

DIVISION 15 PLUMBING

15400 PLUMBING

Part 1 – General

1.1 WORK

- A. Provide and install all plumbing required to complete the work in the **Scope** and as specified herein.
- B. Plumbing includes:
 - Hot and cold water distribution systems.
 - Waste drains and vents.
 - Gas piping.
 - Plumbing fixtures.
- C. Plumbing fixtures shall be as listed in the **Scope** and as specified herein. Fixture selections, i.e manufacturer, model, colors, etc. shall be approved by the **Owner** (see appendix A). Work includes trim and related construction as required.
- D. When work involves removal or disturbance of painted or otherwise coated surfaces in excess of 2 square feet, the **Contractor** shall comply with [Section 02050 Demolition](#) and [Section 01810 Lead Dust Hazards](#).

1.2 QUALITY STANDARDS

- A. Provide licensed, experienced, well-trained workers competent to complete the work as specified.
- B. Unless approved by the **Inspector**, provide all related products and accessories from one manufacturer.
- C. All work shall comply with manufacturer's instructions and the Wisconsin Plumbing Code.

1.3 SUBMITTALS

- A. Submit a copy of the plumbing permit from the City of Milwaukee to the **Agency** prior to starting any plumbing work.
- B. Provide manufacturer's specifications and other data to prove compliance with these **Specifications**.
- C. Submit a list of materials to be provided for this work.
- D. At the completion of this work, provide copies of manufacturer's installation, maintenance, and any warranty information.
- E. Owner Selection Sheet:
 - Do not start work until **Owner** has approved product/style/color selections in writing (See Appendix A).
 - Provide **Agency** with a completed and signed Owner Selection Sheet.

1.4 PRECONSTRUCTION AND PREPARATION

- A. Examine and verify that job conditions are satisfactory for speedy and acceptable work.
 - Maintain an up-to-date copy of the **Scope** on site.
 - Confirm that there is no conflict between this work and the work of other trades.
 - Confirm that the work of other trades that must precede this work has been completed.

PART 2 – MATERIALS

2.1 SANITARY SEWER PIPES

- A. Sanitary sewer piping within the building shall be:
 - PVC pipe as per ASTM D2665, D1785, or F891, with solvent weld joints.
 - ABS pipe as per ASTM D1527, D2661, or F628, with solvent weld joints.
 - Cast iron pipe as per ASTM A74, A888, or CISPI 301, service weight, neoprene gaskets.
- B. Sanitary sewer piping below grade beyond the building line shall be:
 - Vitrified clay pipe as per ASTM C700, standard, bell and spigot, neoprene gaskets.
 - PVC pipe as per ASTM D1785, D2665, D3034 or F891. Elastomeric Gaskets as required.
 - Cast iron pipe, as per ASTM A74, A888, or CISPI 301, service weight, neoprene gaskets.

2.2 WATER SUPPLY

- A. Water supply piping within the building shall be:
- Copper piping type M, as per ASTM B42, or B88.
 - Galvanized Steel as per ASTM A53.
 - Other materials as approved by the State of Wisconsin Plumbing Code.

2.3 WATER SERVICE

- A. Water service piping shall be copper, as per ASTM B42 or B88.

2.4 GAS SUPPLY

- A. Gas supply piping shall be steel, Schedule 40 black, malleable iron or forged steel fittings, screwed or welded.
- B. Gas supply piping materials shall comply with the standards of the Nation Fuel Gas Code, 1999 Edition.
- C. Provide clearly marked, easily accessible, and tested shut off valves as required by the building code.

2.5 WATER HEATER

- A. Provide and install an automatic water heater as per the **Scope**.
- Gas or electric powered as per the **Scope**.
 - Standard or high-efficiency as per **Scope**.
 - Sized per the **Scope**.
 - Seal all chimney breaches with concrete mortar materials.
 - Provide and install metal flue liners where required or listed on the **Scope**.
- B. Manufacturer as approved by plumbing code.

2.6 PLUMBING FIXTURES

- A. Provide and install plumbing fixtures, trim, and related construction as per the **Scope**.
- B. All plumbing fixtures shall be as approved by the plumbing code.
- C. Plumbing fixtures shall be as listed on the Owner Selection Sheet.

