

## INTRODUCTION

This manual is intended primarily as a resource for entry level geotechnical engineers. It may serve more experienced engineers as a checklist and convenient source of references for geotechnical studies. It may also prove useful in communications with clients and potential clients on the appropriate scope of geotechnical studies.

The focus of the manual is building and transportation projects. Dams and levees are included less extensively because of the greater degree of specialization involved in those projects.

The section entitled Classical References discusses various project types and provides references for each of these. The remainder of manual is divided into topics covering the pervasive issues for geotechnical site and soil characterization. These divisions and an explanation of their scope are given below.

- **BENEFITS OF THOROUGH SITE CHARACTERIZATION** discusses communicating the benefits of thorough site characterization with clients and the risk of inadequate site characterization.
- **SITE CHARACTERIZATION PROCEDURES** discusses desk studies and field studies used to characterize sites, as well as the benefits of thorough site characterization.
- **SOIL CHARACTERIZATION** discusses laboratory testing and correlations used to determine the characteristics of soils, as well as the essential content of soil descriptions.
- **HAZARDS ASSOCIATED WITH VARIOUS SOIL TYPES** discusses particular geotechnical hazards associated with various soil types.
- **CONSTRUCTION CONSIDERATIONS** discusses the importance of constructability and the impacts of various construction activities.
- **CONTRACTS FOR GEOTECHNICAL SERVICES** discusses reducing risk through properly written contracts.
- **INSTRUMENTATION AND PERFORMANCE MONITORING** discusses the importance of monitoring performance and applicable equipment.

## ORGANIZATION OF THIS MANUAL

This manual provides an expanded checklist of topics that are important in soil and site characterization, and references to useful information on these topics. The cited sources include specific page numbers, making it possible for the reader to locate the relevant information quickly and efficiently.