



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

FIRE SAFETY AUDIT IN COMMERCIAL BUILDING
IN SHAH ALAM

This academic project is submitted in partial fulfillment of the
requirement for the Bachelor Of Building Surveying (Hons.)

LIANA EZZANA BINTI ZAINAL RASHID

2006699758

APRIL 2009

ACKNOWLEDGEMENT

Upon completion of this dissertation, I would like to express my gratitude to a bunch of people whom with their help, this dissertation had only made possible. A bouquet of appreciation for my supervisor, Sr. Ghazali Bin Mohd Amin who had guided me all the way through the process of completing this with much patience. Additional thanks to the Department of Building Surveying including the lecturers and the staffs, who has helped me either directly or indirectly.

I would as well like to thank the person who had given me the access to the buildings of choice and assisted me during my site visits which are Encik Razi from Plaza Perangsang, Encik Izwan from Wisma PKPS, Encik Fakhirin from Anggerik Mall and Encik Zulhizam from Menara MRCB.

Special thanks to my beloved family and friends for their time, their help and support financially and emotionally. Yet their names are not cited here, they deserve my greatest gratitude.

TABLE OF CONTENT

TITLE	PAGE
ACKNOWLEDGMENT	I
ABSTRACT	II
TABLE OF CONTENT	IV
LIST OF FIGURE	VII
LIST OF TABLE	XI
LIST OF ABBREVIATIONS	XII
CHAPTER 1: INTRODUCTION	
1.0 Introduction	1
1.1 Objective	2
1.2 Scope of study	2
1.3 Research Methodology	3
1.3.1 Methodology Process	4
1.4 Chapter Organization	5
CHAPTER 2: LITERATURE REVIEW	
2.1 Fire	6
2.2 Safety	7
2.3 Fire Safety	7
	IV

2.4 Fire Safety Components	9
2.4.1 Life Safety Facilities	10
2.4.2 Fire Prevention Facilities	12
2.4.3 Fire Protection Facilities	14
2.4.4 Fire Fighting Facilities	16
2.5 Servicing and Maintenance of Fire Protection System	19
2.6 Preventive Maintenance in Fire Protection	39
CHAPTER 3: AUDIT	
3.0 Audit	41
3.1 Fire Safety Audit	42
3.2 Fire Safety Audit Checklist	44
3.3 Adherence to Legislations	44
CHAPTER 4: METHODOLOGY & CASE STUDY	
4.0 Methodology	46
4.1 Literature Review	47
4.2 Case Study	
4.2.1 Plaza Perangsang	48
4.2.2 Wisma PKPS	50
4.2.3 Anggerik Mall	51

CHAPTER 1

INTRODUCTION AND RESEARCH OUTLINE

1.0 Introduction

Fire safety engineers have successfully created and established fire safety systems in buildings. Even though sufficient and high quality systems are installed, failures still occur. In some cases, problems arise because the fire safety systems were not well maintained. This lack of maintenance on fire safety in a building results in fire-fighting equipments not working when it is needed. Not working in this context may as well apply to the fire escape route. Sometimes, the design complies with the regulations but the improper space utilization may cause difficulty for the occupants to escape in fire emergency.

Level of fire safety maintenance depends on its audit. It can be done by the maintenance department of the building and to be checked or reported by the Fire and Rescue Department (Jabatan Bomba). Jabatan Bomba has the guidelines and rules for every type of building to ensure satisfactory fire safety design in a building. And more important is the building's characteristics: its design, organization and fire safety system have an influence on the evacuation outcome. How easily an occupant can find escape routes and understand signs and instructions depend on the way-finding performance of the building.