

Part 1 General

1.1 SECTION INCLUDES

- .1 Water closets.
- .2 Urinals.
- .3 Lavatories.
- .4 Service sinks.
- .5 Flush mounted wall box
- .6 Drinking Fountains

1.2 RELATED SECTIONS

- .1 Division 01.
- .2 Section 23 05 29 - Supports And Anchors.
- .3 Section 22 10 00 - Plumbing Piping.
- .4 Section 22 42 01 - Plumbing Specialties.
- .5 Section 22 47 00 - Plumbing Equipment.
- .6 Equipment Wiring: Electrical characteristics and wiring connections.

1.3 REFERENCES

- .1 CSA B651 – Barrier-free Design.
- .2 ANSI Z124.1 - Gel-Coated Glass-Fibre Reinforced Polyester Resin Bathtub Units.
- .3 ANSI Z124.2 - Gel-Coated Glass-Fibre Reinforced Polyester Resin Shower Receptor and Shower Stall Units.
- .4 ANSI Z358.1 - Emergency Eye Wash and Shower Equipment.
- .5 ARI 1010 - Self-Contained Mechanically Refrigerated Drinking Water Coolers.
- .6 ASME A112.6.1 - (Floor Affixed) Supports for Off-the-Floor Plumbing Fixtures for Public Use.
- .7 ASME A112.18.1 / CSA-B125.1-05- Plumbing Fixture Fittings.
- .8 ASME A112.19.1 / CSA B45.2-08 - Enamelled Cast Iron Plumbing Fixtures.

- .9 ASME A112.19.2 / CSA B45.1-08 - Vitreous China Plumbing Fixtures.
- .10 ASME A112.19.3 / CSA B45.4-08- Stainless Steel Plumbing Fixtures (Designed for Residential Use).
- .11 ASME A112.19.4 - Porcelain Enamelled Formed Steel Plumbing Fixtures.
- .12 ASME A112.19.5 - Trim for Water-Closet Bowls, Tanks, and Urinals.
- .13 NFPA 70 - National Electrical Code.
- .14 NBCC 2010 - National Building Code of Canada
- .15 NPCC 2010 – National Plumbing Code of Canada
- .16 NFCC 2010 – National Fire Code of Canada

1.4 SUBMITTALS FOR REVIEW

- .1 Division 01: Submission procedures.
- .2 Product Data: Provide catalogue illustrations of fixtures, sizes, rough-in dimensions, utility sizes, trim, and finishes.

1.5 CLOSEOUT SUBMITTALS

- .1 Division 01: Submission procedures.
- .2 Maintenance Data: Include fixture trim exploded view and replacement parts lists.
- .3 Warranty Documentation: Submit manufacturer warranty and ensure forms have been completed in City of Winnipeg's name and registered with manufacturer.

1.6 QUALITY ASSURANCE

- .1 Manufacturer Qualifications: Company specializing in manufacturing the Products specified in this section with minimum three (3) years documented experience.

1.7 REGULATORY REQUIREMENTS

- .1 Products Requiring Electrical Connection: Listed and classified by CSA as suitable for the purpose specified and indicated.

1.8 DELIVERY, STORAGE, AND PROTECTION

- .1 Division 01 Transport, handle, store, and protect products.
- .2 Accept fixtures on site in factory packaging. Inspect for damage.
- .3 Protect installed fixtures from damage by securing areas and by leaving factory packaging in place to protect fixtures and prevent use.

