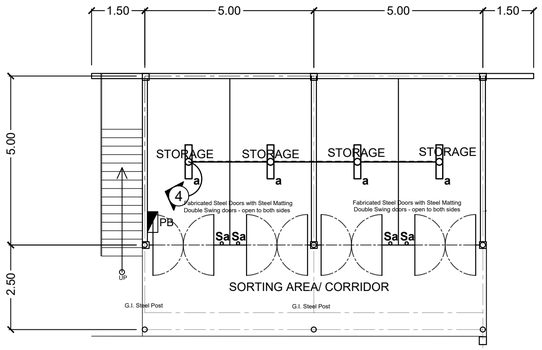
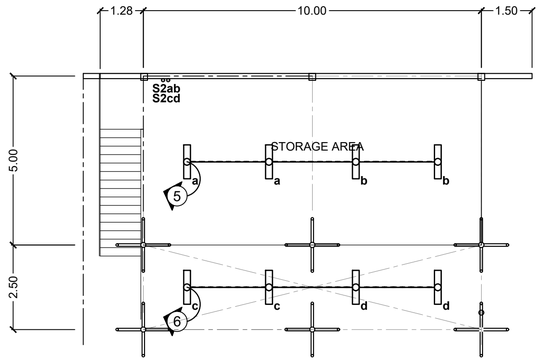


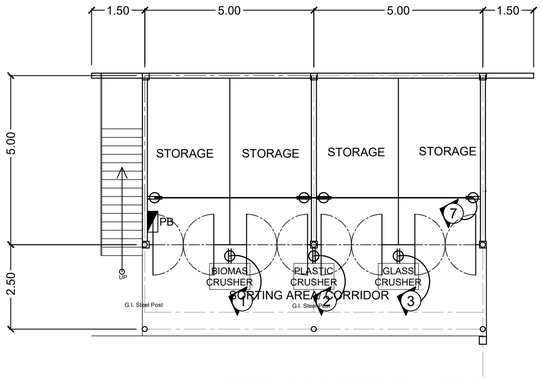

## LIGHTING LAYOUT (GF)

SCALE: 1:100M



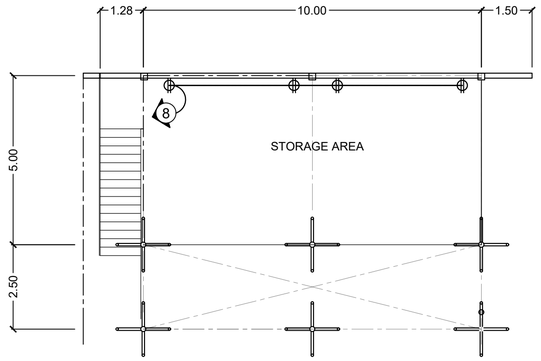

## LIGHTING LAYOUT (2F)

SCALE: 1:100M




## POWER LAYOUT (GF)

SCALE: 1:100M

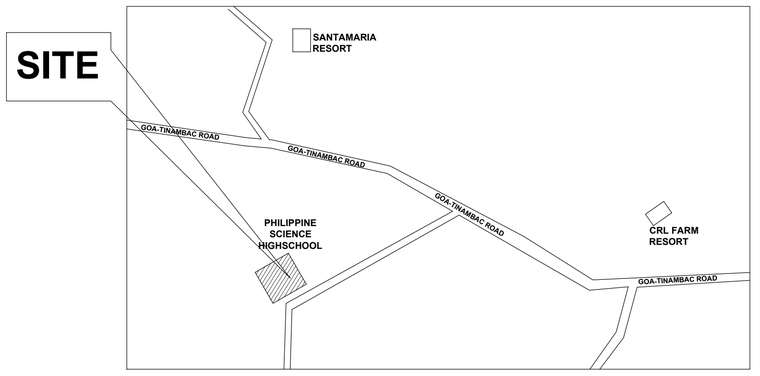



## POWER LAYOUT (2F)

SCALE: 1:100M

## LEGENDS

| SYMBOL | DESCRIPTION | SYMBOL | DESCRIPTION |
|---|---|---|---|
| | CIRCUIT BREAKER | | LIGHTING OUTLET |
| M | KWHM | S1 | SINGLE POLE SWITCH |
| | SYSTEM GROUNDING LINE | S2 | TWO GANG SWITCH |
| | POWER & LIGHTING CIRCUIT. LINE | | WALL MOUNTED CONVENIENCE OUTLET |
| | PANEL BOARD | | CIRCUIT HOMERUN |




