



HIGHER TECHNICAL INSTITUTE	PROJECT NO
	3824

**HIGHER TECHNICAL INSTITUTE**

**ELECTRICAL ENGINEERING DEPARTMENT**

**DIPLOMA PROJECT**

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

**E.1442**

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## **ABSTRACT**

The purpose of the project is to design all the possible electrical services of a luxury house. It is very important to keep 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 wirings regulations of 16<sup>th</sup> edition.

At the end of the project there are placed appendixes, tables, drawings and other informations giving specification 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
- Storage heaters
- Electrical operation of a garage door
- Door phone
- Supply cables to the distribution boards
- Diversity
- Single line diagrams
- Telephone and T.V. distribution
- Lightning and protection system
- 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  $\Omega$ . EAC conditions of supply and CYTA requirements were used in order to achieve a proper design.