

## **PART 1 – GENERAL**

### **1.1 Related Documents**

- A. Drawings, technical specification and general provisions of the Contract as modified herein apply to this section.

### **1.2 Description of Work Included**

- A. Provide excavation and base preparation per Civil Engineer/Geotechnical Engineer's recommendations, and/or as shown on design drawings, to provide adequate support for project design loads and safety from excavation sidewall collapse. Excavations shall be in accordance with owner's and OSHA requirements.
- B. Provide and install ACO StormBrixx SD system, including approved fill materials, geotextiles, pipe connections, in accordance with manufacturer's installation instructions.
- C. ACO StormBrixx SD system should be protected from construction traffic during installation and until project completion.
- D. Contractor must have manufacturer's representative available for site review if requested by Owner.

### **1.4 Submittals**

- A. ACO StormBrixx SD submittals should include typical section details, required base elevation of stone and system tanks, minimum cover requirements and system layout.
- B. Product Data: Include Manufacturer data sheets to include:
  - 1. Preparation instructions.
  - 2. Storage and handling requirements.
  - 3. Installation methods.

### **1.5 Delivery, Storage, and Handling**

- A. Protect ACO StormBrixx SD and other materials from damage during delivery.
- B. If extended storage is expected, ACO StormBrixx SD units/parts should be protected from UV exposure.
- C. Use lifting equipment appropriate to size and site conditions, including, but not limited to, handcarts, forklifts, extension lifts and small cranes. Use care to prevent damage to pallets and ACO StormBrixx SD units.

### **1.6 Project Conditions**

- A. Review installation procedures and coordinate work with preparation and adjacent work, including but not limited to grading, excavation, utilities, or erosion control. Do not permit construction traffic or loads greater than design loads over completed installation.
- B. Protect work against damage from construction traffic during installation and following completion of backfill. Protect using construction tape, fencing, or other means, until construction is complete. Protect adjacent work from damage during installation.

### **1.7 Pre-Construction Meeting**

- A. Representatives from ACO StormBrixx SD installer, design team, general contractor, excavation contractor, and manufacturer representative should meet prior to installation.

## **PART 2 – PRODUCTS**

### **2.1 Manufacturers **\*\*NOTE TO SPECIFIER\*\*** Contact manufacturer for local representative.**

- A. Manufacturer: ACO, Inc., 9470 Pinecone Dr, Mentor, OH 44060; (440) 639-7231; Web: [www.acousa.com](http://www.acousa.com)  
**\*\*NOTE TO SPECIFIER\*\* Delete one of the following two paragraphs; coordinate with requirements of Division 1 section on product options and substitutions.**
- B. Substitutions: Not permitted
- C. Requests for substitutions will be considered in accordance with provisions of Section 01 60 00 – Product Requirements.

### **2.2 Materials**

- A. ACO StormBrixx SD: Geocellular water management units are installed in layers using a brickbonding and crossbonding design to form structural tanks that contain water.

1. ACO StormBrixx SD dimensions:
    - a) Half Body unit: 47.20" L x 23.62" W x 19.45" H
    - b) Assembled unit (Two ½ units assembled): 47.20" L x 23.62" W x 38.9" H
    - c) Side Panel: 35.70" L x 23.30 W x 4.09 H
    - d) Top Cover: 21.65" L x 21.65" W x 1.77" H
  2. Void Ratio: 97%
  3. Gross Storage Volume 23.23 ft<sup>3</sup> / Net Storage Volume 22.53 ft<sup>3</sup>
  4. Vertical Load Capacity uninstalled: 50.76 psi. This must be tested by an independent lab uninstalled and submitted with independent lab test report.
  5. Lateral Load Capacity uninstalled: 10.00 psi. This must be tested by an independent lab uninstalled and submitted with independent lab test report.
  6. System must provide for clear access to entirety of system with remote CCTV and jetting equipment.
  7. System must provide for a 50 year design life in accordance with 'C680 Testing of Geocellular Attenuation (detention) Cells'. Testing must be completed by an independent lab with lab test report documentation.
- B. Geosynthetics
1. Geotextile. A geotextile envelope is required to prevent backfill material from entering ACO StormBrixx SD system.
  2. Attenuation (detention) systems shall use 8 oz per square yard, nonwoven geotextile appropriate for soil type.
- C. Infiltration systems shall use woven geotextile monofilament.
- D. Backfill: Provide structural fill. Shall be free from lumps and debris, or sharp materials.
1. Side Infill: Structural fill per civil engineering design details. Site soils can be used per Civil Engineer/Geotechnical Engineer approval.
  2. Top Infill: Per civil engineering design details.

### **PART 3: EXECUTION**

#### **3.1 Examination**

- A. Prepared excavation and conditions shall be inspected for smoothness, compaction, and level. Installation should not proceed until subbase conditions are satisfactory.
- B. Water Table Elevation: Do not install if seasonal high water table will be above invert of ACO StormBrixx SD system.
- C. Verify installed ACO StormBrixx SD system will not interfere with new, or existing, underground structures, utility lines, and piping.

#### **3.2 Preparation**

- A. Base of excavation: Compact excavation base to minimum 90 percent density, or as required by Civil Engineer/Geotechnical Engineer.
- B. See manufacturer installation guide for fabric installation.
- C. Layout footprint of ACO StormBrixx SD system with chalk lines to ensure squareness during installation.

#### **3.3 Installation**

- A. Install per manufacturers installation guide.

#### **3.4 Maintenance Requirements**

- A. System must provide clear access for a remote CCTV to inspect entire system.
- B. Clean out cover must be located at each pipe connection point.
- C. Inspection ports must be placed in accordance with the construction documents.
- D. Routine maintenance is required to ensure long-term performance of ACO StormBrixx SD system. Maintain as required using acceptable practices, or following manufacturer's guidelines (for proprietary systems).
- E. ACO StormBrixx SD system shall be inspected for sediment quarterly through first year of operation. Inspection should be completed yearly following first year of installation.

**END OF SECTION**