## LOCATION MAP

SCALE: NTS

## SPECIFICATION

1. ALL ELECTRICAL WORKS SHALL BE DONE IN ACCORDANCE WITH THE RULES AND REGULATIONS OF THE LATEST EDITION OF THE PHILIPPINE ELECTRICAL CODE, APPLICABLE ORDINANCES OF THE LOCAL GOVERNMENT AND WITH THE REQUIREMENTS OF THE LOCAL POWER COMPANY.
2. INDIVIDUAL CONDUCTORS SHALL BE INSULATED OR COVERED, EXCEPT THE GROUNDED CONDUCTOR OF A MULTICONDUCTOR CABLE SHALL BE PERMITTED TO BE BARE. CONDUCTORS SHALL HAVE SUFFICIENT AMPACITY TO CARRY THE CURRENT LOAD AS CALCULATED AND SHALL HAVE ADEQUATE MECHANICAL STRENGTH. IT SHALL NOT BE SMALLER THAN 8.0mm² (3.2mmØ) COPPER WIRE OR 14mm² ALUMINUM OR COPPER CLAD ALUMINUM. SERVICE DROP CONDUCTORS SHALL NOT BE READILY ACCESSIBLE. CONDUCTORS SHALL HAVE A VERTICAL CLEARANCE OF NOT LESS THAN 2400mm ABOVE THE ROOF SURFACE VERTICAL CLEARANCE FROM GROUND.
   A. 3000mm AT THE ELECTRICAL SERVICE ENTRANCE TO BUILDINGS VOLTAGE DOES NOT EXCEED 300V.
   B. 3600mm OVER RESIDENTIAL PROPERTY AND DRIVEWAYS, VOLTAGE DOES NOT EXCEED 300V.
   C. 4500mm FOR THOSE AREAS LISTED IN THE 3600mm CLASSIFICATION WHERE THE VOLTAGE EXCEEDS 300V TO GROUND.
   D. 5500mm OVER PUBLIC STREETS, ALLEYS, ROADS, PARKING AREAS SUBJECT TO TRUCK TRAFFIC.
3. A BUILDING OR OTHER STRUCTURE SERVED SHALL BE SUPPLIED BY ONLY ONE SERVICE UNLESS PERMITTED IN:
   A. SPECIAL CONDITIONS FOR FIRE PUMPS, EMERGENCY SYSTEMS, LEGALLY REQUIRED STANDBY SYSTEMS, OPTIONAL STANDBY SYSTEMS, PARALLEL POWER PRODUCTION SYSTEMS, SYSTEMS DESIGNED FOR CONNECTION TO MULTIPLE SOURCES OF SUPPLY FOR THE PURPOSE OF ENHANCED RELIABILITY.
   B. SPECIAL OCCUPANCIES FOR MULTI-OCCUPANCY:
      1.) MULTIPLE-OCCUPANCY BUILDINGS WHERE THERE IS NO AVAILABLE SPACE FOR SERVICE EQUIPMENT ACCESSIBLE TO ALL OCCUPANTS.
      2.) MULTIPLE-OCCUPANCY BUILDING OR GROUP OF SINGLE DETACHED BUILDINGS OWNED OR OPERATED/MANAGED BY ONE (1) PERSON ENTITY AND WHERE SPACES ARE AVAILABLE, A MAIN SERVICE SHALL BE ALLOWED TO SERVE THE SERVICE ENTRANCE EQUIPMENT OF EACH OCCUPANT AND COMMON LOADS.
      3.) A SINGLE BUILDING OR OTHER STRUCTURE SUFFICIENTLY LARGE TO MAKE TWO OR MORE SERVICES.
   C. ADDITIONAL SERVICES SHALL BE PERMITTED UNDER ANY OF THE FOLLOWING:
      1.) WHERE THE SUPPLY CAPACITY REQUIREMENTS ARE IN EXCESS OF 2000 AMPERES AT A SUPPLY VOLTAGE 600 VOLTS OR LESS.
      2.) WHERE THE LOAD REQUIREMENTS OF A SINGLE PHASE INSTALLATION ARE GREATER THAN THE SERVING AGENCY NORMALLY SUPPLIES THROUGH ONE SERVICE.
   D. ADDITIONAL SERVICES SHALL BE PERMITTED FOR DIFFERENT VOLTAGES, FREQUENCIES, OR PHASES, OR FOR DIFFERENT USES, SUCH AS FOR DIFFERENT RATE SCHEDULES.
