

DRAINFILL

1. **APPLICABILITY**

Construction Specification 24 is applicable to the placing of drainfill in all types of structure drainage systems such as:

- a. Drainage systems installed beneath concrete structures, lining or pavements;
- b. Wall drains for concrete structures;
- c. Embankment drainage systems;
- d. Interceptor drains installed adjacent to structures;
- e. Foundation drains.

2. **MATERIAL SPECIFICATIONS**

Material Specification 521 is complementary to Construction Specification 24.

3. **ITEMS TO BE INCLUDED IN CONTRACT SPECIFICATIONS AND DRAWINGS**

- a. The location, extent, and dimensions of each drain.
- b. The grading limits of each type of drainfill.
- c. The allowable percentage of material (non-plastic) passing No. 200 Sieve.
- d. The source of drainfill materials, when applicable.
- e. Specifications for control of moisture if required. If water is to be added and is to be included in a separate pay item for water, add the statement in Section 9: "Water applied to the drainfill material will be measured and payment will be made as specified in Construction Specification 10, Water for Construction".
- f. Class of compaction. Also specify the weight and number of passes of the compacting equipment required, if more than the minimum amounts specified in Section 6. (Class A provides for control of compaction by minimum density requirements determined by ASTM D698 for fine grain material. Classes I, II and III specify the method of compaction. Relative density tests during construction usually should be made in connection with the method specifications to evaluate the compaction being accomplished and be compared to test data outlined in ASTM D4254. Class I is intended for use where highest densities are required, Class II is intermediate, and Class III may be used for wall drains in uncompacted backfill or for other applications where strength is not important.

Specify in Section 9 the ASTM D698 procedure to be modified to consist of one point value for maximum dry density determined on an oven-dried representative

sample of the drainfill material. The procedure shall be repeated three times to obtain an average value for the one point.

When specifying Class II compaction, note in Section 9 the method (a, b, or c) that applies. Note also if one or more of the methods are to be excluded.

- g. Special requirements for placing drainfill adjacent to new concrete as set forth in Section 4.

4. DISCUSSION OF METHODS

a. Section 2, Materials

- (1) Method 1 is intended for use in specifications for drainage systems in areas where commercial aggregate is available in sufficient quantity to meet project needs.
- (2) Method 2 is intended to be used in specifications for drainage systems in areas where the Contractor will need to process the material from designated sources.

b. Section 8, Measurement and Payment.

- (1) Method 1 is intended for use when for use when quantities are determined from volume measurements and payment is made to the nearest cubic yard.
- (2) Method 2 is intended for use when quantities are determined by weight and payment is by the ton.

When specifications are prepared using electronic procedures and all but one method are deleted for use in a contract specification, delete "All Methods The following provisions apply to all methods of measurement and payment." and left justify the remaining text.