

This specification outlines the requirements for the correction to maximum dry density to take into account aggregate particles larger than 4.77 mm.

PART 1 REFERENCES

This specification refers to the following standards, specifications, or publications:

ASTM International

C127	Standard Test Method for Density, Relative Density (Specific Gravity), and Absorption of Coarse Aggregate
D698	Standard Test Methods for Laboratory Compaction Characteristics of Soil Using Standard Effort (12,400 ft-lbf/ft ³ (600 kN-m/m ³))
D4253	Standard Test Methods for Maximum Index Density and Unit Weight of Soils Using a Vibratory Table

PART 2 GENERAL

2.1 MAXIMUM DRY DENSITY

.1 Maximum dry density to be determined to ASTM D698, Method D with particles exceeding 16 mm removed from sample.

2.2 CORRECTED MAXIMUM DRY DENSITY

.1 Where the in-situ material being tested for compaction contains particles exceeding #4000 sieve, maximum dry density will be corrected using the following equation:

$$D = \frac{D1 \times D2}{F1D2 + F2D1}$$

.2 Where D = corrected maximum dry density kg/m³ for in-situ material being tested.

.1 F1 = fraction (expressed as a decimal) of total field sample passing ASTM 4.75 mm sieve

.2 F2 = fraction (expressed as a decimal) of total field sample retained on ASTM 4.75 mm sieve (equal to 1.00 - F1)

.3 D1 = maximum dry density, kg/m³ of material passing ASTM 4.75 mm sieve in accordance with Method C of ASTM D698.

.4 D_2 = bulk density, kg/m^3 , of material retained on passing 4.75 mm sieve, equal to $1000 \cdot G$ where G is bulk specific gravity (dry basis) of material when tested in accordance with ASTM C127.

.3 For free draining ~~soils and soil~~-aggregate~~s mixtures~~, determine D1 (maximum dry density) to ASTM D4253, dDry Mmethod when directed by Owner.

PART 3 PRODUCTS

3.1 NOT APPLICABLE.

PART 4 EXECUTION

4.1 NOT APPLICABLE

PART 5 PAYMENT

5.1 MEASUREMENT FOR PAYMENT

.1 Not Applicable.

5.2 BASIS OF PAYMENT

.1 No separate or direct payment will be made for work specified in this specification. Costs of all work specified is deemed to be included in the lump sum and unit prices quoted in the MERX Schedule of Quantities and Prices.