



Republic of the Philippines
WESTERN MINDANAO STATE UNIVERSITY
Zamboanga City
Physical Plant and Engineering Services Office



BILL OF ESTIMATED MATERIALS

Project Title: Installation of a Hybrid Solar Energy System and Single Phase Powerline at the WMSU Climate Change Center, Lapaz Zamboaga City
Location: WMSU, Climate Change Center, KM. 11, Barangay La Paz, Zamboanga City

SUMMARY






a.) Electrical Pole Line Material Cost	₱	1,800,000.00
b.) Hybrid Solar Material Cost	₱	2,100,000.00
c.) Overhead, Contingencies and Miscellaneous	₱	550,000.00
c.) VAT	₱	550,000.00

TOTAL PROJECT COST ₱ **5,000,000.00**

Prepared By:


ENGR. RICARDO B. GONZALES
University Electrical Engineer

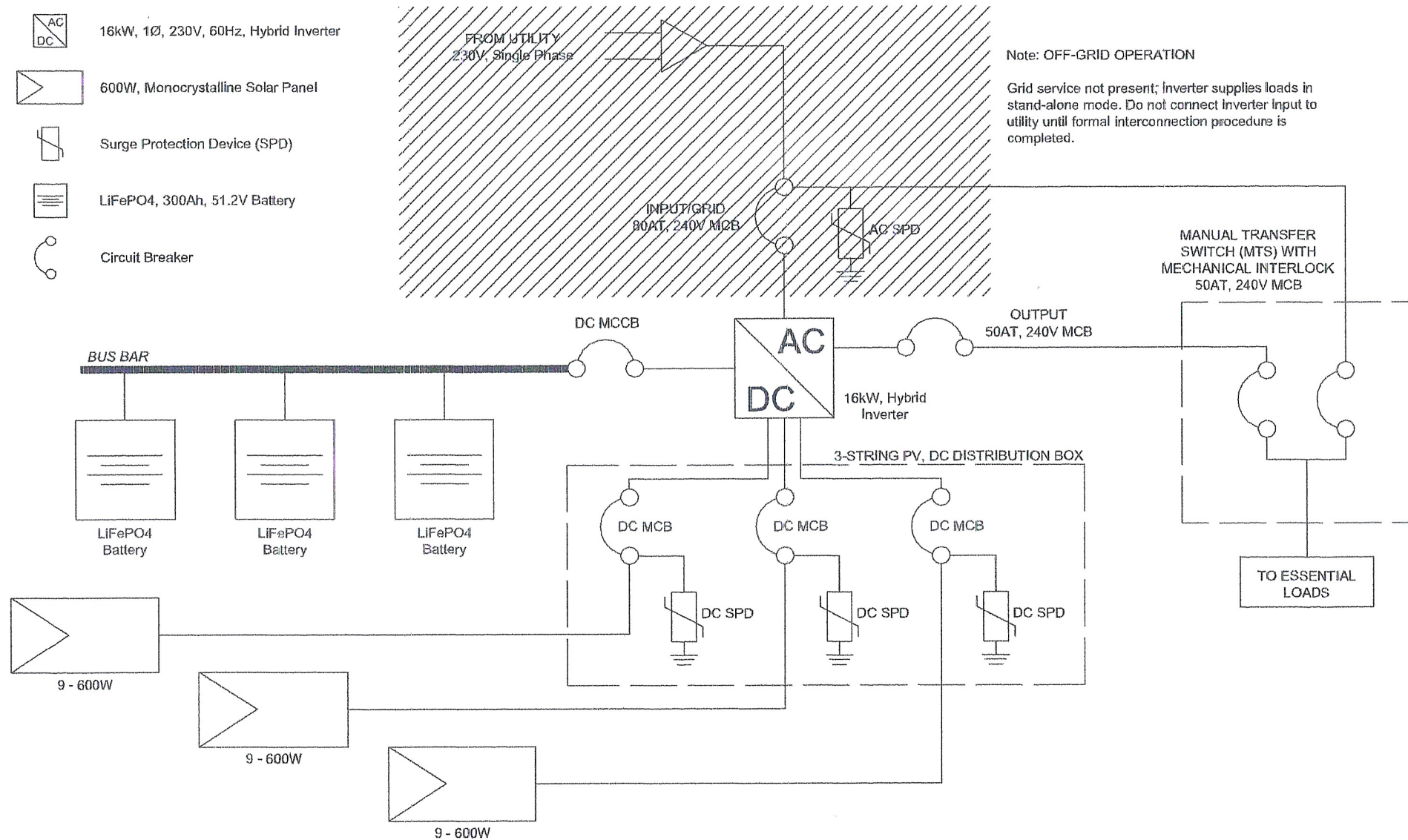
LEGENDS


-  16kW, 1Ø, 230V, 60Hz, Hybrid Inverter
-  600W, Monocrystalline Solar Panel
-  Surge Protection Device (SPD)
-  LiFePO4, 300Ah, 51.2V Battery
-  Circuit Breaker

