PHILIPPINE BIDDING DOCUMENTS

Procurement of INFRASTRUCTURE PROJECTS

Government of the Republic of the Philippines

Sixth Edition
July 2020

Preface

These Philippine Bidding Documents (PBDs) for the procurement of Infrastructure Projects (hereinafter referred to also as the "Works") through Competitive Bidding have been prepared by the Government of the Philippines for use by all branches, agencies, departments, bureaus, offices, or instrumentalities of the government, including government-owned and/or -controlled corporations, government financial institutions, state universities and colleges, local government units, and autonomous regional government. The procedures and practices presented in this document have been developed through broad experience, and are for mandatory use in projects that are financed in whole or in part by the Government of the Philippines or any foreign government/foreign or international financing institution in accordance with the provisions of the 2016 revised Implementing Rules and Regulations (IRR) of Republic Act (RA) No. 9184.

The PBDs are intended as a model for admeasurements (unit prices or unit rates in a bill of quantities) types of contract, which are the most common in Works contracting.

The Bidding Documents shall clearly and adequately define, among others: (i) the objectives, scope, and expected outputs and/or results of the proposed contract; (ii) the eligibility requirements of Bidders; (iii) the expected contract duration; and (iv)the obligations, duties, and/or functions of the winning Bidder.

Care should be taken to check the relevance of the provisions of the PBDs against the requirements of the specific Works to be procured. If duplication of a subject is inevitable in other sections of the document prepared by the Procuring Entity, care must be exercised to avoid contradictions between clauses dealing with the same matter.

Moreover, each section is prepared with notes intended only as information for the Procuring Entity or the person drafting the Bidding Documents. They shall not be included in the final documents. The following general directions should be observed when using the documents:

a. All the documents listed in the Table of Contents are normally required for the procurement of Infrastructure Projects. However, they should be adapted as necessary to the circumstances of the particular Project.

b. Specific details, such as the "*name of the Procuring Entity*" and "*address for bid submission*," should be furnished in the Instructions to Bidders, Bid Data Sheet, and Special Conditions of Contract. The final documents should contain neither blank spaces nor options.

c. This Preface and the footnotes or notes in italics included in the Invitation to Bid, BDS, General Conditions of Contract, Special Conditions of Contract, Specifications, Drawings, and Bill of Quantities are not part of the text of the final document, although they contain instructions that the Procuring Entity should strictly follow.

d. The cover should be modified as required to identify the Bidding Documents as to the names of the Project, Contract, and Procuring Entity, in addition to date of issue.

e. Modifications for specific Procurement Project details should be provided in the Special Conditions of Contract as amendments to the Conditions of Contract. For easy completion, whenever reference has to be made to specific clauses in the Bid Data Sheet or Special Conditions of Contract, these terms shall be printed in bold typeface on Sections I (Instructions to Bidders) and III (General Conditions of Contract), respectively.

f. For guidelines on the use of Bidding Forms and the procurement of Foreign-Assisted Projects, these will be covered by a separate issuance of the Government Procurement Policy Board.

TABLE OF CONTENTS

Glossary of Terms, Abbreviations, and Acronyms

ABC – Approved Budget for the Contract.

ARCC – Allowable Range of Contract Cost.

BAC – Bids and Awards Committee.

Bid – A signed offer or proposal to undertake a contract submitted by a bidder in response to and in consonance with the requirements of the bidding documents. Also referred to as *Proposal* and *Tender.* (2016 revised IRR, Section 5[c])

Bidder – Refers to a contractor, manufacturer, supplier, distributor and/or consultant who submits a bid in response to the requirements of the Bidding Documents. (2016 revised IRR, Section 5[d])

Bidding Documents – The documents issued by the Procuring Entity as the bases for bids, furnishing all information necessary for a prospective bidder to prepare a bid for the Goods, Infrastructure Projects, and/or Consulting Services required by the Procuring Entity. (2016 revised IRR, Section 5[e])

BIR – Bureau of Internal Revenue.

BSP – Bangko Sentral ng Pilipinas.

CDA – Cooperative Development Authority.

Consulting Services – Refer to services for Infrastructure Projects and other types of projects or activities of the GOP requiring adequate external technical and professional expertise that are beyond the capability and/or capacity of the GOP to undertake such as, but not limited to: (i) advisory and review services; (ii) pre-investment or feasibility studies; (iii) design; (iv) construction supervision; (v) management and related services; and (vi) other technical services or special studies. (2016 revised IRR, Section 5[i])

Contract – Refers to the agreement entered into between the Procuring Entity and the Supplier or Manufacturer or Distributor or Service Provider for procurement of Goods and Services; Contractor for Procurement of Infrastructure Projects; or Consultant or Consulting Firm for Procurement of Consulting Services; as the case may be, as recorded in the Contract Form signed by the parties, including all attachments and appendices thereto and all documents incorporated by reference therein.

Contractor – is a natural or juridical entity whose proposal was accepted by the Procuring Entity and to whom the Contract to execute the Work was awarded. Contractor as used in these Bidding Documents may likewise refer to a supplier, distributor, manufacturer, or consultant.

CPI – Consumer Price Index.

DOLE – Department of Labor and Employment.

DTI – Department of Trade and Industry.

Foreign-funded Procurement or Foreign-Assisted Project – Refers to procurement whose funding source is from a foreign government, foreign or international financing institution as specified in the Treaty or International or Executive Agreement. (2016 revised IRR, Section 5[b]).

GFI – Government Financial Institution.

GOCC – Government-owned and/or –controlled corporation.

Goods – Refer to all items, supplies, materials and general support services, except Consulting Services and Infrastructure Projects, which may be needed in the transaction of public businesses or in the pursuit of any government undertaking, project or activity, whether in the nature of equipment, furniture, stationery, materials for construction, or personal property of any kind, including non-personal or contractual services such as the repair and maintenance of equipment and furniture, as well as trucking, hauling, janitorial, security, and related or analogous services, as well as procurement of materials and supplies provided by the Procuring Entity for such services. The term "related" or "analogous services" shall include, but is not limited to, lease or purchase of office space, media advertisements, health maintenance services, and other services essential to the operation of the Procuring Entity. (2016 revised IRR, Section 5[r])

GOP – Government of the Philippines.

Infrastructure Projects – Include the construction, improvement, rehabilitation, demolition, repair, restoration or maintenance of roads and bridges, railways, airports, seaports, communication facilities, civil works components of information technology projects, irrigation, flood control and drainage, water supply, sanitation, sewerage and solid waste management systems, shore protection, energy/power and electrification facilities, national buildings, school buildings, hospital buildings, and other related construction projects of the government. Also referred to as *civil works or works*. (2016 revised IRR, Section 5[u])

LGUs – Local Government Units.

NFCC – Net Financial Contracting Capacity.

NGA – National Government Agency.

PCAB – Philippine Contractors Accreditation Board.

PhilGEPS - Philippine Government Electronic Procurement System.

Procurement Project – refers to a specific or identified procurement covering goods, infrastructure project or consulting services. A Procurement Project shall be described, detailed, and scheduled in the Project Procurement Management Plan prepared by the agency which shall be consolidated in the procuring entity's Annual Procurement Plan. (GPPB Circular No. 06-2019 dated 17 July 2019)

PSA – Philippine Statistics Authority.

SEC – Securities and Exchange Commission.

SLCC – Single Largest Completed Contract.

UN – United Nations.

Section I. Invitation to Bid

Notes on the Invitation to Bid

The Invitation to Bid (IB) provides information that enables potential Bidders to decide whether to participate in the procurement at hand. The IB shall be posted in accordance with Section 21.2 of the 2016 revised IRR of RA No. 9184.

Apart from the essential items listed in the Bidding Documents, the IB should also indicate the following:

a. The date of availability of the Bidding Documents, which shall be from the time the IB is first advertised/posted until the deadline for the submission and receipt of bids;

b. The place where the Bidding Documents may be acquired or the website where it may be downloaded;

c. The deadline for the submission and receipt of bids; and

d. Any important bid evaluation criteria.

The IB should be incorporated into the Bidding Documents. The information contained in the IB must conform to the Bidding Documents and in particular to the relevant information in the Bid Data Sheet.

Republic of the Philippines
Department of Education
REGION IV-A CALABARZON
CITY SCHOOLS DIVISION OF BIÑAN CITY

Invitation to Bid for CY 2024 Upgrading of Electrical System (Binan ES)

1. The ***Department of Education (DepEd) - City Schools Division of Biñan City***, through the *Fiscal Year (FY) 2024 General Appropriations Act (GAA)* intends to apply the sum of ***Sixteen Million Seven Hundred Eighty-Seven Thousand Three Hundred Forty-Six and Eighty-Nine Hundredths pesos only (P16,787,346.89)*** being the Approved Budget for the Contract (ABC) to payments under the contract for ***CY 2024 Upgrading of Electrical System (Binan ES)*** *with Project Identification Number* ***R4A-BNN-2023-04***. Bids received in excess of the ABC shall be automatically rejected at bid opening.

2. The ***Department of Education (DepEd) - City Schools Division of Biñan City*** now invites bids for the above Procurement Project. Completion of the Works is required ***two hundred forty (240) calendar days***. Bidders should have completed a contract similar to the Project. The description of an eligible bidder is contained in the Bidding Documents, particularly, in Section II (Instructions to Bidders).

3. Bidding will be conducted through open competitive bidding procedures using non-discretionary "*pass/fail*" criterion as specified in the 2016 revised Implementing Rules and Regulations (IRR) of Republic Act (RA) No. 9184.

4. Interested bidders may obtain further information from ***Department of Education (DepEd) - City Schools Division of Biñan City*** and inspect the Bidding Documents at the address given below from ***8:00 a.m. to 5:00 a.m***..

5. A complete set of Bidding Documents may be acquired by interested bidders on ***December 27, 2023 to January 16, 2024*** from given address and website/s below *and upon payment of the applicable fee for the Bidding Documents, pursuant to the latest Guidelines issued by the GPPB, in the amount of* ***Twenty-five thousand pesos only (P25,000.00)***. The Procuring Entity shall allow the bidder to present its proof of payment for the fees ***in person.***

6. The ***Department of Education (DepEd) - City Schools Division of Biñan City*** will hold a Pre-Bid Conference[1] on ***January 4, 2024*** at ***DepEd – City Schools Division of***

[1] May be deleted in case the ABC is less than One Million Pesos (PhP1,000,000) where the Procuring Entity may not hold a pre-bid conference.

Biñan City, SDO Training Hall, P. Burgos St. Brgy. Sto.Domingo, Biñan City, Laguna which shall be open to prospective bidders.

7. Bids must be duly received by the BAC Secretariat through **manual submission** at the office address as indicated below on or before ***January 16, 2024, 8:59 a.m..*** Late bids shall not be accepted.

8. All bids must be accompanied by a bid security in any of the acceptable forms and in the amount stated in **ITB** Clause 16.

9. Bid opening shall be on ***January 16, 2024, 9:00 a.m.*** at the given address below ***DepEd – City Schools Division of Biñan City, SDO Training Hall, P. Burgos St. Brgy. Sto. Domingo, Biñan City, Laguna.*** Bids will be opened in the presence of the bidders' representatives who choose to attend the activity.

10. *The procurement project is **short of award**. The awarding of the procurement contract will be made once the corresponding Sub-ARO for the project is released.*

11. The ***Department of Education (DepEd) - City Schools Division of Biñan City*** reserves the right to reject any and all bids, declare a failure of bidding, or not award the contract at any time prior to contract award in accordance with Sections 35.6 and 41 of the 2016 revised Implementing Rules and Regulations (IRR) of RA No. 9184, without thereby incurring any liability to the affected bidder or bidders.

12. For further information, please refer to:

    SYLVIA S. TANAEL
    Head, BAC Secretariat
    Bids and Awards Committee (BAC)
    DepEd – City Schools Division of Biñan City
    P. Burgos St., Brgy. Sto. Domingo
    Biñan City, Laguna
    bac.sdobinancity@deped.gov.ph
    Tel. No. (049) 547-0105
    https://www.depedbinan.com/

13. You may visit the following websites:

    For downloading of Bidding Documents: ***https://www.depedbinan.com/***

December 22, 2023

(Sgd.)
EDENIA O. LIBRANDA
BAC Chairman
Chief Education Supervisor
Officer-in-Charge
Office of the Assistant Schools Division Superintendent

Section II. Instructions to Bidders

Notes on the Instructions to Bidders

This Section on the Instruction to Bidders (ITB) provides the information necessary for bidders to prepare responsive bids, in accordance with the requirements of the Procuring Entity. It also provides information on bid submission, eligibility check, opening and evaluation of bids, post-qualification, and on the award of contract.

1. Scope of Bid

The Procuring Entity, ***Department of Education (DepEd) - City Schools Division of Biñan City*** invites Bids for the ***CY 2024 Upgrading of Electrical System (Binan ES)***, with Project Identification Number ***R4A-BNN-2023-04***.

[Note: The Project Identification Number is assigned by the Procuring Entity based on its own coding scheme and is not the same as the PhilGEPS reference number, which is generated after the posting of the bid opportunity on the PhilGEPS website.]

The Procurement Project (referred to herein as "Project") is for the construction of Works, as described in Section VI (Specifications).

2. Funding Information

2.1. The GOP through the source of funding as indicated below for ***Fiscal Year (FY) 2024 General Appropriations Act (GAA)*** in the amount of ***Sixteen Million Seven Hundred Eighty-Seven Thousand Three Hundred Forty-Six and Eighty-Nine Hundredths pesos only (P16,787,346.89)***.

2.2. The source of funding is:

*[If an **early procurement activity**, select one and delete others:]*

a. NGA, the National Expenditure Program.

3. Bidding Requirements

The Bidding for the Project shall be governed by all the provisions of RA No. 9184 and its 2016 revised IRR, including its Generic Procurement Manual and associated policies, rules and regulations as the primary source thereof, while the herein clauses shall serve as the secondary source thereof.

Any amendments made to the IRR and other GPPB issuances shall be applicable only to the ongoing posting, advertisement, or invitation to bid by the BAC through the issuance of a supplemental or bid bulletin.

The Bidder, by the act of submitting its Bid, shall be deemed to have inspected the site, determined the general characteristics of the contracted Works and the conditions for this Project, such as the location and the nature of the work; (b) climatic conditions; (c) transportation facilities; (c) nature and condition of the terrain, geological conditions at the site communication facilities, requirements, location and availability of construction aggregates and other materials, labor, water, electric power and access roads; and (d) other factors that may affect the cost, duration and execution or implementation of the contract, project, or work and examine all instructions, forms, terms, and project requirements in the Bidding Documents.

4. Corrupt, Fraudulent, Collusive, Coercive, and Obstructive Practices

The Procuring Entity, as well as the Bidders and Contractors, shall observe the highest standard of ethics during the procurement and execution of the contract. They or through an agent shall not engage in corrupt, fraudulent, collusive, coercive, and obstructive practices defined under Annex "I" of the 2016 revised IRR of RA No. 9184 or other integrity violations in competing for the Project.

5. Eligible Bidders

5.1. Only Bids of Bidders found to be legally, technically, and financially capable will be evaluated.

5.2. The Bidder must have an experience of having completed a Single Largest Completed Contract (SLCC) that is similar to this Project, equivalent to at least fifty percent (50%) of the ABC adjusted, if necessary, by the Bidder to current prices using the PSA's CPI, except under conditions provided for in Section 23.4.2.4 of the 2016 revised IRR of RA No. 9184.

A contract is considered to be "similar" to the contract to be bid if it has the major categories of work stated in the **BDS**.

5.3. For Foreign-funded Procurement, the Procuring Entity and the foreign government/foreign or international financing institution may agree on another track record requirement, as specified in the Bidding Document prepared for this purpose.

5.4. The Bidders shall comply with the eligibility criteria under Section 23.4.2 of the 2016 IRR of RA No. 9184.

6. Origin of Associated Goods

There is no restriction on the origin of Goods other than those prohibited by a decision of the UN Security Council taken under Chapter VII of the Charter of the UN.

7. Subcontracts

7.1. The Bidder may subcontract portions of the Project to the extent allowed by the Procuring Entity as stated herein, but in no case more than fifty percent (50%) of the Project.

The Procuring Entity has prescribed that:

a. Subcontracting is not allowed.

8. Pre-Bid Conference

The Procuring Entity will hold a pre-bid conference for this Project on the specified date and time and either at its physical address ***DepEd – City Schools Division of Biñan City, SDO Training Hall, P. Burgos St. Brgy. Sto.Domingo, Biñan City, Laguna*** as indicated in paragraph 6 of the **IB.**

9. Clarification and Amendment of Bidding Documents

Prospective bidders may request for clarification on and/or interpretation of any part of the Bidding Documents. Such requests must be in writing and received by the Procuring Entity, either at its given address or through electronic mail indicated in the **IB**, at least ten (10) calendar days before the deadline set for the submission and receipt of Bids.

10. Documents Comprising the Bid: Eligibility and Technical Components

10.1. The first envelope shall contain the eligibility and technical documents of the Bid as specified in **Section IX. Checklist of Technical and Financial Documents**.

10.2. If the eligibility requirements or statements, the bids, and all other documents for submission to the BAC are in foreign language other than English, it must be accompanied by a translation in English, which shall be authenticated by the appropriate Philippine foreign service establishment, post, or the equivalent office having jurisdiction over the foreign bidder's affairs in the Philippines. For Contracting Parties to the Apostille Convention, only the translated documents shall be authenticated through an apostille pursuant to GPPB Resolution No. 13-2019 dated 23 May 2019. The English translation shall govern, for purposes of interpretation of the bid.

10.3. A valid special PCAB License in case of Joint Ventures, and registration for the type and cost of the contract for this Project. Any additional type of Contractor license or permit shall be indicated in the **BDS**.

10.4. A List of Contractor's key personnel (e.g., Project Manager, Project Engineers, Materials Engineers, and Foremen) assigned to the contract to be bid, with their complete qualification and experience data shall be provided. These key personnel must meet the required minimum years of experience set in the **BDS**.

10.5. A List of Contractor's major equipment units, which are owned, leased, and/or under purchase agreements, supported by proof of ownership, certification of availability of equipment from the equipment lessor/vendor for the duration of the project, as the case may be, must meet the minimum requirements for the contract set in the **BDS**.

11. Documents Comprising the Bid: Financial Component

11.1. The second bid envelope shall contain the financial documents for the Bid as specified in **Section IX. Checklist of Technical and Financial Documents**.

11.2. Any bid exceeding the ABC indicated in paragraph 1 of the **IB** shall not be accepted.

11.3. For Foreign-funded procurement, a ceiling may be applied to bid prices provided the conditions are met under Section 31.2 of the 2016 revised IRR of RA No. 9184.

12. Alternative Bids

Bidders shall submit offers that comply with the requirements of the Bidding Documents, including the basic technical design as indicated in the drawings and specifications. Unless there is a value engineering clause in the **BDS**, alternative Bids shall not be accepted.

13. Bid Prices

All bid prices for the given scope of work in the Project as awarded shall be considered as fixed prices, and therefore not subject to price escalation during contract implementation, except under extraordinary circumstances as determined by the NEDA and approved by the GPPB pursuant to the revised Guidelines for Contract Price Escalation guidelines.

14. Bid and Payment Currencies

14.1. Bid prices may be quoted in the local currency or tradeable currency accepted by the BSP at the discretion of the Bidder. However, for purposes of bid evaluation, Bids denominated in foreign currencies shall be converted to Philippine currency based on the exchange rate as published in the BSP reference rate bulletin on the day of the bid opening.

14.2. *Payment of the contract price shall be made in:*

a. Philippine Pesos

15. Bid Security

15.1. The Bidder shall submit a Bid Securing Declaration or any form of Bid Security in the amount indicated in the **BDS**, which shall be not less than the percentage of the ABC in accordance with the schedule in the **BDS**.

15.2. The Bid and bid security shall be valid until ***May 15, 2024***. Any bid not accompanied by an acceptable bid security shall be rejected by the Procuring Entity as non-responsive.

16. Sealing and Marking of Bids

Each Bidder shall submit ***1 (one) original and 2 (two) copies*** of the first and second components of its Bid.

The Procuring Entity may request additional hard copies and/or electronic copies of the Bid. However, failure of the Bidders to comply with the said request shall not be a ground for disqualification.

If the Procuring Entity allows the submission of bids through online submission to the given website or any other electronic means, the Bidder shall submit an electronic copy of its Bid, which must be digitally signed. An electronic copy that cannot be opened or is corrupted shall be considered non-responsive and, thus, automatically disqualified.

17. Deadline for Submission of Bids

The Bidders shall submit on the specified date and time and either at its physical address or through online submission as indicated in paragraph 7 of the **IB.**

18. Opening and Preliminary Examination of Bids

18.1. The BAC shall open the Bids in public at the time, on the date, and at the place specified in paragraph 9 of the **IB**. The Bidders' representatives who are present shall sign a register evidencing their attendance. In case videoconferencing, webcasting or other similar technologies will be used, attendance of participants shall likewise be recorded by the BAC Secretariat.

In case the Bids cannot be opened as scheduled due to justifiable reasons, the rescheduling requirements under Section 29 of the 2016 revised IRR of RA No. 9184 shall prevail.

18.2. The preliminary examination of Bids shall be governed by Section 30 of the 2016 revised IRR of RA No. 9184.

19. Detailed Evaluation and Comparison of Bids

19.1. The Procuring Entity's BAC shall immediately conduct a detailed evaluation of all Bids rated "*passed*" using non-discretionary pass/fail criteria. The BAC shall consider the conditions in the evaluation of Bids under Section 32.2 of 2016 revised IRR of RA No. 9184.

19.2. If the Project allows partial bids, all Bids and combinations of Bids as indicated in the **BDS** shall be received by the same deadline and opened and evaluated simultaneously so as to determine the Bid or combination of Bids offering the lowest calculated cost to the Procuring Entity. Bid Security as required by **ITB** Clause 15 shall be submitted for each contract (lot) separately.

19.3. In all cases, the NFCC computation pursuant to Section 23.4.2.6 of the 2016 revised IRR of RA No. 9184 must be sufficient for the total of the ABCs for all the lots participated in by the prospective Bidder.

20. Post Qualification

Within a non-extendible period of five (5) calendar days from receipt by the Bidder of the notice from the BAC that it submitted the Lowest Calculated Bid, the Bidder shall submit its latest income and business tax returns filed and paid through the BIR Electronic Filing and Payment System (eFPS), and other appropriate licenses and permits required by law and stated in the **BDS**.

21. Signing of the Contract

The documents required in Section 37.2 of the 2016 revised IRR of RA No. 9184 shall form part of the Contract. Additional Contract documents are indicated in the **BDS**.

Section III. Bid Data Sheet

Notes on the Bid Data Sheet (BDS)

The Bid Data Sheet (BDS) consists of provisions that supplement, amend, or specify in detail, information, or requirements included in the ITB found in Section II, which are specific to each procurement.