   E. A BUILDING OR STRUCTURE IS SUPPLIED BY MORE THAN ONE SERVICE, OR ANY COMBINATION OF BRANCH CIRCUITS, FEEDERS, AND SERVICES, A PERMANENT PLAQUE OR DIRECTORY SHALL BE INSTALLED AT EACH SERVICE DISCONNECT LOCATION DENOTING ALL OTHER SERVICES, FEEDERS AND BRANCE CIRCUITS SUPPLYING THAT BUILDING OR STRUCTURE AND THE AREA SERVED BY EACH.
4. WIRING METHODS SHALL BE USED FOR 600 VOLTS, NOMINAL, OR LESS, AC CIRCUITS, AND DC CIRCUITS SHALL BE PERMITTED TO OCCUPY THE SAME EQUIPMENT WIRING ENCLOSURE, CABLE, OR RACEWAY. THEY SHALL BE PERMITTED FOR OVER 600 VOLTS, NOMINAL, SHALL NOT OCCUPY THE SAME EQUIPMENT WIRING ENCLOSURE, CABLE, OR RACEWAY WITH CONDUCTORS OF CIRCUITS RATED 600 VOLTS NOMINAL, OR LESS UNLESS OTHERWISE PERMITTED.
   A. EACH SERVICE DROP OR LATERAL SHALL SUPPLY ONLY ONE SET OF SERVICE-ENTRANCE CONDUCTORS.
   B. FEEDER CONDUCTOR SHALL HAVE AN AMPACITY NOT LESS THAN REQUIRED TO SUPPLY THE LOAD. THE MINIMUM FEEDER CIRCUIT CONDUCTOR SIZE, BEFORE THE APPLICATION OF ANY ADJUSTMENT OR CORRECTION FACTORS, SHALL HAVE AN ALLOWABLE AMPACITY NOT LESS THAN THE NONCONTINUOUS LOAD PLUS 125% OF THE CONTINUOUS LOAD.
   C. BRANCH CIRCUITS IN DWELLING UNITS SHALL SUPPLY ONLY LOADS WITHIN THAT DWELLING UNIT OR LOADS ASSOCIATED ONLY WITH IN THAT DWELLING UNIT OR LOADS ASSOCIATED ONLY WITH THAT DWELLING UNIT. BRANCH CIRCUITS REQUIRED FOR THE PURPOSE OF LIGHTING, CENTRAL ALARM, SIGNAL, COMMUNICATIONS, OR OTHER NEEDS FOR PUBLIC OR COMMON AREAS OF A TWO-FAMILY OR MULTI-FAMILY DWELLING SHALL NOT BE SUPPLIED FROM EQUIPMENT THAT SUPPLIES AN INDIVIDUAL DWELLING UNIT.
5. ELECTRICAL SYSTEM THAT ARE GROUNDED SHALL BE CONNECTED TO EARTH IN A MANNER THAT WILL LIMIT THE VOLTAGE IMPOSED BY LIGHTNING, LINE SURGES, OR UNINTENTIONAL CONTACT WITH HIGHER-VOLTAGE LINES AND THAT WILL STABILIZE THE VOLTAGE TO EARTH DURING NORMAL OPERATION.
6. SERVICE EQUIPMENT DISCONNECTION MEANS SHALL PROVIDE TO DISCONNECT ALL CONDUCTORS IN A BUILDING OR OTHER STRUCTURE FROM THE SERVICE ENTRANCE CONDUCTORS. ENERGIZED PARTS SHALL BE ENCLOSED SO THAT THEY WILL NOT BE EXPOSED TO ACCIDENT CONTACT OR SHALL BE GUARDED. ENERGIZED PARTS THAT ARE NOT ENCLOSED SHALL BE INSTALLED ON A SWITCHBOARD, PANELBOARD, OR CONTROL BOARD AND GUARDED. SERVICE EQUIPMENT RATED AT 600 VOLTS OR LESS SHALL BE MARKED TO IDENTIFY IT AS BEING SUITABLE FOR USE AS SERVICE EQUIPMENT. INDIVIDUAL METER SOCKET ENCLOSURES SHALL NOT BE CONSIDERED SERVICE EQUIPMENT.
7. SUFFICIENT ACCESS AND WORKING SPACE SHALL BE PROVIDED AND MAINTAINED ABOUT ALL ELECTRICAL EQUIPMENT TO PERMIT READY AND SAFE OPERATION AND MAINTENANCE OF SUCH EQUIPMENT.
8. ELECTRTICAL EQUIPMENT SHALL BE INSTALLED IN A NEAT AND WORKMANLIKE MANNER.
9. ELECTRICAL PLANS SHALL BE SIGNED AND SEALED BY A LICENSED PROFESSIONAL ELECTRICAL ENGINEER. IN-CHARGE OF ELECTRICAL WORKS SHALL BE A LICENSED ELECTRICAL PRACTITIONERS.
