

**SECTION 22 42 16.13  
COMMERCIAL LAVATORIES**

**PART 1 - GENERAL**

**1.1 STIPULATIONS**

- A. The specifications sections "General Conditions to the Construction Contract", "Special Conditions" and "Division 01 - General Requirements" form a part of this Section by this reference thereto, and shall have the same force and effect as if printed herewith in full.

**1.2 SUMMARY**

- A. Section Includes:
  - 1. Solid Surface, vandal and ligature resistant wall-mounted lavatories.
  - 2. Automatically operated lavatory faucets.
  - 3. Supply fittings.
  - 4. Waste fittings.
  - 5. Lavatory supports.

**1.3 ACTION SUBMITTALS**

- A. Product Data: For each type of product.
  - 1. Include construction details, material descriptions, dimensions of individual components and profiles, and finishes for lavatories.
  - 2. Include rated capacities, operating characteristics, electrical characteristics, and furnished specialties and accessories.
- B. Shop Drawings: Include diagrams for power, signal, and control wiring of automatic faucets.

**1.4 INFORMATIONAL SUBMITTALS**

- A. Coordination Drawings: Counter cutout templates for mounting of counter-mounted lavatories.

**1.5 CLOSEOUT SUBMITTALS**

- A. Operation and Maintenance Data: For lavatories and faucets to include in operation and maintenance manuals.
  - 1. In addition to items specified in Section 017823 "Operation and Maintenance Data," include the following:
    - a. Servicing and adjustments of automatic faucets.

## **1.6 MAINTENANCE MATERIAL SUBMITTALS**

- A. Furnish extra materials that match products installed and that are packaged with protective covering for storage and identified with labels describing contents.
  - 1. Faucet Washers and O-Rings: Equal to 5 percent of amount of each type and size installed.
  - 2. Faucet Cartridges and O-Rings: Equal to 5 percent of amount of each type and size installed.

## **PART 2 - PRODUCTS**

### **2.1 GENERAL LAVATORY PERFORMANCE REQUIREMENTS**

- A. Lavatory and Accessories: Furnish and Install Plumbing Fixtures and accessories that are in compliance with current standards, regulations and requirements including the following:
  - 1. Furnish and install lavatory fixtures, of types as scheduled and specified on the drawings. Furnish and install rough-in components of types that are required and herein specified.
    - a. Stops, strainers, traps and supplies may be as manufactured by Moen, Brasscraft, McGuire Manufacturing Company, or as otherwise approved equal.
    - b. Stops, strainers, traps and supplies shall not be PVC or plastic construction unless otherwise specified.
    - c. Chicago Faucet Company, T & S Brass and Bronze Works, Inc., Cambridge Brass and Zurn Industries may be submitted as acceptable fixture trim, pending the Project and Client Agency standards, requirements and review of approved as equals.
  - 2. The Contractor shall furnish and deliver lavatory, faucets and accessory repair parts, kits and installation maintenance guides and instructions to the Client Agency, upon completion of the installation as recommended by the manufacturer supplier. The repair kits shall contain basic repair parts for fixture, faucets and associated trim herein specified.
  - 3. All plumbing fixtures and equipment, as well as their installation, with piping, venting, and all phases of installation, must meet the minimum requirements as established by the all applicable Plumbing Codes, local Authorities having Jurisdiction and inspections.
  - 4. All plumbing fixtures, associated components and assemblies must be "lead-free", and meet and bear the NSF 61 / 372-certification label for potable water requirements.
  - 5. The Contractor shall be responsible for coordinating and notifying the General Contractor of exact locations and dimensions where plumbing fixtures and equipment will be installed, mounted, anchored or recessed. It will be necessary to coordinate and verify the exact locations of building structural members to provide adequate and necessary mounting, anchoring or clearances for recessed plumbing fixtures or equipment.
  - 6. The Contractor shall coordinate and verify the dimensions of the space, wall thickness, proposed finishes, materials, location of structural supports and substrate construction of the space available for the installation of chair carriers for the specified fixtures and equipment. It shall be the responsibility of the Contractor and the carrier equipment supplier to ensure the installation of the support carriers accommodate the various wall thicknesses, meets the appropriate fixture application, structural integrity and specified weight limitations.

