CUDO®

Stormwater Storage System

Product Specifications

Oldcastle Infrastructure™
A CRH COMPANY

1. General

1.1. General Provisions

a. The Conditions of the Contract and all Sections of Division 1 are hereby made a part of this Section.

1.2. Description of Work

a. Work Included:

1. Provide excavation and base preparation per Geotechnical Engineer's recommendations and/or as shown on drawings, to provide adequate support for project design loads and safety from excavation sidewall collapse. See 2.2 Materials.

2. Provide CUDO cube modular system products, and install per the manufacturer's instructions furnished under this section.

b. Related Work:

1. Subgrade excavation and preparation under Section 02300 – Earthwork.

2. Surface Drainage materials – Section 02700 – Subsurface Drainage and Structures, as needed.

1.3. Quality Assurance

a. Follow Section 01340 requirements.

b. Installation: Performed only by skilled work people with satisfactory record of performance on bulk earthworks, pipe, chamber, or pond/landfill construction projects of comparable size and quality.

1.4. Submittals

a. Submit manufacturer's product data and installation instructions.

b. Submit CUDO module for review. Reviewed and accepted samples will be returned to the Contractor.

c. Submit material certificates for geotextile, geogrid, base course and backfill materials.

1.5. Delivery, Storage, and Handling

a. Protect CUDO cube modular system products from damage during delivery, and store under tarp to protect from sunlight when time of delivery to installation exceeds one week. Storage should occur on smooth surfaces, free from dirt, mud and debris.

b. Handling is to be performed with equipment appropriate to the size (height) of cubes and site conditions, and may include hand, hand cart, forklifts, extension lifts, etc.

1.6. Project Conditions

a. Review installation procedures and coordinate CUDO cube installation with other work affected, such as grading, excavation, utilities, construction access and erosion control to prevent all non-installation related construction traffic over completed CUDO cube installation, especially with loads greater than design load.

b. Cold weather:

1. Do not use frozen materials or materials mixed or coated with ice or frost.
2. Do not build on frozen, wet, saturated or muddy subgrade.
3. Care must be taken when handling CUDO cubes when air temperature is at 40 degrees or below as plastic becomes brittle.

c. Protect partially completed CUDO cube installation against damage from other construction traffic when work is in progress and following completion of backfill by establishing a perimeter with highly visible construction tape, fencing, or other means until construction is complete.

d. Protect adjacent work from damage during CUDO cube installation.

2. Products

2.1. Availability

a. Manufactured by Oldcastle Infrastructure, 7100 Longe Street, Stockton, California, 95206.

2.2. Materials

a. Base of excavation: Shall be smooth, level and free of lumps or debris.

b. Geotextile: Use non-woven geotextile with weight of at least 4 oz per square yard, appropriate for the soil type and depth conditions. Fabric shall be placed on the floor of the excavation, and the sides and top of the modular system.

c. CUDO cube modular units: The CUDO product will arrive onsite with the required number of components to complete your project. Those components will consist of (as required) CUDO half cubes, top/bottom grates, stacking couplers, side plugs, and/or lateral connectors. Assembly of the completed system will be done onsite per project specific assembly details with their simple snap together feature.

d. Side and top backfill: Using structural fill, sand or other free-draining material material as specified by the project engineer, backfill the sides of the CUDO system evenly in 12” lifts to a minimum of 95% with a mechanical compactor. Bring the backfill to the top of the CUDO system and then continue backfill placement in accordance with the project’s specific requirements for the type and location of Geogrid over the top of the CUDO system.

e. Geogrid: Use Tensar BX-1200 or equivalent to reinforce backfill above CUDO cubes to support H20 loads (otherwise not required). Geogrid should extend 3 feet beyond the cube footprint.

f. Utility marker: Use metallic tape at corners of install to mark the area for future utility detection.

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