SEVENTH EDITION

SOILS AND FOUNDATIONS

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Preface

We have attempted to prepare an introductory, practical textbook for soil mechanics and foundations, which emphasizes design and practical applications that are supported by basic theory. Written in a simple and direct style that should make it very easy to read and understand the subject matter, this book contains an abundance of both example problems within each chapter and work problems at the end of each chapter. In addition, there are ample diagrams, charts, and illustrations throughout to help better explain the subject matter. In summary, we have tried to extract the salient and essential aspects of soils and foundations and to present them in a simple and straightforward manner.

The preceding paragraph, slightly modified, began the preface of the first six editions of *Soils and Foundations,* and we think that it aptly relates our basic philosophy in preparing the seventh edition. We have, however, deleted some outdated material, updated material where applicable, and added new and essential material to the seventh edition. We believe the result is a much stronger, more comprehensive, and therefore better book.

We urge students using this book to review each illustration as it is cited and to study each example problem very carefully. Believing that example problems are an extremely effective means of learning a subject such as soils and foundations, we have included an abundance of these problems, and we believe that they will be very useful in mastering the material in the book.

We want to express our sincere appreciation to Carlos G. Bell, formerly of The University of North Carolina at Charlotte, and to W. Kenneth Humphries, former Dean of Engineering at the University of South Carolina, who read our original manuscript and offered many helpful suggestions. Also, we would like to acknowledge the late Donald Steila of the Department of Geography and Earth Science at The University of North Carolina at Charlotte, who reviewed Chapter 1. We also thank Alan Stadler, formerly of the Department of Civil Engineering at The University of North Carolina at Charlotte, for reviewing the material on soil stabilization in Chapter 4. Finally, we thank the other reviewers of this edition for their helpful comments and suggestions: M. Sherif Aggour, University of Maryland, College Park; Mir M. Ali, University Of Illinois at Urbana–Champaign; Richard Eckstrom, Technical College of the Lowcountry; Mousa T. Gargari, University of Cincinnati; Timothy W. Jessup, Horry-Georgetown Technical College; and Zhaohui Yang, Ph.D., University of Alaska, Anchorage.

Incidentally, several users and reviewers of our book have suggested that we move Chapter 3 on soil exploration to follow Chapter 8 on shear strength of soil. The reason for the shift was to delay covering soil exploration until after more theory was covered. (In other words, we need to know what we are looking for before

we go looking for it.) We thought that was a good suggestion and planned on making the change. However, we soon realized that there are some cases in the intervening chapters where material covered in Chapter 3 is prerequisite. Hence, we decided not to make this change. The user may elect to delay fully covering Chapter 3 until after covering Chapter 8 while covering small parts of Chapter 3 as needed.

We hope that you will enjoy using the book. We would be pleased to receive your comments, suggestions, and/or criticisms.

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SUPPLEMENTS

To access supplementary materials online, instructors need to request an instructor access code. Go to **www.prenhall.com,** click the **Instructor Resource Center** link, an then click **Register Today** for an instructor access code. Within 48 hours after registering you will receive a confirming e-mail including an instructor access code. Once you have received your code, go to the site and log on for full instructions on downloading the materials you wish to use.