7. Reference the Architectural Drawings for fixture mounting heights, designated ADA/ Handicap accessibility and locations. All additional and other related fixture equipment, trim, and accessories not indicated or shown as part of the Architectural Drawings shall be mounted or installed in accordance with roughing-in dimensions noted, specified as part of the plumbing drawings or obtained from the fixture manufacturer.
8. All exposed metal trim and components of all plumbing fixtures, Kitchen, Dishwashing, and miscellaneous equipment, shall be polished-chromium-plated, except where specifically indicated otherwise. All escutcheons, floor plates, and wall plates shall be polished chromium plated cast brass, set-screw type, including those escutcheons provided with equipment, such as flush valves supplies, etc.
9. Grab bars for handicapped use at fixture locations and Toilet Room accessories will be furnished and installed by the General Contractor.
10. Upon completion of the plumbing installation, the Contractor shall adjust all new fixture faucet flow controls throughout the building for a minimum flow and time.
11. Exposed hot and cold water supply piping and drain piping serving ADA accessible lavatories and sinks located immediately at the fixtures shall be insulated as specified. There shall be no sharp or abrasive surfaces under handicap accessible lavatories.
12. Contractor shall furnish and install all necessary adapters required to make complete final connections.
13. Contractor shall make all necessary repairs to, or replacement of existing wall tiles, or other tiled surfaces.
14. Chair carriers shall be furnished and installed for fixtures wherever possible. At locations where chair carriers cannot be installed for lavatories or urinals due to existing structural conditions, lavatories shall be firmly supported from wall construction on suitable wall hangers. Exposed wall hangers for lavatories shall be painted. Provide suitable structural reinforcement for all wall supports as required. Lavatories with wall hangers need not be punched for supports. In general, lavatories herein specified shall include manufacturer's numbers for mounting with concealed chair carriers. Numbers shall be revised accordingly for lavatories mounted with wall hangers, per manufacturer's standards.
15. New plumbing fixtures shall be securely attached and supported by the existing structure of the existing building construction where designated. Provide suitable structural reinforcement for all wall supports, carriers and anchors, as required for a substantial installation.
16. Where exposed vertical supplies above floor are indicated for fixtures, supply piping shall be polished chromium plated, with setscrew escutcheons and 3/8-inch supplies with loose key stops.
17. The combination height of each bowl and seat for handicapped closets, floor mounted or wall hung, must meet and not exceed ADA handicapped mounting height requirements. All other handicapped fixture and trim mounting heights must also conform to ADA mounting height and clearance space requirements. The force required to operate handicapped hand-activated controls must not exceed 5 pounds. Self-closing valves shall remain open for at least 10 seconds.
18. Apply two coats of white enamel paint to all exposed cast iron parts of fixtures.

**B. Chair Carriers**

1. Wall hung lavatories shall be punched for and supported on concealed arms chair carriers, similar to the Zurn No. Z-1231, Josam, J.R. Smith, Wade, or approved equal, - except as otherwise specified. Where wall hung lavatories are installed back-to-back on the same partitions, they may be furnished with double concealed arms chair carriers, similar to the Zurn No. Z-1231-D, or approved equal. Chair carriers for 20" x 18" lavatories arranged for handicapped use shall also be supported with Zurn No. Z-1231 or No. Z-1231-D carriers as required; however, carriers shall include extended height upright supports, of 42" length. All carriers as specified herein shall be specially designed for narrow partitions.

C. Caulking

1. Plumbing Contractor shall furnish and install caulking around all wall-mounted fixtures, floor mounted fixtures, service receptors, sinks, prefabricated shower stalls, fixture accessories and other similar fixtures.
2. Caulking shall be the Dow Corning No. 786 Mildew Resistant Silicone Sealant, or equal, white. Coordinate all work with the General Contractor.
3. At locations where new plumbing fixtures are installed to replace existing fixtures, modify the existing piping systems as required for the installation of the new fixtures.

