# Subject Index

## A

Aeolinite, 156 Appalachians, 163 ASTM standards, 149 D 698, 93, 173 D 1557, 173, 197, 209

# B

Bentonite, sand liner, 243 Bermuda sports center, 156 Boreholes, 156 Building pads, 163 Bureau of Reclamation, 39, 126

## С

Calcite cement, 156 Calcium carbonate, 229 Calibration, nuclear gauge, 3 California, cut and fill, 197 Canyon fills, deep, 197 Cement, calcite, 156 Centrifuge tests, 173 China, highway embankment compaction/performance, 173 Chromium, 243 Clavs dry density and hydraulic conductivity, 229 liners, 254 Clod test, 72 Coal mine workings, 149 Commercial developments, 163 Compaction curve, 113 Compactor, 93 Concrete drilled pier foundations, 149 Construction control, rapid method of, 39 Construction testing, soils containing rock, 185 Cut and fill, 163, 197 differential settlement, 149

# D

Deflectometer, falling weight, 274 Density control, 185 Density curves, dry, 126 Density, dry, 72, 274 Density, dry/hydraulic conductivity, 229 Density, dry/water content combinations, 209 Density, field tests, 58, 72 Density, in place, 39 Density measurement, 3, 290 Density, moisture, 126 Density, relative, 39 Dielectric properties, 290 Drive cylinder density test, 58, 72 Dynaflect, 274 Dynamic compaction, 163

# Е

Earthwork construction control, 39 Earthwork engineering, 137 Embankment compaction/ performance, 173 Energy, compaction, 113 transfer, 93 Erosion, 173 Excavation vs. compacted settlement, 149

# F

Falling weight deflectometer, 274 Family curves, 113 Foundations, differential settlement and, 149 Free swelling capacity, 243

# G

Gauges, nuclear moisture density, 3

### 339

#### Н

Hazardous waste disposal site liners, 243 Heavy metal, 243 Historic perspectives, 137 Hydraulic conductivity, 93, 229, 243, 254 Hydrocompression, 197, 209

### K

Kaolinite, 229

#### L

Landfills, 254 Lead, 243 Limestone, 156, 229 Liners clay, 254 sand-bentonite, 243 Loess embankments, 173

#### Μ

Metal, heavy, 243 Mine spoils, surface, 163 Mine workings, coal, 149 Modulus, 311 Moisture content, 3, 72, 126, 209, 229 compact soils, 290 deep fills, 197 nuclear device, 58 Moisture control, 185 Moisture density, optimum, 126

#### Ν

Natural Resources Conservation Service, 72 TR-26 and TR-27, 185 Nuclear density gauge, 290 Nuclear density test, 58 Nuclear moisture density gauge, 3 Nuclear test, 72

#### 0

Ohio SHRP test road, 274 One-point method, 113 Oven-drying water contents, 58

#### Р

Pavement performance, 274 Penetration testing, 163 Permeability, 243 coefficient of, 229 Playing surfaces, sports, 156 Poisson's ratio, 311 Ponds, storm water, 173 Precompression, 163 Proctor method ASTM D 698, 93, 173 ASTM D 1557, 173, 197, 209 Proctor values, 156

## Q

Quality control testing, 126, 311

#### R

Rammer compactor, 93 Reflectometry, time domain, 290 Residential fills, 209 Road, subgrade modulus variability, 274 Rock particles, oversized, 185 Rubber balloon density test, 72

#### S

Sand/bentonite liner, 243 Sand cone density test, 58, 72, 290 Saturation, 209, 254 Scale dependent hydraulic conductivity, 254 Seismic testing devices, 311 Settlement, excavation vs. compacted earth, 149 Settlement plates, 163 Shell fragments, 156 Shopping center foundation, differential settlement, 149 Silica, amorphous, 229 Soil problems, subsurface, 137 Soil rock fill, 149 Soils, 39, 58, 126 clayey, 229 compaction, subgrade, 274 compaction testing, 185 fine-grained, 113 mechanics, 137 standards for compaction characteristics ASTM D 698, 93, 173 Stability analysis, 173 Stiffness gage, soil, 274 Subgrade modulus, 274 Survey networks, 163

## Т

Terzaghi, Karl, 137 Three-point impact compaction, 39 Time domain reflectometry, 290 Troxler nuclear gauge, 3

### V

Vibrating plate compactor, 93 Vibratory compactors, 156 Vibratory hammer test, 39

## W

Water content, 3, 72, 126, 209, 229 compact soils, 290 nuclear device, 58 nuclear gauges, 3 Wet density, 39 Wetting tests response to, 197, 209

### Z

Zinc, 243