November 21, 2018

TERMS OF REFERENCE

I. PROJECT TITLE: DESIGN AND BUILD FOR THE ELECTRICAL SUPPLY UPGRADE (CONSTRUCTION OF PRIMARY METERING)

II. PROJECT LOCATION: BATANGAS MEDICAL CENTER, KUMINTANG IBABA, BATANGAS CITY (BatMC)

III. APPROVED BUDGET COST: PHP 60,000,000.00

IV. PROJECT DURATION: 2 MONTHS (AUDIT & DESIGN PHASE)
8 MONTHS (CONSTRUCTION PHASE
10 MONTHS (TOTAL PROJECT DURATION)

V. SCOPE OF WORKS

Audit & Design Phase includes:

1. Conduction of audit and site investigation of the existing electrical system of BatMC
2. Prepare and submit the detailed electrical design and analysis (Sign and Sealed) for the proposed primary metering. The design should meet the Philippine Electrical Code Standard and MERALCO requirements.

Construction Phase includes:

1. General Requirements (Temporary Facilities, Temporary Water and Electrical Supply, Construction Safety and Health Program)
2. Application of Government Permits and Certificate of Final Electrical Inspection (CFEI) including Fees
3. Dismantling and removal of of old electrical components such as old MCB, Electrical panel, MDP, transformers and other related materials. All dismantled electrical wires shall be returned to Batangas Medical Center.
4. Boardup works for the work areas.
5. Provision of the First Private Poles and Electrical Posts complete with accessories.
6. Installation of electrical equipment for the upgrade to primary metering with rating capacity of 1MVA (3 sets) and 750KVA (1set) with the following:
    a. voltage transformers
    b. current transformers
    c. power transformers
    d. surge arresters
    e. breakers
    f. switches
    g. Bus bars
    h. Generator set
    i. Post
    j. Cables

7. Improvement of urgently needed of electrical components, such as deteriorate cables, panel boards, post and etc.
8. Provision of generator set including its accessories and consumables during power interruption caused by the construction.
9. Integration of the system into primary metered system including the existing Enclosed Circuit Breaker (ECB), Main Distribution Panel (MDP), Automatic transfer switch (ATS) and Generator Set (Genset)
10. Testing and Commissioning

VI. TECHNICAL BID SUBMISSIONS

1. Preliminary Conceptual Design Plans in accordance with the degree of details specified by the Procuring Entity. (A3 size- 7 sets, AutoCad File saved in CD)
   a. As-Found Plans
   b. Proposed Electrical Lay out
   c. Schedule of Loads
   d. Single Line Diagram
   e. Electrical Design Analysis
   f. Site Development Plan
2. Certificate of Site Inspection Issued by the Procuring Entity's Representative
3. Construction Schedule and S-curve,
4. Manpower Schedule
5. Equipment Utilization Schedule
6. PERT/CPM
7. Construction Safety and Health Program for approval by the Department of Labor and Employment
8. Copy of Valid Philippine Contractors Accreditation Board (PCAB) License (at least Medium B in Building or Industrial Plant and Medium A in Electrical Works)
9. Copy of ISO 9001-2015 certificate

VII. LIST OF KEY PERSONNEL FOR THE DESIGN AND CONSTRUCTION PHASE

1. Project Manager at least 10 years work experience
2. Project Engineer at least 5 years work experience
3. Professional Electrical Engineer at 10 years work experience
4. Project Electrical Engineer at least 5 years work experience
5. DOLE Accredited Safety Officer at least 5 years work experience
6. Construction Foreman at least 10 years work experience

VIII. MINIMUM EQUIPMENT REQUIREMENTS:

Equipment	Capacity	Number of Units
Generator Set	40KVa	2
Cut-off Machine	N/A	2
Dumptruck	8 cu.m	3
Boom Truck	N/A	1
Concrete Bagger Mixer	N/A	2
Welding Machine	N/A	3

Service Vehicle	atleast 2010 Model	2

IX. CONTRACTOR'S SCHEDULE & PROGRESS REPORTING

Progress Reporting.
Throughout the Contract duration, the Contractor shall be responsible for taking detailed and accurate measurements of the actual progress of all aspects of the works.

Monthly Progress Report.
The Contractor shall maintain a Master Project Schedule to summarize the status of the work; work in progress and the percentage completed. This summary report shall be updated and issued at the end of each month.

Meetings.
Contractor Key Personnel shall meet with BatMC representative upon request of BatMC to discuss matters related to the project. Contractor shall arrange to record the minutes of meeting and submit for BatMC approval.

Kick Off Meeting.
Immediately after the Notice to Proceed, a Kick off meeting shall be held between BatMC and Contractor. The initial Kick off meeting and recorded Minutes shall form the basis of the Project action plan and set such requirements as Safety and Constructability Reviews.

