


**"ELECTRICAL ENHANCEMENT OF LABORATORY ROOMS"
@ THE RESEARCH & DEVELOPMENT COMPLEX BUILDING
BENGUET STATE UNIVERSITY**



Prepared by:


AR. HAZELINE N. TIBANGAY
University Architect – Physical Plant
License No. PTR No.

Checked and Reviewed by:


ENGR. CESAR C. TAMESIS
Professional Electrical Engineer
Consultant
License No. PTR No.

A. BRIEF INTRODUCTION

The Research and Development Complex is a facility with chain of laboratories established to cater the research needs of the Cordillera in terms of soil, plant and water. During the initial planning and construction of the building structure, the said laboratories were not taken into consideration whereas, the equipment procured for laboratory use were not included in the original electrical load design. Instantaneous with the establishment of the laboratories, the university decided to reinforce and enhance the electrical load design of the building in consideration with the procured equipment and future equipment for laboratory use. This so, the Electrical Scope of Works herein mentioned was established to be commissioned to be fully operational.

B. SPECIAL PREAMBLE

In the prosecution of the project only Electrical Contractors with qualified experience shall only be allowed to participate in the bidding process.

The Electrical Contractor Bidder shall practice due diligence in pricing this Bid Form indicating the Bill of Quantities (BOQ) moreover, the Bidder shall guarantee his quantities and it is his responsibility to check the description provided for in this BOQ against the issued Tender Plans and Specifications and in the Pre - Tender Meetings and Bulletins.

The Electrical Contractor shall supply, deliver and install new materials of approved quality by the owner through its technical representative.

The Electrical Contractor shall provide all manpower, tools and equipment required and necessary for the smooth prosecution of the specified Electrical Scope of Works.

C. ELECTRICAL SCOPE OF WORKS

- i. Service Line
- ii. Grounding System
- iii. Main Distribution System
- iv. Crop Protection Laboratory – PP1
- v. Soil, Plant and Water Laboratory A – PP2
- vi. Soil, Plant and Water Laboratory B – PP3
- vii. Biotech Lab – PP4
- viii. Fire Pump – PP5

D. TESTING AND COMMISSIONING

The Electrical Contractor Bidder shall conduct testing and commissioning for all of the Scope of Works indicated above with the presence of the Professional Electrical Consultant (PEE). The Electrical Contractor shall submit report for all the tests conducted prior to the issuance of the Certificate of Completion, Certificate of Turnover and Acceptance for the processing of its final billing.

E. CONTRACT DURATION

The Scope of Works shall be implemented within sixty (60) calendar days.

F. APPROVED BUDGET FOR THE CONTRACT

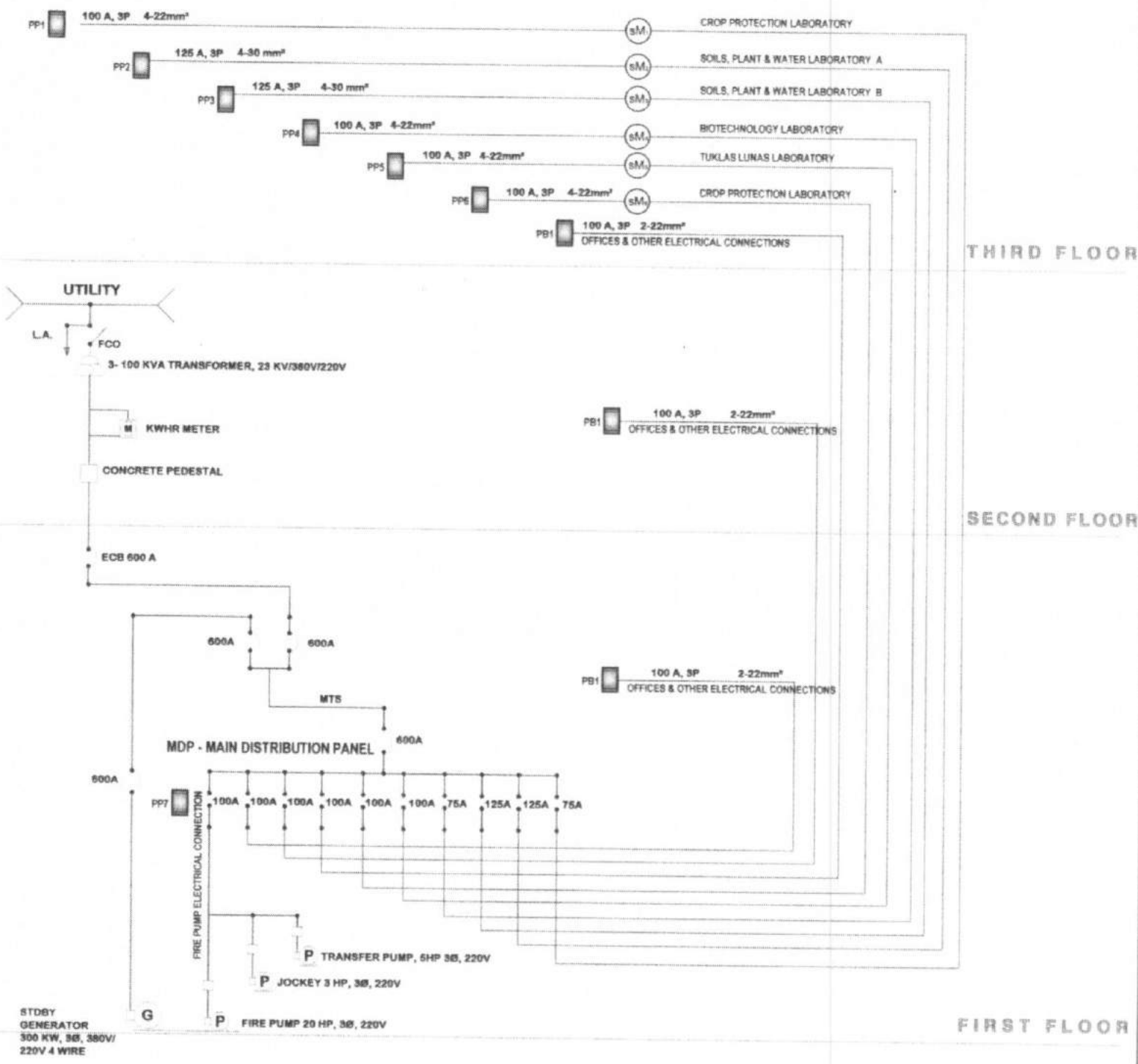
One Million Pesos (Php 1,500,000.00)

