Subject Index

A

AASHTO, 87
Accelerated pavement testing, 121
Aerial photographs, 298
Aluminum access tubes, 223
Arizona, New Waddell Dam, 285
Asphalt pavement, 121
ASTM Provisional Guide, Surface Geophysical Methods, 392
Australian landslide monitoring, 250
Automated dam monitoring, 285
Automated geotechnical instrumentation systems, uses, 36
Axial load, 51

B

Backfilling, 87, 382
culvert and soil behavior during, 66
pipe behavior during, 101
Backscatter, 135
Balfour Beatty Amec Joint Venture, 404
Bentonite, 148
Boston, Central Artery/Tunnel Project, 319, 360

C

Calibration curves, nuclear depth gauges, 223
Calibration, nuclear density gauges, 135
Central Artery/Tunnel Project, Boston, 319, 360
Clay deposits, water content and density measurement, 223
COM624P, 3
Compaction testing, 382
Computer Advisor for Organic Soil Projects (CAOSP), 333
Concrete box culverts, 87
Concrete, reinforced, 101
arch culvert, 66
Conductivity probe, landfill frost penetration measurement, 191
Contouring, 360
Coordinate information, site, 307
Cost factors, electronic monitoring for geotechnical instrumentation, 36
Culvert, earth pressure on measurement, 87
Culvert-soil interaction, 66

D

Dam monitoring, automated, 285
Dam safety data acquisition system, 285
Data management systems, 267, 285, 298, 307
Central Artery/Tunnel Project, Boston, 319, 360
geomatics in, 298
Geosys, 404
organic soil, 333
Deep foundations, 3
Deflectometer, 121
Deformation, 121
behavior, 16
culvert, 66
lateral, 206
Delaware, Cherry Island solid waste site, 175
Density gauge, nuclear, 135, 223, 382
Density, water, measurement, 223
Depth measurement, slurry-supported excavations, 148
Dielectric constant, 267
Dilatometer/cone pressuremeter test, 3
Direct transmission, 135
Drains, vertical, 236
Dredge spoil, landfill construction with, 175
Dynamic replacement, 333

E
Earth pressure on concrete box culverts, 87
Electrical geophysical techniques, 157
Electrical resistivity, 267
Electronic systems, to monitor geotechnical instrumentation, 36
Embarkment, highway, earth pressures on culverts, 87
Embarkment structure, New Waddell Dam, 285

F
Falling weight deflectometer, 121
FEM analysis, 16
Fiber optic cable, 285
Field stress, Montone hill, 16
Finite element analysis, 16, 87
Flood Wall project, Buena Vista, Virginia, 382
FloridaPier, 3
Freezing and thawing, 191, 267
Fresh Kills Landfill, New York, 206
Frost depth, 267
Frost penetration, landfill, 191

G
Geographic information systems, 298, 307
Central Artery/Tunnel Project, Boston, 360
Geogrid, 16
Geomatics, 298
Geomembrane liners, 157
Geophysical methods, selecting, 392
Geosys monitoring system, 404
Geotechnical reading, cost per unit contract, 319
Global positioning satellite, 298
Ground movement, 404
Groundwater, 360, 371
Grouting, 404

H
High density polyethylene, 16, 101
Highway embankments, earth pressures on culverts under, 87
Highway pavement response, 121
Highway, peat and silt compression by, 236
Highway/tunnel project, 319, 360
Hubbardston Landfill, Massachusetts, 191

I
Impact soil tester, 382
Inclinometers, 175, 250 slope, 3
Internet, site and area information, 298
Ion analyzer, 371
Italy, Montone hill slope stabilization, 16

J
Jubilee Line Extension Project, London, 404

L
Landfill monitoring, 157
dredge spoil instrumentation, 175
frost penetration, 191
stability, 206
Landslide
Australia, 250
Montone hill, 16
Large-span culverts, 66
Laser measuring device/culvert wall movement, 66
Lateral load test, 3
Leak detection, 157
Liner leak detection systems, landfill, 157
Liquid settlement gauges, 175
Load, axial, 51
Load simulator, 121
Load testing, culvert behavior monitoring during, 66
Load transfer curves, 3
London, Jubilee Line Extension Project, 404

Madeira Walk, slope stabilization at, 51
Manure mulch, field nitrate leaching test, 371
Marsh, 236
Massachusetts
  Boston Central Artery/Tunnel Project, 319, 360
  Hubbardston landfill, 191
Models and modeling, 307
  rheological, 236
  Winkler, 3
Montone hill slope stabilization, Italy, 16
Montreal's Island, water content and density determination, 223

New Waddell Dam, Arizona, 285
New York, Fresh Kills Landfill, 206
Nitrate leaching, 371
Nuclear density gauge, 135, 223, 382
Nuclear depth gauges, 223

Organic soil, 333

Paper sludge barrier, landfill, 191
Pavement testing, accelerated, 121
Peat, 236
Penetration test, 3

Pier, drilled, 148
Piezometers, 36, 175, 250
Pipe, buried, 101
Pipe-soil interaction, 101
F sore pressure, 206
  water, 250
Poros media, 371
Preload monitoring, 236
Pressure cell, 87, 175
Pressuremeter test, 3
Pressure transducers, 101
Pull-out test, in situ, 16

Refuse fill, 206
Reliability, electronic systems for geotechnical instrumentation, 36
Rheological modeling, 236
Rutting, 121

Sediment slope stabilization, 51
Sediment measurement, slurry-supported excavation, 148
Sensors, spatial location, 307
Settlement
  contour plans, 360
  highway, 236
  landfill, monitoring, 175, 206
  ultimate, 333
Shear movement, subsurface, 250
Silt, organic, 236
Site characterization, 392
Slope inclinometers, 3
Slope reinforcement, 16
Slope stability, 175, 206, 250
Slope stabilization, 16, 51
Sludge barrier, paper, landfill, 191
Slurry-supported excavation, depth and sediment measurement, 148
Slurry trench, 148
Slurry wall, 148
Soil-culvert interaction, 66, 87
Soil density, 101
Soil, electrical properties, 267
Soil-moisture potential, 371
Soil nails, 51
Soil, organic, data management system, 333
Soil-pile interaction, 3
Soil-pipe interaction, 101
Soil resistivity, freezing level prediction, 191
Soil strains, 66, 101
Soil stresses, 66, 101
Soil tester, impact, 382
Spatial location of sensors, 307
Stability monitoring program, landfill, 206
Stabilization
  Maer slope at Madeira Walk, 51
  Montone hill, 16
Steel arch large span culvert, 66
Standards, nuclear density gauges, 135
Steel bars, strain gauged, 51
Steel, corrugated, 101
Strain gauges, 3, 51
Stress, vertical, 87
Subsurface investigations, methods selection for, 392
Surface geophysics, 392

T
Tensiometer, 371
Thawing and freezing, 267
Thermistors, 175, 267
frost penetration measurement, 191
Thermocouples, 267
Time domain reflectometry, 267
Train/ground movement monitoring, 404
Tunnel project, 319, 360, 404

U
U.S. Army Corps of Engineers, Virginia flood wall project, 382
U.S. Bureau of Reclamation, Central Arizona Project, 285
U.S. Census Bureau, 298
U.S. Geographic Survey, 298
Utility trench, 382

V
Virginia Flood Wall project, 382

W
Waste sites
dredge spoil in construction, 175
frost penetration, 91
liner leak detection systems, 157
stability, 206
Water content
clay deposit, measurement, 223
landfill paper sludge barrier, 191
Watermelon, 371
Water pressure, pore, 250
Weight system, two, for depth and sediment measurement, 148
Wire, vibrating, 87