

ITEM 605.12 17 – CRUSHED GLASS UNDERDRAIN FILTER

DESCRIPTION

The work consists of providing and placing crushed glass underdrain filter in accordance with the lines, grades, and cross-sections shown on the plans or established by the Engineer. All requirements of Section 605 - Underdrains apply except as modified herein.

MATERIALS

Crushed Glass Filter Materials. Provide and stockpile all crushed glass filter material conforming to the requirements of Section 203-2.02 F., and meeting the gradation and other requirements in this specification.

Perform material tests and quality control methods in conformance with the procedures contained in the appropriate Departmental publication in effect on the date of advertisement for the project. These publications are available upon request to the Regional Director or the Director, Geotechnical Engineering Bureau.

Acceptance or rejection of this material will be based on the appropriate Geotechnical Control Procedure (GCP) manual in effect at the time of project advertisement.

Gradation:

Sieve Designation	Percent Passing By Weight
12.5 mm	100
9.5 mm	90 - 100
75 µm	0 - 5

CONSTRUCTION DETAILS

Underdrain Filter. After the pipe installation has been inspected and approved, place Underdrain Filter loosely around and over the pipe to such a depth that, after compaction, Underdrain Filter will extend to a level 150 mm above the underdrain pipe or to the next course, whichever is less. Construct subsequent lifts of Underdrain Filter so that they are no more than 150 mm thick prior to compaction. Compact each lift by two passes of an approved vibrating pad or drum type compactor. Proceed with the remainder of the installation in accordance with the applicable Standard Sheet or as indicated on the plans.

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For corrugated polyethylene underdrain tubing, place the filter material around and over the tubing to such a depth that, after compaction, the underdrain filter material extends to a level 300 mm or to the next course, whichever is less, above the tubing. At this stage, compact the surface of the filter material by three passes of a vibrating pad or drum type compactor. Place the remainder of the backfill in maximum 600 mm loose lift thicknesses, and perform compaction by three passes of a vibrating pad or drum type compactor after the placement of each lift.

In the event that a pipe is not included in this installation, place the filter in horizontal layers not exceeding 150 mm in thickness prior to compacting. Compact each lift by two passes of an approved vibrating pad or drum type compactor.

No compaction control tests will be required.

METHOD OF MEASUREMENT

Underdrain Filter. The quantity of underdrain filter material to be paid for under this item will be the number of cubic meters of material computed between the payment lines as shown on the plans, or where changes have been ordered, as established by the Engineer. A deduction shall be made for pipes (based on nominal diameters) and other payment items, when the combined cross-sectional area exceeds 0.1 m^2 , unless otherwise shown on the plans. No deduction will be made for the cross-sectional area of an existing facility.

If the excavation for the underdrain extends outside these payment lines, backfill it with Underdrain Filter material meeting the requirements of this specification, furnished and installed at the Contractor's expense.

BASIS OF PAYMENT

Underdrain Filter. Include in the unit price bid per cubic meter the cost of furnishing all labor materials and equipment necessary to complete the work. No direct payment will be made for any losses of material which may results from compaction, foundation settlement, erosion, or any other causes. Include the cost of such losses in the price bid for this item. Replace any contaminated underdrain filter material by the Contractor as directed by the Engineer at no cost to the State.

Excavation, granular fill and backfill will be paid for separately under their appropriate items in Sections 203 and 206, as applicable.

Payment for underdrain pipe will be made separately under their appropriate items in Section 605, as applicable.