This Section is intended to assist the Procuring Entity in providing the specific information in relation to corresponding clauses in the ITB and has to be prepared for each specific procurement.

The Procuring Entity should specify in the BDS information and requirements specific to the circumstances of the Procuring Entity, the processing of the procurement, and the bid evaluation criteria that will apply to the Bids. In preparing the BDS, the following aspects should be checked:

a. Information that specifies and complements provisions of the ITB must be incorporated.

b. Amendments and/or supplements, if any, to provisions of the ITB as necessitated by the circumstances of the specific procurement, must also be incorporated.

Bid Data Sheet

<table>
<tr><th>ITB Clause</th><th></th></tr>
<tr><td>5.2</td><td>For this purpose, contracts similar to the Project refer to contracts which have the same major categories of work, which shall be:

Repair, Rehabilitation, Restoration, and/or Construction of School Buildings</td></tr>
<tr><td>7.1</td><td>The Procuring Entity has prescribed that:

Subcontracting is not allowed.</td></tr>
<tr><td>10.3</td><td>The winning bidder with the LCRB shall secure the following permits:

a. Building Permit (within 15 days after the issuance of the Notice to Proceed)*

b. Occupancy Permit (within 15 days after the completion of the Project)*

*The National Building Code (P.D. 1096)</td></tr>
<tr><td>10.4</td><td>The key personnel must meet the required minimum years of experience set below:
<table>
<tr><th><u>Key Personnel</u></th><th><u>General Experience</u></th><th><u>Relevant Experience</u></th></tr>
<tr><td>General Foreman</td><td>1 year</td><td>1 year</td></tr>
<tr><td>Helper</td><td>1 year</td><td>1 year</td></tr>
<tr><td>Registered Electrical Engineer</td><td>2 years</td><td>2 years</td></tr>
<tr><td>Electrician</td><td>1 year</td><td>1 year</td></tr>
<tr><td>Registered Master Electrician</td><td>2 years</td><td>2 years</td></tr>
<tr><td>Professional Master Electrician</td><td>2 years</td><td>2 years</td></tr>
</table></td></tr>
<tr><td>10.5</td><td>The minimum major equipment requirements are the following:
<table>
<tr><th><u>Equipment</u></th><th><u>Capacity</u></th><th><u>Number of Units</u></th></tr>
<tr><td>Hand Tools</td><td>Strong Hand Tools</td><td>20 different tools</td></tr>
<tr><td>One-Bagger Mixer</td><td>300L (mixing capacity)</td><td>1</td></tr>
<tr><td>Welding Machine</td><td>200-400 amp</td><td>1</td></tr>
<tr><td>Scaffolding</td><td>over 240 kg per sq</td><td>1 lot</td></tr>
<tr><td>Boom Truck</td><td>20,000 lbs</td><td>1</td></tr>
<tr><td>Ladder</td><td>30 ft</td><td>2</td></tr>
</table></td></tr>
<tr><td>12</td><td>No further instruction.</td></tr>
</table>

15.1	The bid security shall be in the form of a Bid Securing Declaration or any of the following forms and amounts: a. The amount of not less than **P335,746.94**, if bid security is in cash, cashier's/manager's check, bank draft/guarantee or irrevocable letter of credit; b. The amount of not less than **P839,367.34**, if bid security is in Surety Bond.
16	Each Bidder shall submit ***1 (one) original*** and ***2 (two) copies*** of the first and second components of its Bid.
19.2	*Partial bids are not allowed.*
20	***Site Inspection Certificate*** *(duly signed by the School Head or its authorized representative) shall be included in the bidding docs*
21	Additional contract documents relevant to the Project that may be required by existing laws and/or the Procuring Entity, such as 1. Construction Schedule and S-Curve 2. Manpower Schedule; 3. Construction Methods; 4. Equipment Utilization Schedule; 5. Construction Safety and Health Program **approved by the DOLE**; 6. PERT/CPM or other acceptable tools of project scheduling; 7. **Contractor's All Risk Insurance (CARI) Policy**; and 8. **Bio-Data of all construction workers to be assigned in the Project**

Section IV. General Conditions of Contract

Notes on the General Conditions of Contract

The General Conditions of Contract (GCC) in this Section, read in conjunction with the Special Conditions of Contract in Section V and other documents listed therein, should be a complete document expressing all the rights and obligations of the parties.

Matters governing performance of the Contractor, payments under the contract, or matters affecting the risks, rights, and obligations of the parties under the contract are included in the GCC and Special Conditions of Contract.

Any complementary information, which may be needed, shall be introduced only through the Special Conditions of Contract.

1. Scope of Contract

This Contract shall include all such items, although not specifically mentioned, that can be reasonably inferred as being required for its completion as if such items were expressly mentioned herein. All the provisions of RA No. 9184 and its 2016 revised IRR, including the Generic Procurement Manual, and associated issuances, constitute the primary source for the terms and conditions of the Contract, and thus, applicable in contract implementation. Herein clauses shall serve as the secondary source for the terms and conditions of the Contract.

This is without prejudice to Sections 74.1 and 74.2 of the 2016 revised IRR of RA No. 9184 allowing the GPPB to amend the IRR, which shall be applied to all procurement activities, the advertisement, posting, or invitation of which were issued after the effectivity of the said amendment.

2. Sectional Completion of Works

If sectional completion is specified in the **Special Conditions of Contract (SCC)**, references in the Conditions of Contract to the Works, the Completion Date, and the Intended Completion Date shall apply to any Section of the Works (other than references to the Completion Date and Intended Completion Date for the whole of the Works).

3. Possession of Site

3.1 The Procuring Entity shall give possession of all or parts of the Site to the Contractor based on the schedule of delivery indicated in the **SCC,** which corresponds to the execution of the Works. If the Contractor suffers delay or incurs cost from failure on the part of the Procuring Entity to give possession in accordance with the terms of this clause, the Procuring Entity's Representative shall give the Contractor a Contract Time Extension and certify such sum as fair to cover the cost incurred, which sum shall be paid by Procuring Entity.

3.2 If possession of a portion is not given by the above date, the Procuring Entity will be deemed to have delayed the start of the relevant activities. The resulting adjustments in contract time to address such delay may be addressed through contract extension provided under Annex "E" of the 2016 revised IRR of RA No. 9184.

4. The Contractor's Obligations

The Contractor shall employ the key personnel named in the Schedule of Key Personnel indicating their designation, in accordance with **ITB** Clause 10.3 and specified in the **BDS**, to carry out the supervision of the Works.

The Procuring Entity will approve any proposed replacement of key personnel only if their relevant qualifications and abilities are equal to or better than those of the personnel listed in the Schedule.

5. Performance Security

5.1. Within ten (10) calendar days from receipt of the Notice of Award from the Procuring Entity but in no case later than the signing of the contract by both parties, the successful Bidder shall furnish the performance security in any of the forms prescribed in Section 39 of the 2016 revised IRR.

5.2. The Contractor, by entering into the Contract with the Procuring Entity, acknowledges the right of the Procuring Entity to institute action pursuant to RA No. 3688 against any subcontractor be they an individual, firm, partnership, corporation, or association supplying the Contractor with labor, materials and/or equipment for the performance of this Contract.

6. Site Investigation Reports

The Contractor, in preparing the Bid, shall rely on any Site Investigation Reports referred to in the **SCC** supplemented by any information obtained by the Contractor.

7. Warranty

7.1. In case the Contractor fails to undertake the repair works under Section 62.2.2 of the 2016 revised IRR, the Procuring Entity shall forfeit its performance security, subject its property(ies) to attachment or garnishment proceedings, and perpetually disqualify it from participating in any public bidding. All payables of the GOP in his favor shall be offset to recover the costs.

7.2. The warranty against Structural Defects/Failures, except that occasioned-on force majeure, shall cover the period from the date of issuance of the Certificate of Final Acceptance by the Procuring Entity. Specific duration of the warranty is found in the **SCC**.

8. Liability of the Contractor

Subject to additional provisions, if any, set forth in the **SCC**, the Contractor's liability under this Contract shall be as provided by the laws of the Republic of the Philippines.

If the Contractor is a joint venture, all partners to the joint venture shall be jointly and severally liable to the Procuring Entity.

9. Termination for Other Causes

Contract termination shall be initiated in case it is determined *prima facie* by the Procuring Entity that the Contractor has engaged, before, or during the implementation of the contract, in unlawful deeds and behaviors relative to contract acquisition and implementation, such as, but not limited to corrupt, fraudulent, collusive, coercive, and obstructive practices as stated in **ITB** Clause 4.

10. Dayworks

Subject to the guidelines on Variation Order in Annex "E" of the 2016 revised IRR of RA No. 9184, and if applicable as indicated in the **SCC**, the Dayworks rates in the Contractor's Bid shall be used for small additional amounts of work only when the Procuring Entity's Representative has given written instructions in advance for additional work to be paid for in that way.

11. Program of Work

11.1. The Contractor shall submit to the Procuring Entity's Representative for approval the said Program of Work showing the general methods, arrangements, order, and timing for all the activities in the Works. The submissions of the Program of Work are indicated in the **SCC.**

11.2. The Contractor shall submit to the Procuring Entity's Representative for approval an updated Program of Work at intervals no longer than the period stated in the **SCC.** If the Contractor does not submit an updated Program of Work within this period, the Procuring Entity's Representative may withhold the amount stated in the **SCC** from the next payment certificate and continue to withhold this amount until the next payment after the date on which the overdue Program of Work has been submitted.

12. Instructions, Inspections and Audits

The Contractor shall permit the GOP or the Procuring Entity to inspect the Contractor's accounts and records relating to the performance of the Contractor and to have them audited by auditors of the GOP or the Procuring Entity, as may be required.

13. Advance Payment

The Procuring Entity shall, upon a written request of the Contractor which shall be submitted as a Contract document, make an advance payment to the Contractor in an amount not exceeding fifteen percent (15%) of the total contract price, to be made in lump sum, or at the most two installments according to a schedule specified in the **SCC**, subject to the requirements in Annex "E" of the 2016 revised IRR of RA No. 9184.

14. Progress Payments

The Contractor may submit a request for payment for Work accomplished. Such requests for payment shall be verified and certified by the Procuring Entity's Representative/Project Engineer. Except as otherwise stipulated in the **SCC**, materials and equipment delivered on the site but not completely put in place shall not be included for payment.

15. Operating and Maintenance Manuals

15.1. If required, the Contractor will provide “as built” Drawings and/or operating and maintenance manuals as specified in the **SCC.**

15.2. If the Contractor does not provide the Drawings and/or manuals by the dates stated above, or they do not receive the Procuring Entity’s Representative’s approval, the Procuring Entity’s Representative may withhold the amount stated in the **SCC** from payments due to the Contractor.

Section V. Special Conditions of Contract

Notes on the Special Conditions of Contract

Similar to the BDS, the clauses in this Section are intended to assist the Procuring Entity in providing contract-specific information in relation to corresponding clauses in the GCC found in Section IV.

The Special Conditions of Contract (SCC) complement the GCC, specifying contractual requirements linked to the special circumstances of the Procuring Entity, the Procuring Entity's country, the sector, and the Works procured. In preparing this Section, the following aspects should be checked:

a. Information that complements provisions of the GCC must be incorporated.

b. Amendments and/or supplements to provisions of the GCC as necessitated by the circumstances of the specific purchase, must also be incorporated.

However, no special condition which defeats or negates the general intent and purpose of the provisions of the GCC should be incorporated herein.

Special Conditions of Contract

GCC Clause	
2	*Completion of Works is **within ninety (90) calendar days** upon receipt of the Notice to Proceed.*
4.1	*The Procuring Entity shall give possession of all parts of the site to the contractor after submission of the notarized contract by the contractor to the Procuring Entity and on or before date of receipt of the NTP by the contractor.*
6	The site investigation reports are: ***None***
7.2	*The warranty against Structural Defects/Failures, except that occasioned-on force majeure, shall cover the period from the date of issuance of the Certificate of Final Acceptance by the Procuring Entity: **One (1) year***
10	*No further instructions.*
11.1	The Contractor shall submit the Program of Work to the Procuring Entity's Representative within ***seven (7) calendar*** days of delivery of the Notice of Award.
11.2	The amount to be withheld for late submission of an updated Program of Work is [*insert amount*].
13	The amount of the advance payment ***shall not exceed 15% of the total contract price and schedule of payment.***
14	*[If allowed by the Procuring Entity, state:]* Materials and equipment delivered on the site but not completely put in place shall be included for payment. ***Not Applicable***
15.1	The date by which operating and maintenance manuals are required is ***five (5) days upon completion***. The date by which "as built" drawings are required is ***five (5) days upon completion and upon request of final billing***.
15.2	The amount to be withheld for failing to produce "as built" drawings and/or operating and maintenance manuals by the date required is ***two percent (2%) of contract price.***

Section VI. Specifications

Notes on Specifications

A set of precise and clear specifications is a prerequisite for Bidders to respond realistically and competitively to the requirements of the Procuring Entity without qualifying or conditioning their Bids. In the context of international competitive bidding, the specifications must be drafted to permit the widest possible competition and, at the same time, present a clear statement of the required standards of workmanship, materials, and performance of the goods and services to be procured. Only if this is done will the objectives of economy, efficiency, and fairness in procurement be realized, responsiveness of Bids be ensured, and the subsequent task of bid evaluation facilitated. The specifications should require that all goods and materials to be incorporated in the Works be new, unused, of the most recent or current models, and incorporate all recent improvements in design and materials unless provided otherwise in the Contract.

Samples of specifications from previous similar projects are useful in this respect. The use of metric units is mandatory. Most specifications are normally written specially by the Procuring Entity or its representative to suit the Works at hand. There is no standard set of Specifications for universal application in all sectors in all regions, but there are established principles and practices, which are reflected in these PBDs.

There are considerable advantages in standardizing General Specifications for repetitive Works in recognized public sectors, such as highways, ports, railways, urban housing, irrigation, and water supply, in the same country or region where similar conditions prevail. The General Specifications should cover all classes of workmanship, materials, and equipment commonly involved in construction, although not necessarily to be used in a particular Works Contract. Deletions or addenda should then adapt the General Specifications to the particular Works.

Care must be taken in drafting specifications to ensure that they are not restrictive. In the specification of standards for goods, materials, and workmanship, recognized international standards should be used as much as possible. Where other particular standards are used, whether national standards or other standards, the specifications should state that goods, materials, and workmanship that meet other authoritative standards, and which ensure substantially equal or higher quality than the standards mentioned, will also be acceptable. The following clause may be inserted in the SCC.

Sample Clause: Equivalency of Standards and Codes

Wherever reference is made in the Contract to specific standards and codes to be met by the goods and materials to be furnished, and work performed or tested, the provisions of the latest current edition or revision of the relevant standards and codes in effect shall apply, unless otherwise expressly stated in the Contract. Where such standards and codes are national, or relate to a particular country or region, other authoritative standards that ensure a substantially equal or higher quality than the standards and codes specified will be accepted

subject to the Procuring Entity's Representative's prior review and written consent. Differences between the standards specified and the proposed alternative standards shall be fully described in writing by the Contractor and submitted to the Procuring Entity's Representative at least twenty-eight (28) days prior to the date when the Contractor desires the Procuring Entity's Representative's consent. In the event the Procuring Entity's Representative determines that such proposed deviations do not ensure substantially equal or higher quality, the Contractor shall comply with the standards specified in the documents.

These notes are intended only as information for the Procuring Entity or the person drafting the Bidding Documents. They should not be included in the final Bidding Documents.

Detailed Unit Price Analysis (Page 1 of 35)

DETAILED UNIT PRICE ANALYSIS

Project :	**Upgrading of Electrical System (Overhead System)**
Location:	**: CITY OF BIÑAN**
Item:	A.1
Description:	**Temporary Facilities**

Quantity: 8.00
Output : 1.00
Unit: Month

A.	Designation of Personnel	No. of Person	No. of Hours	Hourly Rate	Amount
	Sub-Total (Labor)			Php	-
B.	**Name / Capacity (Equipment)**	**No. of Units**	**No. of Hours**	**Hourly Rate**	**Amount**
	Sub-Total (Equipment)			Php	-
C.	**Name / Specification (Materials)**	**Unit**	**Quantity**	**Unit Cost**	**Amount**
	Rental of Office/ Storage House (including light and water)	Month	8.00		-
	Sub-Total (Materials)			Php	-
D.	**Direct Cost (A+B+C)**			**Php**	-
E.	Overhead,Contingencies and Miscellaneous (Ocm)			% of D.	
F.	Contractor's Profit			% of D.	-
G.	Value Added Tax (VAT)			% of (D+E+F)	-
H.	**Adjusted Total Cost (D+E+F+G)**			**Php**	-
I.	Adjusted Unit Cost (H/Quantity)			Php	-

Detailed Unit Price Analysis (Page 2 of 35)

DETAILED UNIT PRICE ANALYSIS

Project :	**Upgrading of Electrical System (Overhead System)**
Location:	**: CITY OF BIÑAN**
Item:	B.1
Description:	**Fire Safety Inspection Certificate (FSIC)**

Quantity: 1.00
Output : 1.00
Unit: lot

A.	Designation of Personnel	No. of Person	No. of Hours	Hourly Rate	Amount
	Skilled Laborer	1.00	8.00		-
	Sub-Total (Labor)			Php	-
B.	**Name / Capacity (Equipment)**	**No. of Units**	**No. of Hours**	**Hourly Rate**	**Amount**
	Sub-Total (Equipment)			Php	-
C.	**Name / Specification (Materials)**	**Unit**	**Quantity**	**Unit Cost**	**Amount**
	Plans & Permits for Fire Safety Inspection Certificate	lot	1		0.00
	Sub-Total (Materials)			Php	-
D.	**Direct Cost (A+B+C)**			**Php**	-
E.	Overhead,Contingencies and Miscellaneous (Ocm)			% of D.	
F.	Contractor's Profit			% of D.	
G.	Value Added Tax (VAT)			% of (D+E+F)	-
H.	**Adjusted Total Cost (D+E+F+G)**			**Php**	-
I.	Adjusted Unit Cost (H/Quantity)			Php	-

Detailed Unit Price Analysis (Page 3 of 35)

DETAILED UNIT PRICE ANALYSIS

Project :	**Upgrading of Electrical System (Overhead System)**
Location:	**: CITY OF BIÑAN**
Item:	SPL.1
Description:	**Project Billboard**

Quantity: 1.00
Output: 1.00
Unit: Each

A.	Designation of Personnel	No. of Person	No. of Hours	Hourly Rate	Amount
	Skilled Laborer	1	4.00		-
	Sub-Total (Labor)			Php	-
B.	**Name / Capacity (Equipment)**	**No. of Units**	**No. of Hours**	**Hourly Rate**	**Amount**
	Electric Hand Drill	1	8.00		-
	Sub-Total (Equipment)			Php	**-**
C.	**Name / Specification (Materials)**	**Unit**	**Quantity**	**Unit Cost**	**Amount**
	8' x 8' Tarpaulin, 2 sets	sq ft	64.00		-
	Coco Lumber	bd.ft	384.00		-
	Plywood, Ordinary 3/4" x 4' x 8'	pc	2.00		-
	CWN, Assorted	kg	1.00		-
	Sub-Total (Materials)			Php	-
D.	**Direct Cost (A+B+C)**			**Php**	-
E.	Overhead,Contingencies and Miscellaneous (Ocm)			% of D.	-
F.	Contractor's Profit			% of D.	-
G.	Value Added Tax (VAT)			% of (D+E+F)	-
H.	**Adjusted Total Cost (D+E+F+G)**			**Php**	-
I.	Adjusted Unit Cost (H/Quantity)			Php	-

Detailed Unit Price Analysis (Page 4 of 35)

DETAILED UNIT PRICE ANALYSIS

Project :	**Upgrading of Electrical System (Overhead System)**
Location:	**: CITY OF BIÑAN**
Item:	SPL.2
Description:	**Construction Safety and Health**

Quantity: 6.00
Output : 1.00
Unit: Month

A.	Designation of Personnel	No. of Person	No. of Hours	Hourly Rate	Amount
	Safety Officer	1	1440.00		-
	First Aider	1	1440.00		-
	Sub-Total (Labor)			Php	-
B.	**Name / Capacity (Equipment)**	**No. of Units**	**No. of Hours**	**Hourly Rate**	**Amount**
	Sub-Total (Equipment)			Php	-
C.	**Name / Specification (Materials)**	**Unit**	**Quantity**	**Unit Cost**	**Amount**
	First Aid Kit	Ls	1		0.00
	Personal Protective equipment (PPE)				
	Safety Helmet	man - days	10		0.00
	Safety Vest	man - days	10		0.00
	Safety Shoes	man - days	10		0.00
	Safety Gloves	man - days	20		0.00
	Signages and Barricades				
	PPE Signage (4' x 8')	set	1		0.00
	Safety First (4' x 4')	set	1		0.00
	Warning Signs (2' x 3')	set	1		0.00
	Caution Tape, 100 ft	roll	1		0.00
	Sub-Total (Materials)			Php	-
D.	**Direct Cost (A+B+C)**			**Php**	-
E.	Overhead,Contingencies and Miscellaneous (Ocm)			% of D.	
F.	Contractor's Profit			% of D.	-
G.	Value Added Tax (VAT)			% of (D+E+F)	-
H.	**Adjusted Total Cost (D+E+F+G)**			**Php**	-
I.	Adjusted Unit Cost (H/Quantity)			Php	-

Detailed Unit Price Analysis (Page 5 of 35)

DETAILED UNIT PRICE ANALYSIS

Project :	**Upgrading of Electrical System (Overhead System)**
Location:	**: CITY OF BIÑAN**
Item:	B.2
Description:	**Security/ Bill Deposit**

Quantity: 1.00
Output: 1.00
Unit: Ls

A.	Designation of Personnel	No. of Person	No. of Hours	Hourly Rate	Amount
	Sub-Total (Labor)			Php	-
B.	**Name / Capacity (Equipment)**	**No. of Units**	**No. of Hours**	**Hourly Rate**	**Amount**
	Sub-Total (Equipment)			Php	-
C.	**Name / Specification (Materials)**	**Unit**	**Quantity**	**Unit Cost**	**Amount**
	Security/ Bill Deposit	Ls	1.00		-
	Sub-Total (Materials)			Php	-
D.	**Direct Cost (A+B+C)**			**Php**	-
E.	Overhead,Contingencies and Miscellaneous (OCM)			% of D.	-
F.	Contractor's Profit			% of D.	-
G.	Value Added Tax (VAT)			% of (D+E+F)	-
H.	**Adjusted Total Cost (D+E+F +G)**			**Php**	-
I.	Adjusted Unit Cost (H/Quantity)			Php	-

