

SECTION 15413
STORM WATER SYSTEMS

PART 1 GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of Contract, including General and Supplementary Conditions and Division-1 Specification sections, apply to work of this Section.
- B. Division-15 Basic Mechanical Materials and Methods sections apply to work of this section.

1.2 DESCRIPTION OF WORK

- A. The drawings, schedules, and this section define the extent of storm water systems work.
- B. Trenching and backfill required in conjunction with underground building drain piping is specified in applicable Division-15 sections, and is included as work of this section.

1.3 QUALITY ASSURANCE

- A. Manufacturer's Qualifications: Firms regularly engaged in manufacture of storm water systems products of types, materials, and sizes required whose products have been satisfactory use in similar service for not less than five years.
- B. Installer Qualifications: Firm with at least three years of successful installation experience on projects with storm water systems work similar to that required for project.
- C. Codes and Standards:
 - 1. Plumbing Code Compliance: Comply with applicable portions of The Florida Building Code pertaining to plumbing materials, construction and installation of products.
 - 2. ANSI Compliance: Comply with applicable ANSI Standards pertaining to materials, products, and installation of storm water systems.
 - 3. Local Jurisdiction: Comply with State of Florida Department of Environmental Protection (DEP), State of Florida Department of Natural Resources, the St. Johns Water Management District and the City of Melbourne, Florida requirements.

1.4 SUBMITTALS

- A. Product Data: Submit manufacturer's technical products data for storm water systems, materials and products.
- B. Record Drawings: At project closeout, submit record drawings of installed storm water systems, in accordance with requirements of Division 1.
- C. Maintenance Data: Submit maintenance data and parts lists for storm water systems materials and products. Include this data, product data, shop drawings, and record drawings in maintenance manual; in accordance with requirements of Division 1.

PART 2 PRODUCTS

2.1 MATERIALS AND PRODUCTS

- A. Provide piping materials and factory-fabricated piping products of sizes, types, pressure ratings, and capacities as indicated in section 15420. Where not indicated, the Installer makes proper selection

in per installation requirements. Provide sizes and types matching piping and equipment connections; provide fittings of materials, which match pipe materials used in storm water systems. Where more than one type of materials or products are indicated, selection is Installer's option.

2.2 BASIC IDENTIFICATION

- A. Provide identification complying with Division-15 Basic Mechanical Materials and Methods section "Mechanical Identification".

PART 3 EXECUTION

3.1 INSPECTION

- A. Examine substrate and conditions for installation of storm water system being. Do not proceed with work until all conditions are in an acceptable condition to Installer.

3.2 INSTALLATION OF BASIC IDENTIFICATION

- A. General: Install mechanical identification in accordance with Division-15 Basic Mechanical Materials and Methods section "Mechanical Identification".

3.3 INSTALLATION OF BUILDING DRAIN PIPING

- A. General: Install storm building drains as indicated and in accordance with Florida Building Code. Lay storm building drains beginning at low point of systems, true to grade and alignment indicated with unbroken continuity of invert. Place bell ends of piping facing upstream. Install required gaskets in accordance with manufacturer's recommendations for use lubricants, cements, and other special installation requirements. Clear interior of piping of dirt and other superfluous material as work progresses. Maintain swab or drag in line and pull past each joint as it is completed. Place plugs in ends of uncompleted piping at end of day or whenever work stops.

3.4 INSTALLATION OF ABOVE GRADE STORM DRAINS

- A. Do not install roof drains of piping above electrical equipment.
- B. Insulate all horizontal roof drain, including secondary drains.

3.5 FIELD QUALITY CONTROL

A. TESTING

1. Flush-out piping systems with clean water before proceeding with required tests. Inspect each run of each system for completion of joints, supports and accessory items.
2. Hydraulically pressure test each section or segment of system prior to backfilling, encasing, enclosing or otherwise preventing visual observation of the section or segment being tested. Backfill underground systems. Exposing joints only, is permitted on all systems and required on systems having a pressure test exceeding 30 psig.
3. Water test storm water system at 10' of head for 4 hours. Test standpipe to be a minimum of 10' above the highest point of section being tested.

3.6 PROTECTION

- A. Protect roof drains during remainder of construction period, to avoid clogging with construction materials and debris, and to prevent damage from traffic and construction work.

END OF SECTION