

SECTION 15400 - PLUMBING

PART I - GENERAL

1.01 DESCRIPTION

- A. Division 1, General Requirements, and Section 15050, Basic Mechanical Materials and Methods, shall be considered a part of these specifications.
- B. Codes, Ordinances, and Permits: All permits, connection fees, tap fees, licenses, approvals, and other arrangements including plumbing and riser diagrams, if required, shall be obtained by the plumbing contractor at his expense. Should any changes be necessary in the drawings, or specifications, to secure such approval, this contractor shall include in his bid all costs for such changes to comply with these departments, without extra costs to Walgreen Co. It will be this contractor's responsibility to provide all systems complete and operable.
- C. Scope of Work: Contractor shall furnish all materials, tools, equipment, labor, and services and pay all costs of whatever nature, as may be necessarily expended, for a proper workmanlike and fully operable installation, and completion of all plumbing and related work. The plumbing contractor shall provide the following within, beneath and up to 5 feet beyond the building(s):
 - 1. Complete system of sanitary, soil, waste, and vent piping connecting each and every plumbing fixture or other piece of equipment requiring same, with sanitary sewer including pipe, fittings, and other necessary appurtenances.
 - 2. Complete system of storm water drainage including downspouts, roof drains, pipe, fittings, and other necessary appurtenances.
 - 3. Complete systems shall be connected to adequate source of supply or disposal of the local public utility company or municipality commonly serving the area. It will be the contractor's responsibility to provide all systems complete and operable.
 - 4. Complete system of cold water supply and distributing piping of hot and cold water connecting to each and every plumbing fixture, cooling tower, evaporative condenser, or other pieces of equipment requiring same, including shut-off valves (for each piece of equipment), hangers, supports, and other necessary appurtenances.
 - 5. Cold water supplies to refrigeration and condensers.
 - 6. Funnel or other drains for air conditioning units, refrigeration, and fire protection piping.
 - 7. All floor and wall sleeves shall be provided at all wall and floor penetrations.
 - 8. All plumbing fixtures, except as hereinafter noted.
 - 9. All pipe covering.
 - 10. Water heaters/water coolers.
 - 11. Connections to the supply lines of the fixtures and outlets for equipment furnished by Walgreen Co.
 - 12. Seismic bracing of all equipment and piping as per state and local codes

1.02 SUBMITTALS

- A. This contractor shall submit product data for all plumbing fixtures, trim and accessories.

1.03 QUALITY ASSURANCE

- A. At Walgreens discretion, any store where the sewer/drainage system operation, installation or material are considered "suspect" shall be inspected, at the Landlord's/Contractor's expense, using a sewer line video camera. All necessary repairs will be made at the Landlord's/Contractor's expense.

PART II - PRODUCTS

2.01 PIPING & VALVES

- A. All sanitary sewers below floor shall be standard weight cast iron soil pipe.
- B. All waste lines within building to 5 feet outside of building shall be standard weight cast iron pipe conforming to CISI 302 or ANSI/ASTM A74. All inside downspout lines, less than 2.5 inch diameter, from roof drains to a point 6 inches above floor shall be Type "M" copper with wrought copper fittings. All fittings and couplings shall be soldered.
- C. See Section 02600 of the specifications for pipe more than 5 feet outside of the building.
- D. Sewer pipe underground more than 5 feet outside of building shall be vitrified clay pipe or locally acceptable alternate.
- E. Drain tile shall be standard form tile to conform with ASTM standards. Drain tile shall be placed with open joints and wrapped with building paper, set true to grade, and pitched to drain to sump. All tile shall be encased with a minimum of 6 inch clean gravel.
- F. All rough-in for plumbing fixtures, including all waste lines and all branch soil pipe below floor from plumbing fixtures, shall be standard weight cast iron pipe.
- G. All waste and vent piping above floor 2 inches and smaller to be Type "M" copper with wrought copper fittings. All fittings and couplings shall be soldered.
- H. Water main 2 ½ inch diameter and over in the ground shall be class 150 ductile iron water main pipe and fittings. Buried water main 2 inch diameter and under shall be "K" copper pipe and wrought copper fittings.
- I. All hot and cold water lines within the building above floor shall be copper tubing with copper fittings, type "L." All fittings and couplings shall be soldered.
- J. Where such use is acceptable to the authority having jurisdiction, all storm and sanitary lines and fittings above floor may be schedule 40 PVC DWV with solvent welded joints per ANSI/ASTM D2665 and D3311. All piping, valves, fittings and solvent shall be furnished by the same manufacturer.
- K. Isolation valves shall be *Jomar* Model T/S 100 ball type (or equal).

