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## **PART 1 GENERAL**

### **1.1 REFERENCE STANDARDS**

- .1 ASTM International Inc.
  - .1 ASTM B32 (Latest Edition), Standard Specification for Solder Metal.
  - .2 ASTM B306 (Latest Edition), Standard Specification for Copper Drainage Tube (DWV).
  - .3 ASTM C564 (Latest Edition), Standard Specification for Rubber Gaskets for Cast Iron Soil Pipe and Fittings.
- .2 Canadian Standards Association (CSA International).
  - .1 CSA B67 (Latest Edition), Lead Service Pipe, Waste Pipe, Traps, Bends and Accessories.
  - .2 CAN/CSA-B70 (Latest Edition), Cast Iron Soil Pipe, Fittings and Means of Joining.
  - .3 CAN/CSA-B125.3 (Latest Edition), Plumbing Fittings.
- .3 Green Seal Environmental Standards (GSES)
  - .1 Standard GS-36 (Latest Edition), Commercial Adhesives.
- .4 South Coast Air Quality Management District (SCAQMD), California State
  - .1 SCAQMD Rule 1168 (Latest Edition), Adhesive and Sealant Applications.

### **1.2 ACTION AND INFORMATIONAL SUBMITTALS**

- .1 Provide submittals in accordance with Section 01 33 00 - Submittal Procedures.
- .2 Product Data:
  - .1 Provide manufacturer's printed product literature and datasheets for adhesives, and include product characteristics, performance criteria, physical size, finish and limitations.

### **1.3 DELIVERY, STORAGE AND HANDLING**

- .1 Deliver, store and handle in accordance with Section 01 33 00 - Submittal Procedures.
- .2 Deliver materials to site in original factory packaging, labelled with manufacturer's name, address.

## **PART 2 PRODUCTS**

### **2.1 COPPER TUBE AND FITTINGS**

- .1 Above ground sanitary storm and vent Type DWV to: ASTM B306.
  - .1 Fittings.

- .1 Cast brass: to CAN/CSA-B125.3.
- .2 Wrought copper: to CAN/CSA-B125.3.
- .2 Solder: tin-lead, 50:50, type 50A or lead free, tin-antimony 95:5, type TA, to ASTM B32.

## 2.2 CAST IRON PIPING AND FITTINGS

- .1 Buried sanitary storm and vent minimum NPS 2, to: CAN/CSA-B70, with one layer of protective coating of bituminous.
  - .1 Joints:
    - .1 Mechanical joints:
      - .1 Neoprene or butyl rubber compression gaskets: to ASTM C564 or CAN/CSA-B70.
      - .2 Stainless steel clamps.
    - .2 Hub and spigot:
      - .1 Caulking lead: to CSA B67.
      - .2 Cold caulking compounds.
  - .2 Above ground sanitary, storm and vent: to CAN/CSA-B70.
    - .1 Joints:
      - .1 Hub and spigot:
        - .1 Caulking lead: to CSA B67.
      - .2 Mechanical joints:
        - .1 Neoprene or butyl rubber compression gaskets with stainless steel clamps.

## PART 3 EXECUTION

### 3.1 APPLICATION

- .1 Manufacturer's Instructions: comply with manufacturer's written recommendations, including product technical bulletins, handling, storage and installation instructions, and datasheets.

### 3.2 INSTALLATION

- .1 In accordance with Section 23 05 01 - Use of HVAC Systems During Construction.
- .2 Install in accordance with National Plumbing Code and local authority having jurisdiction.

### 3.3 TESTING

- .1 Pressure test buried systems before backfilling.
- .2 Hydraulically test to verify grades and freedom from obstructions.

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**3.4 PERFORMANCE VERIFICATION**

- .1 Cleanouts:
  - .1 Ensure accessible and that access doors are correctly located.
  - .2 Open, cover with linseed oil and re-seal.
  - .3 Verify that cleanout rods can probe as far as the next cleanout, at least.
- .2 Test to ensure traps are fully and permanently primed.
- .3 Storm water drainage:
  - .1 Verify domes are secure.
  - .2 Ensure weirs are correctly sized and installed correctly.
  - .3 Verify provisions for movement of roof system.
- .4 Ensure that fixtures are properly anchored, connected to system and effectively vented.
- .5 Affix applicable label (storm, sanitary, vent, pump discharge etc.) c/w directional arrows every floor or 4.5 m (whichever is less).

**3.5 CLEANING**

- .1 Clean in accordance with Section 01 74 11 - Cleaning.

**END OF SECTION**