شبكة المعلومات الجامعية

بسم الله الرحمن الرحيم

شبكة المعلومات الجامعية

التوثيق الالكتروني والميكروفيلم

شبكة المعلومات الجامعية

جامعة عين شمس

التوثيق الالكتروني والميكروفيلم

قسم

نقسم بالله العظيم أن المادة التي تم توثيقها وتسجيلها
علي هذه الأفلام قد أعدت دون أية تغيرات

يجب أن

تحفظ هذه الأفلام بعيدا عن الغبار

في درجة حرارة من ١٥-٢٥ مئوية ورطوبة نسبية من ٢٠-٤٠%

To be Kept away from Dust in Dry Cool place of 15-25- c and relative humidity 20-40%

بعض الوثائق الاصلية تالفة

بالرسالة صفحات لم ترد بالاصل

Tanta University
Faculty of Engineering
Structural Engineering Department

LOAD TRANSFER OF PILES IN SAND ADJACENT TO A SLOPE

A THESIS

Submitted in the Fulfillment of the Ph.D. Degree of
Civil Engineering - Structural Engineering

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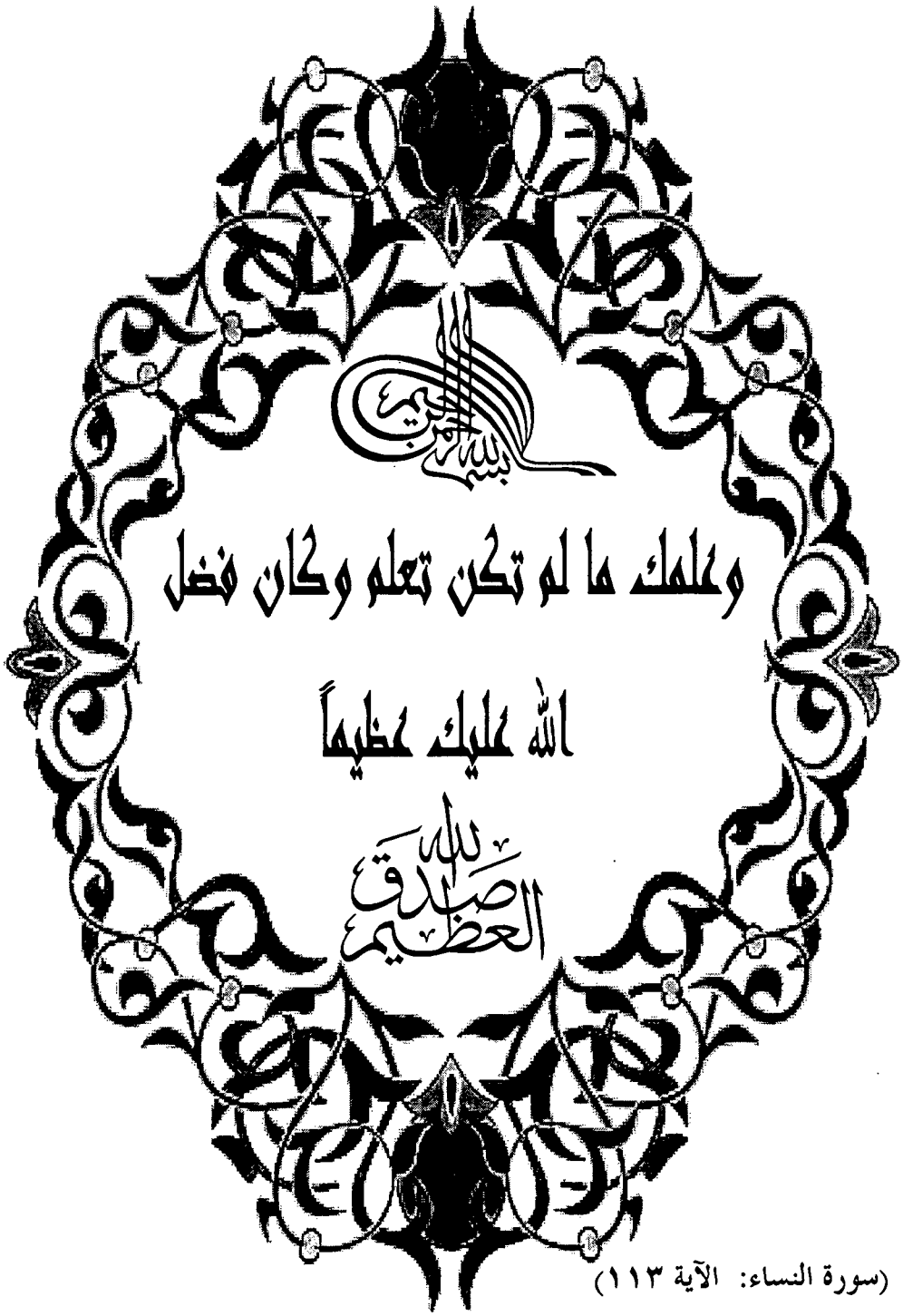
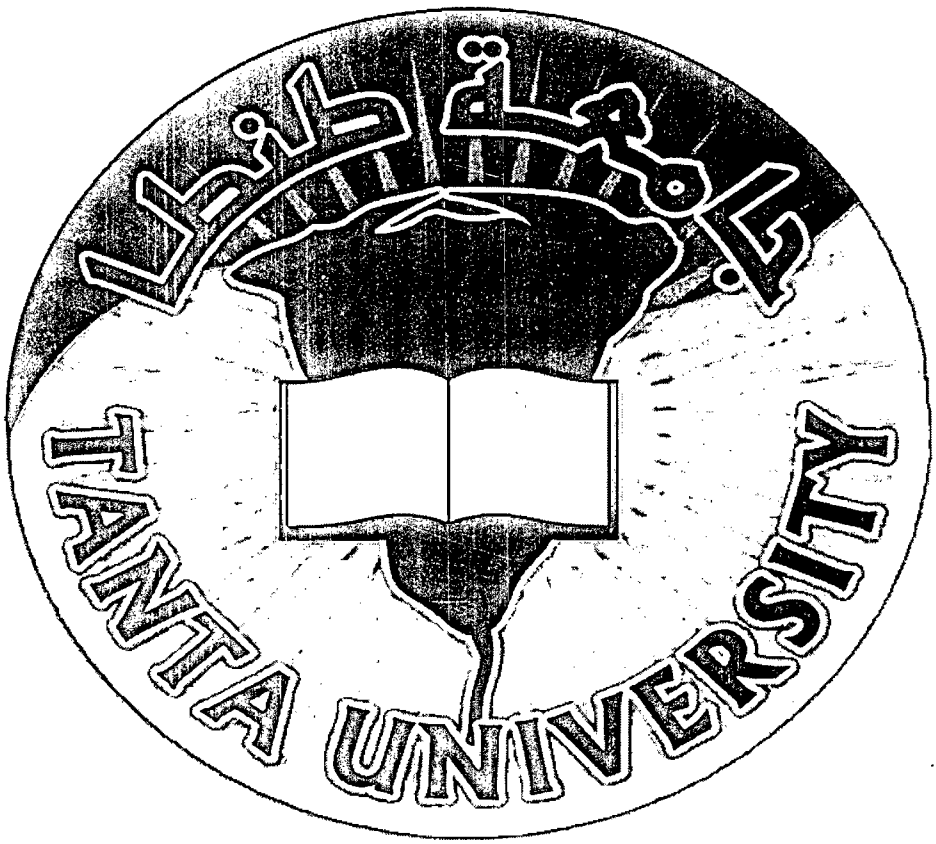
Tanta, 2007



(سورة النساء: الآية ١١٣)



To

My Parents,

Wife, Son, and daughter.

An experimental testing program was designed to study the behavior of a laterally loaded single pile and pile groups adjacent to ground slope. The effect of the ground slope adjacent to the pile was studied by different factors such as the distance of the pile head from the crest of the slope, the slope gradient, and the length to the diameter ratio of the pile. Piles were tested at different sand densities and ground slopes. Improving the lateral response for piles adjacent to ground slope is described by three basic methods: pile head enlargement, compaction of top layer, and using batter piles. Also, tests were conducted on fixed head 2x1 and 2x3 pile groups at three diameter (3D) spacing. The effect of piles arrangement in the group are studied. A three-dimensional elasto-plastic theoretical model based on COSMOS/M finite elements program code (Ver: 2.6, 2000) is proposed to study the problem. Statistic study for the results of the research was achieved by using statistical software called (SPSS).

Keywords:

Laterally loaded piles, Sand, ground slope, Experimental modeling, Theoretical model, Pile-Head enlargement, Layered sand, batter piles, Pile groups.

ACKNOWLEDGEMENTS