

DEPARTMENT OF BUILDING SURVEYING
FACULTY OF ARCHITECTURE, PLANNING AND SURVEYING
UNIVERSITI TEKNOLOGI MARA

HIGHWAY FACILITIES FROM USER PERSPECTIVE

*This dissertation submitted in partial fulfillment of the
Requirement for the Bachelor of Building Surveying (Hons.)*

MOHD YUSMAN BIN MOHD YASIN

ACKNOWLEDGEMENT

Alhamdulillah and thanks to God for giving me strength and opportunity to complete this whole dissertation with having much difficulty.

I would like to thank all the people who have been involved directly and indirectly with the preparation of this dissertation.

My deepest gratitude goes to my own supervisor, Prof. Bill Hamilton for his continuous guidance and endless support throughout the study. His valuable help is very much appreciated.

My precious appreciation to my parents, a million thanks to them for their endless encouragement over the years.

Very much appreciation to Training Department, PLUS berhad and Operation Department, KESAS holding Berhad for my case study and any individual contributions.

Last but not least, to all my friends and lecturers greatest appreciation to them all for their continuous help and moral support throughout my studies here at Uitm, Shah Alam, Selangor.

ABSTRACT

Today, facilities are provided on all highways in Malaysia. The purpose of these facilities is to ensure users enjoy a comfortable and convenient journey along highways. Government and parties involved have provided excellent service and facilities along the highway. Constant monitoring of the operations of these facilities are being undertaken to provide quality service to users. That is an important part because they provide value-added services to highway users.

The preparation of this dissertation is to understand the characteristics of highway facilities and understand the user's satisfaction. The dissertation is divided into 6 chapters that cover the development of the study from the background investigation and research to the final conclusions. This dissertation includes summarized conclusions from the research findings of the study and from this conclusion the recommendation will find out for future improvement and planning of facilities on highways.

CONTENT

ACKNOWLEDGEMENT	i
ABSTRACT	ii
LIST OF PICTURES	iii
LIST OF FIGURES	iv
LIST OF TABLES	vi
LIST OF APPENDICS	vii
Chapter1: INTRODUCTION	1-9
1.1 Introduction	
1.2 Issue	
1.3 Objective & purpose	
1.4 Significance of study	
1.5 Methodology	
1.6 Scope of study	
1.7 Limitations of study	
Chapter 2: THEORICAL AND TECHNICAL STUDY	10-31
2.1 Introduction	
2.2 Definition of Highways	
2.3 Definition of Facilities	
2.4 User the Highways	
2.5 Defining User Requirements	
2.6 Facility Planning	
2.6.1 Location of Facilities	
2.6.2 Facilities Preparation Principles	
2.7 Facilities Management	

- 2.8 Definition of Facility Management.**
- 2.9 Objective of Facilities Management.**
- 2.10 Facilities Maintenance Management**
- 2.11 Objective Facilities Maintenance**
- 2.12 Type of facilities maintenance**
- 2.13 Definition of Types of Facility Maintenance**
- 2.14 Facilities maintenance operation**
- 2.15 Conclusion**

Chapter 3: HIGHWAY FACILITIES

32-43

- 3.1 Introduction**
- 3.2 Type of Highway Facilities**
 - 3.2.1 Rest and Service Area
 - 3.2.2 Lay By
 - 3.2.3 Toll Plazas & Customer Service Centre
 - 3.2.4 Motorcycle Shelter & Motorcycle Lane
 - 3.2.5 Emergency phones
 - 3.2.6 Integrated Transport Information System (ITIS)

Chapter 4: CASE STUDY

44-84

- 4.1 Introduction**
- 4.2 Case study 1**
 - 4.2.1 Background
 - 4.2.2 Location
 - 4.2.3 Technical specifications
 - 4.2.4 Highway Management
 - 4.2.5 Facilities at North-South Expressway (NSE)
 - 4.2.5.1 Rest & Service Areas (RSA) / Kawasan Rehat & Rawat
 - 4.2.5.2 Lay By
 - 4.2.5.3 Toll Plazas & Customer Service Centre