

## **SECTION 334600 - SUBDRAINAGE**

### **PART 1 GENERAL**

#### 1.1 SUMMARY

- A. Section Includes:
  - 1. Subdrainage system.
  - 2. Filter fabric and drainage fill.
- B. Related Sections:
  - 1. Division 01: Administrative, procedural, and temporary work requirements.

#### 1.2 REFERENCES

- A. ASTM International (ASTM):
  - 1. D2564 - Standard Specification for Solvent Cements for Poly (Vinyl Chloride) (PVC) Plastic Piping Systems.
  - 2. D2729 - Standard Specification for Poly (Vinyl Chloride) (PVC) Sewer Pipe and Fittings.
  - 3. D2855 - Standard Practice for Making Solvent-Cemented Joints with Poly (Vinyl Chloride) (PVC) Pipe and Fittings.

#### 1.3 SUBMITTALS

- A. Submittals for Review:
  - 1. Shop Drawings: Show layout of drainage lines, including locations, elevations, slopes, pipe sizes, and accessories.
  - 2. Product Data: Manufacturer's data for filter fabric and drainage pipe, showing physical properties and installation procedures.
  - 3. Samples: 12 x 12 inch filter fabric samples.

#### 1.4 QUALITY ASSURANCE

- A. Installer Qualifications: Minimum 5 years experience in work of this Section.

### **PART 2 PRODUCTS**

#### 2.1 MATERIALS

- A. Drainage Pipe:
  - 1. ASTM D2729, polyvinyl chloride (PVC) material, bell and spigot style solvent sealed ends, perforated, diameter as indicated on Drawings, with filter fabric wrap.
  - 2. Fittings: PVC.
  - 3. Joints: ASTM D2855, solvent weld type with ASTM D2564 solvent cement.

#### 2.2 ACCESSORIES

- A. Filter Fabric: Open weave polyolefin or polyester, free draining.
- B. Drainage Fill: Washed crushed stone or gravel, graded from 3/4 to 1-1/2 inches.

### **PART 3 EXECUTION**

#### 3.1 EXCAVATION

- A. Trench for drainage pipe.
- B. Hand trim excavations to required shape and elevations.
- C. Remove large stones and obstructions that could perforate filter fabric.

### 3.2 INSTALLATION

- A. Place filter fabric in trench, extending up and over sides. Lap ends 6 inches minimum and secure.
- B. Place drainage fill to level of bottom of pipe, minimum 6 inch depth. Shape to required cross section and flow line. Hand or machine compact.
- C. Install drainage pipe and fittings in accordance with manufacturer's instructions, at required flow line and grade.
- D. Place pipe with perforations facing down.
- E. Provide minimum 0.5 percent uniform slope.
- F. Solvent weld joints.
- G. Fill around sides and over top of pipe with drainage fill, minimum 6 inches thick. Fold filter fabric over top of drainage fill from both sides; lap and secure.
- H. Backfill and compact without damage to filter fabric.

### 3.3 FIELD QUALITY CONTROL

- A. Test drainage lines for free flow prior to covering.
- B. If free flow is not present, remove obstructions and repeat test.

END OF SECTION