HIGHER TECHNICAL INSTITUTE

ELECTRICAL ENGINEERING DEPARTMENT

DIPLOMA PROJECT

DESIGN OF THE ELECTRICAL SERVICES OF A MULTISTOREY BUILDING

E.1404

FRANGOU CONSTANTINOS

JUNE 2006

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CONTENTS

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SUMMARY

The purpose of the electrical installation project is the design of electrical services in a multi-storey building which must be carried out accordance with responsibility in order to provide safety to the people .

The electrical design of the building is carried out according to IEE Regulation of sixteenth edition .

The design of the electrical services of the building is explained in details in the book . The book has been divided into different chapters. The contents of the book and of each chapter are given at the beginning. All the electrical design calculations are including in architectural drawing which provided. At the end of the book there are appendices. In each appendix there are tables and manufactures data used in the design, for each equipment.

INTRODUCTION

Design of electrical services of a multi-storey building as the title of this project

The objectives of this project are:

To design the complete electrical installation of a multi-storey building which include the following:

1. Lighting
2. Power
3. Design of storage heaters installation

To provide all necessary drawing , schedule of material and costing including labour.

The main purpose of electrical services of a multi-storey building is to install an electrical installation with:

1. Minimum cost
2. Maximum safety
3. Maximum reliability
4. Maximum flexibility to provide for change in usage and extensions

TERMS AND CONDITIONS

1. Architectural drawing will be provided.
2. The IEE regulation sixteenth edition and all related local EAC conditions of supply should be considered.
3. Three phase supply 415 Volts, 50 Hz , and TT earthing system must be used.
4. Levels of illuminations must in according with the CIBS code.
5. All swithes are mounted 1.5m above the floor and sockets are mounted 0.4m above the floor. Distribution boards are mounted 1.7m above the floors.
6. External earth fault loop impedance is chosen to be Ze = 1Ω