G. DURATION OF CONTRACT

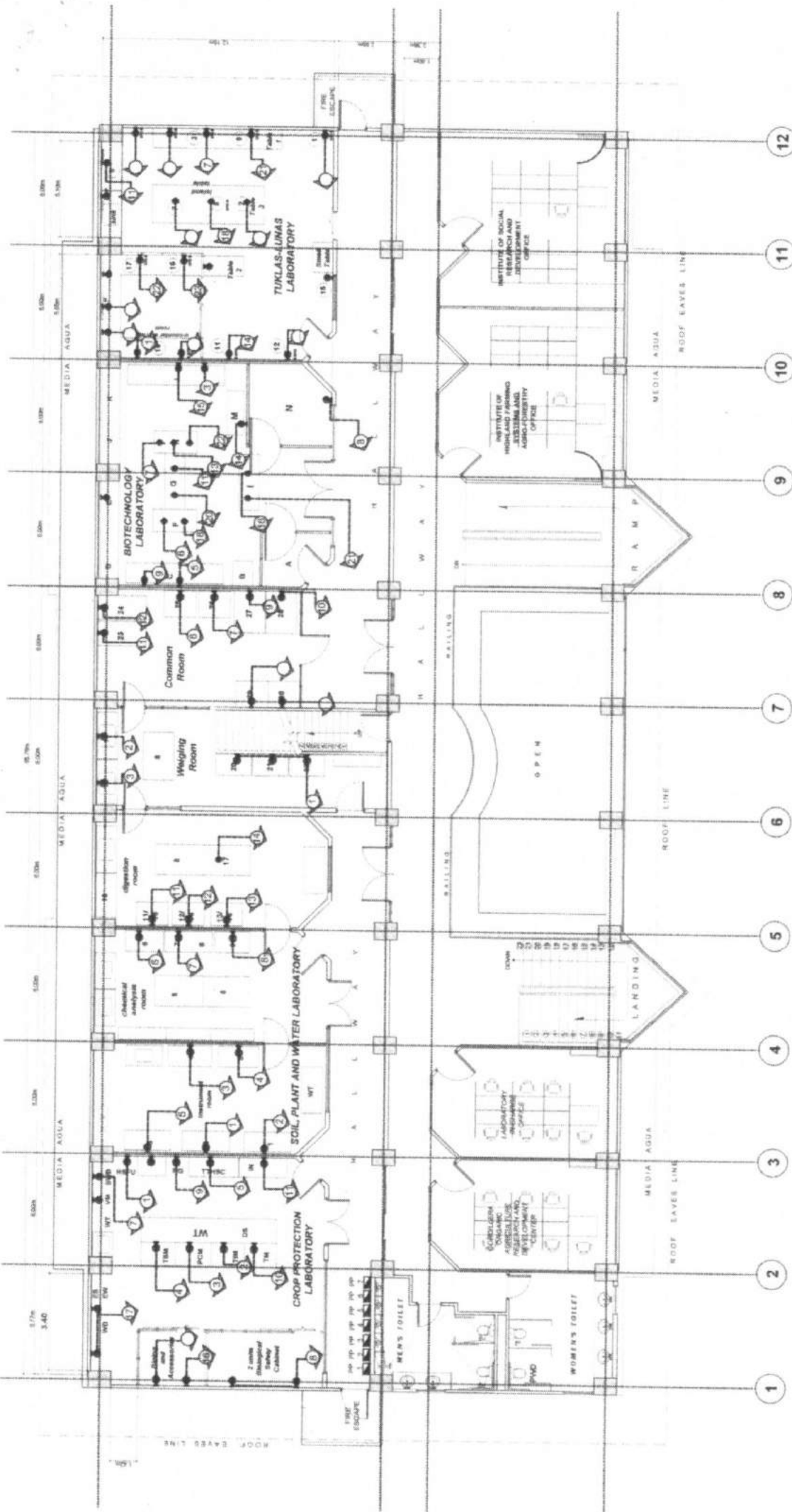
60 Calendar Days

H. TECHNICAL PERSONNEL REQUIRED

- i. Registered Electrical Engineer (REE)/ Registered Master Electrician (RME)
- ii. Safety Officer
- iii. Skilled Workers



3 POWER SINGLE LINE DIAGRAM
 E 10 NOT TO SCALE



- CROP PROTECTION LABORATORY**
- 1-10: 100mm
 - 11-12: 100mm
 - 13-14: 100mm
 - 15-16: 100mm
 - 17-18: 100mm
 - 19-20: 100mm
 - 21-22: 100mm
 - 23-24: 100mm
 - 25-26: 100mm
 - 27-28: 100mm
 - 29-30: 100mm
- LEGEND:**
- 1-10: 100mm
 - 11-12: 100mm
 - 13-14: 100mm
 - 15-16: 100mm
 - 17-18: 100mm
 - 19-20: 100mm
 - 21-22: 100mm
 - 23-24: 100mm
 - 25-26: 100mm
 - 27-28: 100mm
 - 29-30: 100mm
- SOIL PLANT AND WATER LABORATORY**
- 1-10: 100mm
 - 11-12: 100mm
 - 13-14: 100mm
 - 15-16: 100mm
 - 17-18: 100mm
 - 19-20: 100mm
 - 21-22: 100mm
 - 23-24: 100mm
 - 25-26: 100mm
 - 27-28: 100mm
 - 29-30: 100mm
- LEGEND:**
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 - 11-12: 100mm
 - 13-14: 100mm
 - 15-16: 100mm
 - 17-18: 100mm
 - 19-20: 100mm
 - 21-22: 100mm
 - 23-24: 100mm
 - 25-26: 100mm
 - 27-28: 100mm
 - 29-30: 100mm
- BOTECNOLOGY LABORATORY**
- 1-10: 100mm
 - 11-12: 100mm
