

PHILIPPINE BIDDING DOCUMENTS
(As Harmonized with Development Partners)

**Procurement of
INFRASTRUCTURE
PROJECTS**

Government of the Republic of the Philippines

PROPOSED UPGRADING OF MAIN ELECTRICAL SERVICE
ENTRANCE OF SAN AGUSTIN ELEMENTARY SCHOOL

Project No.: 20-00045

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	5
Section I. Invitation to Bid.....	8
Section II. Instructions to Bidders	9
1. Scope of Bid	10
2. Funding Information	10
3. Bidding Requirements.....	10
4. Corrupt, Fraudulent, Collusive, Coercive, and Obstructive Practices	11
5. Eligible Bidders	11
6. Origin of Associated Goods	11
7. Subcontracts	11
8. Pre-Bid Conference.....	12
9. Clarification and Amendment of Bidding Documents	12
10. Documents Comprising the Bid: Eligibility and Technical Components	12
11. Documents Comprising the Bid: Financial Component	13
12. Alternative Bids	13
13. Bid Prices	13
14. Bid and Payment Currencies	14
15. Bid Security	14
16. Sealing and Marking of Bids	14
17. Deadline for Submission of Bids	14
18. Opening and Preliminary Examination of Bids.....	15
19. Detailed Evaluation and Comparison of Bids	15
20. Post Qualification	15
21. Signing of the Contract	15
Section III. Bid Data Sheet	16
Section IV. General Conditions of Contract.....	17
1. Scope of Contract.....	18
2. Sectional Completion of Works	18
3. Possession of Site.....	18
4. The Contractor's Obligations	18
5. Performance Security	19
6. Site Investigation Reports	19

7.	Warranty.....	19
8.	Liability of the Contractor.....	19
9.	Termination for Other Causes	19
10.	Dayworks.....	20
11.	Program of Work	20
12.	Instructions, Inspections and Audits	20
13.	Advance Payment	20
14.	Progress Payments	20
15.	Operating and Maintenance Manuals	21
Section V. Special Conditions of Contract.....		22
Section VI. Specifications		23
Section VII. Drawings.....		25
Section VIII. Bill of Quantities		26
Section IX. Checklist of Technical and Financial Documents		29

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
QUEZON CITY GOVERNMENT



BIDS AND AWARDS COMMITTEE FOR INFRASTRUCTURE & CONSULTANCY
2nd floor, Finance Building, Procurement Department, Quezon City Hall Complex, Elliptical Road, Quezon City

