

**SECTION 22 14 00  
DRAINAGE SYSTEMS**

**PART 1 – GENERAL**

**1.1 SCOPE**

- A. Provide piping, equipment and accessories as shown of types and sizes specified to complete the building drainage system. Work of this Section shall include all accessories and appurtenances required for a complete installation.

**1.2 CONDITIONS OF THE CONTRACT**

- A. All Work shall be in accordance with the terms and conditions of the Contract Documents.

**1.3 STANDARDS**

- A. Work is to comply with but not limited to the following standards, the latest adopted edition of said standards shall apply:
  - 1. National Sanitation Foundation.
  - 2. American Society for Testing and Materials.

**1.4 SUBMITTALS**

- A. Refer to Section on submittal procedures, provide data and samples and be governed accordingly. Submit manufacturer's catalog cuts, literature and descriptive data for products specified on the documents and herein.

**1.5 ACCEPTABLE MANUFACTURERS**

- A. Products, materials and systems of this Section as specified herein shall be manufactured by one of the following.
  - 1. For Cleanout Tops, Covers, Caps and Plugs:
    - a. Zurn Industries, Inc., Erie, PA 16503
    - b. Josam Mfg. Co. Michigan City, IN 46360
    - c. J.R. Smith Mfg. Co., Piscataway, NJ 08854
    - d. Wade Division, Tyler Pipe Industries, Tyler, TX 75710
    - e. Ancon
  - 2. For Floor Drains:

- a. Zurn Industries, Inc., Erie, PA 16503
- b. Josam Mfg. Co., Michigan City, IN 46360
- c. J.R. Smith Mfg. Co., Piscataway, NJ 08854
- d. Wade Division, Tyler Pipe Industries, Tyler, TX 75710
- e. Ancon

## 1.6 PRODUCT HANDLING

- A. Handle and store materials in such a manner as to prevent damage. Store under cover and above ground. All damaged or otherwise unsuitable material, when so ascertained, shall be removed from the job site.
- B. All products and materials shall be shipped to the job site in unopened cartons, containers, etc., as received from the manufacturer.

## 2.0 PRODUCTS

### 2.1 MATERIALS

- A. Cleanouts, Tops, Covers, Caps and Plugs
  - 1. Cleanouts shall be located and sized in accordance with the local and state codes and shall be inside or outside caulk. Josam Co. numbers or equal are herein indicated to establish type and quality only.
    - a. Finished Walls 58910-19 with 58600
    - b. Exposed Lines 58910
- B. Floor Drains:
  - 1. Floor drains shall be located and sized in accordance with local and state codes and shall be inside or outside caulked.

## 3.0 EXECUTION

### 3.1 PREPARATION

- A. Verify all dimensions of in-place and subsequent construction. Installation of piping, equipment and accessories specified herein and commencing of work of this Section constitutes acceptance of the existing conditions.

### 3.2 INSTALLATION

- A. Materials specified herein shall be installed in strict accordance with manufacturer's printed instructions.
  - 1. Soil, Waste and Vent Piping
    - a. Install complete drainage system, making all final connections of soil, waste, vent piping, and make all final plumbing service connections to site work and to

all plumbing fixtures and other equipment as indicated on the drawings, specified or required to complete and operate the equipment and systems satisfactorily. Systems shall be connected to the sewer system as indicated on the drawings.

- b. The manner of installing sewage and venting systems shall comply in all respects, with local and state codes and authorities having jurisdiction. However, as a minimum, they shall be installed as shown on the drawings and as specified.
- c. All horizontal suspended sewers shall be run as close to overhead construction as possible and shall be securely supported by hangers as specified, secured to construction above. All junctions shall be made by means of combination "Y" and 1/8 bend fittings. At any change in direction of suspended sewers and at end of all runs, provide cleanouts with ends fitted with solid brass capped screw plugs where sewers are exposed. For concealed sewers, refer to article entitled CLEANOUTS, as hereinafter specified.
- d. Soil and waste risers shall extend from horizontal sewers to and thru the roof, properly flashed.
- e. No horizontal waste line in concealed spaces shall be run less than 1 1/2" in diameter.
- f. All vent risers installed adjacent to outside wall shall be offset so as to pass thru far enough away from the outside wall to allow for flashing.
- g. Each length of pipe, fitting, trap and other device used in a drainage system shall be plainly stamped, indelibly marked, or color Coded to an acceptable standard specification as to the weight, class, and type thereof and the maker's mark or name.

## 2. Cleanouts

- a. Cleanout plugs shall be installed thru-out the system of soil and, waste water piping. They shall be provided at the ends of all runs of piping, at each change in direction of piping, where sewers leave the building, join outside sewers. Provide cleanout covers for cleanouts at the base of soil and waste stacks as indicated on drawings. Extend cleanouts for toilet rooms into corridors for ease of access. Coordinate locations with architect prior to installation.
- b. Each horizontal drainage pipe shall be provided with a cleanout at the upstream end of the pipe:

EXCEPTIONS: The following plumbing arrangements are acceptable in lieu of the upstream cleanout.

- 1) "P" traps connected to the drainage piping with slip joints or ground joint connections.
- 2) "P" traps into which floor drains with removable strainer discharge.
- 3) Test tees or cleanouts in a vertical pipe above the flood-level rim of the fixtures that the horizontal pipe serves and not more than 4 ft. above the

finished floor.

4) Water closets for the water closet fixture branch only.

- c. Floor cleanout covers shall be of solid bronze, nickel alloy, or ductile iron; round scoriated and secure. Wall access covers or raised covers are not acceptable for floor cleanout use.
- d. Provide concrete collar on all exterior Clean Outs in landscaping. 16"x16" tag & schedule.

### 3.3 TESTING

#### A. Waste Piping:

- 1. Water tests shall be made of all soil, waste, vent systems. The tests shall be applied when all rough-in of the system, including fittings, branches, cleanouts and traps (except fixture traps) are completed by adding a 10-foot vertical pipe to the highest point of the system and closing all openings except the highest stack and filling the entire system or section thereof with water. When the system or section is filled, the water shall be shut off and allowed to stand for one hour. There shall be no loss by leakage during this time.

END OF DOCUMENT 221400