 - 13-14: 100mm
 - 15-16: 100mm
 - 17-18: 100mm
 - 19-20: 100mm
 - 21-22: 100mm
 - 23-24: 100mm
 - 25-26: 100mm
 - 27-28: 100mm
 - 29-30: 100mm
- LEGEND:**
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 - 13-14: 100mm
 - 15-16: 100mm
 - 17-18: 100mm
 - 19-20: 100mm
 - 21-22: 100mm
 - 23-24: 100mm
 - 25-26: 100mm
 - 27-28: 100mm
 - 29-30: 100mm
- TULAS-LIMAS LABORATORY**
- 1-10: 100mm
 - 11-12: 100mm
 - 13-14: 100mm
 - 15-16: 100mm
 - 17-18: 100mm
 - 19-20: 100mm
 - 21-22: 100mm
 - 23-24: 100mm
 - 25-26: 100mm
 - 27-28: 100mm
 - 29-30: 100mm
- LEGEND:**
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 - 19-20: 100mm
 - 21-22: 100mm
 - 23-24: 100mm
 - 25-26: 100mm
 - 27-28: 100mm
 - 29-30: 100mm

1
E 9 SCALE
THIRD FLOOR ELECTRICAL POWER LAYOUT (ADDITIONAL CONVENIENCE OUTLETS)
1: 100 MTS

WD
ES
EW

WT
VM
SWB

10

Biolog
and
Accessories

TSM

HSFU

chemical
analysis
room

digesti
room

16

PCM

WT

Rg

instrument
room

8

6

11/
16

2 units
Biological
Safety
Cabinet

TIM

DS

THSC

3

8

7

12/
16

12

CROP PROTECTION
LABORATORY

IN

SOIL, PLANT AND WATER LABORATORY

WT

13/
16

13

8

TM

11

2

8

9

13

PP 1 2 3 4 5 6 7

H A L L W A Y

MEN'S TOILET