October 3, 2020

INVITATION TO BID

No.	Project No.	Project Name	Location	Amount	Duration Cal. Days	Office	Source Fund
<u>Buildings – Small B</u>							
1	20-00035	Proposed Improvement of Electrical System of Nick M. Joaquin Senior High School	Bahay Toro	2,158,497.58	120	City Engineering Department	Special Educational Fund (SEF)
2	20-00036	Proposed Construction of Stage at Mines Elementary School	Vasra	2,322,428.36	90	City Engineering Department	Special Educational Fund (SEF)
3	20-00037	Proposed Rehabilitation of Roof Deck and Upper Roof Deck at QCRRMO Building	Central	2,515,087.12	120	City Engineering Department	General Fund-Engineering Dept.
4	20-00038	Proposed Construction of Flagpole, Stage and Covered Court at Nick Joaquin Senior High School	Bahay Toro	2,873,144.07	120	City Engineering Department	Special Educational Fund (SEF)
5	20-00039	Proposed Improvement of Barangay Hall with Daycare Center	West Kamias	2,927,446.02	120	City Engineering Department	General Fund-Engineering Dept.
6	20-00040	Proposed Renovation and Expansion of Senior Citizen Multi Purpose Hall	Pinagkaisahan	3,433,214.27	120	City Engineering Department	City Engineering Dept-Continuing
7	20-00041	Proposed Rehabilitation of Sitio Maligaya Multi-Purpose Hall	Bahay Toro	3,501,733.92	90	City Engineering Department	City Engineering Dept-Continuing
8	20-00042	Proposed Construction of Covered Pathwalk at Bagong Pag-Asa Elementary School	Bagong Pag-Asa	4,338,083.07	120	City Engineering Department	Special Educational Fund (SEF)
9	20-00043	Proposed Construction of Exit Gate, Covered Pathwalk and Standard Toilet facilities at Ramon Magsaysay Elementary School	Lourdes	6,359,701.62	120	City Engineering Department	Special Educational Fund (SEF)
10	20-00044	Proposed Improvement of Covered Court and Stage at GSIS Village Elementary School	Sangandaan	6,532,001.97	150	City Engineering Department	Special Educational Fund (SEF)
11	20-00045	Proposed Upgrading of Main Electrical Service Entrance of San Agustin Elementary School	San Agustin	6,804,995.05	150	City Engineering Department	Special Educational Fund (SEF)
12	20-00046	Proposed Renovation of Vice Mayor's Office, Information Desk and QCADDAAC	Central	7,245,482.39	150	City Engineering Department	General Fund-Engineering Dept.
13	20-00047	Proposed Construction of two (2) storey Multi Purpose Hall at R.T. Gonzales Park	San Bartolome	7,991,277.39	180	City Engineering Department	City Engineering Dept-Continuing
14	20-00048	Proposed Construction of Covered Pathwalk, Waiting Area, Hand Washing Area and Exit Gate at Placido Del Mundo Elementary School	Talipapa	9,006,063.18	150	City Engineering Department	Special Educational Fund (SEF)
15	20-00049	Proposed Construction of Covered Pathwalk / Waiting Area at Toro Hills Elementary School	Bahay Toro	9,623,352.25	120	City Engineering Department	Special Educational Fund (SEF)
<u>Building – Medium A</u>							
16	20-00050	Proposed Construction of Lucrecia Kasilag Performing Arts Building	Veterans Village	34,314,107.16	180	City Engineering Department	General Fund-Engineering Dept.

1. The **QUEZON CITY LOCAL GOVERNMENT** now invites bids for Various Projects. Completion of the works is required *as stated above*. 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
2. A complete set of Bidding Documents may be acquired by interested Bidders on **October 4, 2020** upon submission of a Document Request List (DRL) printed from the Philippine Government Electronic Procurement System (PhilGEPS) website from the address below *and upon payment of the applicable fee for the Bidding Documents, pursuant to the latest Guidelines issued by the GPPB.*

STANDARD RATES:

Approved Budget for the Contract	Maximum Cost of Bidding Documents (in Philippine Peso)
More than 1 Million up to 5 Million	5,000.00
More than 5 Million up to 10 Million	10,000.00
More than 10 Million up to 50 Million	25,000.00

It may also be downloaded free of charge from the website of the Philippine Government Electronic Procurement System (PhilGEPS) and the website of the Procuring Entity, provided that Bidders shall pay the applicable fee for the Bidding Documents not later than the submission of the bids.

3. The following are the requirements for purchase of Bidding Documents;
 1. PhilGEPS Registration Certificate (Platinum – 3 Pages)
 2. Document Request List (DRL)
 3. Authorization to purchase bidding documents
 - 3.1 Secretary’s Certificate (for corporation)
 - 3.2 Special Power of Attorney (for sole proprietorship)
 4. Notarized Joint Venture Agreement (if applicable)
 5. Letter of Intent

It must be duly received by the BAC Secretariat at 2nd Floor, Procurement Department, Finance Building, Quezon City Hall Compound on or before **October 11, 2020 - 5:00PM**

4. The **QC- BAC- INFRASTRUCTURE & CONSULTANCY** will hold a Pre-Bid Conference on **October 14, 2020 at 11:00 AM** at **2nd Floor, Procurement Department-Bidding Room, Finance Building, Quezon City Hall Compound** or we encourage the prospective bidders to join through our **Virtual Conference (ZOOM APP)**
Meeting ID : 89111859539
Password : 598996
5. Bids must be duly received by the BAC Secretariat at the address below on or before **October 28, 2020 – 11:00AM**. All Bids must be accompanied by a bid security in any of the acceptable forms and in the amount stated in **ITB** Clause.