Detailed Unit Price Analysis (Page 6 of 35)

DETAILED UNIT PRICE ANALYSIS

Project :	**Upgrading of Electrical System (Overhead System)**
Location:	**: CITY OF BIÑAN**
Item:	B.3
Description:	**Equipment Testing and Commissioning**

Quantity: 1.00
Output: 1.00
Unit: Ls

A.	Designation of Personnel	No. of Person	No. of Hours	Hourly Rate	Amount
	Construction Foreman	1	32.00		-
	Skilled Laborer	1	32.00		-
	Unskilled Laborer	1	32.00		-
	Sub-Total (Labor)			Php	-
B.	**Name / Capacity (Equipment)**	**No. of Units**	**No. of Hours**	**Hourly Rate**	**Amount**
	Sub-Total (Equipment)			Php	-
C.	**Name / Specification (Materials)**	**Unit**	**Quantity**	**Unit Cost**	**Amount**
	Equipment Testing and Commissioning Grounding Test Voltage Test Insulation Test	lot	1.00		-
	Sub-Total (Materials)			Php	-
D.	**Direct Cost (A+B+C)**			**Php**	-
E.	Overhead,Contingencies and Miscellaneous (OCM)			% of D.	-
F.	Contractor's Profit			% of D.	-
G.	Value Added Tax (VAT)			% of (D+E+F)	-
H.	**Adjusted Total Cost (D+E+F+G)**			**Php**	-
I.	Adjusted Unit Cost (H/Quantity)			Php	-

Detailed Unit Price Analysis (Page 7 of 35)

DETAILED UNIT PRICE ANALYSIS

Project :	**Upgrading of Electrical System (Overhead System)**
Location:	**: CITY OF BIÑAN**
Item:	C.1
Description:	Mobilization and Demobilization

Quantity: 1.00
Output : 1.00
Unit: Ls

A.	Designation of Personnel	No. of Person	No. of Hours	Hourly Rate	Amount
	Unskilled Laborer	1	24.00		-
	Sub-Total (Labor)			Php	-
B.	**Name / Capacity (Equipment)**	**No. of Units**	**No. of Hours**	**Hourly Rate**	**Amount**
	Self Loading Truck and Accessories	1	24.00		0.00
	Sub-Total (Equipment)			Php	-
C.	**Name / Specification (Materials)**	**Unit**	**Quantity**	**Unit Cost**	**Amount**
	Sub-Total (Materials)			Php	-
D.	**Direct Cost (A+B+C)**			**Php**	-
E.	Overhead,Contingencies and Miscellaneous (Ocm)			% of D.	
F.	Contractor's Profit			% of D.	
G.	Value Added Tax (VAT)			% of (D+E+F)	-
H.	**Adjusted Total Cost (D+E+F+G)**			**Php**	-
I.	Adjusted Unit Cost (H/Quantity)			Php	-

Detailed Unit Price Analysis (Page 8 of 35)

DETAILED UNIT PRICE ANALYSIS

Project :	**Upgrading of Electrical System (Overhead System)**
Location:	**: CITY OF BIÑAN**
Item:	
Description:	**Clearing of Right of Way**

Quantity: 1.00
Output: 1.00
Unit: Ls

A.	Designation of Personnel	No. of Person	No. of Hours	Hourly Rate	Amount
	Unskilled Laborer	1	16.00		-
	Sub-Total (Labor)			Php	-
B.	**Name / Capacity (Equipment)**	**No. of Units**	**No. of Hours**	**Hourly Rate**	**Amount**
	Sub-Total (Equipment)			Php	-
C.	**Name / Specification (Materials)**	**Unit**	**Quantity**	**Unit Cost**	**Amount**
	Clearing of Right of Way	Ls	1.00		-
	Sub-Total (Materials)			Php	-
D.	**Direct Cost (A+B+C)**			**Php**	-
E.	Overhead,Contingencies and Miscellaneous (OCM)			% of D.	-
F.	Contractor's Profit			% of D.	-
G.	Value Added Tax (VAT)			% of (D+E+F)	-
H.	**Adjusted Total Cost (D+E+F +G)**			**Php**	-
I.	Adjusted Unit Cost (H/Quantity)			Php	-

Detailed Unit Price Analysis (Page 9 of 35)

DETAILED UNIT PRICE ANALYSIS

Project :	**Upgrading of Electrical System (Overhead System)**
Location:	**: CITY OF BIÑAN**
Item:	1 (a)
Description:	**Clearing and Grubbing**

Quantity: 58.03
Output per hour: 500.00
Unit: sq.m

A.	Designation of Personnel	No. of Person	No. of Hours	Hourly Rate	Amount
	Construction Foreman	1	0.12		-
	Unskilled Laborer	2	0.12		-
	Sub-Total (Labor)			Php	-
B.	**Name / Capacity (Equipment)**	**No. of Units**	**No. of Hours**	**Hourly Rate**	**Amount**
	Backhoe (0.80 cu.m.)	1	0.12		0.00
	Dump Truck (12 cu.yd.)	1	0.12		0.00
	Sub-Total (Equipment)			Php	-
C.	**Name / Specification (Materials)**	**Unit**	**Quantity**	**Unit Cost**	**Amount**
	Sub-Total (Materials)			Php	-
D.	**Direct Cost (A+B+C)**			**Php**	-
E.	Overhead,Contingencies and Miscellaneous (OCM)			% of D.	-
F.	Contractor's Profit			% of D.	-
G.	Value Added Tax (VAT)			% of (D+E+F)	-
H.	**Adjusted Total Cost (D+E+F+G)**			**Php**	-
I.	Adjusted Unit Cost (H/Quantity)			Php	-

Detailed Unit Price Analysis (Page 10 of 35)

DETAILED UNIT PRICE ANALYSIS

Project :	**Upgrading of Electrical System (Overhead System)**
Location:	**: CITY OF BIÑAN**
Item:	1 (b)
Description:	**Structural Excavation**

Quantity: 112.67
Output per hour: 20.00
Unit: cu m

A.	Designation of Personnel	No. of Person	No. of Hours	Hourly Rate	Amount
	Construction Foreman	1	5.63		-
	Unskilled Laborer	1	5.63		-
	Sub-Total (Labor)			Php	-
B.	**Name / Capacity (Equipment)**	**No. of Units**	**No. of Hours**	**Hourly Rate**	**Amount**
	Backhoe (0.80 cu.m.)	1	5.63		0.00
	Dump Truck (12 cu.yd.)	1	5.63		0.00
	Sub-Total (Equipment)			Php	-
C.	**Name / Specification (Materials)**	**Unit**	**Quantity**	**Unit Cost**	**Amount**
	Sub-Total (Materials)			Php	-
D.	**Direct Cost (A+B+C)**			**Php**	-
E.	Overhead,Contingencies and Miscellaneous (OCM)			% of D.	-
F.	Contractor's Profit			% of D.	-
G.	Value Added Tax (VAT)			% of (D+E+F)	-
H.	**Adjusted Total Cost (D+E+F+G)**			**Php**	-
I.	Adjusted Unit Cost (H/Quantity)			Php	-

Detailed Unit Price Analysis (Page 11 of 35)

DETAILED UNIT PRICE ANALYSIS

Project :	**Upgrading of Electrical System (Overhead System)**
Location:	**: CITY OF BIÑAN**
Item:	1 (d)
Description:	**Gravel Bedding**

Quantity: 0.58
Output per hour: 1.20
Unit: cu m

A.	Designation of Personnel	No. of Person	No. of Hours	Hourly Rate	Amount
	Construction Foreman	1	0.48		-
	Unskilled Laborer	2	0.48		-
	Sub-Total (Labor)			Php	-
B.	**Name / Capacity (Equipment)**	**No. of Units**	**No. of Hours**	**Hourly Rate**	**Amount**
	Plate Compactor (5hp)	1	0.48		0.00
	Sub-Total (Equipment)			Php	-
C.	**Name / Specification (Materials)**	**Unit**	**Quantity**	**Unit Cost**	**Amount**
	Gravel Bedding G-1 (with 5% Shrinkage Factor)	cu.m	0.61		-
	Sub-Total (Materials)			Php	-
D.	**Direct Cost (A+B+C)**			**Php**	-
E.	Overhead,Contingencies and Miscellaneous (OCM)			% of D.	-
F.	Contractor's Profit			% of D.	-
G.	Value Added Tax (VAT)			% of (D+E+F)	-
H.	**Adjusted Total Cost (D+E+F+G)**			**Php**	-
I.	Adjusted Unit Cost (H/Quantity)			Php	-

Detailed Unit Price Analysis (Page 12 of 35)

DETAILED UNIT PRICE ANALYSIS

Project :	**Upgrading of Electrical System (Overhead System)**
Location:	**: CITY OF BIÑAN**
Item:	1 (e)
Description:	**Embankment**

Quantity: 81.67
Output per hour: 9.84
Unit: cu m

A.	Designation of Personnel	No. of Person	No. of Hours	Hourly Rate	Amount
	Construction Foreman	1	8.30		-
	Unskilled Laborer	1	8.30		-
	Sub-Total (Labor)			Php	-
B.	**Name / Capacity (Equipment)**	**No. of Units**	**No. of Hours**	**Hourly Rate**	**Amount**
	Plate Compactor (5hp)	1	8.30		0.00
	Backhoe (0.80 cu.m.)	1	8.30		0.00
	Sub-Total (Equipment)			Php	-
C.	**Name / Specification (Materials)**	**Unit**	**Quantity**	**Unit Cost**	**Amount**
	Embankment Material (with 25% shinkage factor)	cu.m	102.09		-
	Sub-Total (Materials)			Php	-
D.	**Direct Cost (A+B+C)**			**Php**	-
E.	Overhead,Contingencies and Miscellaneous (OCM)			% of D.	-
F.	Contractor's Profit			% of D.	-
G.	Value Added Tax (VAT)			% of (D+E+F)	-
H.	**Adjusted Total Cost (D+E+F+G)**			**Php**	-
I.	Adjusted Unit Cost (H/Quantity)			Php	-

Detailed Unit Price Analysis (Page 13 of 35)

DETAILED UNIT PRICE ANALYSIS

Project :	**Upgrading of Electrical System (Overhead System)**
Location:	**: CITY OF BIÑAN**
Item:	13 (a)
Description:	**Masonry Painting**

Quantity: 12.16
Output per hour: 2.10
Unit: sq.m

A.	Designation of Personnel	No. of Person	No. of Hours	Hourly Rate	Amount
	Construction Foreman	1	5.79		-
	Unskilled Laborer	1	5.79		-
	Sub-Total (Labor)			Php	-
B.	**Name / Capacity (Equipment)**	**No. of Units**	**No. of Hours**	**Hourly Rate**	**Amount**
	Sub-Total (Equipment)			Php	-
C.	**Name / Specification (Materials)**	**Unit**	**Quantity**	**Unit Cost**	**Amount**
	Neutralizer	gal	0.04		-
	Latex, Flat	gal	0.97		-
	Masonry Putty	gal	0.61		-
	Latex, Semi Gloss	gal	0.97		-
	Acri Color	qrt	0.06		-
	Sub-Total (Materials)			Php	-
D.	**Direct Cost (A+B+C)**			**Php**	-
E.	Overhead, Contingencies and Miscellaneous (OCM)			% of D.	-
F.	Contractor's Profit			% of D.	-
G.	Value Added Tax (VAT)			% of (D+E+F)	-
H.	**Adjusted Total Cost (D+E+F+G)**			**Php**	-
I.	Adjusted Unit Cost (H/Quantity)			Php	-

Detailed Unit Price Analysis (Page 14 of 35)

DETAILED UNIT PRICE ANALYSIS

Project :	**Upgrading of Electrical System (Overhead System)**
Location:	**Upgrading of Electrical System (Overhead System)**
Item:	13 (c)
Description:	**Metal Painting**

Quantity: 34.00
Output per hour: 2.00
Unit: sq.m

A.	Designation of Personnel	No. of Person	No. of Hours	Hourly Rate	Amount
	Construction Foreman	1	17.00		-
	Skilled Laborer	2	17.00		-
	Unskilled Laborer	1	17.00		-
	Sub-Total (Labor)			Php	-
B.	**Name / Capacity (Equipment)**	**No. of Units**	**No. of Hours**	**Hourly Rate**	**Amount**
	Sub-Total (Equipment)			Php	-
C.	**Name / Specification (Materials)**	**Unit**	**Quantity**	**Unit Cost**	**Amount**
	Primer, Zinc Chromate	gal	1.36		-
	Enamel Paint	gal	3.40		-
	Paint Thinner	gal	34.00		-
	Paint Primer Solvent	gals	34.00		-
	Paint Metal Epoxy	gals	13.60		-
	Steel Brush	pcs	12.00		-
	Paint Brush	pcs	12.00		-
	Sub-Total (Materials)			Php	-
D.	**Direct Cost (A+B+C)**			**Php**	-
E.	Overhead, Contingencies and Miscellaneous (OCM)			% of D.	-
F.	Contractor's Profit			% of D.	-
G.	Value Added Tax (VAT)			% of (D+E+F)	-
H.	**Adjusted Total Cost (D+E+F+G)**			**Php**	-
I.	Adjusted Unit Cost (H/Quantity)			Php	-

Detailed Unit Price Analysis (Page 15 of 35)

DETAILED UNIT PRICE ANALYSIS

Project :	**Upgrading of Electrical System (Overhead System)**
Location:	**: CITY OF BIÑAN**
Item:	1 (a)
Description:	**Clearing and Grubbing**

Quantity: 122.40
Output per hour: 500.00
Unit: sq m

A.	Designation of Personnel	No. of Person	No. of Hours	Hourly Rate	Amount
	Construction Foreman	1	0.24		-
	Unskilled Laborer	2	0.24		-
	Sub-Total (Labor)			Php	-
B.	**Name / Capacity (Equipment)**	**No. of Units**	**No. of Hours**	**Hourly Rate**	**Amount**
	Dump Truck (12 cu.yd.)	2	0.24		-
	Payloader (1.5 cu.m.)	1	0.24		-
	Bulldozer (155 Hp)	1	0.24		-
	Sub-Total (Equipment)			Php	-
C.	**Name / Specification (Materials)**	**Unit**	**Quantity**	**Unit Cost**	**Amount**
	Sub-Total (Materials)			Php	-
D.	**Direct Cost (A+B+C)**			**Php**	-
E.	Overhead,Contingencies and Miscellaneous (OCM)			% of D.	-
F.	Contractor's Profit			% of D.	-
G.	Value Added Tax (VAT)			% of (D+E+F)	-
H.	**Adjusted Total Cost (D+E+F+G)**			**Php**	-
I.	Adjusted Unit Cost (H/Quantity)			Php	-

Detailed Unit Price Analysis (Page 16 of 35)

DETAILED UNIT PRICE ANALYSIS

Project :	**Upgrading of Electrical System (Overhead System)**
Location:	**: CITY OF BIÑAN**
Item:	1 (b)
Description:	**Structural Excavation**

Quantity: 73.00
Output per hour: 20.00
Unit: cu m

A.	Designation of Personnel	No. of Person	No. of Hours	Hourly Rate	Amount
	Construction Foreman	1	3.65		-
	Unskilled Laborer	3	3.65		-
	Sub-Total (Labor)			Php	-
B.	**Name / Capacity (Equipment)**	**No. of Units**	**No. of Hours**	**Hourly Rate**	**Amount**
	Backhoe (0.80 cu.m.)	1	3.65		-
	Dump Truck (12 cu.yd.)	2	3.65		-
	Sub-Total (Equipment)			Php	-
C.	**Name / Specification (Materials)**	**Unit**	**Quantity**	**Unit Cost**	**Amount**
	Sub-Total (Materials)			Php	-
D.	**Direct Cost (A+B+C)**			**Php**	-
E.	Overhead, Contingencies and Miscellaneous (OCM)			% of D.	-
F.	Contractor's Profit			% of D.	-
G.	Value Added Tax (VAT)			% of (D+E+F)	-
H.	**Adjusted Total Cost (D+E +F+G)**			**Php**	-
I.	Adjusted Unit Cost (H/Quantity)			Php	-

Detailed Unit Price Analysis (Page 17 of 35)

DETAILED UNIT PRICE ANALYSIS

Project :	**Upgrading of Electrical System (Overhead System)**
Location:	**: CITY OF BIÑAN**
Item:	1 (c)
Description:	**Backfilling of Excavated Materials**

Quantity: 73.44
Output per hour: 9.84
Unit: cu m

A.	Designation of Personnel	No. of Person	No. of Hours	Hourly Rate	Amount
	Construction Foreman	1	7.46		-
	Unskilled Laborer	3	7.46		-
	Sub-Total (Labor)			Php	-
B.	**Name / Capacity (Equipment)**	**No. of Units**	**No. of Hours**	**Hourly Rate**	**Amount**
	Plate Compactor (5hp)	1	5.60		-
	Backhoe (0.80 cu.m.)	1	5.60		-
	Sub-Total (Equipment)			Php	-
C.	**Name / Specification (Materials)**	**Unit**	**Quantity**	**Unit Cost**	**Amount**
	Sub-Total (Materials)			Php	-
D.	**Direct Cost (A+B+C)**			**Php**	-
E.	Overhead,Contingencies and Miscellaneous (OCM)			% of D.	-
F.	Contractor's Profit			% of D.	-
G.	Value Added Tax (VAT)			% of (D+E+F)	-
H.	**Adjusted Total Cost (D+E+F+G)**			**Php**	-
I.	Adjusted Unit Cost (H/Quantity)			Php	-

Detailed Unit Price Analysis (Page 18 of 35)

DETAILED UNIT PRICE ANALYSIS

Project :	**Upgrading of Electrical System (Overhead System)**
Location:	**: CITY OF BIÑAN**
Item:	1 (d)
Description:	**Gravel Bedding**

Quantity: 73.44
Output per hour: 1.20
Unit: cu m

A.	Designation of Personnel	No. of Person	No. of Hours	Hourly Rate	Amount
	Construction Foreman	1	61.20		-
	Unskilled Laborer	3	61.20		-
	Sub-Total (Labor)			Php	-
B.	**Name / Capacity (Equipment)**	**No. of Units**	**No. of Hours**	**Hourly Rate**	**Amount**
	Plate Compactor (5hp)	1	30.60		-
	Sub-Total (Equipment)			Php	-
C.	**Name / Specification (Materials)**	**Unit**	**Quantity**	**Unit Cost**	**Amount**
	Gravel Bedding G-1 (with 5% Shrinkage Factor)	cu.m	77.11		-
	Sub-Total (Materials)			Php	-
D.	**Direct Cost (A+B+C)**			**Php**	-
E.	Overhead, Contingencies and Miscellaneous (OCM)			% of D.	-
F.	Contractor's Profit			% of D.	-
G.	Value Added Tax (VAT)			% of (D+E+F)	-
H.	**Adjusted Total Cost (D+E+F+G)**			**Php**	-
I.	Adjusted Unit Cost (H/Quantity)			Php	-

Detailed Unit Price Analysis (Page 19 of 35)

DETAILED UNIT PRICE ANALYSIS

Project :	**Upgrading of Electrical System (Overhead System)**
Location:	**: CITY OF BIÑAN**
Item:	2 (e)
Description:	**Concreting Works**

Quantity: 73.44
Output per hour: 0.270
Unit: cu m

A.	Designation of Personnel	No. of Person	No. of Hours	Hourly Rate	
	Construction Foreman	1	272.00		-
	Skilled Laborer	1	272.00		-
	Unskilled Laborer	4	272.00		-
	Sub-Total (Labor)			Php	-
B.	**Name / Capacity (Equipment)**	**No. of Units**	**No. of Hours**	**Hourly Rate**	**Amount**
	One - bagger Mixer	1	272.00		-
	Sub-Total (Equipment)			Php	-
C.	**Name / Specification (Materials)**	**Unit**	**Quantity**	**Unit Cost**	**Amount**
	Portland Cement	bag	660.96		-
	Washed Sand	cu.m.	36.72		-
	Crushed Gravel 3/4"	cu.m.	73.44		-
	Sub-Total (Materials)			Php	-
D.	**Direct Cost (A+B+C)**			**Php**	-
E.	Overhead,Contingencies and Miscellaneous (OCM)			% of D.	-
F.	Contractor's Profit			% of D.	-
G.	Value Added Tax (VAT)			% of (D+E+F)	-
H.	**Adjusted Total Cost (D+E+F+G)**			**Php**	-
I.	Adjusted Unit Cost (H/Quantity)			Php	-

Detailed Unit Price Analysis (Page 20 of 35)

DETAILED UNIT PRICE ANALYSIS

Project :	**Upgrading of Electrical System (Overhead System)**
Location:	**: CITY OF BIÑAN**
Item:	4 (a)
Description:	**Installation and Removal of Formworks**

Quantity: 122.40
Output per hour: 3.24
Unit: sq.m

A.	Designation of Personnel	No. of Person	No. of Hours	Hourly Rate	Amount
	Installation				
	Construction Foreman	1	37.78		-
	Skilled Laborer	2	37.78		-
	Unskilled Laborer	4	37.78		-
	Stripping				
	Construction Foreman	1	15.49		-
	Unskilled Laborer	6	15.49		-
	Sub-Total (Labor)			Php	-
B.	**Name / Capacity (Equipment)**	**No. of Units**	**No. of Hours**	**Hourly Rate**	**Amount**
	Sub-Total (Equipment)			Php	-
C.	**Name / Specification (Materials)**	**Unit**	**Quantity**	**Unit Cost**	**Amount**
	Coco Lumber	bd.ft	880.06		-
	Plywood Ordinary, 1/2" x 4' x 8'	pc	42.47		-
	CWN, Assorted	kg	25.70		-
	Sub-Total (Materials)			Php	-
D.	**Direct Cost (A+B+C)**			**Php**	-
E.	Overhead, Contingencies and Miscellaneous (OCM)			% of D.	-
F.	Contractor's Profit			% of D.	-
G.	Value Added Tax (VAT)			% of (D+E+F)	-
H.	**Adjusted Total Cost (D+E+F+G)**			**Php**	-
I.	Adjusted Unit Cost (H/Quantity)			Php	-

Detailed Unit Price Analysis (Page 21 of 35)

DETAILED UNIT PRICE ANALYSIS

Project :	**Upgrading of Electrical System (Overhead System)**
Location:	**: CITY OF BIÑAN**
Item:	E 10 (k)
Description:	**Conduit, Boxes and Fitting**

