SECTION 22 40 00

PLUMBING FIXTURES

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Water closets.

B. Urinals.

C. Lavatories.

D. Sinks.

E. Service sinks.

F. Drinking fountains.

1.02 RELATED REQUIREMENTS

A. Section 07 90 05 - Joint Sealers: Seal fixtures to walls and floors.

B. Section 22 10 05 - Plumbing Piping.

C. Section 22 10 06 - Plumbing Piping Specialties.

D. Section 22 30 00 - Plumbing Equipment.

E. Section 26 27 17 - Equipment Wiring: Electrical characteristics and wiring connections.

1.03 REFERENCE STANDARDS

A. ANSI Z124.1 - American National Standard for Plastic Bathtub Units.

B. ANSI Z124.2 - American National Standard for Plastic Shower Units.

C. ANSI Z124.1.2 - American National Standard for Plastic Bathtub and Shower Units.

D. ANSI Z358.1 - American National Standard for Emergency Eyewash and Shower Equipment.

E. ARI 1010 - Self-Contained, Mechanically-Refrigerated Drinking-Water Coolers; Air-Conditioning and Refrigeration Institute.

F. ASME A112.6.1M - Supports for Off-the-Floor Plumbing Fixtures for Public Use; The American Society of Mechanical Engineers.

G. ASME A112.18.1 - Plumbing Supply Fittings; The American Society of Mechanical Engineers.

H. ASME A112.19.1M - Enameled Cast Iron Plumbing Fixtures; The American Society of Mechanical Engineers.

I. ASME A112.19.2 - Vitreous China Plumbing Fixtures and Hydraulic Requirements for Water Closets and Urinals; The American Society of Mechanical Engineers.

J. ASME A112.19.3 - Stainless Steel Plumbing Fixtures (Designed for Residential Use); The American Society of Mechanical Engineers.

K. ASME A112.19.4M - Porcelain Enameled Formed Steel Plumbing Fixtures; The American Society of Mechanical Engineers.

L. ASME A112.19.5 - Trim for Water-Closet Bowls, Tanks and Urinals; The American Society of Mechanical Engineers.

M. ASME A112.19.14 - Six Liter Water Closets Equipped with Dual Flushing Device.

1.04 SUBMITTALS

A. Product Data: Provide catalog illustrations of fixtures, sizes, rough-in dimensions, utility sizes, trim, and finishes.

B. Samples: Submit two sets of color chips for each standard color.

C. Manufacturer's Instructions: Indicate installation methods and procedures.

D. Maintenance Data: Include fixture trim exploded view and replacement parts lists.

E. Waterless Urinals: Submit recommended frequency of maintenance and parts replacement, methods of cleaning, sources of replacement supplies and parts.

F. Warranty: Submit manufacturer warranty and ensure forms have been completed in Red Clay Consolidated School District's name and registered with manufacturer.

1.05 QUALITY ASSURANCE

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

1.06 REGULATORY REQUIREMENTS

A. Products Requiring Electrical Connection: Listed and classified by Underwriters Laboratories Inc., or testing firm acceptable to the authority having jurisdiction as suitable for the purpose specified and indicated.

1.07 MOCK-UP

A. Provide mock-up of typical bathroom group.

B. Mock-up may remain as part of the Work.

1.08 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.

1.09 WARRANTY

A. Provide five year manufacturer warranty for electric water cooler.

1.10 EXTRA MATERIALS

A. Supply two sets of faucet washers, flush valve service kits, and lavatory supply fittings.

PART 2 PRODUCTS

2.01 FLUSH VALVE WATER CLOSETS

A. Water Closets: Vitreous china, ASME A112.19.2, floor mounted, siphon jet flush action, china bolt caps.
   1. Flush Volume: 1.28 gallon, maximum.

2. Flush Valve: Exposed (top spud).
3. Flush Operation: Sensor operated, push-button override.
4. Handle Height: 44 inches or less.
5. Manufacturers:
   a. American Standard Inc: www.americanstandard.com.
   b. Kohler.
   c. Toto USA: www.totousa.com.
   d. Zurn Industries, Inc: www.zurn.com.
   e. Substitutions: See Section 01 60 00 - Product Requirements.

B. Flush Valves: ASME A112.18.1, diaphragm type, complete with vacuum breaker stops and accessories.
1. Sensor-Operated Type: Solenoid operator, battery powered with self-generating hydro-electric turbine, infrared sensor and over-ride push button.
2. ASME A112.19.2; floor mounted, siphon jet or wall hung blow out vitreous china closet bowl, with elongated rim, 1-1/2 inch top spud, china bolt caps.
3. Manufacturers:
   a. Toto USA: www.totousa.com
   b. Sloan Valve Company: www.sloanvalve.com.
   c. Zurn Industries, Inc: www.zurn.com.
   d. Substitutions: See Section 01 60 00 - Product Requirements.

C. Seats:
1. Manufacturers:
   a. Kohler
   b. Bemis Manufacturing Company: www.bemismfg.com.
   c. Church Seat Company: www.churchseats.com.
   d. Olsonite: www.olsonite.com.
   e. Substitutions: See Section 01 60 00 - Product Requirements.
2. Solid plastic, open front, extended back, brass bolts, with cover.

