

## SOIL TESTING

- Atterberg Limits ASTM D4318; AASHTO T89/T90
- California Bearing Ratio (CBR) ASTM D1883; AASHTO T193
- Constant Head Permeability of Granular Soils ASTM D2434
- Consolidation ASTM D2435; AASHTO T216
- Collapse Potential of Soils ASTM D5333
- Direct Shear (3 points) ASTM D3080; AASHTO T236
- Residual Direct Shear
- Expansion Index UBC 29-2, ASTM D4829; AASHTO T258
- Flexible Wall Permeability ASTM D5084
- Moisture Content ASTM D2216; AASHTO T265
- Moisture Content and Dry Density
- Moisture Density Relationship - Modified ASTM D1557; AASHTO T180
- Moisture Density Relationship - Standard ASTM D698; AASHTO T99
- No. 200 Wash ASTM D1140
- Organic Content ASTM D2974; AASHTO T267
- Particle Size Analysis of Soil ASTM D422
- pH CalTrans 643; AASHTO T289
- Resistance R-Value ASTM D2844; AASHTO T190
- Resistivity – Minimum CalTrans 643; AASHTO T288
- Specific Gravity of Soil ASTM D854; AASHTO T100
- Swell or Settlement (One-Dimensional) Potential of Soils ASTM D4546
- Triaxial Compression Test AASHTO T296  
UU—ASTM D2850  
CU—ASTM D4767
- Unconfined Compression of Rock Cores ASTM D4543/D7012 Method C
- Unconfined Compression of Soil ASTM D2166; AASHTO T208

## AGGREGATE TESTING

- Clay Lumps & Friable Particles ASTM C142; AASHTO T112
- Elongated Materials ODOT TM229; ASTM D4791
- Fractured Faces ASTM D5821
- L.A. Abrasion ASTM C131/C535; AASHTO T96
- Lightweight Pieces ASTM C123; AASHTO T113
- Moisture Density Relationship - Standard ASTM D698; AASHTO T99
- Moisture Density Relationship - Modified ASTM D1557; AASHTO T180
- No. 200 Wash ASTM C117; AASHTO T11
- Oregon Air Degradation; ODOT TM 08

- Organic Impurities ASTM C40
- Sand Equivalent ASTM D2419; AASHTO T176
- Sieve Analysis ASTM C136; AASHTO T27
- Sieve Analysis Combined with No. 200 Wash ASTM C136/C117; AASHTO T27/T11
- Soundness - Magnesium or Sodium ASTM C88; AASHTO T104
- Specific Gravity and Absorption Coarse Aggregate ASTM C127; AASHTO T85
- Specific Gravity and Absorption Fine Aggregate ASTM C128; AASHTO T84
- Unit Weight and Voids in Aggregate ASTM C29; AASHTO T19

## CONCRETE TESTING

- Concrete or Grout Mix Design
- Compression Test, 6" x 12" Cylinder ASTM C39; AASHTO T22
- Compression Test, Core ASTM C42; AASHTO T24
- Compression Test, Grout Prism ASTM C1019; UBC 21-18
- Compression Test, Mortar Cube or 2" x 4" Cylinder ASTM C109/C780; UBC 21-15 or 21-16; AASHTO T106
- Compressive Strength of Masonry Block ASTM C90; UBC 21-4
- Compressive Strength of Masonry Prism – Grouted or Ungouted ASTM C1314; UBC 21-17
- Density, Absorption, and Voids in Hardened Concrete ASTM C642
- Flexural Test, 6" x 6" x 22" ASTM C78; AASHTO T97
- Moisture Content, Unit Weight, Percent Net Area & Absorption of Masonry Block ASTM C140
- Split Tensile Testing of Concrete ASTM C496
- Potential Alkali Reactivity of Aggregates (Mortar-Bar Method) ASTM C1260/C1567

## ASPHALTIC CONCRETE TESTING

- Asphaltic Concrete Mix Design (Superpave and Marshall)
- Asphaltic Concrete Mix Design Verification (Superpave and Marshall)
- Core Density and Thickness ASTM D2726/D1188
- Theoretical Maximum Specific Gravity ASTM D2041; AASHTO T209
- Oil Content/Gradation Ignition ASTM D6307; AASHTO T308
- Oil Content Calibration Ignition ASTM D6307; ODOT TM323
- Softening Point of Bitumen (Ring-and-Ball) ASTM D36

## SPRAYED APPLIED FIREPROOFING

- Thickness and Density