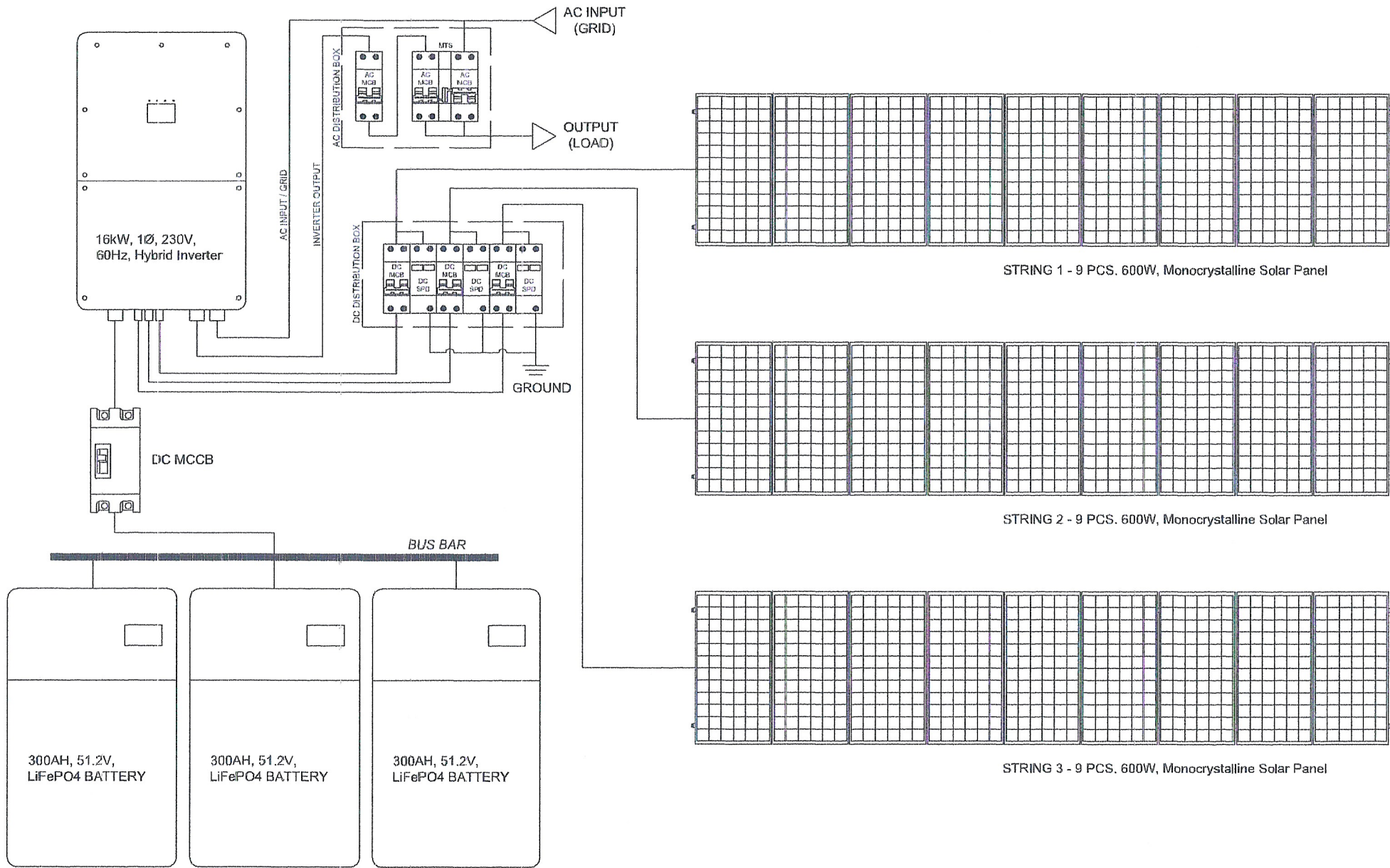
SINGLE LINE DIAGRAM

Note: OFF-GRID OPERATION

Grid service not present; Inverter supplies loads in stand-alone mode. Do not connect inverter input to utility until formal interconnection procedure is completed.



DESIGNED BY: ENGR. RICARDO B. GONZALES UNIVERSITY ELECTRICAL ENGINEER	PROJECT TITLE: 16KW HYBRID SOLAR PROJECT	RECOMMENDING APPROVAL: ARCH. JOSEPH ANDREW L. SAHIAL UAP DIRECTOR OF PHYSICAL PLANT AND ENGINEERING SERVICES	RECOMMENDING APPROVAL: DR. JOSE LITO D. MADRÒÑAL VICE PRESIDENT FOR ADMIN AND FINANCE	APPROVED BY: DR. MA. CARLA A. OCHOTOREÑA WMSU-PRESIDENT	SHEET CONTENTS: AS SHOWN	SHEET NO.: E01 0000	WMSU-PPES- FR-XXX-XX EFFECTIVE DATE: XX XXXX XXXX	
PRC: 23724 PTR: TIR: 275-203-179	LOCATION: WMSU CLIMATE CHANGE CENTER, LAPAZ, ZAMBANGSAY CITY	PRC: 0916577 PTR: 2929291 TIR: 445-413-218						



DESIGNED BY:
ENGR. RICARDO B. GONZALES
 UNIVERSITY ELECTRICAL ENGINEER
 PRG: 23734 PTR: TIN: 275-263-173

PROJECT TITLE:
16KW HYBRID SOLAR PROJECT
 LOCATION: WMAU CLIMATE CHANGE CENTER, LUPAZ, ZAMBOANGA CITY

RECOMMENDING APPROVAL
ARCH. JOSEPH ANDREW L. SAHIA, UAP
 DIRECTOR OF PHYSICAL PLANT AND ENGINEERING SERVICES
 PRG: 6010577 PTR: 2929391 TIN: 445-013-229

RECOMMENDING APPROVAL
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 VICE PRESIDENT FOR ADMIN AND FINANCE

APPROVED BY:
DR. MA. CARLA A. OCHOTORENA
 WMSU PRESIDENT

SHEET CONTENTS
 WMSU-PPES-
 FR-XXXX-XX
 PREPARED BY:
 ENGR. AGM

SHEET NO.
E02
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