

HIGHER TECHNICAL INSTITUTE

ELECTRICAL ENGINEERING

DEPARTMENT

DIPLOMA PROJECT

**DESIGN OF THE ELECTRICAL
SERVICES OF A LUXURY HOUSE**

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PROJECT NUMBER: E/1352

ACADEMIC YEAR

2003-2004

HIGHER TECHNICAL INSTITUTE	PROJECT NO 3508
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CONTENTS

	PAGE
ACKNOWLEDGMENT	1
ABSTRACT	2
INTRODUCTION	3
CHAPTER 1 : ILLUMINATION DESIGN	
1.1 Introduction	4
1.2 Rules for energy efficient lighting	4
1.3 Illumination definitions	5
1.4 Methods of illumination calculations	6
1.5 Procedure of the lumen method	6
1.6 Calculations for a typical case	7
1.7 Table with results of illumination	8
CHAPTER 2 : LIGHTING CIRCUIT DESIGN	
2.1 Introduction	10
2.2 Procedure for the circuit design	10
2.3 Calculations of L1 lighting circuit	12
2.4 Table with results of lighting design	16
CHAPTER 3 : SOCKET OUTLETS DESIGN	
3.1 Introduction	17
3.2 Calculations on ring circuit S1	17
3.3 Table with results of sockets design	21
3.4 Residual current device check	21

CHAPTER 4	:	FIXED ELECTRICAL APPLIANCES	
4.1		Water heater	22
4.2		Washing machine	25
4.3		Cooker unit	28
4.4		Refrigerator	32
4.5		Table with results of fixed appliances design	35
CHAPTER 5	:	AIR CONDITION DESIGN	
5.1		Introduction	36
5.2		Calculations for A/Cs	36
5.3		Theoretical calculation	37
5.4		Table with results of A/Cs	42
CHAPTER 6	:	STORAGE HEATERS	
6.1		Introduction	43
6.2		Selection of storage heaters	43
6.3		Calculations for the worst case of a 3.4KW storage heater	44
6.4		Calculations for the worst case of 2.55KW storage heater	47
6.5		Calculations for the worst case of 1.7KW storage heater	50
6.6		Calculations of the supply cables	53
6.7		Single line diagram (DBA)	56
CHAPTER 7	:	ELECTRICAL OPERATION OF A SPRING OPERATED OVERHEAD GARAGE DOOR	
7.1		Introduction	57
7.2		Calculations for the electrically operated garage door	57
CHAPTER 8	:	SWIMMING POOL DESIGN	
8.1		Introduction	61
8.2		Design calculations	62
8.2.1		Filter pump	62
8.2.2		Underwater lights	64
8.2.3		Socket	65
8.2.4		Light	65

8.2.5	Auto cover	65
8.2.6	Ozon	65
8.3	Conclusion	66

CHAPTER 9 : SUPPLY CABLES FROM DBA TO DBB

9.1	Typical calculations	67
-----	----------------------	----

CHAPTER 10 : BONDING AND EARTHING

10.1	Introduction	70
10.2	Main equipotential bonding of metal services	70
10.3	Bonding conductor	70

CHAPTER 11 : SUPPLY CABLES TO THE DISTRIBUTION BOARD & DIVERSITY

11.1	Table with results of diversified current for DBA	72
------	---	----

CHAPTER 12 : SINGLE LINE DIAGRAM OF DBA

CHAPTER 13 : TELEPHONE SYSTEM AND T.V. INSTALLATION DESIGN

13.1	Introduction	79
13.2	Definitions of the terms used	79
13.3	Earthing	81
13.4	Basic principles governing the internal network	82
13.5	Conduits and conduit sizes	83
13.6	Conduit schematic	85
13.7	Wiring schematic	85
13.8	List of connections	86
13.9	T.V. installation design	86

CHAPTER 14 : LIGHTNING PROTECTION SYSTEM

14.1	Introduction	88
14.2	Definitions and abbreviations	88
14.3	Effects of lightning strike	89

14.4	Function of a lightning conductor	90
14.5	Need for protection	90
14.6	Zone of protection	91
14.7	Acceptable risk	91
14.8	Earth termination network	91
14.9	Calculations of overall risk factor	91

CHAPTER 15 : INTRUDER ALARM SYSTEM

15.1	Introduction	93
15.2	The intruder or burglar alarm	93
15.3	Main parts of the intruder system	93
15.4	The detectors	95
15.5	Planning and installation of intruder alarms	96
15.6	Schematic diagram of a wireless security system	96

CHAPTER 16 : FIRE ALARM SYSTEM

16.1	Introduction	97
16.2	Zones of protection	97
16.3	Manual call points	97
16.4	Types of fire detectors	98

CHAPTER 17 : MATERIAL AND LABOUR COSTING

17.1	Introduction	99
17.2	Analytical method	99
17.3	Table showing the analytical method of estimating the cost of materials used in our installations	100

CONCLUSIONS	104
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APPENDICES	105
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DRAWINGS	
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ACKNOWLEDGEMENT

I would like to express my thanks to my project supervisor Mr G. Kourtellis, lecturer of the Electrical Engineering Department of H.T.I., for his guidance and assistance given to me throughout the project period.

ABSTRACT

The purpose of this project is to design all the possible electrical services of a luxury house. It's very important to bare in mind that the design is directly involved with the safety of people, livestock and property.

The project work includes specifications and drawings as well as typical calculations of the design carried out. The whole design must be carried out in accordance to IEE wiring regulations 16th edition.

The design is explained in detail in the main body of the report. At the end of this report there are placed appendices, tables, drawings and other information giving specifications and help with the comprehension of the design.

INTRODUCTION

This project deals with the design of the electrical and telecommunication services of a luxury house.

The report consisted by the following designs:

- Illumination
- Lighting circuits
- Socket outlet circuits
- Fixed appliances
- Air condition and storage heaters
- Bonding and Earthing
- Swimming pool design
- Supply cables to the distribution boards
- Diversity
- Single line diagrams
- Telephone and T.V. distribution
- Lightning protection system
- Fire and intruder alarm systems

After design is completed materials and labour costing must be evaluated.

The supply of the house is three phase 415 V rms, TT earthing system. We have an external earth fault loop impedance (Z_e) of the value 0,5 Ω . EAC conditions of supply and CYTA requirements were used in order to achieve a proper design.