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Nota di contenuto	Machine generated contents note: Preface Chapter 1. Introduction 1.1 Purpose 1.2 Organization 1.3 Terminology Chapter 2. Nature of Expansive Soils 2.1 Microscale Aspects of Expansive Soil Behavior 2.2 Macroscale Aspects of Expansive Soil Behavior 2.3 Identification of Expansive Soils 2.4 Characteristics of Expansive Soil Profiles Chapter 3. Site Investigation 3.1 Program of Exploration 3.2 Forensic Investigation Chapter 4. Soil Suction 4.1 Soil Suction Components 4.2 Soil Water Characteristic Curve 4.3 Measurement of Matric Suction 4.4 Measurement of Osmotic Suction 4.5 Measurement of Total Suction Chapter 5. State of Stress and Constitutive Relationships 5.1 State of Stress and Stress State Variables 5.2 Stress-Volume Relationships 5.3 Stress-Water Relationships Chapter 6. Oedometer Testing 6.1 Consolidation-Swell and Constant Volume Tests 6.2 Correction of Oedometer Test Data 6.3 Relationship Between CS and CV Swelling Pressures (The "m Method") 6.4 Factors Influencing Oedometer Test Results Chapter 7. Water Migration in Expansive Soils 7.1 Water Flow in Unsaturated Soils 7.2 Depth and Degree of Wetting 7.3 Determination

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Sommario/riassunto

"Your guide to the design and construction of foundations on expansive soils Foundation Engineering for Expansive Soils fills a significant gap in the current literature by presenting coverage of the design and construction of foundations for expansive soils. Written by an expert author team with nearly 70 years of combined industry experience, this important new work is the only modern guide to the subject, describing proven methods for identifying and analyzing expansive soils and developing foundation designs appropriate for specific locations. Expansive soils are found worldwide and are the leading cause of damage to structural roads. The primary problem that arises with regard to expansive soils is that deformations are significantly greater than in non-expansive soils and the size and direction of the deformations are difficult to predict. Now, Foundation Engineering for Expansive Soils gives engineers and contractors coverage of this subject from a design perspective, rather than a theoretical one. Plus, they'll have access to case studies covering the design and construction of foundations on expansive salts from both commercial and residential projects. Provides a succinct introduction to the basics of expansive soils and their threats Includes information on both shallow and deep foundation design Profiles soil remediation techniques, backed-up with numerous case studies Covers the most commonly used laboratory tests and site investigation techniques used for establishing the physical properties of expansive soils If you're a practicing civil engineer, geotechnical engineer or contractor, geologist, structural engineer, or an upper-level undergraduate or graduate student of one of these disciplines, Foundation Engineering for Expansive Soils is a must-have addition to your library of resources"--

"Provides a succinct introduction to the basics of expansive soils and their threats; includes information on both shallow and deep foundation design; profiles soil remediation techniques, backed-up with numerous case studies; and covers the most commonly used laboratory tests and site investigation techniques used for establishing the physical properties of expansive soils"--
