

## **PART 1 GENERAL**

### **1.1 REFERENCES**

- .1 American Society for Testing and Materials International (ASTM)
  - .1 ASTM C127-04, Standard Test Method for Density, Relative Density (Specific Gravity) and Absorption of Coarse Aggregate.
  - .2 ASTM D698-00ae1, Standard Test Methods for Laboratory Compaction Characteristics of Soil Using Standard Effort (12,400 ft-lbf/ft<sup>3</sup> (600 kN-m/m<sup>3</sup>).
  - .3 ASTM D1557-02e1, Test Method for Laboratory Compaction Characteristics of Soil Using Modified Effort (56,000 ft-lbf/ft<sup>3</sup> (2,700 kN-m/m<sup>3</sup>).
  - .4 ASTM D4253-00, Standard Test Methods for Maximum Index Density and Unit Weight of Soils Using a Vibratory Table.

### **1.2 DEFINITIONS**

- .1 Corrected maximum dry density is defined as:
  - .1  $D = D1xD2/(F1 \times D2) + (F2 \times D1)$
  - .2  $D = (F1 \times D1) + (0.9 \times D2 \times F2)$
  - .3 Where: D = corrected maximum dry density kg/m<sup>3</sup>.
    - .1 F1 = fraction (decimal) of total field sample passing 19 4.75 mm sieve
    - .2 F2 = fraction (decimal) of total field sample retained on 19 4.75 mm sieve (equal to 1.00 - F1)
    - .3 D1 = maximum dry density, kg/m<sup>3</sup> of material passing 19 4.75 mm sieve determined in accordance with Method A C of ASTM D698 ASTM D1557.
    - .4 D2 = bulk density, kg/m<sup>3</sup>, of material retained on 19 4.75 mm sieve, equal to 1000G where G is bulk specific gravity (dry basis) of material when tested to ASTM C127.
  - .4 For free draining aggregates, determine D1 (maximum dry density) to ASTM D4253 dry method wet method when directed by Departmental Representative.

**END OF SECTION**