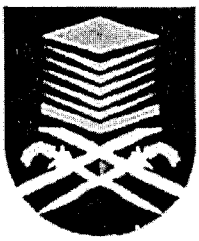
MODELING OF EMBANKMENT ON SOFT SOILS USING NUMERICAL ANALYSIS WITH VARIOUS SOIL MODELS



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Tarikh : 10 Februari 2004

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Rohamezan Rohim
Pensyarah
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Tuan/Puan/Prof.Madya,

KELULUSAN PERMOHONAN UNTUK MENJALANKAN PROJEK PENYELIDIKAN

Perkara di atas adalah dirujuk.

Sukacita dimaklumkan permohonan tuan/puan/Prof.Madya untuk menjalankan penyelidikan telah diluluskan dalam Mesyuarat Jawatankuasa Teknikal Unit Penyelidikan, Pembangunan dan Pengkomersilan Universiti Teknologi MARA (UiTM) Cawangan Pulau Pinang yang telah diadakan pada 7 Januari 2004.

Butiran permohonan yang diluluskan adalah seperti berikut:

Nama Ketua Projek	:	Rohamezan Rohim
Tajuk Penyelidikan	:	Modelling of embankment on soft soils using Numerical Analysis with various soil models
Keputusan	:	Diluluskan dengan peruntukkan RM 20,000.00
Tempoh	:	Februari 2004 – Januari 2005

Berikut disertakan dokumen-dokumen untuk panduan dan tindakan pihak tuan/puan/Prof.Madya selanjutnya.

1. Perjanjian bagi menjalankan Projek Penyelidikan, sila isi dan kembalikan kepada pihak kami untuk ditandatangani oleh pihak seterusnya.

2. Borang laporan kemajuan yang perlu dikemukakan kepada pihak kami setiap empat (4) bulan..

Date : 5 October 2005
Project File No : 600-BRC/ST.5/3/693

The Director
Institute of Research, Development
And Commercialisation (IRDC)
Universiti Teknologi Mara
40450 Shah Alam
Selangor Darul Ehsan.

SUBMISSION OF FINAL RESEARCH REPORT: MODELING OF EMBANKMENT ON SOFT SOILS USING NUMERICAL ANALYSIS WITH VARIOUS SOIL MODELS

The above matter is referred

Herewith, I submit three(3) copies of final research report entitled "Modeling Of Embankment On Soft Soils Using Numerical Analysis With Various Soil Models" for your attention.

Thank you,

Your faithfully,

ROHAMEZAN ROHIM
Project Leader.

TABLE OF CONTENTS

MODELLING OF EMBANKMENT ON SOFT SOILS USING NUMERICAL ANALYSIS WITH VARIOUS SOIL MODELS

ABSTRACT

Numerical analysis used in engineering field has enhanced the performance of the work effort. By using the latest technology such as PLAXIS (Finite Element Code For Soil And Rock Analyses) it help engineers to predict what will happen to the soils (especially soft soil) in future. Even it also can see what really happen in the past, why the soil fail after construction. In this study, the failure of the embankment after being construct on the soft soil has trigger the big problem. The soil failed during the construction stage and it is found that the fill used is not suit able added to the unpredictable strength of the ground soil. The study tried to simulated the behaviour of the embankment on the soft soil by lied the fill layer at five stages of construction. This is equivalent to the total 45 days work expected to being carried out by the contractor. In actual case the embankment seem to fail during the construction . Mohr Coulomb model, Soft Soil Model and Soft Soil Creep Model has been used to simulated the behaviour of the failure embankment. It is found that in certain cases Mohr Coulomb agreed with the result produce by the contractor.