Quantity: 1.00
Output: 1.00
Unit: Ls

A.	Designation of Personnel	No. of Person	No. of Hours	Hourly Rate	Amount
	Construction Foreman	1	60.00		-
	Skilled Laborer	2	60.00		-
	Unskilled Laborer	1	60.00		-
	Sub-Total (Labor)			Php	-
B.	**Name / Capacity (Equipment)**	**No. of Units**	**No. of Hours**	**Hourly Rate**	**Amount**
	Sub-Total (Equipment)			Php	-
C.	**Name / Specification (Materials)**	**Unit**	**Quantity**	**Unit Cost**	**Amount**
	65mmØ PVC Pipe	pc	91.67		-
	Sub-Total (Materials)			Php	-
D.	**Direct Cost (A+B+C)**			**Php**	-
E.	Overhead, Contingencies and Miscellaneous (OCM)			% of D.	-
F.	Contractor's Profit			% of D.	-
G.	Value Added Tax (VAT)			% of (D+E+F)	-
H.	**Adjusted Total Cost (D+E +F+G)**			**Php**	-
I.	Adjusted Unit Cost (H/Quantity)			Php	-

Detailed Unit Price Analysis (Page 22 of 35)

DETAILED UNIT PRICE ANALYSIS

Project :	Upgrading of Electrical System (Overhead System)
Location:	: CITY OF BIÑAN
Item:	E 10 (r)
Description:	Service Entrance Concrete Pedestal

Quantity: 1.00
Output: 1.00
Unit: lot

A.	Designation of Personnel	No. of Person	No. of Hours	Hourly Rate	Amount
	Construction Foreman	1	1.00		-
	Skilled Laborer	1	1.00		-
	Unskilled Laborer	2	1.00		-
	Sub-Total (Labor)			Php	-
B.	Name / Capacity (Equipment)	No. of Units	No. of Hours	Hourly Rate	Amount
	Electric Grinder	1	1.00		0.00
	Electric Hand Drill	1	1.00		0.00
	mini backhoe	1	1.00		0.00
	Sub-Total (Equipment)			Php	-
C.	Name / Specification (Materials)	Unit	Quantity	Unit Cost	Amount
	Concreting Works	m3	3.00		
	Portland Cement	bag	27.00		-
	Crushed Gravel 3/4"	cu.m	3.00		-
	Washed Sand	cu.m	3.00		-
	Rebar Works				
	Deformed Round Bars, Grade 40	kg	112.89		-
	G.I. Tie Wire	kg	3.95		-
	Formworks				
	Coco Lumber	bd.ft	1,393.41		-
	Plywood Ordinary, 1/2" x 4' x 8'	pc	12.00		-
	CWN, Assorted	kg	6.00		-
	Scaffolding Rental				
	Scaffolding	set	18.00		-
	Electrical Works				
	Bolt, Machine 5/8" X 10", Hot Dip Galvanized	pc	3.00		-
	Bolt, Oval Eye 5/8" X 8", Hot Dip Galvanized, Forged	pc	6.00		-
	Washer, Square, Flat, 2-1/4" X 2-1/4" X 3/16"	pc	6.00		-
	Sub-Total (Materials)			Php	-
D.	**Direct Cost (A+B+C)**			**Php**	-
E.	Overhead,Contingencies and Miscellaneous (OCM)			% of D.	-
F.	Contractor's Profit			% of D.	-
G.	Value Added Tax (VAT)			% of (D+E+F)	-
H.	**Adjusted Total Cost (D+E+F+G)**			**Php**	-
I.	Adjusted Unit Cost (H/Quantity)			Php	-

Detailed Unit Price Analysis (Page 23 of 35)

DETAILED UNIT PRICE ANALYSIS

Project :	Upgrading of Electrical System (Overhead System)
Location:	: CITY OF BIÑAN
Item:	E 2 (b)
Description:	Electrical Room - Power House (2x3)

Quantity: 1.00
Output: 1.00
Unit: lot

A.	Designation of Personnel	No. of Person	No. of Hours	Hourly Rate	Amount
	Construction Foreman	1	60.00		-
	Skilled Laborer	2	60.00		-
	Unskilled Laborer	4	60.00		-
	Sub-Total (Labor)			Php	-
B.	Name / Capacity (Equipment)	No. of Units	No. of Hours	Hourly Rate	Amount
	mini backhoe	1	60.00		0.00
	Welding Machine	1	60.00		0.00
	concrete mixer	1	60.00		0.00
	Sub-Total (Equipment)			Php	-
C.	Name / Specification (Materials)	Unit	Quantity	Unit Cost	Amount
	Earthworks				
	Clearing and Grubbing	m^2	13.00		-
	Structural Excavation	m^3	8.00		-
	Backfilling and Compacting	m^3	4.00		-
	Gravel Bedding G-1	cu.m	1.05		-
	Concreting Works				
	Column Footing	m^3	2.00		
	Portland Cement	bag	18.00		-
	Crushed Gravel 3/4"	m^3	2.00		-
	Washed Sand	m^3	2.00		-
	Wall Footing	m^3	3.00		
	Portland Cement	bag	27.00		-
	Crushed Gravel 3/4"	m^3	3.00		-
	Washed Sand	m^3	3.00		-
	Column	m^3	2.00		
	Portland Cement	bag	18.00		-
	Crushed Gravel 3/4"	m^3	2.00		-
	Washed Sand	m^3	2.00		-

	Beam	m^3	2.00		
	Portland Cement	bag	18.00		-
	Crushed Gravel 3/4"	m^3	2.00		-
	Washed Sand	m^3	2.00		-
	Rebar Works				
	Footing	kg	21.00		-
	Wall Footing	kg	46.00		-
	Column	kg	156.00		-
	Beam	kg	111.00		-
	G.I. Tie Wire	kg	37.00		-
	Masonry Works				
	Masonry Wall	m^2	19.00		
	CHB 4" thk	pc	240.00		-
	Portland Cement	bag	25.00		-
	Washed Sand	cu.m	4.00		-
	D10mm x 6.00 mts RSB	pc	26.00		-
	G.I. Tie Wire	kg	2.00		-
	Plaster Moulding	lm	37.00		-
	Formworks				
	Column	m^2	12.00		
	Coco Lumber	bd.ft	190.00		-
	Plywood Ordinary, 1/4" x 4' x 8'	pc	3.00		-
	CWN, Assorted	kg	3.00		-
	Beam	m^2	12.00		
	Coco Lumber	bd.ft	131.00		-
	Plywood Ordinary, 1/4" x 4' x 8'	pc	2.00		-
	CWN, Assorted	kg	2.00		-
	Doors and Windows	m^2	10.00		
	Steel Full louver Door 0.90m x 2.10m on 150mm Steel Jamb Complete with Accessories (lever type door Knob)	set	1.00		-
	W - 4, (0.6 x 0.6 m) Steel Awning Window with Grilles with 1/4 thk Clear Glass Panes complete with Accessories	set	2.00		-
	CWN, Assorted	kg	2.00		-
	Roofing Works	m^2	10.00		
	G.I. Long-Span Roofing, Corrugated, Pre-Painted, 1220mm x 0.5mm BMT	lm	24.00		-
	G.I. Ridge Roll, Preformed, Pre-Painted, 0.610m x 2.440m x 0.5mm BMT	pc	4.00		-
	G.I. Flashing, Preformed, Pre-Painted, 0.610m x 2.440m x 0.5mm BMT	pc	3.00		-
	J-Bolt (6mm dia.)	pc	528.00		-
	Blind Rivets	pc	70.00		-
	Roof Sealant	L	2.00		-
	Steel Works	m^2	10.00		
	L 65 x 65 x 6.0mm	kg	14.00		-
	L 50 x 50 x 6mm	kg	12.00		-
	L 100 x 100 x 6.0mm	kg	24.00		-
	LC 150 x 65 x 20 x 2.0mm	kg	45.00		-
	L 75 x 75 x 6mm	kg	9.00		-
	Plain Round Bar 12mmØ x 6m	pc	2.00		-
	Plain Round Bar 16mmØ x 6m	pc	2.00		-
	Turn Buckle 12 mmØ	pc	2.00		-
	Welding Rod	kg	4.00		-
	Primer, Zinc Chromate	gal	1.00		-

	Painting Works	m^2	26.45		
	Masonry Putty	gal	2.00		-
	Latex, Semi Gloss	gal	4.00		-
	Acri Color	qrt	2.00		-
	Electrical Works				
	Single Pole Wall Switch in One Switch Plate (10 AMP, 230	set	1.00		-
	1 -18W, 230V, 60Hz AC, Compact Fluorescent Lighting Fix	set	1.00		-
	3.5 mm^2 THHN Wire, Stranded	m	40.00		-
	25mmØ PVC Pipe	pc	2.00		-
	Octagonal Box, PVC	pc	1.00		-
	Utility Box, PVC 2"x 4"	pc	1.00		-
	Electrical Tape	pc	4.00		-
	Sub-Total (Materials)			Php	-
D.	**Direct Cost (A+B+C)**			**Php**	-
E.	Overhead,Contingencies and Miscellaneous (OCM)			% of D.	-
F.	Contractor's Profit			% of D.	-
G.	Value Added Tax (VAT)			% of (D+E+F)	-
H.	**Adjusted Total Cost (D+E+F+G)**			**Php**	-
I.	Adjusted Unit Cost (H/Quantity)			Php	-

Detailed Unit Price Analysis (Page 24 of 35)

DETAILED UNIT PRICE ANALYSIS

Project :	Upgrading of Electrical System (Overhead System)
Location:	: CITY OF BIÑAN
Item:	E 10 (a)
Description:	Primary Extension

Quantity: 1.00
Output: 0.25
Unit: set

A.	Designation of Personnel	No. of Person	No. of Hours	Hourly Rate	Amount
	Construction Foreman	1	4.00		-
	Skilled Laborer	1	4.00		-
	Unskilled Laborer	1	4.00		-
	Sub-Total (Labor)			Php	-
B.	**Name / Capacity (Equipment)**	**No. of Units**	**No. of Hours**	**Hourly Rate**	**Amount**
	Boom Truck	1	4.00		0.00
	Bucket Truck	1	4.00		0.00
	Cable Puller/Tensioner	1	4.00		0.00
	Sub-Total (Equipment)			Php	-
C.	**Name / Specification (Materials)**	**Unit**	**Quantity**	**Unit Cost**	**Amount**
	Insulator, Pin Type, Porcelain, ANSI, Class 56-2	pc	3.00		-
	Pin, Pole Top, Channel, 1" Thread, 20" Long, Hot Dip Galv	pc	3.00		-
	Insulator, Suspension, 6", ANSI, Class 52-1	pc	3.00		-
	Clamp, Dead-end Strain, #2 ACSR	pc	6.00		-
	Washer, Square, Flat, 2-1/4" X 2-1/4" X 3/16"	pc	9.00		-
	Bolt, Machine 5/8" X 9", Hot Dip Galvanized	pc	6.00		-
	Nut, Lock, MF Type, 5/8"	pc	6.00		-
	Rod, Armor, Preformed, #2 ACSR, Single Support	pc	6.00		-
	Shackle, Anchor, 5/8", Forged Steel, Hot Dip Galvanized	pc	6.00		-
	Wire, Tie, insulated, #4 mm	m	90.00		-
	Sub-Total (Materials)			Php	-
D.	**Direct Cost (A+B+C)**			**Php**	-
E.	Overhead,Contingencies and Miscellaneous (OCM)			% of D.	-
F.	Contractor's Profit			% of D.	-
G.	Value Added Tax (VAT)			% of (D+E+F)	-
H.	**Adjusted Total Cost (D+E+F+G)**			**Php**	-
I.	Adjusted Unit Cost (H/Quantity)			Php	-

Detailed Unit Price Analysis (Page 25 of 35)

DETAILED UNIT PRICE ANALYSIS

Project :	**Upgrading of Electrical System (Overhead System)**
Location:	**: CITY OF BIÑAN**
Item:	E 10 (b)
Description:	**Distribution Poles**

Quantity: 1.00
Output per hour: 0.25
Unit: pc

A.	Designation of Personnel	No. of Person	No. of Hours	Hourly Rate	Amount
	Construction Foreman	1	4.00		-
	Skilled Laborer	1	4.00		-
	Unskilled Laborer	1	4.00		-
	Sub-Total (Labor)			Php	-
B.	**Name / Capacity (Equipment)**	**No. of Units**	**No. of Hours**	**Hourly Rate**	**Amount**
	Hole Digger	1	4.00		0.00
	Sub-Total (Equipment)			Php	-
C.	**Name / Specification (Materials)**	**Unit**	**Quantity**	**Unit Cost**	**Amount**
	Pole, Concrete, 35', Class 2, 1800 kgs. (Minimum Load Break)	pc	1.00		-
	Sub-Total (Materials)			Php	-
D.	**Direct Cost (A+B+C)**			**Php**	-
E.	Overhead,Contingencies and Miscellaneous (OCM)			% of D.	-
F.	Contractor's Profit			% of D.	-
G.	Value Added Tax (VAT)			% of (D+E+F)	-
H.	**Adjusted Total Cost (D+E+F +G)**			**Php**	-
I.	Adjusted Unit Cost (H/Quantity)			Php	-

Detailed Unit Price Analysis (Page 26 of 35)

DETAILED UNIT PRICE ANALYSIS

Project :	Upgrading of Electrical System (Overhead System)
Location:	: CITY OF BIÑAN
Item:	E 10 (c)
Description:	Distribution Transformer, Accessories and Assembly

Quantity: 1.00
Output per hour: 0.13
Unit: unit

A.	Designation of Personnel	No. of Person	No. of Hours	Hourly Rate	Amount
	Construction Foreman	1	8.00		-
	Skilled Laborer	1	8.00		-
	Unskilled Laborer	1	8.00		-
	Sub-Total (Labor)			Php	-
B.	Name / Capacity (Equipment)	No. of Units	No. of Hours	Hourly Rate	Amount
	Boom Truck	1	8.00		0.00
	Bucket Truck	1	8.00		0.00
	Cable Puller/Tensioner	1	8.00		0.00
	Sub-Total (Equipment)			Php	-
C.	Name / Specification (Materials)	Unit	Quantity	Unit Cost	Amount
	Transformer, Pole Type, Conventional, Amorphous, 100 KVA, Cu-Cu Winding	pc	3.00		-
	Bracket, Transformer Pole Mounting, 3 Phase, Cluster Type, Hot Dip Galvanized	pc	3.00		-
	Bracket, Mounting for Fuse Cut-Out & Arrester	pc	3.00		-
	Fuse Cut-out & Arrester Combination, 15KV, Class 200	set	3.00		-
	Link, Fuse, Universal, Bottom Head, Type K, 30A	pc	3.00		-
	Clamp, Hotline, #2 - #4/0 ACSR	pc	3.00		-
	Connector, Split Bolt	pc	3.00		-
	Bolt, Machine 1/2" X 12", Hot Dip Galvanized	pc	3.00		-
	#4, ACSR, AWG, 6/1	m	30.00		-
	Conductor, Bare, ACSR #4, AWG 6/1	m	30.00		-
	Rod, Tapping, Preformed, #2 ACSR	pc	3.00		-
	Compression, Sleeve Splice, #2 ACSR	pc	12.00		-
	Conductor, 23 kv Insulated, Tree Wire, ACSR/AW-TR/OC-SB #2, AWG 6/1	m	30.00		-
	Nut, Lock, MF Type, 5/8"	pc	6.00		-
	Washer, Square, Flat, 2-1/4" X 2-1/4" X 3/16"	pc	6.00		-
	Sub-Total (Materials)			Php	-
D.	Direct Cost (A+B+C)			Php	-
E.	Overhead,Contingencies and Miscellaneous (OCM)			% of D.	-
F.	Contractor's Profit			% of D.	-
G.	Value Added Tax (VAT)			% of (D+E+F)	-
H.	Adjusted Total Cost (D+E+F+G)			Php	-
I.	Adjusted Unit Cost (H/Quantity)			Php	-

Detailed Unit Price Analysis (Page 27 of 35)

DETAILED UNIT PRICE ANALYSIS

Project :	**Upgrading of Electrical System (Overhead System)**
Location:	**: CITY OF BIÑAN**
Item:	E 10 (d)
Description:	**Grounding Assembly**

Quantity: 1.00
Output: 1.00
Unit: set

A.	Designation of Personnel	No. of Person	No. of Hours	Hourly Rate	Amount
	Construction Foreman	1	1.00		-
	Skilled Laborer	1	1.00		-
	Unskilled Laborer	1	1.00		-
	Sub-Total (Labor)			Php	-
B.	**Name / Capacity (Equipment)**	**No. of Units**	**No. of Hours**	**Hourly Rate**	**Amount**
	Cable Puller/Tensioner	1	1.00		0.00
	Sub-Total (Equipment)			Php	-
C.	**Name / Specification (Materials)**	**Unit**	**Quantity**	**Unit Cost**	**Amount**
	Plate, Pole Grounding, Butt Type, Hot Dip Galvanized	pc	1.00		-
	Staple, Ground wire, 1/2" X 2"	ft	40.00		-
	Clip, Ground wire	pc	1.00		-
	Wire, Grounding, Aluminum Alloy, #4 AWG	ft	3.00		-
	Wire, Grounding, Galvanized, 3 Strand, 5/16" Dia.	ft	40.00		-
	Connector, Compression, #2 - #4/0 ACSR Run To #6 - #2	pc	1.00		-
	Connector, Split Bolt	pc	1.00		-
	Sub-Total (Materials)			Php	-
D.	**Direct Cost (A+B+C)**			**Php**	-
E.	Overhead,Contingencies and Miscellaneous (OCM)			% of D.	-
F.	Contractor's Profit			% of D.	-
G.	Value Added Tax (VAT)			% of (D+E+F)	-
H.	**Adjusted Total Cost (D+E+F+G)**			**Php**	-
I.	Adjusted Unit Cost (H/Quantity)			Php	-

Detailed Unit Price Analysis (Page 28 of 35)

DETAILED UNIT PRICE ANALYSIS

Project :	**Upgrading of Electrical System (Overhead System)**
Location:	**: CITY OF BIÑAN**
Item:	E 10 (g)
Description:	**Guy and Anchor Assembly**

Quantity: 1.00
Output per hour: 0.50
Unit: set

A.	Designation of Personnel	No. of Person	No. of Hours	Hourly Rate	Amount
	Construction Foreman	1	2.00		-
	Skilled Laborer	1	2.00		-
	Unskilled Laborer	1	2.00		-
	Sub-Total (Labor)			Php	-
B.	**Name / Capacity (Equipment)**	**No. of Units**	**No. of Hours**	**Hourly Rate**	**Amount**
	Cable Puller/Tensioner	1	2.00		0.00
	Hole Digger	1	2.00		0.00
	Rachet	1	2.00		0.00
	Sub-Total (Equipment)			Php	-
C.	**Name / Specification (Materials)**	**Unit**	**Quantity**	**Unit Cost**	**Amount**
	Connector, Compression, YHO 100, Run #6 - #2 - Tap #6-#2	pc	2.00		-
	Clamp, Guy Straight, 3 Bolt, Heavy Duty Steel, Hot Dip Galvanized	pc	2.00		-
	Attachment, Guy, Malleable Type with 11/16" Hole Diameter	pc	1.00		-
	Wire, Guy, Steel, 3/8", 7 Strand, High Strength	ft	50.00		-
	Wire, Grounding, Galvanized, 3 Strand, 5/16" Dia.	ft	10.00		-
	Bolt, Machine 5/8" X 9", Hot Dip Galvanized	pc	1.00		-
	Washer, Square, Flat, 2-1/4" X 2-1/4" X 3/16"	pc	1.00		-
	Nut, Lock, MF Type, 5/8"	pc	1.00		-
	Clamp, Anchor Bonding. Single Eye Rod, 5/8"	pc	1.00		-
	Rod, Anchor, Thimble Eye, 5/8" X 7', Hot Dip Galvanized, Forged	pc	1.00		-
	Anchor, Expanding, 8 - Ways, Hot Dip Galvanized	pc	1.00		-
	Sub-Total (Materials)			Php	-
D.	**Direct Cost (A+B+C)**			**Php**	-
E.	Overhead,Contingencies and Miscellaneous (OCM)			% of D.	-
F.	Contractor's Profit			% of D.	-
G.	Value Added Tax (VAT)			% of (D+E+F)	-
H.	**Adjusted Total Cost (D+E+F+G)**			**Php**	-
I.	Adjusted Unit Cost (H/Quantity)			Php	-

Detailed Unit Price Analysis (Page 29 of 35)

DETAILED UNIT PRICE ANALYSIS

Project :	**Upgrading of Electrical System (Overhead System)**
Location:	**: CITY OF BIÑAN**
Item:	
Description:	**Removal of Old Wires and Electrical Equipment & Devices**

Quantity: 1.00
Output: 1.00
Unit: Ls

A.	Designation of Personnel	No. of Person	No. of Hours	Hourly Rate	Amount
	Unskilled Laborer	1	18.00		-
	Sub-Total (Labor)			Php	-
B.	**Name / Capacity (Equipment)**	**No. of Units**	**No. of Hours**	**Hourly Rate**	**Amount**
	Electric Grinder	1	18.00		0.00
	Electric Hand Drill	1	18.00		0.00
	Sub-Total (Equipment)			Php	-
C.	**Name / Specification (Materials)**	**Unit**	**Quantity**	**Unit Cost**	**Amount**
	Removal of Old Wires and Electrical Equipment & Devices	Ls	1		-
	Sub-Total (Materials)			Php	-
D.	**Direct Cost (A+B+C)**			**Php**	-
E.	Overhead,Contingencies and Miscellaneous (OCM)			% of D.	-
F.	Contractor's Profit			% of D.	-
G.	Value Added Tax (VAT)			% of (D+E+F)	-
H.	**Adjusted Total Cost (D+E+F +G)**			**Php**	-
I.	Adjusted Unit Cost (H/Quantity)			Php	-

Detailed Unit Price Analysis (Page 30 of 35)

DETAILED UNIT PRICE ANALYSIS

Project :	Upgrading of Electrical System (Overhead System)
Location:	: CITY OF BIÑAN
Item:	E 10 (i)
Description:	Wires and Wiring Devices