Part 2 Products

2.1 FLUSH VALVE WATER CLOSETS – WALL-MOUNTED

- .1 WC-1:
 - .1 Manufacturer: Kohler Model K-4325.
 - .2 Other acceptable manufacturers offering equivalent products.
 - .1 American Standard.
 - .2 Crane.
 - .3 Substitutions: Refer to Division 01.
 - .3 ASME A112.19.2 / CSA B45.1:
 - .1 Wall-mounted, vitreous china closet bowl, with elongated rim,
 - .2 Siphon-jet
 - .3 (1-1/2 inch) 38 mm top spud,
- .2 Exposed Sensor Operated Flush Valve:
 - .1 Manufacturer: Delta Model 81T221HW.
 - .1 Substitutions: Refer to Division 01.
 - .2 ASME A112.19.2 / CSA B45.1:
 - .1 Exposed chrome plated,
 - .2 Electronic hard wired diaphragm flush valve with infrared sensor,
 - .3 Integral screwdriver stop and vacuum breaker,
 - .4 Metal “non hold down” ADA compliant over-ride button,
 - .5 Pressure loss check angle stop with cap,
 - .6 Valve outlet tube 292 mm (11-1/2 inches) height
 - .7 Factory-set to 4.8L (1.28 gal) flush volume.
- .3 Seat:
 - .1 Manufacturer: Kohler K-4731-SC.
 - .2 Other acceptable manufacturers offering equivalent products.
 - .1 Olsonite 10 CC/SS.
 - .2 Substitutions: Refer to Division 01.
 - .3 Solid white plastic, open front less cover, extended back,
 - .4 Self-sustaining hinge, brass bolts.
 - .5 Self-sustaining hinge, brass bolts,
 - .6 Sized for elongated bowl.
 - .7 Provide lid for barrier free fixtures. (x3)
- .1 Wall Mounted Carrier (for fixtures on concrete block wall):
 - .1 Manufacturer: Mifab MC-10-EXT.
 - .2 Other acceptable manufacturers offering equivalent products.

- .1 Zurn.
- .2 Substitutions: Refer to Division 01.
- .3 ASME A112.6.1:
 - .1 Adjustable coated cast iron frame,
 - .2 Integral 4" drain hub and 2" vent,
 - .3 Adjustable spud,
 - .4 Lugs for floor and wall attachment,
 - .5 Complete with rolling thread cast iron nipple of appropriate length to accommodate wall thickness, refer to plan.
 - .6 Threaded fixture studs with nuts and washers.
- .2 Wall Mounted Carrier (for fixtures on stud wall):
 - .1 Manufacturer: Mifab MC-10-EXT-FM.
 - .2 Other acceptable manufacturers offering equivalent products.
 - .1 Zurn.
 - .2 Substitutions: Refer to Division 01.
 - .3 ASME A112.6.1:
 - .1 Adjustable coated cast iron frame,
 - .2 Integral 4" drain hub and 2" vent,
 - .3 Adjustable spud,
 - .4 Lugs for floor and wall attachment,
 - .5 Threaded fixture studs with nuts and washers.
 - .6 Complete with rolling thread cast iron nipple of appropriate length to accommodate wall thickness, refer to plan.
 - .7 Floor mount.

2.2 WALL HUNG URINALS

- .1 UR-1:
 - .1 Manufacturer: Kohler Model K-4960-ET.
 - .2 Other acceptable manufacturers offering equivalent products.
 - .1 American Standard.
 - .2 Crane.
 - .3 Substitutions: Refer to Division 01.
 - .3 ASME A112.19.2 / CSA B45.1:
 - .1 Vitreous china,
 - .2 Wall hung washout urinal with shields,
 - .3 Integral trap,
 - .4 19 mm (3/4 inch) top spud,
 - .5 Steel supporting hanger.
 - .4 ADA / CSA B651:
 - .1 Barrier-free compliant when installed at proper height. Refer to drawings.
- .2 Exposed Sensor Operated Flush Valve:

- .1 Manufacturer: Delta Model 81T231BTA.
- .2 Other acceptable manufacturers offering equivalent products.
 - .1 Powers.
 - .2 Substitutions: Refer to Division 01.
- .3 ASME A112.18.1:
 - .1 Exposed chrome plated, battery-operated diaphragm type with infrared sensor for 19mm (3/4 inch) top-inlet urinal fixture,
 - .2 Four AA batteries, factory-installed, low battery indicator,
 - .3 Vandal-resistant cover screw,
 - .4 Metal “non hold open” handle,
 - .5 Integral screwdriver stop,
 - .6 Vacuum breaker,
 - .7 Cover tube and SS wall flange, spud flange and sput nut.
- .3 Wall Mounted Carrier:
 - .1 Manufacturer: Mifab Model MC-31
 - .2 Other acceptable manufacturers offering equivalent products.
 - .1 Zurn.
 - .2 Substitutions: Refer to Division 01.
 - .3 ASME A112.6.1:
 - .1 Cast iron and steel frame with tubular legs,
 - .2 Lugs for floor and wall attachment,
 - .3 Threaded fixture studs for fixture hanger to bearing studs.