X. CONTRACTOR'S UTILITIES CONSUMPTION

The Contractor shall pay their electric and water consumption bills. Sub meters shall be installed at the expense of the Contractor to determine their actual consumption.

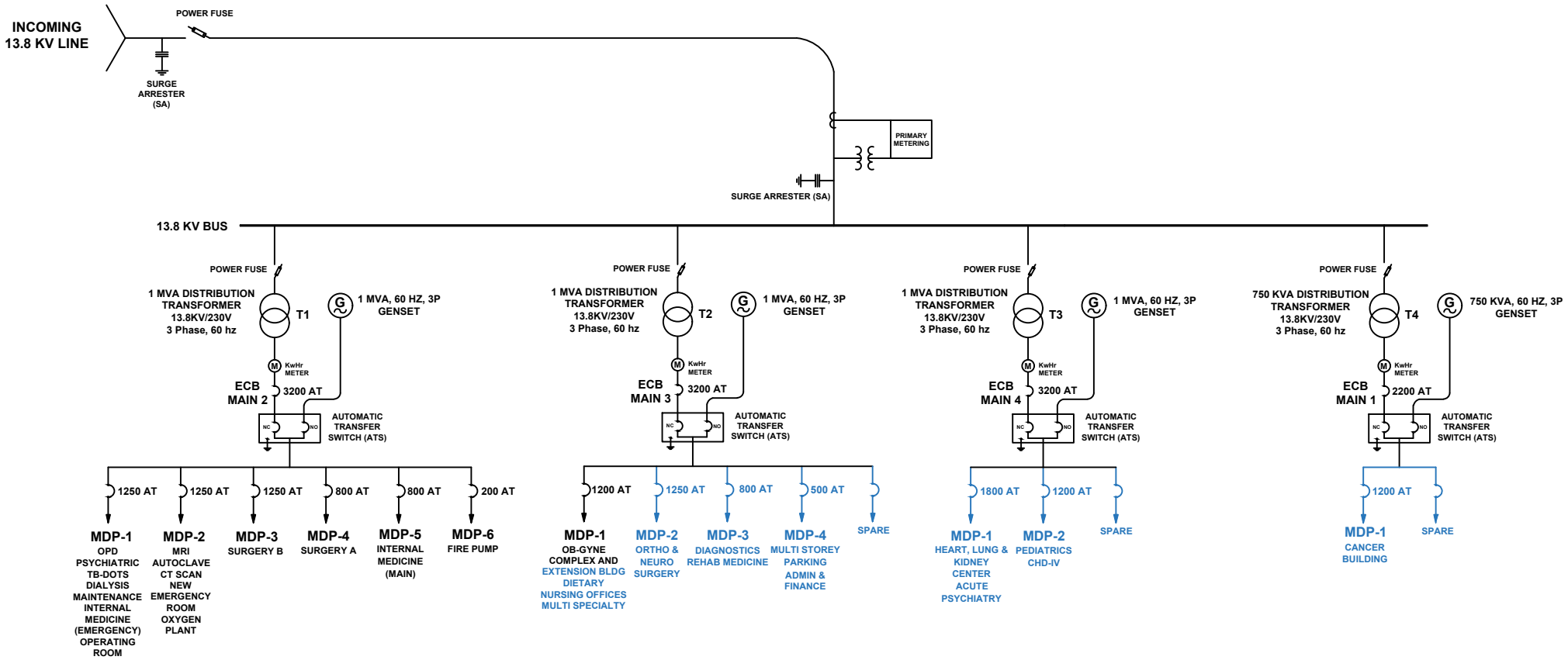
XI. WARRANTY & MAINTENANCE

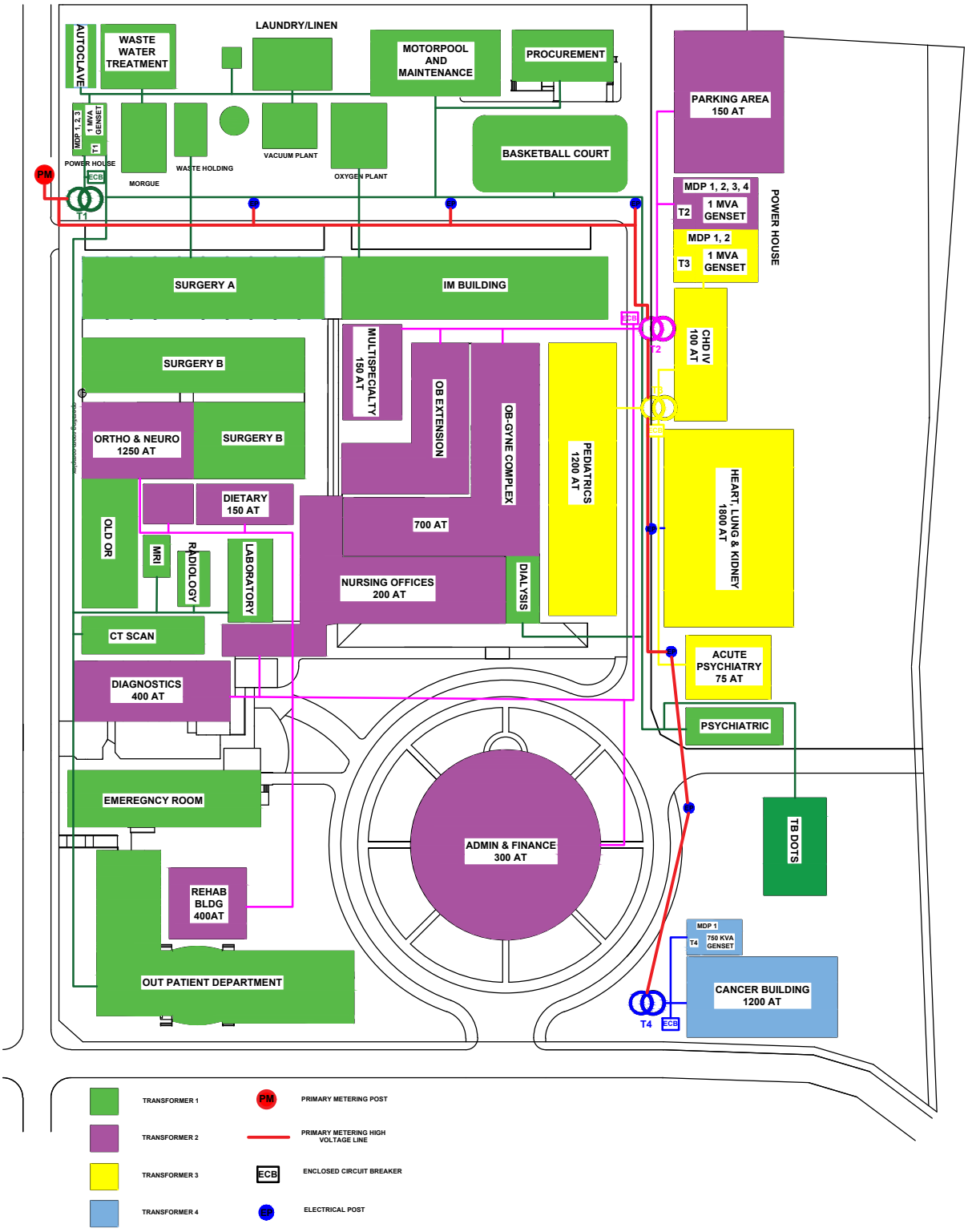
a. 3 years warranty on installed parts and labor. Any defective installed parts of the system shall be replaced.
b. Quarterly Preventive Maintenance of the system during the warranty period.

XII. ORIENTATION AND TRAINING

Contractor shall provide at least 3 days on-site training on the operations and maintenance of the installed system for the EFM Staff.

BATANGAS MEDICAL CENTER
PROPOSED SINGLE LINE DIAGRAM




AUTOCLAVE
WASTE WATER TREATMENT
LAUNDRY/LINEN
MOTORPOOL AND MAINTENANCE
PROCUREMENT