D. Flow Rates

1. The Contractor shall utilize Omni Products, or approved equal, laminar flow control, - vandal resistant pressure compensating devices for lavatory and sink faucets, in lieu of the aerators normally included with the fixtures.
2. Maximum flow rates and flush volumes for new fixtures for the project shall be as follows:
  - a. Faucets and Aerators (Rest Rooms) 0.5 GPM
3. Comply with applicable standards below and other requirements specified.
  - a. National Sanitation Foundation Construction: NSF 2.
  - b. Vitreous-China Fixtures: ASME A112.19.2M.

## 2.2 SOLID SURFACE, WALL-MOUNTED LAVATORIES

A. Lavatory (L-#): Solid Surface, Vandal and Ligature Resistant single bowl wall mounted Lavatory: (L-#) Refer to the Plumbing Fixture Schedules on Drawings for additional information and specific fixture designations. The fixture schedule identifies the basis of design, product descriptions, make, models, details, components and accessories.

1. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to the following:
  - a. Acorn Engineering Company; a Division of Morris Group International.
  - b. Bradley Corporation.
  - c. Intersan Manufacturing Company.
  - d. Willoughby Industries.
  - e. Or equal as approved by the Professional.
2. Source Limitations: Obtain water fountains from single source from single manufacturer.
3. Single Bowl:
  - a. Height to Rim: ADA compliant.
  - b. Color or Finish: As selected by Architect.
  - c. Number of Bowls or User Stations: One.
  - d. Bowl Shape: Rectangular.
  - e. Drain: Grid with NPS 1-1/2 tailpiece, concealed.
4. Apron: Required, with access panel.
5. Faucets:
  - a. Type: Manufacturer's standard, chrome-plated solid brass.

- b. Control: Hardwired, control-voltage, sensor-actuated actuation with thermostatic mixing valve, and having check stops for each bowl or user station.
- 6. Soap Dispensers: Hardwired, control-voltage, sensor-actuated, liquid dispenser for each user station.
- 7. Mounting: commercial floor-mounted carrier.
- 8. Supply Fittings: (Concealed)
  - a. Piping: NPS 1/2 copper tubing.
  - b. Valves: Shutoff valve on each supply.
  - c. Supply Piping: From wall.
- 9. Waste Fittings:
  - a. Trap and Drain Piping: NPS 1-1/2.

## **2.3 SOLID-BRASS, AUTOMATICALLY OPERATED LAVATORY FAUCETS**

- A. NSF Standard: Comply with NSF/ANSI 61 Annex G, "Drinking Water System Components - Health Effects," for faucet materials that will be in contact with potable water.
- B. Lavatory Faucets (L-#): Institutional, Vandal and Ligature Resistant, Automatic-type, hard-wired, electronic-sensor-operated, solid-brass valve.
  - 1. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to the following:
    - a. Acorn
    - b. Bradley.
    - c. Sloan Valve Company.
    - d. Willoughby.
    - e. Zurn Industries, LLC.
    - f. Or equal as approved by the Professional.
  - 2. Standards: ASME A112.18.1/CSA B125.1 and UL 1951.
  - 3. Electrical Components, Devices, and Accessories: Listed and labeled as defined in NFPA 70, by a qualified testing agency, and marked for intended location and application.
  - 4. General: Include hot- and cold-water indicators; coordinate faucet inlets with supplies and fixture hole punchings; coordinate outlet with spout and fixture receptor.
  - 5. Body Type: Single hole or 4"centers.
  - 6. Body Material: Commercial, solid brass.
  - 7. Finish: Polished chrome plate.
  - 8. Maximum Flow Rate: 0.5 gpm.
  - 9. Mounting Type: Deck, concealed.
  - 10. Spout: Rigid, ligature resistant type.
  - 11. Spout Outlet: Aerator and Spray.

## **2.4 LAMINAR-FLOW, FAUCET-SPOUT OUTLETS**

- A. NSF Standard: Comply with NSF/ANSI 61 Annex G, "Drinking Water System Components - Health Effects," for faucet-spout-outlet materials that will be in contact with potable water.

