

# Soils, Earthwork, and Foundations

**A Practical Approach | *Based on 2015 IRC® and IBC®***

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Soils, Earthwork, and Foundations:  
A Practical Approach  
Third Edition

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## ***PREFACE to the 3<sup>rd</sup> EDITION***

The subjects in this book (and previous editions) provide insights into the design, plan review, construction, and inspection of soils, earthwork, and foundations. This book is intended to fill a void in technical publishing that has long existed between textbooks intended for use by professional engineers and knowledge gained by experience and on the job training that has been the traditional training ground for inspectors, construction personnel, and technicians. The contents are based on sound principles and up-to-date technology sharpened by the authors' extensive construction exposure and forensic studies of failures. The first and second editions contained frequent references and coordination with the applicable chapters of the 2006 *International Residential Code*<sup>®</sup> and 2006 *International Building Code*<sup>®</sup> and 2012 *International Residential Code*<sup>®</sup> and 2012 *International Building Code*<sup>®</sup> respectively. This edition makes similar references to the 2015 *International Residential Code*<sup>®</sup> (IRC<sup>®</sup>) and the 2015 *International Building Code*<sup>®</sup> (IBC<sup>®</sup>). This is a unique feature rarely found in any similar textbook on the subject.

Studying the book will not make the reader an expert professional but will permit the reader to better communicate with geotechnical and structural professionals and will benefit those who do code enforcement, plan reviews, construction inspections, laboratory testing, and construction related to foundations and earthwork. Architects and engineers will also benefit from the information on design and field applications. Engineering students and graduate engineers who are starting to work as professionals will find it helpful in bringing together coursework topics and practical applications. This book will also benefit those who plan to participate in a certification exam on the subject of soils, earthwork, grading, and foundations through gained knowledge on the most important issues relevant to the subjects.

While it is labeled a practical book, many of the topics are not thoroughly understood by all practicing engineers. One difficulty is that geotechnical engineers understand their discipline very well but may not always be familiar with the work of structural engineers; the opposite is also true. Due to the interaction between the soil and foundations, some crossover knowledge between the geotechnical and structural disciplines is important. The authors hope that this book will help bridge that gap.

Test questions are included at the end of each chapter to evaluate the reader's understanding of the presented concepts. An answer key follows the Glossary.

## ***ABOUT THE AUTHORS***

Kirby T. Meyer was a Professional Engineer licensed in Texas and Colorado who had a bachelor's and master's degree in civil and geotechnical engineering from Texas A&M University and studied at Harvard and the University of Texas at Austin, concentrating in geotechnical and foundation engineering. He had over 40 years of experience in the subject of this book and was a Fellow of the American Society of Civil Engineers and a Diplomate of the Academy of Geo-Professionals.

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