout.
 - 3. Flush Valve: Exposed (top spud).
 - 4. Flush Operation: Manual, oscillating handle.
 - 5. Trap: Integral.
 - 6. Removable stainless steel strainer.
 - 7. Supply Size: 3/4 inch.
 - 8. Outlet Size: 2 inches.
- C. Flush Valves: ASME A112.18.1, diaphragm type, complete with vacuum breaker stops and accessories.
 - 1. Exposed Type: Chrome plated, escutcheon, integral screwdriver stop.
 - 2. Manufacturers:
 - a. Sloan Valve Company; 180 ESS: www.sloanvalve.com/#sle.
 - 3. Sensor-Operated:
 - a. Type: ASME A112.19.5; chloramine-resistant, clog-resistant dual-seat diaphragm valve with vacuum breaker, stops and accessories.
 - b. Mechanism: Solenoid-operated piston or electronic motor-actuated operator with low-voltage powered infrared sensor, and mechanical override or override push button.
 - c. Supplied Volume Capacity: 1.1 gal per flush.
- D. Carriers:
 - 1. ASME A112.6.1M; cast iron and steel frame with tubular legs, lugs for floor and wall attachment, threaded fixture studs for fixture hanger, bearing studs.

2.5 LAVATORIES

- A. Lavatory Manufacturers:
 - 1. American Standard, Inc; Lucerne: www.americanstandard-us.com.
 - 2. Substitutions: See Section 01 6000 - Product Requirements.
- B. Wall-Hung Basin:
 - 1. Vitreous China: ASME A112.19.2; white rectangular basin with splash lip, front overflow. Size 18.5 by 17 inch with 4 inch centerset spacing.
 - 2. Vitreous China, Grade A: ASME A112.19.2; white, rectangular commercial-grade sink with predrilled holes, rear-center drain, front overflow, and hanger. Size 20 by 18 inches with 4-inch centerset spacing.
 - 3. Carrier:
 - a. ASME A112.6.1M; cast iron and steel frame with tubular legs, lugs for floor and wall attachment, threaded studs for fixture hanger, bearing plate and studs.
- C. Accessories:
 - 1. Offset waste with perforated open strainer.
 - 2. Rigid supplies and shut-off valves.

2.6 LAVATORY FAUCET

- A. Sensor Operated Faucet: Cast brass, chrome plated, deck mounted with sensor located on neck of spout.
 - 1. Spout Style: Standard.
 - 2. Power Supply:
 - a. Wired: 24 VDC, field-wired into dedicated or common power supply.
 - 3. Mixing Valve: External lever operated.

4. Water Supply: 3/8 inch compression connections.
5. Aerator: Vandal resistant, 0.5 gpm, laminar flow device.
6. Finish: Polished chrome.
7. Manufacturers:
 - a. Sloan Valve Company; ETF-600: www.sloanvalve.com/#sle.

2.7 BOTTLE FILLING DRINKING FOUNTAINS

- A. Manufacturers:
 1. Elkay Manufacturing Company; Model LK4405BF: www.elkay.com/#sle.
- B. Fountain: Vandal resistant single arm bottle filling station; non-refrigerated.

PART 3 EXECUTION

3.1 EXAMINATION

- A. Verify that walls and floor finishes are prepared and ready for installation of fixtures.
- B. Verify that electric power is available and of the correct characteristics.
- C. Examine roughing-in of water supply and sanitary drainage and vent piping systems to verify actual locations of piping connections before plumbing fixture installation.

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. Assemble plumbing fixtures, trim, fittings, and other components according to manufacturers' written instructions.
- B. Install each fixture with trap, easily removable for servicing and cleaning.
- C. Provide chrome plated rigid or flexible supplies to fixtures with loose key stops, reducers, and escutcheons.
- D. Install components level and plumb.
- E. Install and secure fixtures in place with wall carriers and bolts.
- F. Seal fixtures to wall and floor surfaces with sealant as specified in Section , color to match fixture.
- G. Install water-supply piping with stop on each supply to each fixture to be connected to water distribution piping. Attach supplies to supports or substrate within pipe spaces behind fixtures. Install stops in locations where they can be easily reached for operation.
 1. Exception: Use ball, gate, or globe valves if supply stops are not specified with fixture. Valves are specified in Division 22 Section "General-Duty Valves for Plumbing Piping."
- H. Install trap and tubular waste piping on drain outlet of each fixture to be directly connected to sanitary drainage system.
- I. Install tubular waste piping on drain outlet of each fixture to be indirectly connected to drainage system.
- J. Install faucet-spout fittings with specified flow rates and patterns in faucet spouts if faucets are not available with required rates and patterns. Include adapters if required

3.4 ADJUSTING

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

3.5 CLEANING

- A. Clean plumbing fixtures and equipment.

3.6 PROTECTION

- A. Protect installed products from damage due to subsequent construction operations.

- B. Repair or replace damaged products before Date of Substantial Completion.

END OF SECTION