A STUDY ON THE EFFECTIVENESS OF SPEED HUMP AS A SPEED REDUCER IN RESIDENTIAL AREA

By

MOHD ZULKARNAIN ABDUL MANAN

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

UNIVERSITI TEKNOLOGI MARA OCTOBER 2004

DECLARATION

I (Mohd Zulkarnain Bin Abdul Manan, 2000135713) confirm that the work is my own and that appropriate credit has been given where reference has been made to the work of others.

29 October 2004

ACKNOWLEDGEMENT

First of all with the name of Allah S.W.T the most gracious and merciful and to our prophet Nabi Muhammad S.A.W. Thanks to Allah S.W.T for giving me opportunity to complete this research successfully.

I would like to express my sincere gratitude to all individual and a group that help me an in preparing my research proposal, especially to Mr. Muhammad Akram Adnan the lecturer of Highway Engineering and also my supervisor, for his personal and technical guidance, advice, support and encouragement provided throughout this study.

I would like to express our deep sense of gratitude and appreciation to my coordinator final year project, Madam Clotilda Petrus, for the consistent help and guidance as well as prevision of their valuable time, encourage and patient during the period to complete this final year project. I'm very grateful to them and will never forget for everything what they have done to us. Only Allah S.W.T could pay back their kindness and we will appreciate it till the rest of our life.

I would like to thank to Mr Fauzan Jali who is the laboratory technician for his cooperation. I also would like to thank to Mr Mohd Syahrizan Ibrahim, my partner for helping me to get the information about this research and also to my parent and my family.

TABLE OF CONTENT

CHAPTER

.

PAGE

Declaration	
Acknowledgement	i
Table of Content	iii
List of Figures	vii
List of Tables	x
List of Abbreviations	xii
Abstract	xiv
List of Tables	x xii xiv

1.1	Introduction	1
1.2	Background of Traffic Calming	2
1.3	Problem Statement	3
1.4	Objective of the research scope of the study	3
	1.4.1 To study the effectiveness of speed humps	3
	1.4.2 To determine the speed reductions of speed humps	4
	1.4.3 To determine the efficiency of speed humps	4
1.5	Scope Of Study	4
	1.5.1 The Study will carry out on residential area in Seberang	
	Perai area	4
	1.5.2 The study will focus on 5 different locations only	5
	1.5.3 The characteristics of drivers behaviours	5
1.6	Significance of the study	5

ABSTRACT

One of the most important of traffic calming systems is the reduction of traffic speed. Fast driving, inconsiderate towards other road users and selfishness are the root to the occurrence of most road traffic accidents in Malaysia. Many traffic calming devices such as speed humps, speed breaker, textured pavement will increase motorist's awareness and forced them to reduce their vehicular speeds. The popular 3 E's (Engineering, Education and Enforcement) approaches are implemented by the authorities, but the results are much more to be desired. Our local authorities have had experiences on certain traffic calming devices such as speed humps, speed breaker, speed tables, textured pavements, transverse bar and others but no records or studies done on their effectiveness. The speed hump was effective in reducing traffic speeds when the device is properly installed. Speed humps are a geometric roadway design feature with the purpose of slowing traffic in residential area. The speed hump also reduced the number of vehicles exceeding the speed limit in the immediate vicinity of the devices. Speed humps should be placed so that vehicles do not approach at high speeds. Speed humps should not be placed on curves, transit routes, or major emergency response routes. When designed and installed properly, speed humps will reduce vehicle speeds to 24-32 kph at the hump and 40-48 kph between humps in a series.