- B. Manufacturers: Subject to compliance with requirements, provide products by the following available manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:
  - 1. AM Conservation Group, Inc.
  - 2. Chronomite Laboratories, Inc; a division of Morris Group International.
  - 3. NEOPERL, Inc.
  - 4. Or equal as approved by the Professional.
- C. Description: Chrome-plated-brass, faucet-spout outlet that produces non-aerating, laminar stream. Include external or internal thread that mates with faucet outlet for attachment to faucets where indicated and flow-rate range that includes flow of faucet.

## **2.5 SUPPLY FITTINGS**

- A. NSF Standard: Comply with NSF/ANSI 61 Annex G, "Drinking Water System Components - Health Effects," for supply-fitting materials that will be in contact with potable water.
- B. Standard: ASME A112.18.1/CSA B125.1.
- C. Supply Piping: Chrome-plated-brass pipe or chrome-plated copper tube matching water-supply piping size. Include chrome-plated-brass or stainless-steel wall flange.
- D. Supply Stops: Chrome-plated-brass, one-quarter-turn, ball-type or compression valve with inlet connection matching supply piping.
- E. Operation: Loose key.
- F. Risers:
  - 1. NPS 1/2.
  - 2. Chrome-plated, soft-copper flexible tube riser.

## **2.6 WASTE FITTINGS**

- A. Standard: ASME A112.18.2/CSA B125.2.
- B. Drain: Grid type with NPS 1-1/4 offset and straight tailpiece.
- C. Trap:
  - 1. Size: NPS 1-1/2 by NPS 1-1/4.
  - 2. Material: Chrome-plated, two-piece, cast-brass trap and swivel elbow with 0.032-inch-thick brass tube to wall two-piece or cast-brass trap and ground-joint swivel elbow with 0.032-inch-thick brass tube to wall; and chrome-plated, brass or steel wall flange.
  - 3. Material: Stainless-steel, two-piece trap and swivel elbow with 0.012-inch-thick stainless-steel tube to wall; and stainless-steel wall flange.

## **PART 3 - EXECUTION**

### **3.1 EXAMINATION**

- A. Examine roughing-in of water supply and sanitary drainage and vent piping systems to verify actual locations of piping connections before lavatory installation.
- B. Examine counters and walls for suitable conditions where lavatories will be installed.
- C. Proceed with installation only after unsatisfactory conditions have been corrected.

### **3.2 INSTALLATION**

- A. Install lavatories level and plumb according to roughing-in drawings.
- B. Install supports, affixed to building substrate, for wall-mounted lavatories.
- C. Install accessible wall-mounted lavatories at handicapped/elderly mounting height for people with disabilities or the elderly, according to ICC/ANSI A117.1.
- D. Install wall flanges or escutcheons at piping wall penetrations in exposed, finished locations. Use deep-pattern escutcheons if required to conceal protruding fittings. Comply with escutcheon requirements specified in Section 220518 "Escutcheons for Plumbing Piping."
- E. Seal joints between lavatories, counters, and walls using sanitary-type, one-part, mildew-resistant silicone sealant. Match sealant color to fixture color. Comply with sealant requirements specified in Section 079200 "Joint Sealants."
- F. Install protective shielding pipe covers and enclosures on exposed supplies and waste piping of accessible lavatories. Comply with requirements in Section 220719 "Plumbing Piping Insulation."

### **3.3 CONNECTIONS**

- A. Connect fixtures with water supplies, stops, and risers, and with traps, soil, waste, and vent piping. Use size fittings required to match fixtures.
- B. Comply with water piping requirements specified in Section 221116 "Domestic Water Piping."
- C. Comply with soil and waste piping requirements specified in Section 221316 "Sanitary Waste and Vent Piping."

### **3.4 ADJUSTING**

- A. Operate and adjust lavatories and controls. Replace damaged and malfunctioning lavatories, fittings, and controls.
- B. Adjust water pressure at faucets to produce proper flow.

- C. Install hardwire electric-powered, electronic-sensor mechanisms and required components.

### **3.5 CLEANING AND PROTECTION**

- A. After completing installation of lavatories, inspect and repair damaged finishes.
- B. Clean lavatories, faucets, and other fittings with manufacturers' recommended cleaning methods and materials.
- C. Provide protective covering for installed lavatories and fittings.
- D. Do not allow use of lavatories for temporary facilities unless approved in writing by Client Agency.

**END OF SECTION**