 Bid opening will be on **October 28, 2020 - 1:00PM** at **2nd Floor, Procurement Department-Bidding Room, Finance Building, Quezon City Hall Compound**. Bids will be opened in the presence of the bidders’ representatives who choose to attend at the address below. Late bids shall not be accepted.
6. The **Quezon City Local Government** 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 Section 41 of RA 9184 and its IRR, without thereby incurring any liability to the affected bidder or bidders.

7. For further information, please refer to:

ATTY. DOMINIC B. GARCIA
OIC, Procurement Department
2nd Floor, Procurement Department,
Finance Building, Quezon City Hall Compound
Elliptical Road, Barangay Central Diliman, Quezon City.
Tel. No. (02)8988-4242 loc. 8506/8710
Email Add: procurement@quezoncity.gov.ph
Website: www.quezoncity.gov.ph

By:


ATTY. MARK DALE DIAMOND P. PERRAL
Chairman BAC-Infra and Consultancy 

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, *[indicate name]* invites Bids for the *[insert Procurement Project]*, with Project Identification Number *[indicate number]*.

[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 *[indicate funding year]* in the amount of *[indicate amount]*.

2.2. The source of funding is:

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

- a. NGA, the National Expenditure Program.
- b. GOCC and GFIs, the proposed Corporate Operating Budget.
- c. LGUs, the proposed Local Expenditure Program.

[If not an early procurement activity, select one and delete others:]

- a. NGA, the General Appropriations Act or Special Appropriations.
- b. GOCC and GFIs, the Corporate Operating Budget.
- c. LGUs, the Annual or Supplemental Budget, as approved by the Sanggunian.

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:
[Select one, delete other/s]

- a. Subcontracting is allowed. The portions of Project and the maximum percentage allowed to be subcontracted are indicated in the **BDS**, which shall not exceed fifty percent (50%) of the contracted Works.
- b. Subcontracting is not allowed.

- 7.1. *[If Procuring Entity has determined that subcontracting is allowed during the bidding , state:]* The Bidder must submit together with its Bid the documentary requirements of the subcontractor(s) complying with the eligibility criterion stated in **ITB** Clause 5 in accordance with Section 23.4 of the 2016 revised IRR of RA No. 9184 pursuant to Section 23.1 thereof.
- 7.2. *[If subcontracting is allowed during the contract implementation stage, state:]* The Supplier may identify its subcontractor during the contract implementation stage. Subcontractors identified during the bidding may be changed during the implementation of this Contract. Subcontractors must submit the documentary requirements under Section 23.1 of the 2016 revised IRR of RA No. 9184 and comply with the eligibility criteria specified in **ITB** Clause 5 to the implementing or end-user unit.
- 7.3. Subcontracting of any portion of the Project does not relieve the Contractor of any liability or obligation under the Contract. The Supplier will be responsible for the acts, defaults, and negligence of any subcontractor, its agents, servants, or workmen as fully as if these were the Contractor's own acts, defaults, or negligence, or those of its agents, servants, or workmen.

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 {*[insert if applicable]*} and/or through videoconferencing/webcasting} 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 PCAB License is required, and in case of joint ventures, a valid special PCAB License, 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:*

[Select one, delete other/s]

a. Philippine Pesos.

b. *[indicate currency if procurement involves a foreign-denominated bid as allowed by the Procuring Entity, which shall be tradeable or acceptable by the BSP.]*

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 *[indicate date]*. 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 one copy 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 16 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