Quantity: 1.00
Output: 1.00
Unit: Ls

A.	Designation of Personnel	No. of Person	No. of Hours	Hourly Rate	Amount
	Construction Foreman	1	480.00		-
	Skilled Laborer	1	480.00		-
	Unskilled Laborer	1	480.00		-
	Sub-Total (Labor)			Php	-
B.	Name / Capacity (Equipment)	No. of Units	No. of Hours	Hourly Rate	Amount
	Electric Grinder	1	480.00		0.00
	Electric Hand Drill	1	480.00		0.00
	Sub-Total (Equipment)			Php	-
C.	Name / Specification (Materials)	Unit	Quantity	Unit Cost	Amount
	Main Service Feeder				
	200 mm² THHN/THWN-2 Wire Stranded	m	160.00		-
	50 mm² THHN/THWN-2 Wire Stranded	m	60.00		-
	Distribution Feeder				
	200 mm² THHN/THWN-2 Wire Stranded	m	445.00		-
	50 mm² THHN/THWN-2 Wire Stranded	m	229.00		-
	175 mm² THHN/THWN-2 Wire Stranded	m	1,842.00		-
	30 mm² THHN/THWN-2 Wire Stranded	m	623.00		-
	Connecting Feeder				
	250 mm² THHN/THWN-2 Wire Stranded	m	60.00		-
	150 mm² THHN/THWN-2 Wire Stranded	m	60.00		-
	100 mm² THHN/THWN-2 Wire Stranded	m	60.00		-
	80 mm² THHN/THWN-2 Wire Stranded	m	60.00		-
	60 mm² THHN/THWN-2 Wire Stranded	m	60.00		-
	50 mm² THHN/THWN-2 Wire Stranded	m	60.00		-
	38 mm² THHN/THWN-2 Wire Stranded	m	60.00		-
	22 mm² THHN/THWN-2 Wire Stranded	m	200.00		-
	14 mm² THHN/THWN-2 Wire Stranded	m	60.00		-
	8.0 mm² THHN/THWN-2 Wire Stranded	m	300.00		-
	Connector, Solderless, Copper, 2 Bolt, AWG #400MCM - AWG#600 (200mm - 300mm)	pc	42.00		-
	Electrical Tape	pc	79.00		-
	Sub-Total (Materials)			Php	-
D.	**Direct Cost (A+B+C)**			**Php**	-
E.	Overhead,Contingencies and Miscellaneous (OCM)			% of D.	-
F.	Contractor's Profit			% of D.	-
G.	Value Added Tax (VAT)			% of (D+E+F)	-
H.	**Adjusted Total Cost (D+E+F+G)**			**Php**	-
I.	Adjusted Unit Cost (H/Quantity)			Php	-

Detailed Unit Price Analysis (Page 31 of 35)

DETAILED UNIT PRICE ANALYSIS

Project :	Upgrading of Electrical System (Overhead System)
Location:	: CITY OF BIÑAN
Item:	E 10 (j)
Description:	Panel Board and Circuit Protections

Quantity: 1.00
Output: 1.00
Unit: Ls

A.	Designation of Personnel	No. of Person	No. of Hours	Hourly Rate	Amount
	Construction Foreman	1	480.00		-
	Skilled Laborer	1	480.00		-
	Unskilled Laborer	1	480.00		-
	Sub-Total (Labor)			Php	-
B.	Name / Capacity (Equipment)	No. of Units	No. of Hours	Hourly Rate	Amount
	Electric Grinder	1	480.00		0.00
	Electric Hand Drill	1	480.00		0.00
	Sub-Total (Equipment)			Php	-
C.	Name / Specification (Materials)	Unit	Quantity	Unit Cost	Amount
	Panel Box, Circuit Breaker and Grounding System				
	Main Circuit Protection				
	MCB Flush Mounted, Enclosure, 4-Branches 3R, Powder Coated Finished incld. Busbar and Ground Terminal Block	set	1.00		-
	1200A, 3P Molded Case Circuit Breaker	pc	1.00		-
	700A, 3P Molded Case Circuit Breaker	pc	2.00		-
	500A, 3P Molded Case Circuit Breaker	pc	2.00		-
	400A, 3P Molded Case Circuit Breaker	pc	2.00		-
	Service Protection				
	NEMA 3R Single Door Enclosure	set	16.00		-
	700A, 3P Molded Case Circuit Breaker	pc	1.00		-
	500A, 3P Molded Case Circuit Breaker	pc	1.00		-
	400A, 3P Molded Case Circuit Breaker	pc	2.00		-
	300A, 3P Molded Case Circuit Breaker	pc	1.00		-
	225A, 2P Molded Case Circuit Breaker	pc	1.00		-
	175A, 2P Molded Case Circuit Breaker	pc	1.00		-
	150A, 2P Molded Case Circuit Breaker	pc	1.00		-
	125A, 2P Molded Case Circuit Breaker	pc	2.00		-
	100A, 2P Molded Case Circuit Breaker	pc	1.00		-
	Circuit Breaker, 70A 2P	pc	2.00		-
	Circuit Breaker, 50A 2P	pc	3.00		-
	Grounding System				
	Grounding Rod, 2.4m x 16mm dia.	pc	16.00		-
	Grounding Rod, 3.0m x 25mm dia.	pc	1.00		-
	Clamp, Ground Rod, 5/8"	pc	17.00		-
	Sub-Total (Materials)			Php	-
D.	**Direct Cost (A+B+C)**			**Php**	-

E.	Overhead,Contingencies and Miscellaneous (OCM)	% of D.	-
F.	Contractor's Profit	% of D.	-
G.	Value Added Tax (VAT)	% of (D+E+F)	-
H.	**Adjusted Total Cost (D+E+F+G)**	**Php**	-
I.	Adjusted Unit Cost (H/Quantity)	Php	-

Detailed Unit Price Analysis (Page 32 of 35)

DETAILED UNIT PRICE ANALYSIS

Project :	Upgrading of Electrical System (Overhead System)
Location:	: CITY OF BIÑAN
Item:	E 10 (k)
Description:	Conduit, Boxes and Fitting

Quantity: 1.00
Output: 1.00
Unit: Ls

A.	Designation of Personnel	No. of Person	No. of Hours	Hourly Rate	Amount
	Construction Foreman	1	480.00		-
	Skilled Laborer	1	480.00		-
	Unskilled Laborer	1	480.00		-
	Sub-Total (Labor)			Php	-
B.	Name / Capacity (Equipment)	No. of Units	No. of Hours	Hourly Rate	Amount
	Electric Grinder	1	480.00		0.00
	Electric Hand Drill	1	480.00		0.00
	Sub-Total (Equipment)			Php	-
C.	Name / Specification (Materials)	Unit	Quantity	Unit Cost	Amount
	Main Service Conduit				
	Service Entrance Cap 2-1/2" (Diecast Aluminum)	pc	3.00		-
	65mmØ RSC Pipe	pc	3.00		-
	65mmØ RSC Locknut	pc	9.00		-
	65mmØ RSC Bushing	pc	9.00		-
	65mmØ RSC Strap	pc	12.00		-
	Main Service Grounding Conduit				
	20mmØ RSC Pipe	pc	1.00		-
	20mmØ RSC Locknut	pc	2.00		-
	20mmØ RSC Bushing	pc	2.00		-
	20mmØ RSC Strap	pc	4.00		-
	Distribution Service Conduit				
	Service Entrance Cap 2-1/2" (Diecast Aluminum)	pc	3.00		-
	65mmØ RSC Pipe	pc	3.00		-
	65mmØ RSC Locknut	pc	6.00		-
	65mmØ RSC Bushing	pc	6.00		-
	65mmØ RSC Strap	pc	12.00		-
	Service Conduit				
	Service Entrance Cap 2-1/2" (Diecast Aluminum)	pc	1.00		-
	65mmØ RSC Pipe	pc	1.00		-
	65mmØ RSC Locknut	pc	2.00		-
	65mmØ RSC Bushing	pc	2.00		-
	65mmØ RSC Strap	pc	4.00		-
	Service Entrance Cap 2" (Diecast Aluminum)	pc	2.00		-
	50mmØ RSC Pipe	pc	2.00		-
	50mmØ RSC Locknut	pc	4.00		-
	50mmØ RSC Bushing	pc	4.00		-

	50mmØ RSC Strap	pc	8.00	-
	Service Entrance Cap 1-1/2" (Diecast Aluminum)	pc	1.00	-
	40mmØ RSC Pipe	pc	1.00	-
	40mmØ RSC Locknut	pc	2.00	-
	40mmØ RSC Bushing	pc	2.00	-
	40mmØ RSC Strap	pc	4.00	-
	Service Entrance Cap 1-1/4" (Diecast Aluminum)	pc	3.00	-
	32mmØ RSC Pipe	pc	3.00	-
	32mmØ RSC Locknut	pc	6.00	-
	32mmØ RSC Bushing	pc	6.00	-
	32mmØ RSC Strap	pc	12.00	-
	Service Entrance Cap 1" (Diecast Aluminum)	pc	3.00	-
	25mmØ RSC Pipe	pc	3.00	-
	25mmØ RSC Locknut	pc	6.00	-
	25mmØ RSC Bushing	pc	6.00	-
	25mmØ RSC Strap	pc	12.00	-
	Service Entrance Cap 3/4" (Diecast Aluminum)	pc	3.00	-
	20mmØ RSC Pipe	pc	3.00	-
	20mmØ RSC Locknut	pc	6.00	-
	20mmØ RSC Bushing	pc	6.00	-
	20mmØ RSC Strap	pc	12.00	-
	Sub-Total (Materials)		Php	-
D.	**Direct Cost (A+B+C)**		**Php**	-
E.	Overhead, Contingencies and Miscellaneous (OCM)		% of D.	-
F.	Contractor's Profit		% of D.	-
G.	Value Added Tax (VAT)		% of (D+E+F)	-
H.	**Adjusted Total Cost (D+E+F+G)**		**Php**	-
I.	Adjusted Unit Cost (H/Quantity)		Php	-

Detailed Unit Price Analysis (Page 33 of 35)

DETAILED UNIT PRICE ANALYSIS

Project :	**Upgrading of Electrical System (Overhead System)**
Location:	**: CITY OF BIÑAN**
Item:	E 10 (l)
Description:	**Metering System**

Quantity: 1.00
Output per hour: 0.13
Unit: set

A.	Designation of Personnel	No. of Person	No. of Hours	Hourly Rate	Amount
	Construction Foreman	1	8.00		-
	Skilled Laborer	1	8.00		-
	Unskilled Laborer	1	8.00		-
	Sub-Total (Labor)			Php	-
B.	**Name / Capacity (Equipment)**	**No. of Units**	**No. of Hours**	**Hourly Rate**	**Amount**
	Electric Grinder	1	18.00		0.00
	Electric Hand Drill	1	18.00		0.00
	Sub-Total (Equipment)			Php	-
C.	**Name / Specification (Materials)**	**Unit**	**Quantity**	**Unit Cost**	**Amount**
	Meter, Base Socket CL-200, 7 Jaw	pc	1.00		-
	Meter, KWH, 3 Phase, Class 20, 240V, 3W, Form 45A, Electronic, Complete w/ TOU & Load Profiling	pc	1.00		-
	CT, Box, 10"X 14"X 18"	pc	1.00		-
	Current Transformer 30/15/10 : 5, 15KV	pc	1.00		-
	Sub-Total (Materials)			Php	-
D.	**Direct Cost (A+B+C)**			**Php**	-
E.	Overhead,Contingencies and Miscellaneous (OCM)			% of D.	-
F.	Contractor's Profit			% of D.	-
G.	Value Added Tax (VAT)			% of (D+E+F)	-
H.	**Adjusted Total Cost (D+E+F+G)**			**Php**	-
I.	Adjusted Unit Cost (H/Quantity)			Php	-

Detailed Unit Price Analysis (Page 34 of 35)

DETAILED UNIT PRICE ANALYSIS

Project :	Upgrading of Electrical System (Overhead System)
Location:	: CITY OF BIÑAN
Item:	E 10 (q)
Description:	Street Lights/ Perimeter Light

Quantity: 5.00
Output per hour: 0.25
Unit: set

A.	Designation of Personnel	No. of Person	No. of Hours	Hourly Rate	Amount
	Construction Foreman	1	20.00		-
	Skilled Laborer	1	20.00		-
	Unskilled Laborer	1	20.00		-
	Sub-Total (Labor)			Php	-
B.	**Name / Capacity (Equipment)**	**No. of Units**	**No. of Hours**	**Hourly Rate**	**Amount**
	Electric Grinder	1	20.00		0.00
	Electric Hand Drill	1	20.00		0.00
	Sub-Total (Equipment)			Php	-
C.	**Name / Specification (Materials)**	**Unit**	**Quantity**	**Unit Cost**	**Amount**
	Lamp Post 25', Hot Dip Galvanized	pc	5.00		-
	LED Streetlights, Solar, 150W, Daylight, Polycrystalline	pc	13.00		-
	Lamp Post Single Arm, Hot Dip Galvanized	pc	13.00		-
	Lamp Post Anchor Bolt for 25', Hot Dip Galvanized	pc	20.00		-
	Concreting Works	m3	1.00		
	Portland Cement	bag	15.00		-
	Crushed Gravel 3/4"	cu.m	1.00		-
	Washed Sand	cu.m	1.00		-
	Rebar Works				
	Deformed Round Bars, Grade 40	kg	71.50		-
	G.I. Tie Wire	kg	0.18		-
	Formwork Works				
	Coco Lumber	bd.ft	415.80		-
	Plywood Ordinary, 1/2" x 4' x 8'	pc	5.00		-
	CWN, Assorted	kg	10.00		-
	Sub-Total (Materials)			Php	-
D.	**Direct Cost (A+B+C)**			**Php**	-
E.	Overhead,Contingencies and Miscellaneous (OCM)			% of D.	-
F.	Contractor's Profit			% of D.	-
G.	Value Added Tax (VAT)			% of (D+E+F)	-
H.	**Adjusted Total Cost (D+E+F+G)**			**Php**	-
I.	Adjusted Unit Cost (H/Quantity)			Php	-

Detailed Unit Price Analysis (Page 35 of 35)

DETAILED UNIT PRICE ANALYSIS

Project :	**Upgrading of Electrical System (Overhead System)**
Location:	**: CITY OF BIÑAN**
Item:	E 10 (b)
Description:	**Secondary Distribution**

Quantity: 17.00
Output per hour: 0.25
Unit: set

A.	Designation of Personnel	No. of Person	No. of Hours	Hourly Rate	Amount
	Construction Foreman	1	68.00		-
	Skilled Laborer	1	68.00		-
	Unskilled Laborer	1	68.00		-
	Sub-Total (Labor)			Php	-
B.	**Name / Capacity (Equipment)**	**No. of Units**	**No. of Hours**	**Hourly Rate**	**Amount**
	Boom Truck	1	68.00		0.00
	Bucket Truck	1	68.00		0.00
	mini backhoe	1	68.00		0.00
	Sub-Total (Equipment)			Php	-
C.	**Name / Specification (Materials)**	**Unit**	**Quantity**	**Unit Cost**	**Amount**
	Straight Alignment				
	Pole, Steel, 30', Bare-3.0 mm, 86 Micron, 500 kgs (Minimum Load Break)	pc	8.00		-
	Bracket, Clevis Dead-end Without Spool	pc	24.00		-
	Insulator, Spool, 1-3/4", ANSI, Class 53-2	pc	24.00		-
	Bolt, Double Upset 5/8" X 10", Hot Dip Galvanized, Forged	pc	24.00		-
	Nut, Lock, MF Type, 5/8"	pc	48.00		-
	Washer, Square, Flat, 2-1/4" X 2-1/4" X 3/16"	pc	48.00		-
	Corner or Obtuse Alignment				
	Pole, Steel, 30', Bare-3.0 mm, 86 Micron, 500 kgs (Minimum Load Break)	pc	9.00		-
	Bracket, Clevis Dead-end Without Spool	pc	27.00		-
	Insulator, Spool, 1-3/4", ANSI, Class 53-2	pc	27.00		-
	Bolt, Double Upset 5/8" X 10", Hot Dip Galvanized, Forged	pc	27.00		-
	Nut, Lock, MF Type, 5/8"	pc	54.00		-
	Washer, Square, Flat, 2-1/4" X 2-1/4" X 3/16"	pc	54.00		-
	Bolt, Oval Eye 5/8" X 12", Hot Dip Galvanized, Forged	pc	27.00		-
	Scaffolding Rental				

	Scaffolding	set	153.00		-
	Pole Support for Corner & Obtuse Alignment				
	Sidewalk Fixture, 44 1/2"	pc	9.00		-
	Guy, Grip Spacer, 5/8"	pc	18.00		-
	Bolt, Machine 5/8" X 8"", Hot Dip Galvanized	pc	27.00		-
	Washer, Square, Flat, 2-1/4" X 2-1/4" X 3/16"	pc	162.00		-
	Attachment, Guy, Malleable Type with 11/16" Hole Diameter	pc	27.00		-
	Rod, Anchor, Threaded, Double Eye, 3/4" X 10', Hot Dip Galvanized, Forged	pc	36.00		-
	Anchor, Expanding, 8 - Ways, Hot Dip Galvanized	pc	36.00		-
	Anchor, Block, 3'	pc	36.00		-
	Anchor, Screw Eye Shaft, 3/4" X 8', HDG, Forged	pc	36.00		-
	Wire, Guy, Steel, 3/8", 7 Strand, High Strength	ft	2,520.00		-
	Guy, Dead-end Grip, 3/8"	pc	1.00		-
	Insulator, Strain, #502, ANSI 54-1	pc	9.00		-
	Protector, Wire, Guy, 7" HDPE Pipe (Yellow)	pc	9.00		-
	Concreting Works	m3	51.00		
	Portland Cement	bag	459.00		-
	Crushed Gravel 3/4"	cu.m	51.00		-
	Washed Sand	cu.m	25.50		-
	Rebar Works				
	Deformed Round Bars, Grade 40	kg	2,042.51		-
	G.I. Tie Wire	kg	71.49		-
	Formwork Works				
	Coco Lumber	bd.ft	4,441.20		-
	Plywood Ordinary, 1/2" x 4' x 8'	pc	68.00		-
	CWN, Assorted	kg	34.00		-
	Sub-Total (Materials)			Php	-
D.	**Direct Cost (A+B+C)**			**Php**	-
E.	Overhead,Contingencies and Miscellaneous (OCM)			12% of D.	-
F.	Contractor's Profit			10% of D.	-
G.	Value Added Tax (VAT)			5% of (D+E+F)	-
H.	**Adjusted Total Cost (D+E+F +G)**			**Php**	-
I.	Adjusted Unit Cost (H/Quantity)			Php	-

Biñan Elementary School

Detailed Cost Estimate (Part 1 of 1)

PROGRAM OF WORKS

DETAILED COST ESTIMATE

(TOTAL CONSTRUCTION COST / A BC)

ELEC 2023 - RVIA - BIÑAN - 001

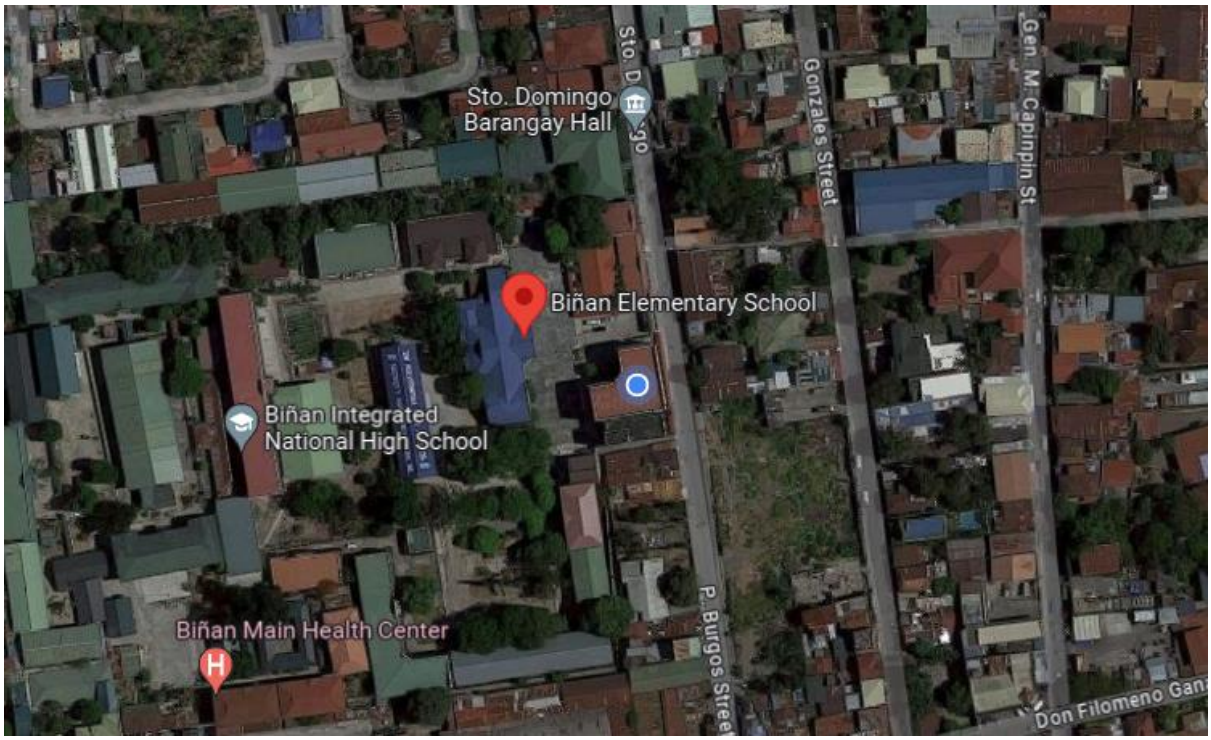
PROJECT : **Upgrading of Electrical System (Overhead System)**
SCHOOL : **BIÑAN C S (DOÑA AURORA E S)**
LOCATION : **CITY OF BIÑAN**
OWNER : **DEPARTMENT OF EDUCATION**

CONTRACT DURATION : 240 CD

ITEM NO.	DESCRIPTION	QUANTITY	UNIT	ESTIMATED DIRECT COST	MARK-UPS IN PERCENT		TOTAL MARK-UP		VAT (5%)	TOTAL INDIRECT COST	ADJUSTED TOTAL COST	ADJUSTED UNIT COST
					OCM	PROFIT	%	VALUE				
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8) (6) + (7)	(9) (5) x (8)	(10) 5% [(5) + (9)]	(11) (9) + (10)	(12) (5) + (11)	(13) (12) / (3)
A	**Temporary Facilities of Engineer**											
A.1	Temporary Facilities	8.00	Month	-								
B	**Other General Requirements**											
B.1	Fire Safety Inspection Certificate (FSIC)	1.00	lot	-								
SPL.1	Project Billboard / Signage	1.00	Each	-								
SPL.2	Construction Safety and Health	8.00	Month	-								
B.2	Security/ Bil Deposit	1.00	Ls	-								
B.3	Equipment Testing and Commissioning	1.00	Ls	-								
C	**Mobilization and Demobilization**											
C.1	Mobilization and Demobilization	1.00	Ls	-								
	Removal of Structures and Obstructions											
	Clearing of Right of Way	1.00	Ls	-								
1.0000	**Earthworks**											
1 (a)	Clearing and Grubbing	58.03	sq. m	-								
1 (b)	Structural Excavation	112.67	cu m	-								
1 (d)	Gravel Bedding G-1	0.58	cu m	-								
1 (e)	Embankment	81.67	Ls	-								
13.0000	**Painting Works**											
13 (a)	Mansory Painting	12.16	sq m	-								
13 (c)	Metal Painting	34.00	sq m	-								
E 2 (f)	**Duct Bank**											
1 (a)	Clearing and Grubbing	122.40	sq.m	-								
1 (b)	Structural Excavation	73.00	cu m	-								
1 (c)	Backfilling of Excavated Materials	73.44	cu m	-								
1 (d)	Gravel Bedding G-1	73.44	cu m	-								
2 (e)	Concreting Works	73.44	cu m	-								
4 (a)	Installation and Removal of Formworks	122.40	sq.m	-								
E 10 (k)	Conduit Works, Boxes & Fittings	1.00	Ls	-								
10.0000	**Electrical Works**											
E 2 (a)	Service Entrance Concrete Pedestal	1.00	lot	-								
E 2 (b)	Power House (Electrical Room)	1.00	lot	-								
E 10 (a)	Primary Extension	1.00	set	-								
E 10 (b)	Distribution Poles	1.00	pc	-								
E 10 (c)	Distribution Transformer,Accessories and Assembly	1.00	unit	-								
E 10 (d)	Grounding Assembly	1.00	set	-								
E 10 (g)	Guy Assembly and Anchor Assembly	1.00	set	-								
	Removal of Old Wires and Electrical Equipment & Devices	1.00	Ls	-								
E 10 (i)	Wires and Wiring Devices	1.00	Ls	-								
E 10 (j)	Panel Board and Circuit Protections	1.00	Ls	-								
E 10 (k)	Conduit Works, Boxes & Fittings	1.00	Ls	-								
E 10 (l)	Metering System	1.00	set	-								
E 10 (q)	Street Lights/ Perimeter Light	5.00	set	-								
E 10 (r)	Secondary Distribution	17.00	set	-								
	TOTAL CONSTRUCTION COST										-	

