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Nota di contenuto	Geotechnical Problem Solving; Contents; Preface; 1 General Topics; 1.1 How to Use This Book; 1.2 You have to See It to Solve It; 1.3 My Approach to Modern Geotechnical Engineering Practice - An Overview; 1.4 Mistakes or Errors; 2 Geotechnical Topics; 2.1 Soil Classification - Why DoWe Have It?; 2.2 Soil Stresses and Strains; 2.3 Soil Shear Strength; 2.4 Shear Strength Testing - What is Wrong with the Direct Shear Test?; 2.5 What is the Steady State Line?; 2.6 Static Equilibrium and Limit States; 2.7 Unsaturated Soils; 3 Foundations; 3.1 Settlements of Clays; 3.2 Settlements of Sands 3.3 Self-Weight Settlement of Sandy Soils3.4 Bearing Capacity of Shallow Foundations; 3.5 Load Capacity of Deep Foundations; 3.6 Laterally Loaded Piles and Shafts; 4 Retaining Structures - Lateral Loads; 4.1 Lateral Earth Pressure; 4.2 Retaining Walls - Gravity, Cantilevered, MSE, Sheet Piles, and Soldier Piles; 4.3 Tieback Walls; 5 Geotechnical LRFD; 5.1 Reliability, Uncertainty and Geo-Statistics; 5.2 Geotechnical Load and Resistance Factor Design; 5.3 LRFD Spread Footings; 5.4 LRFD Pile Foundations; 5.5 LRFD Drilled-Shaft Foundations; 5.6 LRFD Slope Stability; 6 Closing 6.1 The Big Picture6.2 V and V and Balance; 6.3 The Biggest Problem;

Sommario/riassunto

"Devised with a focus on problem solving, Geotechnical Problem Solving bridges the gap between geotechnical and soil mechanics material covered in university Civil Engineering courses and the advanced topics required for practicing Civil, Structural and Geotechnical engineers. By giving newly qualified engineers the information needed to apply their extensive theoretical knowledge, and informing more established practitioners of the latest developments, this book enables readers to consider how to confidently approach problems having thought through the various options available. Where various competing solutions are proposed, the author systematically leads through each option, weighing up the benefits and drawbacks of each, to ensure the reader can approach and solve real-world problems in a similar manner The scope of material covered includes a range of geotechnical topics, such as soil classification, soil stresses and strength and soil self-weight settlement. Shallow and deep foundations are analyzed, including special articles on laterally loaded piles, retaining structures including MSE and Tieback walls, slope and trench stability for natural, cut and fill slopes, geotechnical uncertainty, and geotechnical LRFD (Load and Resistance Factor Design)"--