10. GROUNDED CONDUCTORS, WHERE INSULATED, SHALL HAVE INSULATION THAT IS SUITABLE, OTHER THAN COLOR, FOR ANY UNDERGROUNDED CONDUCTOR OF THE SAME CIRCUIT ON CIRCUIT OF LESS THAN 1000 VOLTS OR IMPEDANCE GROUNDED NEUTRAL SYSTEMS OF 1KV AND OVER, OR RATED NOT LESS THAN 600 VOLTS FOR SOLIDLY GROUNDED NUETRAL SYSTEM OF 1 KV AND OVER AS DESCRIBED. MEANS OF IDENTIFYING GROUNDED CONDUCTOR, SIZES 14mm² OR SMALLER INSULATED GROUNDED CONDUCTOR SHALL BE IDENTIFIED BY A CONTINUOUS WHITE OR GRAY OUTER FINISH OR BY THREE CONTINUOUS WHITE STRIPES ON OTHER THAN GREEN INSULATION ALONG ITS LENGTH. SIZES LARGER THAN 14mm² SHALL BE IDENTIFIED BY A CONTINUOUS WHITE OR GRAY OUTER FINISH, BY A THREE CONTINUOUS WHITE STRIPES ALONG ITS ENTIRE LENGTH ON OTHER THAN GREEEN INSULATION, AT THE TIME OF INSTALLATION, BY A DISTINCTIVE WHITE OR GRAY OUTER FINISH OR BY METHODS PERMITTED. FOR UNGROUNDED CONDUCTORS THE MEANS OF IDENTIFICATION SHALL BE PERMITTED TO BE BY SEPARATE COLOR CODING, MARKING TAPE, TAGGING, OR OTHER APPROVED MEANS AND SHALL BE PERMANENTLY POSTED AT EACH BRANCH CIRCUIT PANELBOARD OR SIMILAR BRANCH CIRCUIT PANELBOARD OR SIMILAR BRANCH CIRCUIT DISTRIBUTION EQUIPMENT. INDIVIDUALLY COVERED OR INSULATED EQUIPMENT GROUNDING CONDUCTORS SHALL HAVE A CONTINUOUS OUTER FINISH THAT IS EITHER GREEN OR GREEN WITH ONE OR MORE YELLOW STRIPES EXCEPT AS PERMITTED. CONDUCTORS WITH INSULATION OR INDIVIDUAL COVERING THAT IS GREEN, GREEN WITH ONE OR MORE YELLOW STRIPES, OR OTHERWISE IDENTIFIED AS PERMITTED SHALL NOT BE USED FOR UNGROUNDED OR GROUNDED CIRCUIT CONDUCTORS. MARKING OF HEATING CABLE SHALL BE MARKED WITH THE IDENTIFYING NAME OR IDENTIFICATION SYMBOL, CATALOG NUMBER, AND RATINGS IN VOLTS AND WATTS OR IN VOLTS AND AMPERES. EACH UNIT OF HEATING CABLE SHALL HAVE A PERMANENT LEGIBLE MARKING ON EACH NONHEATING LEAD LOCATED WITHIN 75mm OF THE TERMINAL END.

**PHILIPPINE SCIENCE HIGH SCHOOL**
**BICOL REGION CAMPUS**

LOCATION: PSHS-BRC, BRGY. TAGONGTONG, GOA, CAMARINES SUR, PHILIPPINES

CERTIFIED BY:

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PROFESSIONAL ELECTRICAL ENGINEER

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T I N: 928-553-648 | DATE/PLACE ISSUED: 1/08/21 PTO-C.S

REGISTERED PROFESSIONAL ENGINEER — PHILIPPINES — ARNOLD C. REONAL — LIC. NO. 3776 — ELECTRICAL ENGINEER

PROJECT TITLE & LOCATION:

**CONSTRUCTION OF MATERIAL RECOVERY FACILITY**

LOCATION : TAGONGTONG, GOA, CAMARINES SUR

RECOMMENDING APPROVAL:

**JAY P. BASSIG**
FAD CHIEF

APPROVED BY:

**LORVI B. PAGOROGON, RPAE, MHWQ**
CAMPUS DIRECTOR

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DATE: SEPT. 22, 2021