Section VII. Drawings

MAP (Binan Elementary School)
P. Burgos Street, Sto. Domingo Zone 2, Biñan, 4024 Laguna



Electrical Plans (Page 1 of 8)

GENERAL NOTES AND SPECIFICATIONS

1. ALL ELECTRICAL WORKS HEREIN SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE PHILIPPINE ELECTRICAL CODE (PEC). THE EXISTING LOCAL ORDINANCES RULES & REGULATIONS OF THE MUNICIPAL ELECTRICIAN & REQUIREMENTS OF THE UTILITY COMPANY.
2. THE TYPE OF ELECTRICAL SERVICE TO BE SUPPLIED SHALL BE THREE PHASE, 3 WIRE + GROUND, 240 V, 60 Hz.
3. WIRING METHOD SHALL BE AS FOLLOWS :
   A. MAIN FEEDER – RSC (RIGID STEEL CONDUIT) & MUST BE COLOR CODED AND STANDARD COLOR CODING FOR GROUNDING FEEDER IN ACCORDANCE TO LATEST VERSION OF PEC
   B. LIGHTING, POWER RECEPTACLE, BRANCH CIRCUIT & AUXILIARY – POLYVINYL CHLORIDE CONDUIT
4. ALL WIRE SHALL BE COPPER WITH AT LEAST 99% CONDUCTIVITY, 600 VOLTS INSULATION, THERMOPLASTIC INSULATED TYPE "THHN", "THWN" & "THW" UNLESS OTHERWISE INDICATED AND COLOR CODED. THE MINIMUM SIZE FOR POWER AND LIGHTING SHALL BE 3.5mm².
5. ALL SERVICE ENTRANCE FEEDER ATLEAST IN MINIMUM SIZE OF 8.0mm² AND MAIN BREAKER ATLEAST IN 50 AMPERE TRIP BOLT ON TYPE BREAKER.
6. THE ELECTRICAL WIRING INSULATION INSIDE THE BUILDING SHALL BE DONE RIGID PVC CONDUIT, CONCEALED IN CEILING, CONCRETE AND MASONRY WORKS AND IN DOUBLE WOOD WALLS. FLEXIBLE METALLIC CONDUITS SHALL BE USED WHERE REQUIRED MINIMUM SIZE FOR ALL CONDUIT SHALL BE 25 mm ϕ ELECTRICAL TRADE SIZE.
7. ALL OUTLET BOXES SHALL BE GALVANIZED GAGE NO. 16 DEEP TYPE WITH FACTORY KNOCKOUTS.
8. ALL MATERIALS TO BE USED SHALL BE BRAND NEW AND APPROVED TYPE FOR THE PARTICULAR LOCATION AND PURPOSE OF USAGE.
9. ALL SERVICE ENTRANCE EQUIPMENT, SWITCHES, PANEL BOARDS, LIGHTING FIXTURES AND ALL NON–CURRENT CARRYING METAL PARTS SHALL BE PROPERLY CONDUCTED. GROUND WIRE MUST BE CONTINUOUS WITH GREEN INSULATION OR BARE UN–INSULATED.
10. MOUNTING HEIGHT OF WIRING DEVICES SHALL BE AS FOLLOWS :
    A. LIGHTSWITCH – 1.20 M ABOVE FINISH FLOOR
    B. CONVENIENCE OUTLET – 0.30 M ABOVE FINISH FLOOR.
    C. PANELBOARD – 1.80 M ABOVE FINISH FLOOR
11. WIRE SPLICES SHALL BE MECHANICALLY AND ELECTRICALLY SECURED JOINTS, TAPS AND SPLICES LARGER THAN 5.5 mm. SHALL BE MADE WITH THE USE OF SOLDER–LESS COPPER CONNECTION. THEY SHALL BE COVERED WITH ELECTRICAL TAPE EQUAL TO THE THICKNESS OF THE WIRE INSULATION.
12. CIRCUIT BREAKERS SHALL BE MOLDED CASE, NEMA STANDARD, QUICK MAKE, QUICK BREAK, THERMAL MAGNETIC WITH INVERSE TIME CHARACTERISTICS SHALL BE FUJI OR GE BRAND. PANEL BOARDS SHALL BE FUJI–HAYA OR EDISON ELECTRICAL BRAND. BOXES SHALL BE CODE GALVANIZED SHEET WITH BLUE GRAY LACQUERED VARNISH TRIM
13. CONDUIT ROUTING SHOWN SHOULD SUIT THE FIELD CONDITIONS AND THE COORDINATION REQUIREMENTS OF UTILITIES AND OTHER TRADES. ANY CHANGES MUST BE COORDINATED WITH THE ENGINEER/OWNER AND HIS/HER REPRESENTATIVE.
14. ALL OVERHEAD LINE SHOULD BE SUPPORTED BY MESSENGER WIRE.
15. ANY DISCREPANCY IN LOCATION AND RATING OF EQUIPMENT AND APPARATUS SHALL BE VERIFIED WITH THE ENGINEER/OWNER OR ANY OF HIS REPRESENTATIVES AND CHANGES SHALL BE MADE ACCORDINGLY.
16. THE JOB SHALL BE EXECUTED IN THE MOST THOROUGH, PROMPT AND WORKMANLIKE MANNER, EMPLOYING STANDAR TOOLS, EQUIPMENT, METHODS AND GOOD ENGINEERING PRACTICES. THE JOB SHALL BE COMPLETE IN ALL ASPECTS A REQUIRED IN PLAN AND SPECIFICATIONS AND READY FOR OPERATION.
17. ALL RECEPTACLE OUTLETS SHALL BE TAGGED WITH PANEL AND CIRCUIT NUMBER SUPPLYING THEM.
18. THE ELECTRICAL CONTRACTOR IS RESPONSIBLE FOR THE PROPER ELECTRICAL LOAD BALANCING IN ALL BREAKERS. IDENTIFICATION AND LABELING OF ALL CIRCUIT BREAKERS. EACH PANEL BOARD SHALL BE PROVIDED WITH TYPE–WRITTEN CIRCUIT DIRECTORY
19. ALL ELECTRICAL WORKS SHALL BE DONE UNDER DIRECT AND IMMEDIATE SUPERVISION OF DULY REGISTERED MASTER ELECTRICIAN OR REGISTERED ELECTRICAL ENGINEER.

Panel	Main Circuit Breaker	Voltage	230V	Enclosure:		Surface Mounted, NEMA 3R					
		Phase	3Ø	CB Type:		MCCB, Bolt-On					
Ckt No.	Description	Power (kVA)	Phase Current(A)			Circuit Protection				Feeder Wire	
			ØAB	ØBC	ØCA	AT	AF	P	kAIC		
1	Main Distribution Panel - 1	66	174.07	51.41	88.87	400	400	3	30.0	Z100-G30	2 (53mm)
2	Main Distribution Panel - 2	139	214.50	201.33	187.09	500	600	3	35.0	Z125-G30	2 (53mm)
3	Main Distribution Panel - 3	103	49.04	112.26	294.48	700	800	3	35.0	Z200-G50	2-1/2 (63mm)
Total Connected Load, kVA_{TOTAL}		**309kVA**	437.61	365.00	541.43						
Full Load Current = √3 x Highest Phase Current x 80% DF		**750.21A**		**Feeder Wire:**							
Minimum Ampacity of Feeder Conductor = I_{FL} x 125%		**938A**		Use: 3 SETS OF (Z200+G30 in 2-1/2 (63mm) Ø RSC)							
Transformer Sizing = KVA_{TOTAL} x 80% DF		**247KVA**		**Main Circuit Protection:**							
Use: 3 - 100KVA 13.8/0.23 kV, 3 Phase, 60Hz AMD Transformer				Use: 1200AT, 1200AF, 3P, 230V, 75KAIC							
Transformer Ampacity and Overcurrent Protection											
At Primary Side:				**At Secondary Side**							
I_{PL} = Transformer Size / √3 x (Service Line V_{PH}) =		**10.35A**		I_{PL} = Transformer Size / √3 x (Service Line V_{PH})							**620.81A**
Allowable Ampacity of Conductor = I_{PL} x 125% =		**12.93A**		**Allowable Ampacity of Conductor =** I_{PL} x 125% =							**776.01A**
Use: 2R-GR 5kV XPLE Power Cable				Use: 3 SETS OF (2150+G30 in 2 (53mm) Ø RSC)							
Max. Setting of Overcurrent Primary Protection for Transformer over 600V				**Max. Setting of Overcurrent Secondary Protection for Transformer over 600V**							
I_{MPRO} = (300% Fuse Rating x I_{PL}		**31.04A**		I_{MPRO} = (250% Circuit Breaker Rating x I_{PL}							**1,552.01A**
Use: 40A Power Fuse				Use: 2000AT, 2000AF, 3P, 230V, 75KAIC							

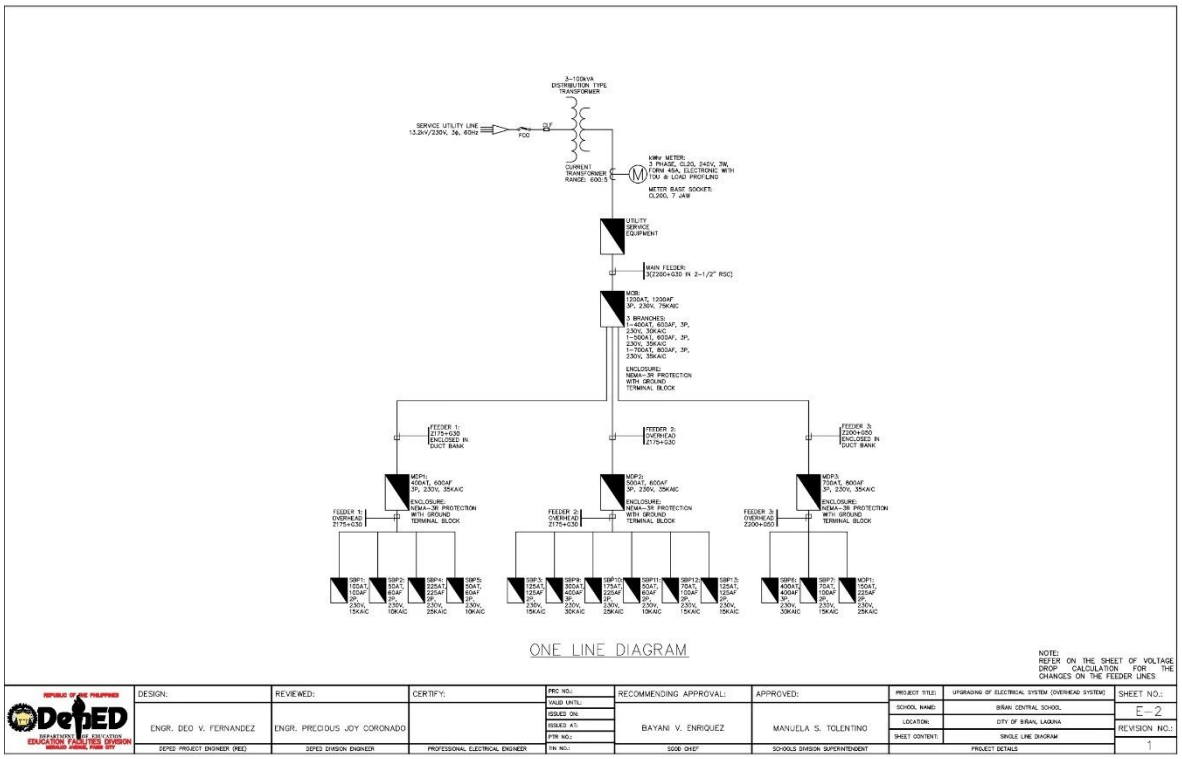
Panel	Main Distribution Panel - 1	Voltage	230V	Enclosure:		Surface Mounted, NEMA 3R					
		Phase	3Ø	CB Type:		MCCB, Bolt-On					
Bldg. No.	Description	Power (VA)	Phase Current(A)			Circuit Protection				Feeder Wire	
			ØAB	ØBC	ØCA	AT	AF	P	kAIC		
1	Gov. Teresita Lazaro Building (3 Sty 6 Cl)	13,770			59.87	100	100	2	15.0	Y22-G8	1 (27mm²) Ø RSC
2	Neres Joaquin Building (2 Sty 4 Cl)	5,335		24.07		50	60	2	10.0	Y8-G8	3/4 (21mm²) Ø RSC
4	SPED Building (2 Sty 14 Cl)	40,035	174.07			225	225	2	25.0	Y100-G30	2 (53mm²) Ø RSC
5	SPED Transition Building (1 Sty 2 Cl)	6,290		27.35		50	60	2	10.0	Y8-G8	3/4 (21mm²) Ø RSC
Total Connected Load, kVA_{TOTAL}		**66kVA**	174.07	51.41	59.87						
Full Load Current = √3 x Highest Phase Current x 80% DF		**241.18A**		**Feeder Wire:**							
Minimum Ampacity of Feeder Conductor = I_{FL} x 125%		**301A**		Use: Z100-G30 in 2 (53mm) Ø RSC							
				Main Circuit Protection:							
				Use: 400AT, 400AF, 3P, 230V, 30KAIC							

Panel	Main Distribution Panel - 2	Voltage	230V	Enclosure:		Surface Mounted, NEMA 3R					
		Phase	3Ø	CB Type:		MCCB, Bolt-On					
Bldg. No.	Description	Power (VA)	Phase Current(A)			Circuit Protection				Feeder Wire	
			ØAB	ØBC	ØCA	AT	AF	P	kAIC		
3	Perez Building (2 Sty 12 Cl)	21,410		93.09		125	125	2	15.0	Y50-G14	1-1/4 (35mm²) Ø RSC
9	Home Economics Building (2 Sty 7 Cl)	49,335	214.50			300	400	3	30.0	Y150-G30	2 (53mm²) Ø RSC
10	Perez Building (2 Sty 18 Cl)	30,380			132.09	175	225	2	25.0	Y80 -G22	1-1/2 (41mm²) Ø RSC
11	Gov. Jose Lina Building (2 Sty 4 Cl)	5,040		21.91		50	60	2	10.0	Y8-G8	3/4 (21mm²) Ø RSC
12	Ulran Joaquin Building (2 Sty 4 Cl)	12,650			55.00	70	100	2	15.0	Y22-G8	1 (27mm²) Ø RSC
13	MBP/ALS Building (2 Sty 5 Cl)	19,855		86.33		125	125	2	15.0	Y38-G14	1-1/4 (35mm²) Ø RSC
Total Connected Load, kVA_{TOTAL}		**139kVA**	214.50	201.33	187.09						
Full Load Current = √3 x Highest Phase Current x 80% DF		**297.21A**		**Feeder Wire:**							
Minimum Ampacity of Feeder Conductor = I_{FL} x 125%		**372A**		Use: Z125-G30 in 2 (53mm) Ø RSC							
				Main Circuit Protection:							
				Use: 500AT, 600AF, 3P, 230V, 35KAIC							

Panel	Main Distribution Panel - 3	Voltage	230V	Enclosure:		Surface Mounted, NEMA 3R					
		Phase	3Ø	CB Type:		MCCB, Bolt-On					
Bldg. No.	Description	Power (VA)	Phase Current(A)			Circuit Protection				Feeder Wire	
			ØAB	ØBC	ØCA	AT	AF	P	kAIC		
5	Gabaldon School Building (1 Sty 4 Cl)	57,730			294.48	400	400	2	30	Y250-G50	2-1/2 (63mm) Ø RSC
7	Security Bank Building (2 Sty 8 Cl)	11,280	49.04			70	100	2	15	Y14-G8	1 (27mm² Ø RSC
8	Dagbl Standard School Building (4 Sty 16 Cl)	25,820		112.26		150	225	2	25	Y60-G22	1-1/4 (35mm²) Ø RSC
Total Connected Load, kVA_{TOTAL}		**105kVA**	49.04	112.26	294.48						
Full Load Current = √3 x Highest Phase Current x 80% DF		**408.03A**		**Feeder Wire:**							
Minimum Ampacity of Feeder Conductor = I_{FL} x 125%		**510A**		Use: 2200-G50 in 2-1/2 (63mm) Ø RSC							
				Main Circuit Protection:							
				Use: 700AT, 800AF, 3P, 230V, 35KAIC							

DESIGN:	REVIEWED:	CERTIFY:	PRC NO.:	RECOMMENDING APPROVAL:	APPROVED:	PROJECT TITLE:	UPGRADING OF ELECTRICAL SYSTEM (OVERHEAD SYSTEM)	SHEET NO.:
			VALID UNTIL:			SCHOOL NAME:	BIÑAN CENTRAL SCHOOL	E-1
ENGR. DEO V. FERNANDEZ	ENGR. PRECIOUS JOY CORONADO		ISSUED ON:	BAYANI V. ENRIQUEZ	MANUELA S. TOLENTINO	LOCATION:	CITY OF BIÑAN, LAGUNA	REVISION NO.:
			ISSUED AT:			SHEET CONTENT:	GENERAL NOTES & SPECIFICATION & MAIN SCHEDULE OF LOADS	
DEPED PROJECT ENGINEER (REE)	DEPED DIVISION ENGINEER	PROFESSIONAL ELECTRICAL ENGINEER	PTR NO.:	SGOD CHIEF	SCHOOLS DIVISION SUPERINTENDENT	PROJECT DETAILS		1
			TIN NO.:					

Electrical Plans (Page 2 of 8)



ONE LINE DIAGRAM

NOTE:
REFER ON THE SHEET OF VOLTAGE DROP CALCULATION FOR THE CHANGES ON THE FEEDER LINES

DESIGN:	REVIEWED:	CERTIFY:	PRC NO.:	RECOMMENDING APPROVAL:	APPROVED:	PROJECT TITLE:	UPGRADING OF ELECTRICAL SYSTEM (OVERHEAD SYSTEM)
			VALID UNTIL:			SCHOOL NAME:	BIÑAN CENTRAL SCHOOL
			ISSUED ON:			LOCATION:	CITY OF BIÑAN, LAGUNA
ENGR. DEO V. FERNANDEZ	ENGR. PRECIOUS JOY CORONADO		ISSUED AT:	BAYANI V. ENRIQUEZ	MANUELA S. TOLENTINO	SHEET CONTENT:	SINGLE LINE DIAGRAM
			PTR NO.:				
DEPED PROJECT ENGINEER (REE)	DEPED DIVISION ENGINEER	PROFESSIONAL ELECTRICAL ENGINEER	TIN NO.:	SDDE CHIEF	SCHOOLS DIVISION SUPERINTENDENT	PROJECT DETAILS	

SHEET NO.:
E-2
REVISION NO.:
1

Electrical Plans (Page 3 of 8)

SHORT CIRCUIT & VOLTAGE DROP CALCULATION

VOLTAGE DROP CALCULATIONS :

CONDUCTORS

No.	Description	Phase	Amps	Wires & Conduit	Length (m)	R/305
1	FEEDER 1	3ϕ	241.18	Z100 & 2"ø RSC	250	0.062
2	FEEDER 2	3ϕ	297.21	Z125 & 2"ø RSC	180	0.052
3	FEEDER 3	3ϕ	408.03	Z200 & 2-1/2"ø RSC	90	0.033

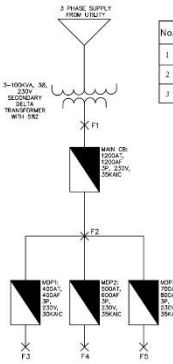
VOLTAGE DROP CALCULATION:

VD = [(2 x A x L X R) / 1000] – FOR SINGLE PHASE
VD = [(2 x A x L X R) / 1000] x 0.866 – FOR 3ϕ PHASE
%VD = (VD / 240) / 100

WHERE:
VD = VOLTAGE DROP, VOLTS
%VD = PERCENTAGE OF VOLTAGE DROP
A = FULL LOAD CURRENT, AMPS
L = ONE-WAY CIRCUIT LENGTH, FEET
R = RESISTANCE FACTOR, OHMS/305m (PER PEC 10.1.1.9)

No.	Description	Amps	Feeder & Conduit	Length (m)	Final Feeder & Conduit	R/305	VD	%VD
1	FEEDER 1	241.18	Z100 & 2" RSC	250	Z175 & 2-1/2" RSC	0.039	12.02	5.01%
2	FEEDER 2	297.21	Z125 & 2" RSC	180	Z175 & 2-1/2" RSC	0.039	11.85	4.94%
3	FEEDER 3	408.03	Z200 & 2-1/2" RSC	90	Z200 & 2-1/2" RSC	0.035	7.30	3.04%

SHORT CIRCUIT CALCULATION: POINT TO POINT



No.	Description	Amps	Length (m)	Final Feeder & Conduit	R/305	C
1	FEEDER 1	241.18	250	Z175 & 2-1/2" RSC	0.039	19703
2	FEEDER 2	297.21	180	Z175 & 2-1/2" RSC	0.039	19703
3	FEEDER 3	408.03	90	Z200 & 2-1/2" RSC	0.035	20565

SOLVE FAULT AT F1

$I_{TRANSFORMER} = \frac{(300 \times 1000)}{(230V \times 1.732)} = 753.09A$

$M_1 = \frac{100}{\%Z \times 0.9} = \frac{100}{(5 \times 0.9)} = 22.22$

$I_{SC1} = I_{TRANSFORMER} \times M_1$
$= 753.09 \times 22.22$
$= 16,735.33A$
$I_{SC1} = 16.74kAIC$

