

HIGHER TECHNICAL INSTITUTE

ELECTRICAL ENGINEERING DEPARTMENT

DIPLOMA PROJECT

**DESIGN OF THE ELECTRICAL SERVICES
OF A BUILDING**

by

SOCRATOUS SOCRATIS (E/990)

JUNE 1995

HIGHER TECHNICAL INSTITUTE

ELECTRICAL ENGINEERING COURSE

DIPLOMA PROJECT

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HIGHER TECHNICAL INSTITUTE	PROJECT NO 2467
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ELECTRICAL SERVICES OF A
BUILDING

Project report by

SOCRATOYS SOCRATIS

In part satisfaction of the award of

diploma of

TECHNICIAN ENGINEER

in

ELECTRICAL ENGINEERING

of the

HIGHER TECHNICAL INSTITUTE

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Project Supervisor: Mr. Georgios Kourtellis

Type of project: Individual

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I would also like to thank my father who has helped me through his experience in the E.A.C to perform this project and finally anyone who has in any way helped me to complete this project.

GENERAL INTRODUCTION

The design of the electrical services of a building are represented in this project. The building it consists of two shops and a parking area on the ground floor. The mezzanines of the shops on the mezzanine floor including a house on the same floor and finally a big house on the first floor.

The main objectives of this project were:

- (1) To design the complete electrical installation of a building which includes the following:
 - (i) Power (including storage-heaters) for two houses and two A/c units for shops.)
 - (ii) Lighting
 - (iii) Telephone distribution.
- (2) To provide lightning protection scheme
- (3) To provide all necessary diagrams shedule of materials and costing including labour.

Terms and Conditions

- (1) Three-phase 415 Vrms, 50Hz supply. T.T. earthing system.
- (2) The work must be carried out with reference to the plans provided. (shown at the back of the project.)
- (3) The I.E.E wiring regulations 16th Edition as currently amended and the local E.A.C conditions of supply must be complied with
- (4) The illumination design must be in accordance with the C.I.B. code.

- (5) C.Y.T.A requirements were taken into consideration.
- (6) The external resistance z_e , is taken to be equal to $z_e=0.5\Omega$ and the cables used were copper conductors single core P.V.C.
- (7) The prospective fault current is taken to be 5KA at p.f = 0.5

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