2.3 LAVATORIES

- .1 Vitreous China Wall Hung Basin (LAV-1):
 - .1 Manufacturer: Kohler Model K-1728.
 - .2 Other acceptable manufacturers offering equivalent products.
 - .1 American Standard.
 - .2 Crane.
 - .3 Substitutions: Refer to Division 01.
 - .3 ASME A112.19.2 / CSA B45.1:
 - .1 Vitreous china wall hung lavatory,
 - .2 48.9 x 43.8 mm (19-1/4 x 17-1/4 inch),
 - .3 Ledge back,
 - .4 Drillings on 100 mm (4 inch) centres,
 - .5 Rectangular basin and splash lip,
 - .6 Integral front overflow.
 - .7 Angle valve screwdriver stop,
 - .8 Chrome-plated copper supplies.
 - .4 ADA / CSA B651:

- .1 Barrier-free compliant.

- .2 Basin to be supplied as part of counter, by others (LAV-2):
 - .1 Lavatory Metered Faucet:
 - .1 Manufacturer: Delta Model 591T0250
 - .2 Other acceptable manufacturers offering equivalent products.
 - .1 Substitutions: Refer to Division 01.
 - .3 ASME A112.18.1:
 - .1 Hands free (touchless) on/off faucet,
 - .2 H2Optics™ technology, no external adjustments required,
 - .3 all metal faucet construction,
 - .4 5 1/4" long rigid spout, no lift rod hole,
 - .5 vandal resistant 0.5 gpm (1.9 L/min) spray outlet,
 - .6 Hard Wire (24VAC) infrared electronic handwash(Product supplied with a Converter to convert 24VAC to 6 VDC) 4" (102mm) centers - 2-1/2" x 7" (64 mm x 178 mm) forged coverplate with locking mechanism (anti-rotation), 3 hole installation,
 - .7 supplied with open grid strainer, chrome finish
 - .8 Solenoid and Controller in Plastic Surface Mount Housing-NO MIXING VALVE SUPPLIED

- .2 Accessories:
 - .1 Chrome plated 1.3 mm (17 gauge) brass P-trap with clean-out plug and arm with escutcheon.
 - .2 Offset waste with perforated open strainer.
 - .3 Straight valve screwdriver stop,
 - .4 Chrome-plated copper supplies.

2.4 SERVICE SINKS

- .1 Mop Sink:
 - .1 Manufacturer: Fiat MSB 24" x 24" x 10" (610 x 610 x 254 mm)
 - .2 Other acceptable manufacturers offering equivalent products.
 - .1 Not permitted.
 - .3 Configuration:
 - .1 Size: 600 x 600 x 250 mm (24 x 24 x 10 inch) high,
 - .2 Floor mounted molded stone mop service basin, with 832 hose and holder, 889 cc. mop hanger, and E-77-AA vinyl bumper guard.
 - .3 Stainless steel strainer.

- .2 Trim:
 - .1 Manufacturer: Delta Model 28T2383.

- .1 Not permitted.
- .2 ASME A112.18.1
 - .1 Polished chrome wallmount service faucet with rigid spout, 8" centres, cast brass construction, chrome-plated.
 - .2 Two handle with integral check stops, polished chrome plated finish, lever-blade handles.
 - .3 Long rigid spout with pail hook and adjustable top wall brace, pail hook and 3/4" hose thread on spout.
 - .4 Body mounted angle vacuum breaker, garden hose end outlet on spout.
 - .5 Vacuum breaker, integral stops.
- .3 Accessories:
 - .1 1.5 m (5 feet) of 13 mm (1/2 inch) diameter plain end reinforced rubber hose,
 - .2 Hose clamp hanger,
 - .3 Mop hanger.