FACTORS TO BE CONSIDERED TO SOLVE FAULT AT F2

$f = \frac{L \times I}{C \times n \times V} \quad M = \frac{1}{1+f}$

WHERE:
L = DISTANCE OF POINT TO POINT FAULT, ft
I_{SCX} = PRECEDING SHORT CIRCUIT CURRENT, A
C = CABLE CONSTANT
n = NO. OF CABLE
V = LINE TO LINE VOLTAGE
$I_{SCX} = I_{SCX} \times M_X$

SOLVE FAULT AT F2

$f_1 = \frac{(20 \times 3.28) \times (16,735.33)}{20565 \times 9 \times 230} = 0.0258$

$M_2 = \frac{1}{1+0.0258} = 0.9749$

$I_{SC2} = I_{SC1} \times M_2$
$= 16,735.33 \times 0.9749$
$= 16,314.54A$
$I_{SC2} = 16.31kAIC$
$CB_{MAIN} = 35kAIC$ (PASSED)

SOLVE FAULT AT F3

$f_2 = \frac{(250 \times 3.28) \times (16,314.54)}{19703 \times 3 \times 230} = 0.9840$

$M_3 = \frac{1}{1+0.9840} = 0.5040$

$I_{SC3} = I_{SC2} \times M_3$
$= 16,314.54 \times 0.5040$
$I_{SC3} = 8,222.94A$
$I_{SC3} = 8.22kAIC$
$CB_{MDP1} = 30kAIC$ (PASSED)

SOLVE FAULT AT F4

$f_3 = \frac{(180 \times 3.28) \times (16,314.54)}{19703 \times 3 \times 230} = 0.7085$

$M_4 = \frac{1}{1+0.7085} = 0.5853$

$I_{SC4} = I_{SC2} \times M_4$
$= 16,314.54 \times 0.5853$
$I_{SC4} = 9,549.04A$
$I_{SC4} = 9.55kAIC$
$CB_{MDP2} = 35kAIC$ (PASSED)

SOLVE FAULT AT F5

$f_4 = \frac{(90 \times 3.28) \times (16,314.54)}{20565 \times 3 \times 230} = 0.3394$

$M_5 = \frac{1}{1+0.2501} = 0.7466$

$I_{SC5} = I_{SC2} \times M_5$
$= 16,314.54 \times 0.7466$
$I_{SC4} = 12,180.47A$
$I_{SC4} = 12.18kAIC$
$CB_{MDP3} = 35kAIC$ (PASSED)

REPUBLIC OF THE PHILIPPINES DepED DEPARTMENT OF EDUCATION EDUCATION FACILITIES DIVISION	DESIGN:	REVIEWED:	CERTIFY:	PRC NO.: VALID UNTIL: ISSUED ON: ISSUED AT: PTR NO.: TIN NO.:	RECOMMENDING APPROVAL:	APPROVED:	PROJECT TITLE:	UPGRADING OF ELECTRICAL SYSTEM (OVERHEAD SYSTEM)	SHEET NO.: E-3
	ENGR. DEO V. FERNANDEZ	ENGR. PRECIOUS JOY CORONADO			BAYANI V. ENRIQUEZ	MANUELA S. TOLENTINO	SCHOOL NAME:	BRAN CENTRAL SCHOOL	
	DEPED PROJECT ENGINEER (PEE)	DEPED DIVISION ENGINEER	PROFESSIONAL ELECTRICAL ENGINEER		SDDE CHIEF	SCHOOLS DIVISION SUPERINTENDENT	LOCATION:	DITY OF BRAN, LAGUNA	REVISION NO.: 1
							SHEET CONTENT:	SHORT CIRCUIT AND VOLTAGE DROP CALCULATION	
								PROJECT DETAILS	

Electrical Plans (Page 4 of 8)

Bldg. 1	Gov. Teresita Lazaro Building (3 Sty 6 Cl)	Voltage	230	Enclosure:			Flush Type Panel Board		
		Phase	1Ø	CB Type:			Bolt-On		
Ckt No.	Description	Power (VA)	Current (A)	Circuit Protection AT	AF	P	KAIC	Feeder Wire	Conduit
1	42 x Lighting Outlet - 60W	2,520	10.96	15	60	2	10.0	Y3.5+G3.5	3/4 (21mm) Ø PVC
2	22 x Wall Fan - 60W	1,650	7.17	15	60	2	10.0	Y3.5+G3.5	3/4 (21mm) Ø PVC
3	38 x Convenience Outlet - 180W	6,840	29.74	40	60	2	10.0	Y8+G5.5	3/4 (21mm) Ø PVC
4	1 x Aircon (2 HP)	2,760	12.00	30	60	2	10.0	Y3.5+G3.5	3/4 (21mm) Ø PVC
Full Load Current = I_T x 100% Demand Factor			**Main Circuit Protection & Enclosure:**						
I_m= 59.87A			Use: 100AT, 100AF, 2P, 230V, 15KAIC						
Minimum Ampacity of Feeder Conductor = 125% x I_m			**Feeder & Ground Wire & Conduit:**						
I_{mc}= 74.84A			Use: Y22+G8 in 1 (27mm)" Ø RSC						

Bldg. 2	Nereo Joaquin Building (2 Sty 4 Cl)	Voltage	230	Enclosure:			Flush Type Panel Board		
		Phase	1Ø	CB Type:			Bolt-On		
Ckt No.	Description	Power (VA)	Current (A)	Circuit Protection AT	AF	P	KAIC	Feeder Wire	Conduit
1	28 x Lighting Outlet - 60W	1,680	7.30	15	60	2	10.0	Y3.5+G3.5	3/4 (21mm) Ø PVC
2	13 x Wall Fan - 60W	975	4.24	15	60	2	10.0	Y3.5+G3.5	3/4 (21mm) Ø PVC
3	16 x Convenience Outlet - 180W	2,880	12.52	20	60	2	10.0	Y3.5+G3.5	3/4 (21mm) Ø PVC
Full Load Current = I_T x 100% Demand Factor			**Main Circuit Protection & Enclosure:**						
I_m= 24.07A			Use: 50AT, 60AF, 2P, 230V, 10KAIC						
Minimum Ampacity of Feeder Conductor = 125% x I_m			**Feeder & Ground Wire & Conduit:**						
I_{mc}= 30.08A			Use: Y8+G8 in 3/4 (21mm)" Ø RSC						

Bldg. 4	SPED Building (2 Sty 14 Cl)	Voltage	230	Enclosure:			Flush Type Panel Board		
		Phase	1Ø	CB Type:			Bolt-On		
Ckt No.	Description	Power (VA)	Current (A)	Circuit Protection AT	AF	P	KAIC	Feeder Wire	Conduit
1	125 x Lighting Outlet - 60W	7,500	32.61	50	60	2	10.0	Y8+G8	3/4 (21mm) Ø PVC
2	9 x Wall Fan - 60W	675	2.93	15	60	2	10.0	Y3.5+G3.5	3/4 (21mm) Ø PVC
3	85 x Convenience Outlet - 180W	15,300	66.52	100	100	2	15.0	Y22+G14	1 (27mm) Ø PVC
4	9 x Aircon (1 HP)	16,560	72.00	100	100	2	15.0	Y30+G8	1 (27mm) Ø PVC
Full Load Current = I_T x 100% Demand Factor			**Main Circuit Protection & Enclosure:**						
I_m= 174.07A			Use: 225AT, 225AF, 2P, 230V, 25KAIC						
Minimum Ampacity of Feeder Conductor = 125% x I_m			**Feeder & Ground Wire & Conduit:**						
I_{mc}= 217.58A			Use: Y100+G30 in 2 (53mm)" Ø RSC						

Bldg. 5	SPED Transition Building (1 Sty 2 Cl)	Voltage	230	Enclosure:			Flush Type Panel Board		
		Phase	1Ø	CB Type:			Bolt-On		
Ckt No.	Description	Power (VA)	Current (A)	Circuit Protection AT	AF	P	KAIC	Feeder Wire	Conduit
1	22 x Lighting Outlet - 60W	1,320	5.74	15	60	2	10.0	Y3.5+G3.5	3/4 (21mm) Ø PVC
2	2 x Wall Fan - 60W	150	0.65	15	60	2	10.0	Y3.5+G3.5	3/4 (21mm) Ø PVC
3	14 x Convenience Outlet - 180W	2,520	10.96	20	60	2	10.0	Y3.5+G3.5	3/4 (21mm) Ø PVC
4	1 x Water Pump (1.5 HP)	2,300	10.00	30	60	2	10.0	Y3.5+G3.5	3/4 (21mm) Ø PVC
Full Load Current = I_T x 100% Demand Factor			**Main Circuit Protection & Enclosure:**						
I_m= 27.35A			Use: 50AT, 60AF, 2P, 230V, 10KAIC						
Minimum Ampacity of Feeder Conductor = 125% x I_m			**Feeder & Ground Wire & Conduit:**						
I_{mc}= 34.18A			Use: Y8+G8 in 3/4 (21mm)" Ø RSC						

NOTE:
CIRCUIT PROTECTION FOR EACH BUILDING MAY DIFFER ON ACTUAL.
THE COMPUTED LOADS ARE DERIVED AND IN ACCORDANCE TO THE LATEST PHILIPPINE ELECTRICAL CODE IN ORDER TO DETERMINE THE PROPER SIZE OF DISTRIBUTION FEEDER LINE AND CIRCUIT PROTECTION.

	DESIGN:	REVIEWED:	CERTIFY:	PRC NO.:	RECOMMENDING APPROVAL:	APPROVED:	PROJECT TITLE:	UPGRADING OF ELECTRICAL SYSTEM (OVERHEAD SYSTEM)	SHEET NO.:
DepED DEPARTMENT OF EDUCATION EDUCATION FACILITIES DIVISION				VALID UNTIL:			SCHOOL NAME:	BIÑAN CENTRAL SCHOOL	E-4
				ISSUED ON:			LOCATION:	CITY OF BIÑAN, LAGUNA	REVISION NO.:
				ISSUED AT:			SHEET CONTENT:	DETAILED SCHEDULE OF LOADS OF MDP-1	
	ENGR. DEO V. FERNANDEZ	ENGR. PRECIOUS JOY CORONADO		PTR NO.:	BAYANI V. ENRIQUEZ	MANUELA S. TOLENTINO			1
	DEPED PROJECT ENGINEER (PEE)	DEPED DIVISION ENGINEER	PROFESSIONAL ELECTRICAL ENGINEER	TIN NO.:	SGOD CHIEF	SCHOOLS DIVISION SUPERINTENDENT		PROJECT DETAILS	

Electrical Plans (Page 5 of 8)

Bldg. 3	Perez Building (2 Sty 12 Cl)	Voltage	230	Enclosure:				Flush Type Panel Board	
		Phase	10	CB Type:				Bolt-On	
Ckt No.	Description	Power (VA)	Current (A)	Circuit Protection AT	AF	P	KAIC	Feeder Wire	Conduit
1	90 x Lighting Outlet - 60W	5,400	23.48	30	60	2	10.0	Y5.5+G5.5	3/4 (21mm) Ø PVC
2	26 x Wall Fan - 60W	1,950	8.48	15	60	2	10.0	Y3.5+G3.5	3/4 (21mm) Ø PVC
3	50 x Convenience Outlet - 180W	9,000	39.13	50	60	2	10.0	Y8+G8	1 (27mm) Ø PVC
4	1 x Aircon (2 HP)	2,760	12.00	30	60	2	10.0	Y3.5+G3.5	3/4 (21mm) Ø PVC
5	1 x Water Pump (1.5 HP)	2,300	10.00	30	60	2	10.0	Y3.5+G3.5	3/4 (21mm) Ø PVC
Full Load Current = I_T x 100% Demand Factor			**Main Circuit Protection & Enclosure:**						
I_{FLC}= 93.09A			Use: 125AT, 125AF, 2P, 230V, 15KAIC						
Minimum Ampacity of Feeder Conductor = 125% x I_{FLC}			**Feeder & Ground Wire & Conduit:**						
I_{MC}= 116.36A			Use: Y50+G14 in 1-1/4 (35mm)" Ø RSC						

Bldg. 9	Home Economics Building (2 Sty 7 Cl)	Voltage	230	Enclosure:				Flush Type Panel Board	
		Phase	10	CB Type:				Bolt-On	
Ckt No.	Description	Power (VA)	Current (A)	Circuit Protection AT	AF	P	KAIC	Feeder Wire	Conduit
1	97 x Lighting Outlet - 60W	5,820	25.30	40	60	2	10.0	Y5.5+G5.5	3/4 (21mm) Ø PVC
2	5 x Wall Fan - 60W	375	1.63	15	60	2	10.0	Y3.5+G3.5	3/4 (21mm) Ø PVC
3	48 x Convenience Outlet - 180W	8,640	37.57	50	60	2	10.0	Y8+G8	1 (27mm) Ø PVC
4	5 x Aircon (5 HP)	32,200	140.00	175	225	2	25.0	Y80+G14	1-1/4 (35mm) Ø PVC
5	1 x Water Pump (1.5 HP)	2,300	10.00	30	60	2	10.0	Y3.5+G3.5	3/4 (21mm) Ø PVC
Full Load Current = I_T x 100% Demand Factor			**Main Circuit Protection & Enclosure:**						
I_{FLC}= 214.80A			Use: 300AT, 400AF, 2P, 230V, 30KAIC						
Minimum Ampacity of Feeder Conductor = 125% x I_{FLC}			**Feeder & Ground Wire & Conduit:**						
I_{MC}= 268.13A			Use: Y150+G30 in 2 (53mm)" Ø RSC						

Bldg. 10	Perez Building (2 Sty 18 Cl)	Voltage	230	Enclosure:				Flush Type Panel Board	
		Phase	10	CB Type:				Bolt-On	
Ckt No.	Description	Power (VA)	Current (A)	Circuit Protection AT	AF	P	KAIC	Feeder Wire	Conduit
1	134 x Lighting Outlet - 60W	8,040	34.96	50	60	2	10.0	Y8+G8	3/4 (21mm) Ø PVC
2	44 x Wall Fan - 60W	3,300	14.35	20	60	2	10.0	Y3.5+G3.5	3/4 (21mm) Ø PVC
3	93 x Convenience Outlet - 180W	16,740	72.78	100	100	2	15.0	Y30+G14	1 (27mm) Ø PVC
4	1 x Water Pump (1.5 HP)	2,300	10.00	30	60	2	10.0	Y3.5+G3.5	3/4 (21mm) Ø PVC
Full Load Current = I_T x 100% Demand Factor			**Main Circuit Protection & Enclosure:**						
I_{FLC}= 132.09A			Use: 175AT, 225AF, 2P, 230V, 25KAIC						
Minimum Ampacity of Feeder Conductor = 125% x I_{FLC}			**Feeder & Ground Wire & Conduit:**						
I_{MC}= 165.11A			Use: Y80+G22 in 1-1/2 (41mm)" Ø RSC						

Bldg. 11	Gov. Jose Lina Building (2 Sty 4 Cl)	Voltage	230	Enclosure:				Flush Type Panel Board	
		Phase	10	CB Type:				Bolt-On	
Ckt No.	Description	Power (VA)	Current (A)	Circuit Protection AT	AF	P	KAIC	Feeder Wire	Conduit
1	24 x Lighting Outlet - 60W	1,440	6.26	15	60	2	10.0	Y3.5+G3.5	3/4 (21mm) Ø PVC
2	12 x Wall Fan - 60W	900	3.91	15	60	2	10.0	Y3.5+G3.5	3/4 (21mm) Ø PVC
3	15 x Convenience Outlet - 180W	2,700	11.74	20	60	2	10.0	Y3.5+G3.5	3/4 (21mm) Ø PVC
Full Load Current = I_T x 100% Demand Factor			**Main Circuit Protection & Enclosure:**						
I_{FLC}= 21.91A			Use: 50AT, 60AF, 2P, 230V, 10KAIC						
Minimum Ampacity of Feeder Conductor = 125% x I_{FLC}			**Feeder & Ground Wire & Conduit:**						
I_{MC}= 27.39A			Use: Y8+G8 in 3/4 (21mm)" Ø RSC						

Bldg. 12	Uliran Josquin Building (2 Sty 4 Cl)	Voltage	230	Enclosure:				Flush Type Panel Board	
		Phase	10	CB Type:				Bolt-On	
Ckt No.	Description	Power (VA)	Current (A)	Circuit Protection AT	AF	P	KAIC	Feeder Wire	Conduit
1	26 x Lighting Outlet - 60W	1,560	6.78	15	60	2	10.0	Y3.5+G3.5	3/4 (21mm) Ø PVC
2	14 x Wall Fan - 60W	1,050	4.57	15	60	2	10.0	Y3.5+G3.5	3/4 (21mm) Ø PVC
3	20 x Convenience Outlet - 180W	3,600	15.65	20	60	2	10.0	Y3.5+G3.5	3/4 (21mm) Ø PVC
4	1 x Aircon (5 HP)	6,440	28.00	40	60	2	10.0	Y5.5+G5.5	3/4 (21mm) Ø PVC
Full Load Current = I_T x 100% Demand Factor			**Main Circuit Protection & Enclosure:**						
I_{FLC}= 55.00A			Use: 70AT, 100AF, 2P, 230V, 15KAIC						
Minimum Ampacity of Feeder Conductor = 125% x I_{FLC}			**Feeder & Ground Wire & Conduit:**						
I_{MC}= 68.75A			Use: Y22+G8 in 1 (27mm)" Ø RSC						

Bldg. 13	MBP/ALS Building (2 Sty 5 Cl)	Voltage	230	Enclosure:				Flush Type Panel Board	
		Phase	10	CB Type:				Bolt-On	
Ckt No.	Description	Power (VA)	Current (A)	Circuit Protection AT	AF	P	KAIC	Feeder Wire	Conduit
1	48 x Lighting Outlet - 60W	2,880	12.52	20	60	2	10.0	Y3.5+G3.5	3/4 (21mm) Ø PVC
2	1 x Wall Fan - 60W	75	0.33	15	60	2	10.0	Y3.5+G3.5	3/4 (21mm) Ø PVC
3	30 x Convenience Outlet - 180W	5,400	23.48	30	60	2	10.0	Y5.5+G5.5	3/4 (21mm) Ø PVC
4	1 x Aircon (1.5 HP)	9,200	40.00	50	60	2	10.0	Y8+G5.5	1 (27mm) Ø PVC
5	1 x Water Pump (1.5 HP)	2,300	10.00	30	60	2	10.0	Y3.5+G3.5	3/4 (21mm) Ø PVC
Full Load Current = I_T x 100% Demand Factor			**Main Circuit Protection & Enclosure:**						
I_{FLC}= 86.33A			Use: 125AT, 125AF, 2P, 230V, 15KAIC						
Minimum Ampacity of Feeder Conductor = 125% x I_{FLC}			**Feeder & Ground Wire & Conduit:**						
I_{MC}= 107.91A			Use: Y38+G14 in 1-1/4 (35mm)" Ø RSC						

NOTE:
CIRCUIT PROTECTION FOR EACH BUILDING MAY DIFFER ON ACTUAL.
THE COMPUTED LOADS ARE DERIVED AND IN ACCORDANCE TO THE LATEST PHILIPPINE ELECTRICAL CODE IN ORDER TO DETERMINE THE PROPER SIZE OF DISTRIBUTION FEEDER LINE AND CIRCUIT PROTECTION.