D. Water Closet Carriers:
1. Manufacturers:
   a. JR Smith.
   b. Sloan Valve Company: www.sloanvalve.com.
   c. Zurn Industries, Inc: www.zurn.com.
   d. Substitutions: See Section 01 60 00 - Product Requirements.
2. 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.

2.02 WALL HUNG URINALS

A. Wall Hung Urinal Manufacturers:
1. Kohler Company: www.kohler.com.
2. Zurn Industries, Inc: www.zurn.com.

B. Urinals: Vitreous china, ASME A112.19.2, wall hung with side shields and concealed carrier.
1. Flush Volume: 1/8 gallon (0.5 liter).
2. Flush Style: Washout.
3. Trap: Integral.

C. Flush Valves: ASME A112.18.1, diaphragm type, complete with vacuum breaker stops and accessories.
1. Sensor-Operated Type: Solenoid operator, battery powered with self-generating hydro-electric turbine, infrared sensor and over-ride push button.

D. Carriers:
   1. Manufacturers:
      a. JR Smith
      b. Sloan Valve Company: www.sloanvalve.com.
      c. Zurn Industries, Inc: www.zurn.com.
   2. 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.

2.03 LAVATORIES

A. Lavatory Manufacturers:
   1. American Standard Inc
   2. Eljer
   3. Kohler Company: www.kohler.com.
   4. Zurn Industries, Inc: www.zurn.com.
   5. Substitutions: See Section 01 60 00 - Product Requirements.

B. Sensor Operated Faucet: Cast brass, chrome plated, deck mounted with sensor located on neck of spout.
   1. Spout Style: Standard,
   2. Power Supply: Self-generating, hydro-powered turbine charging rechargeable battery.
   3. Mixing Valve: automatic.
   4. Water Supply: 1/2 inch compression connections.
   5. Aerator: Vandal resistant, 1 GPM,.
   6. Automatic Shut-off: 30 seconds.
   7. Sensor range: Automatically adjusts.
      a. Accessory: Optional remote reprogrammer module to adjust pre-set factory functions.
   8. Finish: Polished chrome.
   9. Accessory: 4 inch or 8 inch deck plate.
   10. Sensor Operated Faucet Manufacturers:
      a. American Standard Inc: www.americanstandard.com.
      b. Sloan Valve Company: www.sloanvalve.com.
      c. Toto USA: www.totousa.com.
      d. Zurn industries, Inc: www.zurn.com.

C. Accessories:
   1. Chrome plated 17 gage brass P-trap with clean-out plug and arm with escutcheon.
   2. Offset waste with perforated open strainer.
   3. Screwdriver stops.
   4. Rigid supplies.
   5. Carrier:
      a. Manufacturers:
         1) JR Smith
         2) Sloan Valve Company: www.sloanvalve.com.
         3) Zurn Industries, Inc: www.zurn.com.
      b. ASME A112.6.1M; cast iron and steel frame with tubular legs, lugs for floor and wall attachment, threaded studs for fixture hanger, or concealed arm supports bearing plate and studs.

2.04 WATER FOUNTAINS

A. Electric Water Cooler Manufacturers:
   1. Tri Palm International/Oasis: www.tripalmint.com.
   2. Elkay Manufacturing Company: www.elkay.com.

3. Haws Corporation: www.hawsco.com.

B. Fountain:
1. A surface handicapped-height, fully ADA compliant mounted water fountain with stainless steel top, stainless steel; stainless steel body, elevated anti-squirt bubbler with stream guard, automatic stream regulator, push button, bottle filling station, and mounting bracket.

2.05 SERVICE SINKS

A. Service Sink Manufacturers:
1. Kohler
2. Elkay Manufacturing Company: www.elkay.com.

B. Bowl:
1. WHite floor mounted, with one inch wide shoulders. Vinyl bumper guard stainless steel strainer.

C. Trim:
1. ASME A112.18.1 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.

D. Accessories:
1. 5 feet of 1/2 inch diameter plain end reinforced plastic or rubber hose.
2. Hose clamp hanger.
3. Mop hanger.

PART 3 EXECUTION

3.01 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. Confirm that millwork is constructed with adequate provision for the installation of counter top lavatories and sinks.

3.02 PREPARATION

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

3.03 INSTALLATION

A. Install each fixture with trap, easily removable for servicing and cleaning.

B. Provide chrome plated rigid or flexible supplies to fixtures with screwdriver stops, reducers, and escutcheons.

C. Install components level and plumb.

D. Install and secure fixtures in place with wall supports or wall carriers and bolts.

E. Seal fixtures to wall and floor surfaces with sealant as specified in Section 07 90 05, color to match fixture.

F. Solidly attach water closets to floor with lag screws. Lead flashing is not intended hold fixture in place.

3.04 INTERFACE WITH WORK OF OTHER SECTIONS

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

3.05 ADJUSTING

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

3.06 CLEANING

A. Clean plumbing fixtures and equipment.

END OF SECTION