

HIGHER TECHNICAL INSTITUTE
ELECTRICAL ENGINEERING COURSE
DIPLOMA PROJECT

DESIGN OF THE ELECTRICAL SERVICES
OF A MULTISTOREY BUILDING

E. 726

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DESIGN OF THE ELECTRICAL SERVICES
OF A MULTISTOREY BUILDING

Project Report Submitted by:

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In part of satisfaction of the conditions for the award of Diploma of Technician Engineer in Electrical Engineering of the Higher Technical Institute, Cyprus.

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ABSTRACT

This project deal with the electrical installation of a multistorey building which includes:

- (a) Design of the electrical and telephone installation of a multistorey building pertaining to a block of flats.
- (b) Illumination designing
- (c) Costing of the installation including labour.

The designing is carried out according to:

- The IEE and EAC Regulations for the Electrical Design
- The CIBS code for the Illumination Design
- The CYTA Regulations for the Telephone Design

CONTENTS

CHAPTER 1 - ILLUMINATION

1. General
2. Units and Definitions Used in Illumination
3. Types of Lighting Sources
4. Methods of Illumination
5. Spacing of Fittings
6. Typical Calculations of Illumination Design
7. Results of Illumination Calculations

CHAPTER 2 - PROTECTION OF THE ELECTRICAL INSTALLATION

1. General
2. Protection Against Electric Shock
3. Protection Against Overcurrent
4. Miniature Circuit Breakers (MCB's)

CHAPTER 3 - EARTHING

1. General
2. Types of System Earthing
3. Definitions and Analysis of Earthing Terms
4. Earth Fault Loop Impedance
5. Bonding (EBADOS)
6. Earth Fault Protection Devices

CHAPTER 4 - TESTING

1. General
2. Visual Inspection
3. Testing

CHAPTER 5 - ELECTRICAL DESIGN

1. General
2. Design Steps
3. Data and Assumptions Used for the Electrical Design
4. Lighting Circuit Design
5. Power Circuit Design
6. Fixed Appliance Circuit Design
7. Motor Circuit Design
8. Total Current Demand and Supply
9. Supply Cables
10. Distribution Board Sizes

CHAPTER 6 - TELEPHONE INSTALLATION

1. General
2. Definition of Terms Used
3. Earthing
4. Telecommunication Network
5. Installation of Access Cable
6. Installation of Distribution Cases
7. Installation of Telephone Lines
8. Telecommunication Design

CHAPTER 7 - COSTING

1. General
2. Costing by Using the Analytical Method

APPENDICES

DRAWINGS