

**KANSAS DEPARTMENT OF TRANSPORTATION
 SPECIAL PROVISION TO THE
 STANDARD SPECIFICATIONS, EDITION OF 2007**

Add a new SECTION to DIVISION 200:

GEOFOAM LIGHTWEIGHT EMBANKMENT FOR VOID FILL

1.0 DESCRIPTION

Construct the geofoam lightweight Expanded Polystyrene (EPS) fill at the locations designated in the Contract Documents.

BID ITEM

Geofoam

UNITS

Cubic Yard

Note: If this bid item is not included in the Contract Documents, this work is subsidiary to other items in the contract.

2.0 MATERIALS

a. Geofoam. Provide EPS blocks complying with ASTM D 6817 designated EPS 22 or higher with the minimum requirements in **TABLE 1**:

TABLE 1: EPS MINIMUM REQUIREMENTS	
Property	Requirement
Density	1.35 lb/cu ft;
Compressive Resistance	7.3 psi at 1% deformation
Flexural Strength	35.0 psi

Use EPS blocks in standard sizes that are typically from 4 feet wide x 2.5 feet thick x 8 to 16 feet long.

Treat all EPS blocks with a tested and proven EPA registered material complying with ICC ES EG239 for termite treatment with a minimum 3 year field exposure limit.

Provide a minimum of 4 Geogripper Plates per block to restrain the EPS from moving laterally in layer over layer applications. Make the plate of galvanized or stainless steel with two-sided multi-barbed design capable of piercing the EPS. Make each plate capable of holding a lateral load of 60 lbs.

b. Verification Testing. Perform of random sampling and testing for compressive strength and density in accordance with **TABLE 2**. Failure of the samples to meet the compressive strength or density specification will serve as a basis for rejection of the entire lot.

TABLE 2: TESTING FREQUENCY	
Embankment Volume (cubic yards)	Number of EPS Blocks Sampled
< 650	3
650 – 1300	4
> 1300	5

c. Basis of Acceptance. Receipt and approval of a Type B certification as specified in **DIVISION 2600**.

3.0 CONSTRUCTION REQUIREMENTS

Construct the embankment if required in successive layers of geofoam with the block's long axis alternating by 90 degrees and offsetting blocks by half their widths to prevent the continuation of joints within the polystyrene mass.

Trim the blocks so the surface is uniform and even with a tolerance of 1.4 of an inch in ten feet.

Cut the EPS blocks using a saw unless alternative cutting methods have been approved.

Provide temporary weighting and guying down of the geofoam material as required until all blocks are built into a homogeneous mass.

Connect the EPS blocks with gripper plates. Place gripper plates between horizontal layers of geofoam as required.

Do not damage the EPS during construction or storage. Protect the EPS from petroleum based solvents, flame, and other ignition sources. Do not expose the EPS to direct sunlight. Keep the EPS covered with a light-colored opaque tarp.

4.0 MEASUREMENT AND PAYMENT

The Engineer will measure the Geofoam by the cubic yard.

Payment for "Geofoam" at the Contract unit price is full compensation for the specified work.

When the bid item is not included in the Contract Documents, Geofoam will not be measured for payment, but will be subsidiary to other bid items in the contract.

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Sept-14 Letting