**SECTION 22 40 00**

**PLUMBING FIXTURES**

**PART 1 GENERAL**

1. RELATED DOCUMENTS
	1. The other Contract Documents complement the requirements of this section. The General Requirements apply to the work of this section.
2. SCOPE
	1. Provide fixtures, trim, accessories, labor, and supervision necessary for the plumbing fixture installation.
3. FIXTURE SCHEDULE
	1. Fixtures, trim and accessories shall be of type and model numbers as scheduled on the drawings.
4. SUBMITTALS
	1. Submit catalog cuts giving manufacturer's model numbers, fixtures and rough-in dimensions and construction material for each type of fixture, trim, and accessory scheduled.
	2. Submit to the construction manager cutout trim plates for sinks, installed in counter tops.

**PART 2 PRODUCTS**

1. MANUFACTURER
	1. All manufacturers shall be a United States based company doing business in the U.S. for at least 10-years.
2. VITREOUS AND CAST IRON FIXTURES
	1. Vitreous ware shall be non-absorbent, even color, unwrapped, two-fired vitreous china, grade "A" as rated by the Bureau of Standards.
	2. Enameled cast iron fixtures shall have the enamel fused with the iron to provide a hard acid-resisting enameled finish.
	3. Vitreous and enamel fixtures shall be white, except where other colors are called for in schedule.
	4. Vitreous China and Cast Iron Enameled Fixtures
		1. Vitreous china and cast iron enameled fixtures by American Standard, Elkay, Kohler, or Toto,
		2. Use low flow urinals.
		3. Use duel flush or low flow water closets in new and existing construction.
3. STAINLESS STEEL SINKS
	1. Provide stainless steel sinks fabricated from 18-gauge stainless steel, except laboratories where they shall be type 316, with satin finish, and sound deadening treatment.
	2. When a non-self-rimming sink is specified, furnish sinks with mounting hardware and rim.
	3. Stainless Steel Sinks
		1. Stainless steel sinks acceptable manufacturers are American Standard, Elkay, Kohler or approved equal.
4. TRIM
	1. Trim for conventional fixtures shall include supply pipes, stop valves, faucets, tailpieces, strainers, wastes, traps, floor and wall escutcheon plates, which shall be brass.
		1. Exposed trim shall be chrome plated.
	2. Stop valves shall be compression type with loose key or screwdriver control.
	3. P-traps shall be adjustable chrome plated.
	4. Faucets shall contain standardized interchangeable operating units for both hand closing and self-closing types, closing with the pressure of the water.
	5. Faucets for lavatories shall be 0.5-gpm maximum flow rate.
	6. Omit supply side trim for waterless urinals.
	7. Trim, brass trim by American Standard, Elkay, Kohler or approved equal.
5. DRINKING FOUNTAINS, WATER COOLERS AND BOTTLE FILLERS
	1. Acceptable manufacturers are Elkay, Oasis or approved equal.
	2. Non-filtered option shall be used unless know contaminants in the water supply at the point of use exceed the allowable maximum contaminant level defined by the EPA National Drinking Water Regulations (NPDWR).
6. FLOOR DRAINS
	1. Floor drains acceptable manufacturers are Josam, J. R. Smith, Wade, Sioux Chief, or Zurn.
7. CLINIC EYEWASH
	1. Bradley Model S19-435EFW
	2. Haws Model 8905
	3. Guardian G5046
	4. Approved equal
8. FLUSH VALVES
	1. Provide and install either duel flush models or low flow as indicated on plumbing plans.
	2. Acceptable manufacturers are Moen, Sloan, Zurn or approved equal.
9. HAND WASHING FAUCET
	1. Provide and install models as indicated on plumbing plans.
	2. Provide vandal resistant spray head with 0.5gpm flow rate.
	3. Acceptable manufacturers are Chicago Faucet, Moen, Sloan, Zurn or approved equal.

**PART 3 EXECUTION**

1. INSTALLATION
	1. Install fixtures, then make water supply, waste and vent connections.
	2. Set fixtures in center of stalls, between partitions where required, verify dimensions for spacing.
	3. Setting shall be absolutely tight and rigid on proper ground.
		1. Use tube caulk under all setting surfaces.
		2. Grout water closets.
		3. Seal final seam with anti-fungal or silicone caulk.
	4. Cover the fixtures with cardboard taped in place after they are set to prevent damage during the balance of construction.
		1. At the conclusion of the work, remove the cardboard and properly clean the fixtures
	5. This section shall be responsible for the protection of the fixtures until acceptance by Owner. Replace damaged fixtures at no additional cost to the Owner.
	6. Floor mount all mop sinks in custodial closets or areas.
	7. Install lavatory carriers on all lavatories in toilet rooms.
2. DEMONSTRATION AND TRAINING
	1. Training of the Owner’s operation and maintenance personnel is required in cooperation with the Owner's Representative.
		1. Provide competent, factory authorized personnel to provide instruction to operation and maintenance personnel concerning the location, operation, and troubleshooting of the installed systems.
		2. Schedule the instruction in coordination with the Owner's Representative after submission and approval of formal training plans.
		3. Refer to Section 01 91 00, Commissioning, for further contractor training requirements.
	2. Provide Demonstration and Training for the following equipment.
		1. Drinking Fountains and Water Coolers

END OF SECTION