DESIGN:	REVIEWED:	CERTIFY:	PRC NO: / VALID UNTIL: / ISSUED ON: / ISSUED AT: / PTR NO: / TIN NO:	RECOMMENDING APPROVAL:	APPROVED:	PROJECT TITLE:	UPGRADING OF ELECTRICAL SYSTEM (OVERHEAD SYSTEM)	SHEET NO.:
						SCHOOL NAME:	BIÑAN CENTRAL SCHOOL	E-5
ENGR. DEO V. FERNANDEZ	ENGR. PRECIOUS JOY CORONADO			BAYANI V. ENRIQUEZ	MANUELA S. TOLENTINO	LOCATION:	CITY OF BIÑAN, LAGUNA	REVISION NO.:
						SHEET CONTENT:	DETAILED SCHEDULE OF LOADS OF MDF-2	1
DEPED PROJECT ENGINEER (REE)	DEPED DIVISION ENGINEER	PROFESSIONAL ELECTRICAL ENGINEER		SDOE CHIEF	SCHOOLS DIVISION SUPERINTENDENT	PROJECT DETAILS		

Electrical Plans (Page 6 of 8)

Bldg. 6	Gabaldon School Building (1 Sty 4 Cl)		Voltage	230	Enclosure:		Flush Type Panel Board		
			Phase	1Ø	CB Type:		Bolt-On		
Ckt No.	Description	Power (VA)	Current (A)	Circuit Protection				Feeder Wire	Conduit
				AT	AF	P	KAIC		
1	111 x Lighting Outlet - 60W	6,660	28.96	40	60	2	10.0	Y8+G8.5	3/4 (21mm) Ø PVC
2	2 x Wall Fan - 60W	150	0.65	15	60	2	10.0	Y3.5+G3.5	3/4 (21mm) Ø PVC
3	65 x Convenience Outlet - 180W	11,700	50.87	70	100	2	15.0	Y14+G8	1 (27mm) Ø PVC
4	12 x Aircon (3 HP)	46,920	204.00	300	400	2	30.0	Y125+G22	2 (53mm) Ø PVC
5	1 x Water Pump (1.5 HP)	2,300	10.00	30	60	2	10.0	Y3.5+G3.5	3/4 (21mm) Ø PVC
Full Load Current = I_T x 100% Demand Factor			**Main Circuit Protection & Enclosure:**						
I_{FL}= 294.48A			Use: 400AT, 400AF, 2P, 230V, 30KAIC						
Minimum Ampacity of Feeder Conductor = 125% x I_{FL}			**Feeder & Ground Wire & Conduit:**						
I_{MC}= 368.10A			Use: (Y250+G50 in 2-1/2 (63mm)" Ø RSC						

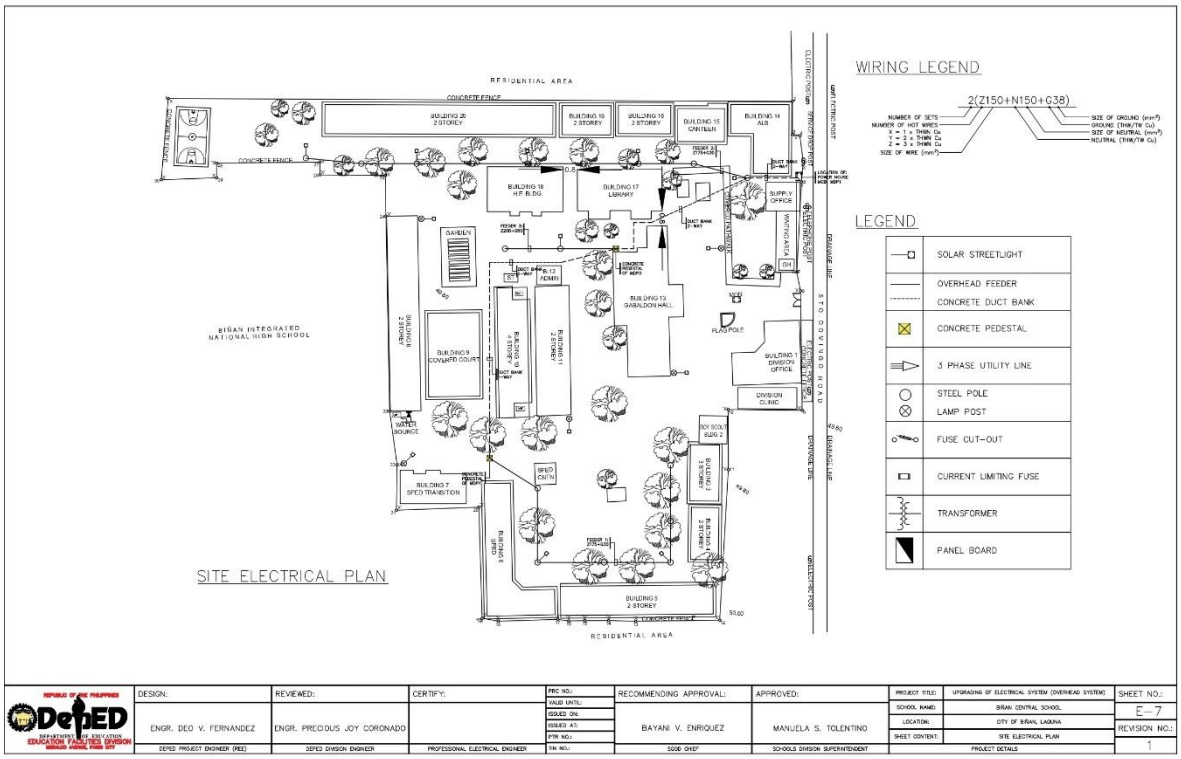
Bldg. 7	Security Bank Building (2 Sty 8 Cl)		Voltage	230	Enclosure:		Flush Type Panel Board		
			Phase	1Ø	CB Type:		Bolt-On		
Ckt No.	Description	Power (VA)	Current (A)	Circuit Protection				Feeder Wire	Conduit
				AT	AF	P	KAIC		
1	68 x Lighting Outlet - 60W	4,080	17.74	30	60	2	10.0	Y3.5+G5.5	3/4 (21mm) Ø PVC
2	24 x Wall Fan - 60W	1,800	7.83	15	60	2	10.0	Y3.5+G3.5	3/4 (21mm) Ø PVC
3	30 x Convenience Outlet - 180W	5,400	23.48	30	60	2	10.0	Y5.5+G5.5	3/4 (21mm) Ø PVC
Full Load Current = I_T x 100% Demand Factor			**Main Circuit Protection & Enclosure:**						
I_{FL}=49.04A			Use: 70AT, 100AF, 2P, 230V, 15KAIC						
Minimum Ampacity of Feeder Conductor = 125% x I_{FL}			**Feeder & Ground Wire & Conduit:**						
I_{MC}= 61.30A			Use: Y14+G8 in 1 (27mm)" Ø RSC						

Bldg. 8	DepEd Standard School Building (4 Sty 16 Cl)		Voltage	230	Enclosure:		Flush Type Panel Board		
			Phase	1Ø	CB Type:		Bolt-On		
Ckt No.	Description	Power (VA)	Current (A)	Circuit Protection				Feeder Wire	Conduit
				AT	AF	P	KAIC		
1	256 x Lighting Outlet - 60W	15,360	66.78	100	100	2	15.0	Y22+G14	1 (27mm) Ø PVC
2	32 x Wall Fan - 60W	2,400	10.43	15	60	2	10.0	Y3.5+G3.5	3/4 (21mm) Ø PVC
3	32 x Convenience Outlet - 180W	5,760	25.04	40	60	2	10.0	Y5.5+G5.5	3/4 (21mm) Ø PVC
4	1 x Water Pump (1.5 HP)	2,300	10.00	30	60	2	10.0	Y3.5+G3.5	3/4 (21mm) Ø PVC
Full Load Current = I_T x 100% Demand Factor			**Main Circuit Protection & Enclosure:**						
I_{FL}=112.26A			Use: 150AT, 225AF, 2P, 230V, 25KAIC						
Minimum Ampacity of Feeder Conductor = 125% x I_{FL}			**Feeder & Ground Wire & Conduit:**						
I_{MC}= 140.33A			Use: (Y60+G22 in 1-1/4 (35mm)" Ø RSC						

NOTE:
CIRCUIT PROTECTION FOR EACH BUILDING MAY DIFFER ON ACTUAL.
THE COMPUTED LOADS ARE DERIVED AND IN ACCORDANCE TO THE LATEST PHILIPPINE ELECTRICAL CODE IN ORDER TO DETERMINE THE PROPER SIZE OF DISTRIBUTION FEEDER LINE AND CIRCUIT PROTECTION.

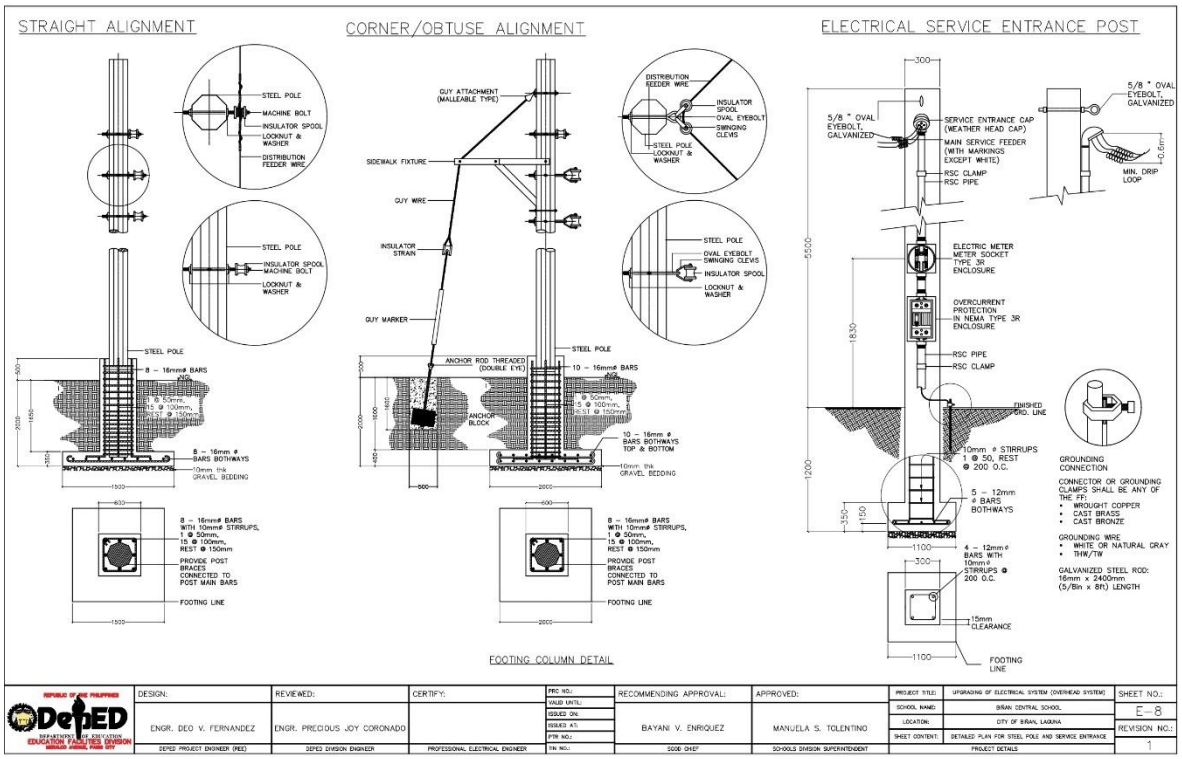
DESIGN:	REVIEWED:	CERTIFY:	PRC NO.:	RECOMMENDING APPROVAL:	APPROVED:	PROJECT TITLE:	UPGRADING OF ELECTRICAL SYSTEM (OVERHEAD SYSTEM)	SHEET NO.:
			VALID UNTIL:			SCHOOL NAME:	BIÑAN CENTRAL SCHOOL	E-6
ENGR. DEO V. FERNANDEZ	ENGR. PRECIOUS JOY CORONADO		ISSUED ON:	BAYANI V. ENRIQUEZ	MANUELA S. TOLENTINO	LOCATION:	CITY OF BIÑAN, LAGUNA	REVISION NO.:
			ISSUED AT:			SHEET CONTENT:	DETAILED SCHEDULE OF LOADS MDP-3	1
DEPED PROJECT ENGINEER (REE)	DEPED DIVISION ENGINEER	PROFESSIONAL ELECTRICAL ENGINEER	PTR NO.:	SDDE CHIEF	SCHOOLS DIVISION SUPERINTENDENT	PROJECT DETAILS		
			TIN NO.:					

Electrical Plans (Page 7 of 8)



	DESIGN:	REVIEWED:	CERTIFY:	PRC NO.: / VALID UNTIL: / ISSUED ON: / ISSUED AT: / PTR NO.: / TIN NO.:	RECOMMENDING APPROVAL:	APPROVED:	PROJECT TITLE:	UPGRADING OF ELECTRICAL SYSTEM (OVERHEAD SYSTEM)	SHEET NO.:
DepED REPUBLIC OF THE PHILIPPINES DEPARTMENT OF EDUCATION EDUCATION FACILITIES DIVISION	ENGR. DEO V. FERNANDEZ	ENGR. PRECIOUS JOY CORONADO			BAYANI V. ENRIQUEZ	MANUELA S. TOLENTINO	SCHOOL NAME:	BIÑAN CENTRAL SCHOOL	E–7
							LOCATION:	CITY OF BIÑAN, LAGUNA	REVISION NO.:
	DEPED PROJECT ENGINEER (REE)	DEPED DIVISION ENGINEER	PROFESSIONAL ELECTRICAL ENGINEER		SGOD CHIEF	SCHOOLS DIVISION SUPERINTENDENT	SHEET CONTENT:	SITE ELECTRICAL PLAN	1
								PROJECT DETAILS	

Electrical Plans (Page 8 of 8)



Section VIII. Bill of Quantities

Notes on the Bill of Quantities

Objectives

The objectives of the Bill of Quantities are:

a. to provide sufficient information on the quantities of Works to be performed to enable Bids to be prepared efficiently and accurately; and

b. when a Contract has been entered into, to provide a priced Bill of Quantities for use in the periodic valuation of Works executed.

In order to attain these objectives, Works should be itemized in the Bill of Quantities in sufficient detail to distinguish between the different classes of Works, or between Works of the same nature carried out in different locations or in other circumstances which may give rise to different considerations of cost. Consistent with these requirements, the layout and content of the Bill of Quantities should be as simple and brief as possible.

Daywork Schedule

A Daywork Schedule should be included only if the probability of unforeseen work, outside the items included in the Bill of Quantities, is high. To facilitate checking by the Entity of the realism of rates quoted by the Bidders, the Daywork Schedule should normally comprise the following:

a. A list of the various classes of labor, materials, and Constructional Plant for which basic daywork rates or prices are to be inserted by the Bidder, together with a statement of the conditions under which the Contractor will be paid for work executed on a daywork basis.

b. Nominal quantities for each item of Daywork, to be priced by each Bidder at Daywork rates as Bid. The rate to be entered by the Bidder against each basic Daywork item should include the Contractor's profit, overheads, supervision, and other charges.

Provisional Sums

A general provision for physical contingencies (quantity overruns) may be made by including a provisional sum in the Summary Bill of Quantities. Similarly, a contingency allowance for possible price increases should be provided as a provisional sum in the Summary Bill of Quantities. The inclusion of such provisional sums often facilitates budgetary approval by avoiding the need to request periodic supplementary approvals as the future need arises. Where such provisional sums or contingency allowances are used, the SCC should state the manner in which they will be used, and under whose authority (usually the Procuring Entity's Representative's).

The estimated cost of specialized work to be carried out, or of special goods to be supplied, by other contractors should be indicated in the relevant part of the Bill of Quantities as a particular provisional sum with an appropriate brief description. A separate procurement procedure is normally carried out by the Procuring Entity to select such specialized contractors. To provide an element of competition among the Bidders in respect of any facilities, amenities, attendance, etc., to be provided by the successful Bidder as prime Contractor for the use and convenience of the specialist contractors, each related provisional sum should be followed by an item in the Bill of Quantities inviting the Bidder to quote a sum for such amenities, facilities, attendance, etc.

Signature Box

A signature box shall be added at the bottom of each page of the Bill of Quantities where the authorized representative of the Bidder shall affix his signature. Failure of the authorized representative to sign each and every page of the Bill of Quantities shall be a cause for rejection of his bid.

These Notes for Preparing a Bill of Quantities are intended only as information for the Procuring Entity or the person drafting the Bidding Documents. They should not be included in the final documents.

Dela Paz Main Elementary School
Bill of Quantities (Part 1 of 1)

School	**: SOUTHVILLE 5A INTEGRATED NATIONAL HIGH SCHOOL**	**Date:**	
School I.D	**: 307934**	**Budget Allocation:**	**3,621,913.97**
Region	**: IV- A**	**Engineering and Administrative Overhead:**	**0.00**
Division	**: BIÑAN CITY**	**Approved Budget for the Contract:**	**3,621,913.97**
Project Title	**:**	**Completion Period:** 120 CD	
	CONSTRUCTION OF SCHOOL CLINIC	**Minimum Required Manpower:**	
		General Foreman / Welder / Carpenter	
		Helper / Mason / Painter	
Location	:	**Minimum Required Equipment:**	
	BRGY. LANGKIWA, BIÑAN CITY, LAGUNA	Hand Tools / Welding Machine	
		One-Bagger Mixer / Bar Cutter	

Item No.	Description	% of Total	Unit	Quantity	Direct Cost		Adjusted Unit Cost	Adjusted Total Cost
					Total Cost	Unit Cost		
(1)	(2)	(3)	(4)	(5)	(6)	(7) (6) / (5)	(8) (9) / (5)	(9)
A.	**Facilities for the Engineer**							
A.1	Temporary Facilities		Month	4.00				
B.	**Other General Requirements**							
B.1	Fire Safety Inspection Certificate (FSIC)		lot	1.00				
SPL 1	Project Billboard		Each	1.00				
SPL 2	Construction Safety and Health		Month	4.00				
C.	**Mobilization and Demobilization**							
C.1	Mobilization and Demobilization		Ls	1.00				
1.0000	**Earthworks**							
1 (a)	Clearing and Grubbing		sq.m	103.20				
1 (b)	Structural Excavation		cu m	27.94				
1 (c)	Backfilling of Excavated Materials		cu m	21.00				
1 (d)	Gravel Bedding G-1		cu m	3.65				
1 (e)	Embankment		cu m	61.92				
	Termite Control Works							
1 (f)	Soil Poisoning		L	113.52				
2.0000	**Concreting Works (3000 psi)**							
2 (b)	Structural Concrete (Footing and Slab on Fill)		cu m	14.06				
2 (c)	Structural Concrete (Footing Tie Beam, Column, Suspended Slab, Girder/ Beam)		cu m	21.96				
2 (d)	Lean Concrete		cu m	1.00				
2 (h)	Ramp on Fill		cu m	2.30				
3.0000	**Rebar Works**							
3 (a)	Reinforcing Steel Bar, Grade 40		kg	7,541.59				
4.0000	**Formworks**							
4 (a)	Installation and Removal of Formworks		sq.m	281.96				
5.0000	**Masonry Works**							
5 (b)	Masonry (100 mm CHB)		sq.m	54.79				
5 (c)	Masonry (150 mm CHB)		sq.m	76.48				
	Finishing Works							
5 (d)	Plain Cement Plaster Finish		sq.m	204.87				
6.0000	**Fabricated Materials and Hardware**							
6 (c)	Hollow Core Flush Door		sq.m	5.04				
6 (d)	Wooden Panel Door		sq.m	7.56				
6 (e)	Jalousie Window (Glass)		sq.m	14.44				
6 (f)	Frames (Jambs, Sill, Head, Transoms, and Mullions)		set	12.00				
6 (g)	Ramp Rail		Ls	1.00				
7.0000	**Steel Works**							
7 (c)	Structural Steel Roof Truss		kg	724.22				
7 (d)	Structural Steel Purlins		kg	2,572.02				
7 (e)	Metal Structure Accessories (Steel Plates)		lot	1.00				
7 (f)	Metal Structure Accessories (Anchor Bolts)		pc	188.00				
7 (g)	Metal Structure Accessories (Sag Rods)		pc	7.00				
7 (h)	Metal Structure Accessories (Turn Buckle)		pc	8.00				
7 (i)	Metal Structure Accessories (Cross Bracing)		pc	9.00				
8.0000	**Roofing Works**							
8 (b)	Pre - painted Metal Sheets (Corrugated, Short Span/ Long Span, below 0.427 BMT/ above 0.427 BMT		sq.m	101.00				
8 (e)	Fabricated Metal Roofing Accessory (Ridge/ Hip Rolls/ Flashing/ Counter Flashing/ Valley Roll)		m	4.95				
9.0000	**Ceiling and Carpentry Works**							
9 (e)	4.5mm Fiber Cement Board/ 4.5mm Marine Plywood/ 6.0mm Marine Plywood/ 6.0 mm Ordinary Plywood in Wood Frame Ceiling		sq.m	85.50				
9 (h)	4.5 mm/ 6.0 mm thk 4' x 8' Fiber Cement Board/ Marine Plywood/ 6.0 mm thk 4' x 8' Ordinary Plywood on Metal Frame Double Partition		sq.m	21.11				
10.0000	**Electrical Works**							
10 (a)	Conduit, Boxes and Fitting		Ls	1.00				
10 (b)	Wires and Wiring Devices		Ls	1.00				
10 (c)	Lighting Fixture/ Fixture		Ls	1.00				
10 (d)	Panel Board and Cabinets		Ls	1.00				
11.0000	**Plumbing Works**							
11 (a)	Waterline Works		Ls	1.00				
12.0000	**Sanitary Works**							
12 (a)	Sewer Line Works		Ls	1.00				
12 (b)	Sanitary/ Plumbing Fixtures		Ls	1.00				
12 (c)	Three Chamber Septic Vault		Ls	1.00				
13.0000	**Painting Works**							
13 (a)	Masonry Painting		sq.m	222.02				
13 (b)	Wooden Painting		sq.m	127.72				
13 (c)	Metal Painting		sq.m	55.00				
15.0000	**Waterproofing**							
15 (a)	Waterproofing Cement Base		sq.m	9.00				
14.0000	**Tile Works**							
14 (a)	Glazed Tiles and Trims		sq.m	9.60				
14 (b)	Unglazed Tiles/ Granite Tiles/ Synthetic Granite Tiles		sq.m	67.00				
		0.00%			-	**Total Construction Cost**		-

Section IX. Checklist of Technical and Financial Documents

Notes on the Checklist of Technical and Financial Documents

The prescribed documents in the checklist are mandatory to be submitted in the Bid, but shall be subject to the following:

a. GPPB Resolution No. 09-2020 on the efficient procurement measures during a State of Calamity or other similar issuances that shall allow the use of alternate documents in lieu of the mandated requirements; or

b. any subsequent GPPB issuances adjusting the documentary requirements after the effectivity of the adoption of the PBDs.

The BAC shall be checking the submitted documents of each Bidder against this checklist to ascertain if they are all present, using a non-discretionary "pass/fail" criterion pursuant to Section 30 of the 2016 revised IRR of RA No. 9184.

Checklist of Technical and Financial Documents

I. TECHNICAL COMPONENT ENVELOPE

Class "A" Documents

Legal Documents

☐ (a) Valid PhilGEPS Registration Certificate (Platinum Membership) (all pages) in accordance with Section 8.5.2 of the IRR;

Technical Documents

☐ (b) Statement of the prospective bidder of all its ongoing government and private contracts, including contracts awarded but not yet started, if any, whether similar or not similar in nature and complexity to the contract to be bid; **and**

☐ (c) Statement of the bidder's Single Largest Completed Contract (SLCC) similar to the contract to be bid, except under conditions provided under the rules; **and**

☐ (d) Special PCAB License in case of Joint Ventures **and** registration for the type and cost of the contract to be bid; **and**

☐ (e) Original copy of Bid Security. If in the form of a Surety Bond, submit also a certification issued by the Insurance Commission **or** original copy of Notarized Bid Securing Declaration; **and**

(f) Project Requirements, which shall include the following:

☐ a. Organizational chart for the contract to be bid;

☐ b. List of contractor's key personnel (*e.g.*, Project Manager, Project Engineers, Materials Engineers, and Foremen), to be assigned to the contract to be bid, with their complete qualification and experience data;

☐ c. List of contractor's major equipment units, which are owned, leased, and/or under purchase agreements, supported by proof of ownership or certification of availability of equipment from the equipment lessor/vendor for the duration of the project, as the case may be; **and**

☐ (g) Original duly signed Omnibus Sworn Statement (OSS) **and** if applicable, Original Notarized Secretary's Certificate in case of a corporation, partnership, or cooperative; or Original Special Power of Attorney of all members of the joint venture giving full power and authority to its officer to sign the OSS and do acts to represent the Bidder.

Financial Documents

☐ (h) The prospective bidder's computation of Net Financial Contracting Capacity (NFCC).

Class "B" Documents

☐ (i) If applicable, duly signed joint venture agreement (JVA) in accordance with RA No. 4566 and its IRR in case the joint venture is already in existence **or** duly notarized statements from all the potential joint venture partners stating that they will enter into and abide by the provisions of the JVA in the instance that the bid is successful.

II. FINANCIAL COMPONENT ENVELOPE

☐ (j) Original of duly signed and accomplished Financial Bid Form; **and**

Other documentary requirements under RA No. 9184

☐ (k) Original of duly signed Bid Prices in the Bill of Quantities; **and**

☐ (l) Duly accomplished Detailed Estimates Form, including a summary shee indicating the unit prices of construction materials, labor rates, and equipment rentals used in coming up with the Bid; **and**

☐ (m) Cash Flow by Quarter.

ADDITIONAL REQUIREMENT

☐ **Site Inspection Certificate** *(duly signed by the School Head or its authorized representative)*


Republic of the Philippines
gppb
Government Procurement Policy Board