DEVELOP TIME DISTRIBUTION PATTERN OF DESIGN RAINFALL IN SELANGOR

By

IZWAN BIN IDRIS

Report is submitted as
the requirement for the degree of
Bachelor Engineering (Hons) (Civil)

UNIVERSITI TEKNOLOGI MARA

APRIL 2007

DECLARATION BY THE CANDIDATE

I Izwan bin Idris, 2004105502 confirm that the work is my own and that appropriate credit has been given where reference has been made to the work of others.

Signature: _____
Date: 11 May 2007

DECLARATION BY THE SUPERVISOR

I confirm that I have read and checked this report and to my opinion the report is suitable in terms of scope and quality required for awarding the Bachelor of Civil Engineering (Hons).

Signature: _____
Supervisor: _____
Date: _____

ABSTRACT

The purpose of this study is to develop the time distribution pattern of design rainfall in Selangor which is more specific in Hulu Langat area. Time distribution or also known as temporal patterns of design rainfall are based on the storm duration which shows the fraction of rainfall to specified time interval. This pattern was used as a guide in design and construction of structure or system that related to hydrology and hydraulic area. In Malaysia, the existing temporal pattern was developed by Drainage and Irrigation Department of Malaysia. It covers nine years rainfall data from July 1970 to June 1979 involving nine rainfall stations located at different part of Peninsular Malaysia which are divided into part of Peninsular Malaysia, West Coast and East Coast. The existing temporal pattern had been used for almost 25 years since its last update on 1982. Therefore, it is necessary to produce the updated pattern which is more appropriate and specific on one area. Method of average variability has been used in the analysis process to develop the temporal pattern. The results of this study are considered more appropriate since it was derived using longer rainfall data which is 11 years compared to 9 years of the existing pattern and more specific compared to the whole Peninsular Malaysia.

TABLE OF CONTENTS