CODES & STANDARDS FOR “GEOTECHNICAL INVESTIGATION”

Following are key codes & standards to remember for Civil Estimators to prepare the tender/bid proposal in correct manner.

Codes & Standards are published documents that establish specifications and procedures designed to ensure the reliability of the materials, products, methods, and/or services use in construction industry.

These Codes & Standards also make it easier to understand and compare competing products.

AMERICAN SOCIETY FOR TESTING AND MATERIALS (ASTM)

D422  ;  Standard Test Methods for Particle Size Analysis of Soils
D516  ;  Standard Test Methods for Sulfate Ion in Water
D596  ;  Standard Guide for Reporting Results of Analysis of Water
D698  ;  Standard Test Methods for Laboratory Compaction Characteristics of Soil Using Standard Effort (12,400 ft-lbf/ft³ (600 kN·m/m³))
D854  ;  Standard Test Method for Specific Gravity of Soil Solids by Water Pycnometer
D1140 ;  Standard Test Methods for Amount of Material in Soils Finer than No. 200 (75 μm) Sieve
D1293 ;  Standard Test Methods for pH of Water
D1411 ;  Standard Test Methods for Water-Soluble Chlorides Present as Admixtures in Graded Aggregate Road Mixes
D1556 ;  Standard Test Method for Density and Unit Weight of Soil in Place by Sand-Cone Method
D1557 ;  Standard Test Methods for Laboratory Compaction Characteristics of Soil Using Modified Effort (56,000 ft-lbf/ft³ (2,700 kN·m/m³))
D1586 ;  Standard Test Methods for Penetration Test and Split Barrel Sampling of Soils
D1587 ;  Standard Practice for Thin-Walled Tube Sampling of Soils for Geotechnical Purposes
D1883 ;  Standard Test Methods for CBR (California Bearing Ratio) of Laboratory Compacted Soils
D2113 ;  Standard Practice for Rock Core Drilling and Sampling of Rock for Site Investigation
D2166 ;  Standard Test Method for Unconfined Compressive Strength of Cohesive Soil
D2167 ;  Standard Test Method for Density and Unit Weight of Soil In-Place by the Rubber Balloon Method
D2216  :  Standard Test Method for Laboratory Determination of Water (Moisture) Content of Soil and Rock by Mass
D2434  :  Standard Test Method for Permeability of Granular Soils (Constant Head)
D2487  :  Standard Practice for Classification of Soils for Engineering Purposes (Unified Soil Classification System)
D2488  :  Standard Practice for Description and Identification of Soils (Visual Manual Procedure)
D2850  :  Standard Test Method for Unconsolidated-Undrained Triaxial Compression Test on Cohesive Soils
D3080  :  Standard Test Method for Direct Shear Test of Soils Under Consolidated Drained Conditions
D3370  :  Standard Practices for Sampling Water from Closed Conduits
D3550  :  Standard Practice for Thick Wall, Ring-Lined, Split Barrel, Drive Sampling of Soils
D4220  :  Standard Practices for Preserving and Transporting Soil Samples
D4318  :  Standard Test Methods for Liquid Limit, Plastic Limit, and Plasticity Index of Soils
D4373  :  Standard Test Methods for Rapid Determination of Carbonate Content of Soils
D4542  :  Standard Test Methods for Pore Water Extraction and Determination of the Soluble Salt Content of Soils by Refractometer
D4767  :  Standard Test Method for Consolidated Undrained Triaxial Compression Test for Cohesive Soils
D4829  :  Standard Test Methods for Expansion Index of Soils
D4253  :  Standard Test Methods for Maximum Index Density and Unit Weight of Soils Using a Vibratory Table
D4254  :  Standard Test Methods for Minimum Index Density and Unit Weight of Soils and Calculation of Relative Density
D4546  :  Standard Test Methods for One-Dimensional Swell or Settlement Potential of Cohesive Soils
D5434  :  Standard Guide for Field Logging of Subsurface Explorations of Soil and Rock
D5778  :  Standard Test Method for Electronic Friction Cone and Piezocone Penetration Testing of Soils
G57   :  Standard Test Methods for Field Measurement of Soil Resistivity Using the Wenner Four Electrode Method

BRITISH STANDARDS INSTITUTION (BSI)
BS 5930  :  Code of Practice for Site Investigations
BS 1377  :  Methods of Test for Soils for Civil Engineering Purposes
BS EN ISO 9001  :  Quality Management Systems-Requirements
BS EN ISO 9004  :  Quality Management Systems-Guidelines for Performance Improvement

AMERICAN SOCIETY of CIVIL ENGINEERS (ASCE)
ASCE 7  :  Minimum Design Loads for Buildings and Other Structures

INTERNATIONAL CODE COUNCIL (ICC)
IBC  :  International Building Code