2.5 FLUSH MOUNTED WALL BOX

- .1 VB-1:
 - .1 Manufacturer: MIFAB Series MHY-95
 - .2 Other acceptable manufacturers offering equivalent products.
 - .1 Substitutions: Refer to Division 01.
 - .3 Flush cast mounted brass wall box with hydrant.
 - .4 Complete with Cylinder key lock.
 - .5 Custom cut hole to suite 38mm domestic water line. Coordinate material with Owner.

2.6 DRINKING FOUNTAINS

- .1 Drinking Fountain:
 - .1 Manufacturer: Elkay Model EZ8.
 - .1 Substitutions: Refer to Division 01.
 - .2 Unit shall provide 8.0 gph of 50°F water at 90°F ambient and 80°F inlet water.
 - .3 Shall include antimicrobial protected plastic components to prevent mold and mildew.
 - .4 Cooler unit shall have pushbar activation and water-efficient Stream-Saver™ bubbler.
 - .5 Shall include the WaterSentry® Plus filter, certified to NSF/ANSI 42 and 53 for lead reduction, with visual monitor to indicate when replacement is necessary.
 - .6 Cooler shall meet ADA guidelines for frontal or parallel approach.
 - .7 1-1/4" P-trap, SS braided supply with stops.
 - .8 Electrical: Maximum 370W compressor.

Part 3 Execution

3.1 EXAMINATION

- .1 Division 01: Verify existing conditions before starting work.
- .2 Verify that walls and floor finishes are prepared and ready for installation of fixtures.
- .3 Verify that electric power is available and of the correct characteristics.
- .4 Confirm that millwork is constructed with adequate provision for the installation of counter top lavatories and sinks.

3.2 PREPARATION

- .1 Rough-in fixture piping connections to minimum sizes indicated in fixture rough-in schedule for particular fixtures.

3.3 INSTALLATION

- .1 Install to manufacturer's instructions.
- .2 Install each fixture with trap, easily removable for servicing and cleaning.
- .3 Provide chrome plated rigid supplies to fixtures with screwdriver stops, reducers, and escutcheons. Install all exposed piping and valves neatly and close to the wall. Supplies should be run as plumb as possible.
- .4 Install components level and plumb.
- .5 All mixing valves serving multiple fixtures shall be installed in recessed cabinets.
- .6 Install lavatory mixing valves neatly and out of site under millwork unless specified as installed in recessed cabinet. Secure with proper fasteners – galvanized strapping is not acceptable. Where provided on the drawings, refer to mixing valve installation details.
- .7 Install and secure fixtures in place with wall supports or wall carriers (as specified in Part 2 Products) and bolt, washer, nut fasteners.
- .8 Seal fixtures to wall and floor surfaces with sealant as specified in Division 07, colour to match fixture.
- .9 Seal sinks and lavatories to the millwork. Install gasket where supplied or recommended by sink or lavatory manufacturer.
- .10 Solidly attach water closets to floor with lag screws. Lead flashing is not intended hold fixture in place.
- .11 Emergency shower / eye-wash stations should be installed so that shower head is at least 82" above floor and 32" from wall or nearest obstruction.
- .12 Thermally insulate and jacket all exposed drain pipe extensions, traps, and trap arms below barrier-free wall-hung lavatories.

3.4 INTERFACE WITH OTHER PRODUCTS

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

3.5 ADJUSTING

- .1 Adjust stops or valves for intended water flow rate to fixtures without splashing, noise, or overflow.
- .2 Adjust stops or valves to comply with specified flow rates.

3.6 CLEANING

- .1 Section 01 74 00: Cleaning installed work.
- .2 Clean plumbing fixtures and equipment.

3.7 PROTECTION OF FINISHED WORK

- .1 Section 01 78 40: Protecting installed work.
- .2 Do not permit use of fixtures.

END OF SECTION