

HIGHER TECHNICAL INSTITUTE

ELECTRICAL ENGINEERING DEPARTMENT

DIPLOMA PROJECT

DESIGN OF THE ELECTRICAL
INSTALLATION SERVICES OF A
PRIMARY SCHOOL

E. 1163

BY: ANTONIOU SAVVAS

JUNE 1999

HIGHER TECHNICAL INSTITUTE	PROJECT NO.
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**HIGHER TECHNICAL INSTITUTE
NICOSIA-CYPRUS**

ELECTRICAL ENGINEERING DEPARTMENT

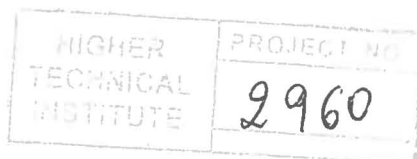
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BY

ANTONIOU SAVVAS

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**DEDICATED TO MY
PARENTS, BROTHERS
AND MY BEST FRIENDS**

ACKNOWLEDGEMENT

I would like to express my thanks and appreciation to my project supervisor Mr Joannis Demetriou for his helpful advises and support throughout the whole process of this project.

TERMS AND CONDITIONS

This project deals with the design of the electrical installation services of a Primary School. These services are shown below:

- Power (lighting, socket outlets, fixed appliances)
- Telephone installation
- Fire alarm system
- Lightning protection system
- Earthing arrangement

Its aim is to give all the necessary diagrams and drawings, schedule of materials, illumination, costing and finally the typical calculations of all kinds of circuits.

This project is also carried out in accordance to some indispensable requirements:

- Voltage supply is 240V, 50Hz
- T.T Earthing System
- IEE Wiring Regulations 16th Edition
- C.I.B.S code for interior lighting
- CYTA Regulations
- B.S for lightning protection
- B.S for fire alarm

ASSUMPTIONS

- Height of all the rooms is 3m
- Height of the roof from the ground is 3.30m
- Height of distribution boards and EAC cabinet from the floor is 1.5m
- Height of all switches from the floor is 1.5m
- Height of socket outlets from the floor is 0.5m
- External earth fault loop impedance is 1Ω
- C_i factor is equal to 1 since thermal insulation is not used
- C_g factor is equal to 1 since earth conduit carries one circuit only
- C_a factor is equal to 1 since ambient temperature is assumed to be 30 degrees C
- Wiring method is the method 3 from IEE regulations (PVC conduit)

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