2.02 DRAINS

- A. Drains shall be 3 inch Josam 30003-6A, 3 inch Zurn Z-415 with type 'B' strainer, cast iron body, bottom outlet, 6 inch diameter, nickel-bronze strainer. Other acceptable alternate manufacturers - Smith and Wade.

2.03 CLEANOUTS

- A. Cleanouts appearing in finished floors to be Zurn Z-1400 which must finish flush with finished floor. Cleanouts appearing in finished wall to be Zurn Z- 1443 which must finish flush with

finished wall. Soil and waste piping run in the earth under the first floor slab shall have cleanouts of double eighth bends and finish flush with floors. All cleanouts must be in accessible location. Acceptable alternate manufacturers - Josam, Wade and Smith.

2.04 FLOOR SINK

- A. Zurn Z-1901-1, 3" Sani-Flor receptor, 12" X 12" X 8" deep, cast iron body with white acid resisting porcelain enamel interior and top, complete with aluminum anti-splash interior bottom dome strainer. Acceptable alternate manufacturers - Josam, Wade and Smith. (For use with expanded refrigeration)

2.05 PLUMBING FIXTURES

- A. Contractor shall furnish and install all plumbing fixtures.

2.06 WATER HEATING

- A. Storage Type:
 - 1. Water Heater: Provide water heater(s) as shown on plumbing drawings.
 - 2. Hot water outlets shall be provided with hot water at a temperature of 105 degrees F. unless otherwise noted.
 - 3. Flues: This contractor shall furnish and install type "B" vent flue. Flues shall be sized and run as required. Flues to be 3 feet above roof with rain cap, and Metal Fab (or approved equal) tall-cone flashing with storm collar.
 - 4. Combination temperature and pressure relief valve, ASME rated, McDonnell and Miller 202-NF 125-195 degrees or Watts 140-210 degrees, where fusible plug type is required by local code.
 - 5. Pipe relief outlets to drain.
 - 6. Thermometer on top of water heater. Range: 30 to 240 F. Only if required by code.

2.07 ELECTRIC WATER COOLER

- A. Oasis No. P8AMSL, Split-level, handicap accessible, self-contained, wall hung electric refrigerated water cooler. Acceptable alternate manufacturer - Elkay Halsey Taylor.

PART III - EXECUTION

3.01 INSTALLATION

- A. Cold Water Supply: Provide a cold water supply and meter, or meters. If water pressure exceeds 80 PSI, this contractor to furnish and install pressure reducing valve on main domestic service line set for 65 PSI.
- B. Piping in General: All pipes shall be run with proper grades to provide for easy draining. They must be thoroughly reamed and cleaned before installation. This contractor shall consult and cooperate with other piping contractors as to obtain the proper grouping of pipes and to avoid interference. Pipes run overhead shall be placed as close to the ceiling as possible to maintain proper headroom and to present a neat appearance, all consistent with the correct pitching of pipes. The plumbing contractor shall consult with the construction superintendent before installation of any pipe lines which will reduce the proper headroom in any way. Piping shall be run as shown on the drawings, but the construction superintendent reserves the right to make slight changes (without extra charge) to avoid conflict with other work. All piping to be concealed in walls.

- C. Vent Pipes: All vent pipes that pass through roof openings shall be kept at a reasonable distance from the walls to permit proper application of built up roofing and base and counter-flashings. All vent pipes shall be flashed with 3 pound sheet lead turned down into pipe.
- D. Cooler/Freezer Wastes: Condenser wastes from refrigeration equipment shall discharge into a minimum 3 inch combination funnel/floor drain connected to the sewer.
- E. Floor Drains: Furnish and install all floor drains.
- F. Cleanouts: Full sized brass screw plugs, cleanout plugs shall be furnished and installed at the foot of all soil and waste stacks, internal downspouts and at all points where necessary to permit the entire drainage system of being rodded out easily. Provide cleanouts at every turn in the waste line. No cleanouts to be located under shelving or in pharmacy.
- G. Connections to Equipment Furnished by Walgreen Co.: This contractor shall rough-in and connect all fixtures and equipment to be furnished by Walgreen Co. This shall include all hot and cold water, waste, and vent piping required to completely connect to equipment.
- H. Flues: Install per manufacturer's specifications.

3.02 TESTING

- A. Domestic Hot and Cold Water Systems: 100 PSI (minimum) air for one hour without leakage.
- B. Sewer Systems: 10 feet (minimum) hydrostatic for one hour without leakage.

END OF SECTION