A STUDY ON THE IMPACT OF ROAD TRAFFIC NOISE ON SCHOOLS IN THE SEBERANG PERAI TENGAH DISTRICT, PULAU PINANG

By

MUHAMMAD AASYIQ TAMIMUDDIN BIN HASHIM

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

UNIVERSITI TEKNOLOGI MARA APRIL 2005

ACKNOWLEDGEMENT

In The Name of Allah, The Most Beneficent and The Most Merciful. All praises to Allah,

God of the universe and peace be upon his messenger.

I would like to give my appreciation to all individual and group that had been helping me in preparing my research project. I am deeply indebted to my supervisor, Puan Satira Binti Hambali as a main advisor and Mr Muhammad Akram B. Adnan as a co-advisor, for his guidance, comments and suggestion during the process of completing this project.

I would also like to extent my appreciation to my family, especially my parents Hashim Mat Isa and Sapiah Awang Teh for their support and understanding, also to Mr Muhammad Fauzan B. Jali my highway and traffic laboratory technician for helping me to prepare on equipment facilities for this research.

Last but not least, I would like to thank to UiTM and all those involved, either directly or indirectly in making this project till success.

Thank You.

TABLE OF CONTENTS

			PAGE
TITI	LE PAC	GE	
DEC	LARA	TION BY CANDIDATE	
ACK	i		
TAB	ii		
LIST	vi		
LIST OF FIGURE			vii
LIST	х		
LIST	xi		
ABSTRACT			xii
CHA	PTER		
1.0	INTRODUCTION		
	1.1	Background	1
	1.2	Objective	6
	1.3	Scope Of Work	7
	1.4	Significant of Research	7
	1.5	Problem statement	8
2.0	LITI	ERATURE REVIEW	
	2.1	Background	9
	2.2	Definition Of Sound	10
	2.3	Noise Pollution	12

ABSTRACT

This study investigates the impact of road traffic noise on schools in the Seberang Perai Tengah (SPT) District, Pulau Pinang. It determines the relationship between road traffic noise and operating speed of vehicles, the relationship between road traffic noise and traffic volume and also to compare the noise exposure level with the World Health Organization (WHO) standard. The field works involved are the determination of the noise level, speed of vehicles, as well as the traffic volume. The result showed that there is no direct relationship between noise level and speed of vehicles and noise level and traffic volume. Noise level is a function of various contributors. This study also showed that the noise exposure level from all the 10 sites exceeded the WHO standard {55 dB (A)}.

Keywords: Road Traffic Noise, Speed of Vehicle, Noise Level, Traffic Volume.

CHAPTER 1

INTRODUCTION

1.1 Background

Seberang Perai Tengah is one of the districts in Pulau Pinang. At present, this district is congested with visitors from local or outside. The growth of development in Pulau Pinang, has more attracted to came into the area. Facilities such as office space, government complexes, school, hospital, business, finance institution, etc all provide attractors to the visitors

From the Jabatan Pengangkutan Jalan (JPJ) vehicle statistics it was found that,
Pulau Pinang has 1,409,780 numbers of registered vehicles. This figure increases
from year to year. It is logical to the level of noise pollution will also increase
because of the additional numbers of vehicle.

The strategic location has make intention to other people to visit this district. Beside that at Seberang Perai Tengah also have shopping complex, shop and the market to buy a product or any goods compare to Seberang Perai Utara and Seberang Perai Selatan. So, the people can get the services and facilities.

When the increasing the numbers of people, so the district needed must be considering. This is to make sure the people are satisfied with the situation at Seberang Perai Tengah. This is because for the visitor leisure when comes to the town.