

SECTION 605 - UNDERDRAINS

605.01 Description. This work includes constructing underdrains according to the contract.

605.02 Materials.

(A) Geotextiles shall conform to Subsection 716.03 - Geotextiles for Underdrain.

(B) Crushed rock shall be either No. 4, No. 5 or No. 57 and shall conform to AASHTO M 43.

(C) Perforated pipe shall conform to Subsection 706.12 - Perforated Plastic Pipe.

(D) Non-perforated drain pipe shall conform to the requirements of perforated pipes except that the provisions for perforation will not apply.

(E) Concrete for cleanouts shall be Class B and shall conform to Section 601 - Structural Concrete.

(F) Steel plate for cleanouts shall conform to ASTM A 36.

605.03 Construction Requirements. The Contractor shall excavate trenches to the dimensions and grade shown in the contract or as ordered by the Engineer.

The Contractor shall protect the geotextiles from sunlight and temperatures over one hundred and forty (140) degrees Fahrenheit during transport and storage. The information on the packaging shall warn against exposing the geotextile to sunlight.

The Contractor shall place the geotextile in the trench to conform loosely to the shape of the trench. The Contractor shall overlap successive sheets a minimum of eighteen (18) inches.

The Contractor shall place the crushed rock in horizontal layers not exceeding twelve (12) inches in thickness before compaction. The Contractor shall compact each lift with at least two (2) passes of a vibrating pad or drum type compactor. The Contractor shall fold the geotextile over the top of the filter rock to produce a minimum overlap of twelve (12) inches after compaction of the filter rock. The Contractor shall not leave geotextile exposed more than five (5) days without being covered by backfill.

The Contractor shall remove and replace geotextile that becomes torn or damaged with undamaged geotextile observing the eighteen (18) inch overlap requirement in all directions.

The Contractor shall place perforated pipe with the perforations down. The Contractor shall join the pipe sections securely with the appropriate couplings or bands.

The Contractor shall install nonperforated drain pipe of the type and size specified according to the contract or as ordered.

605.04 Method of Measurement. The Engineer will measure the underdrain by the linear foot. The Engineer will not measure the excavation, crushed rock, geotextile and compaction.

The Engineer will measure the perforated and nonperforated underdrain pipes by the linear foot. The Engineer will measure cleanouts by the unit each.

605.05 Basis of Payment. The Engineer will pay for the accepted quantities of underdrain at the contract unit price per linear foot, complete in place.

The Engineer will pay for the accepted quantities, types, and sizes of perforated and non-perforated pipes at the contract unit price per linear foot.

The Engineer will pay for the accepted quantities of cleanouts at the contract unit price per each in the proposal complete in place.

The Engineer will not pay for the excavation, crushed rock, geotextile and compaction separately. The Engineer will consider them incidental to underdrain. The Engineer will not make separate payment.

The Engineer will make payment under:

Pay Item	Pay Unit
Underdrain	Linear Foot
___ - Inch Perforated Underdrain Pipe	Linear Foot
___ - Inch Nonperforated Underdrain Pipe	Linear Foot
Cleanout	Each