

HIGHER TECHNICAL INSTITUTE

ELECTRICAL ENGINEERING COURSE

DIPLOMA PROJECT

ELECTRICAL INSTALLATION  
OF  
HOTEL APARTMENTS

BY

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E/1004

**DESIGN OF THE ELECTRICAL**  
**INSTALLATION**  
**FOR HOTEL APARTMENTS**

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# **Design of electrical installation for hotel apartments**

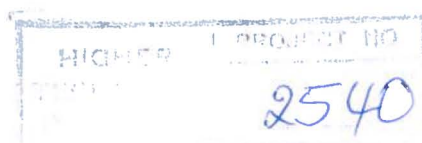
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# **Design of the electrical installation of hotel apartments.**

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## **ABSTRACT**

The purpose of this project is the design of the electrical installation of hotel apartments.

The complex consists of twenty apartments, ten at the first floor and ten at the second floor. The first floor is exactly the same as the second floor. The ground floor is used as a car parking.

The whole work is based on IEE(16<sup>th</sup> edition) wiring regulations and E.A.C regulations.

The design can be broken down into the following parts:

1. General requirements of the electrical installation.
2. Illumination design
3. Electrical installation design
4. Telephony installation design costing
5. References, appendices and technical data
6. The drawing of the electrical installation.

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## CHAPTER 1

### General

Every electrical installation must be able to comply all times with the recommended regulations of safety. Safety is identified as effective isolation, distribution, earthing system. The term safety includes also periodic inspection and testing of the installation as well as protection against thermal effects.

### 1.1 ISOLATION

Every circuit shall be protected by isolating it from each of the live supply conductors so as to ensure safety. The isolation is intended to cut off for reasons of safety the supply from all, or a discrete section of the installation by separating the installation or section from every source of electrical energy.

### 1.2 DISTRIBUTION

Effective distribution of electrical energy is a very important factor of safety. Labels and other suitable means of identification must be provided to indicate the purpose of the switchgear, controlgear, isolator-diagrams, charts, or tables as well as any other information which is considered useful.

For this particular project, a special room will be constructed where the E.A.C will install its fuses and meters. Electrical energy will come through a PVC SWA PVC cable to a main bus-bar and from there the demand for power will be distributed to each apartment.

### 1.3 Earthing

The system of supply that we are using is called TT system.

The first letter denotes the earthing arrangement at that source of energy and T means direct connection of one or more points to the earth.

The second letter denotes the relationship of the exposed conductive parts to earth, independently of the earthing of any point of the source of energy.