

DETECTION OF AND CONSTRUCTION AT THE SOIL/ROCK INTERFACE

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PREFACE

The problem of defining just what rock actually is, and then building on this material, has increasing importance in civil engineering construction. Economic considerations play the major role. Costs are based on what a contractor is excavating: is it soil or rock? Often this is a matter of equipment. One contractor with a D10 dozer and ripper treats the material as soil, while his under-powered competitor must blast.

The definition of soil/rock also is a problem as conditions change. Litigation due to changing conditions is now commonplace. In fact, the Association of Drilled Shaft Contractors (ADSC) is so concerned with this issue that it sponsors numerous roundtable discussions and seminars on the topic.

This publication contains a collection of case studies describing the problems associated with defining, and constructing on, the soil/rock boundary. It begins with an attempt to develop a working definition of rock, follows this with numerous case studies, and then looks at attempts to define it contractually and in the laboratory.

This symposium was sponsored by the Rock Mechanics Committee, Geotechnical Division of the ASCE. It is the current practice of the Geotechnical Engineering Division that each paper published in a special publication be reviewed for its content and quality. These special publications are intended to reinforce the programs presented at convention sessions or specialty conferences, and to contain papers that are timely or controversial to some extent. Ordinarily the reviews are carried out within a three-month period. The standards of review are essentially those for the ASCE Journal of Geotechnical Engineering, but the exigencies of timeliness and the need to have the publication available at the convention preclude more than one cycle of editing and revision. Therefore, it should be recognized that there are some differences in purpose between contributions to the special publications and those in the Journal. All papers are eligible for ASCE awards as well as formal discussion in the Journal of Geotechnical Engineering.

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