PARKING AREA 150 AT
MDP 1, 2, 3
1 MVA GENSET
T1
POWER HOUSE
MORGUE
WASTE HOLDING
VACUUM PLANT
OXYGEN PLANT
BASKETBALL COURT
PM
ECB
T1
MDP 1, 2, 3, 4
T2
1 MVA GENSET
MDP 1, 2
T3
1 MVA GENSET
POWER HOUSE
SURGERY A
IM BUILDING
SURGERY B
MULTISPECIALTY 150 AT
OB EXTENSION
OB-GYNE COMPLEX
PEDIATRICS 1200 AT
CHD IV 100 AT
T2
ORTHO & NEURO 1250 AT
SURGERY B
DIETARY 150 AT
700 AT
OLD OR
MRI
RADIOLOGY
LABORATORY
NURSING OFFICES 200 AT
DIALYSIS
HEART, LUNG & KIDNEY 1800 AT
CT SCAN
ACUTE PSYCHIATRY 75 AT
DIAGNOSTICS 400 AT
PSYCHIATRIC
EMEREGNCY ROOM
ADMIN & FINANCE 300 AT
TB DOTS
REHAB BLDG 400AT
MDP 1
T4
750 KVA GENSET
OUT PATIENT DEPARTMENT
CANCER BUILDING 1200 AT
T4
ECB
TRANSFORMER 1
TRANSFORMER 2
TRANSFORMER 3
TRANSFORMER 4
PM
PRIMARY METERING POST
PRIMARY METERING HIGH VOLTAGE LINE
ECB
ENCLOSED CIRCUIT BREAKER
EP
ELECTRICAL POST