2.7 CABINETS, LAVATORY VANITIES, AND COUNTERTOPS

- A. Kitchen or bathroom cabinets shall be delivered new in sealed packaging.
- Cabinets shall be manufactured by a recognized cabinet manufacturer. No "homemade" cabinets will be accepted.
 - Installed cabinets shall be specified for the use in which they are intended.
 - Cabinet style, color, and cabinet hardware shall be as selected by **Owner** from standard readily available products.
 - Cabinet sizes shall be as listed on the **Scope**, or equal in size and configuration to the cabinets that were removed.
 - When cabinet(s) are being installed where no cabinet originally existed, (i.e. cabinet replacing a wall hung sink) the new cabinet(s) should be at least as wide as the sink it is replacing.
- B. Countertops for kitchen and bathroom sinks shall be:
- New, fabricated and sized too completely cover the cabinets.
 - Countertops shall be one continuous piece without joints.
 - Top and all exposed edges of countertops covered with Formica or other approved countertop material.
 - Countertops abutting walls shall have a backsplash.
 - Molded marble or similar type countertops are acceptable when selected by **Owner**.

2.8 MATERIALS DELIVERY AND STORAGE

- A. Deliver and transport materials to avoid damage to the product or to any other work.
- All materials shall be delivered new, in labeled and unopened containers.
 - Material quality shall be as specified on the **Scope** or as specified herein.

- Reject and return any products or materials delivered in a damaged or unsatisfactory condition.
- B. Store materials indoors, protected from damage, dirt, moisture, contaminants, and weather.

PART 3 – CONSTRUCTION AND INSTALLATION

3.1 INSTALLATION – GENERAL

- A. Install products as per the **Scope**, state plumbing code and these **Specifications**.
- B. Upon completion, secure all required pressure tests, inspections, and approvals of the completed system. Make all required adjustments and corrections at no added cost.
- C. Provide for maintenance of this work for one year following final permit approval by the **Inspector**.

3.2 REPAIR, REPLACE, OR INSTALL FIXTURES

- A. Repair, replacement, or installation of a specified fixture or system shall require all of the following:
 - All necessary supply lines.
 - All necessary waste and vent piping.
- B. Provide on all pipe passing through finished floors, walls, and ceilings, including piping at fixtures, chromed escutcheons of sufficient size to cover openings.
- C. Installation of new sinks, lavatories, tubs, etc. shall include new faucets, tail pieces, traps, shut-offs, etc. unless otherwise specified.
- D. All openings in the walls, floors, ceiling, cabinets or other finishes for piping shall be repaired at the **Contractor's** expense.
- E. Seal all openings at pipes and conduits in exterior walls with non-hardening, weather-resistant caulk. Openings in masonry walls shall be sealed with concrete mortar materials.
- F. No pipes shall run in wall cavities adjacent to any unheated area unless specifically designed to do so.

3.3 INSTALLATION OF CABINETS, COUNTERTOPS, ETC.

- A. Cabinets shall be installed:
 - Securely to wall with screws driven deep enough into wall studs or blocking to adequately support cabinet and its contents.
 - Securely to adjacent cabinets with screws or other manufacturer's approved hardware.
 - In locations identical to the cabinetry or sink it is replacing, or as listed on the **Scope**.
 - Level and plumb, shim cabinets as necessary.
 - Furnish and install all necessary trim for a complete installation (i.e. shoe molding, etc.).
- B. Countertops shall be installed:
 - Securely in place with screws and/or glue.
 - Care shall be taken to not drive screw ends through top or other finished surfaces of the countertop.
 - Countertop back splashes shall be tight to wall with no gaps larger than 1/8 inch.
 - Caulk backsplash to wall with high quality silicone caulk. Color to match.
 - When required carefully cut out properly sized sink opening using care so as to not damage finished countertop material or cabinet.
- C. Bathroom accessories (i.e. paper holders, towel racks, grab bars, soap dishes, etc. shall be installed as listed in the **Scope** as specified herein:
 - Level and at manufacturer's recommended heights.
 - In accessible locations based upon their purpose.
 - Securely to wall studs and/or solid wall blocking.

3.4 REPAIR AND CLEANUP

- A. After installation, inspect all work for improper installation or damage.
- B. Operating fixtures must perform smoothly. Repair or replace any defective work as directed by the **Inspector** at the **Contractor's** expense. Repair work shall be undetectable.
- C. When work involved removal or disturbance of painted or otherwise coated surfaces in excess of 2 square feet, cleanup shall comply with [Section 01810 Lead Dust Hazards](#), and as specified herein.
- D. Clean the work area and remove all scrap and excess material from the site.

END OF SECTION – 15400 PLUMBING