

TABLE OF CONTENTS

	<u>Page No.</u>
INTRODUCTION	1
CHARACTERISTICS AND CRITICAL ASPECTS OF VARIOUS TYPES OF SLOPE STABILITY PROBLEMS	2
Cohesionless Fills Built on Firm Soil or Rock	2
Cohesive Fills Built on Firm Soil or Rock Fills Built on Soft Subsoils	2
Excavation Slopes	4
Natural Slopes	12
Slopes in Soils Presenting Special Problems	17
(1) Stiff-fissured clays and shales	17
(2) Loess	17
(3) Residual soils	18
(4) Highly sensitive clays	18
PROCEDURES FOR INVESTIGATION AND DESIGN OF SLOPES	19
Field Observations	19
Stability Chart Solutions	20
Detailed Analysis	22
GEOLOGIC STUDIES AND SITE INVESTIGATION PROCEDURES	23
SLOPE STABILITY CHARTS	25
Charts for Slopes in Soils with Uniform Strength throughout the Depth of the Soil Layer, and $\phi = 0$	25
Charts for Slopes in Uniform Soils with $\phi > 0$	35
Slope Stability Charts for Infinite Slopes	41
Charts for Slopes in Soils with Strength Increasing with Depth, and $\phi = 0$	45

	<u>Page No.</u>
DETAILED ANALYSES OF SLOPE STABILITY	47
Method of Moments for $\phi = 0$ Soils	47
Ordinary Method of Slices or Fellinius Method for Soils with $\phi = 0$ or $\phi > 0$.	50
Wedge Method for Soils with $\phi = 0$ or $\phi > 0$	53
MINIMUM FACTOR OF SAFETY	70
Locating the Critical Circle	70
Locating the Critical Wedge Mechanism	74
Sources of Inaccuracy in Calculated Factors of Safety	74
Minimum Recommended Values of Safety Factor	74
STABILIZATION OF SLOPES AND LANDSLIDES	77
REFERENCES	80