ITB Clause	
1.1	<p>The Procuring Entity is Quezon City Government</p> <p>The name of the Contract is PROPOSED UPGRADING OF MAIN ELECTRICAL SERVICE ENTRANCE OF SAN AGUSTIN ELEMENTARY SCHOOL, BARANGAY SAN AGUSTIN</p> <p>The identification number of the Contract is 20-00045</p>
2	<p>The Funding Source is:</p> <p>The Government of the Philippines (GOP) through Special Educational Fund (SEF) in the amount of Six Million Eight Hundred Four Thousand Nine Hundred Ninety Five Pesos & 05/100 Cts. (P 6,804,995.05).</p> <p><i>NOTE: In the case of National Government Agencies, the General Appropriations Act and/or continuing appropriations; in the case of Government-Owned and/or –Controlled Corporations, Government Financial Institutions, and State Universities and Colleges, the Corporate Budget for the contract approved by the governing Boards; in the case of Local Government Units, the Budget for the contract approved by the respective Sanggunian.</i></p> <p>The name of the Project is Proposed Upgrading of Main Electrical Service Entrance of San Agustin Elementary School, Barangay San Agustin, District 5, Quezon City</p>
3.1	No further instructions.
5.1	<p>In addition, eligible bidders shall qualify or comply with the following:</p> <p>1. Bidders with valid Philippine Contractors Accreditation Board (PCAB) Type</p> <p><input type="checkbox"/> Buildings_Small B</p> <p>2. Completed construction project(s) which is similar to the Project and which cost at least fifty percent (50%) of the ABC.</p>
5.2	Bidding is restricted to eligible bidders as defined in ITB Clause 5.1.
5.4(a)	No further instructions.
5.4(b)	For this purpose, similar contracts shall refer to contracts which have the same major categories of work.
8.1	Subcontracting is not allowed

8.2	Not applicable																																				
9.1	The QC-BAC- Infrastructure and Consultancy will hold a pre-bid conference for this Project on October 14, 2020 11:00 A.M. at 2 nd Floor, Procurement Department-Bidding Room, Finance Building, Quezon City Hall Compound or we encourage the prospective bidders to join through our Virtual Conference (ZOOM APP) Meeting ID: 89111859539 Password : 598996																																				
10.1	The Procuring Entity’s address is: QUEZON CITY GOVERNMENT Quezon City Hall Compound Barangay Central, Quezon City ATTY. DOMINIC B. GARCIA Procurement Department 2 nd Floor, Finance Building, Quezon City Hall Compound, Barangay Central, Quezon City 8988-4242 loc. 8709/8710 Email Add: procurement@quezoncity.gov.ph Website: www.quezoncity.gov.ph																																				
10.4	No further instructions.																																				
12	Bidders are encouraged but not required to comply with the following: -all copy documents be originally stamped “Certified True Copy”and duly signed by the authorized signatory; -use of more visible color of ink other than black when stamping for Certified True Copy; and -tabbing of the required documents																																				
12.1(a)	In the statement of all on-going and completed contracts, all requirements in support of the enumerated projects shall be presented in proper sequence as they appear in the issued bid documents.																																				
12.1(a)(ii)	Each contractor shall submit its relevant and number of completed projects which shall be subjected to detailed evaluation later on.																																				
12.1(b)(ii.2)	<div>The minimum work experience requirements for key personnel are the following:</div> <table><tr><th>Qty.</th><th><u>Key Personnel</u></th><th><u>General Experience</u></th><th><u>Relevant Experience</u></th></tr><tr><td>1</td><td>Project Manager</td><td>3 years</td><td>3 years</td></tr><tr><td>1</td><td>Project Engineer</td><td>3 years</td><td>3 years</td></tr><tr><td>1</td><td>Materials Engineer</td><td>3 years</td><td>3 years</td></tr><tr><td>1</td><td>Equipment Operator</td><td>3 years</td><td>3 years</td></tr><tr><td>1</td><td>General Foreman</td><td>3 years</td><td>3 years</td></tr><tr><td>3</td><td>Skilled Worker</td><td>3 years</td><td>3 years</td></tr><tr><td>7</td><td>Laborer</td><td>3 years</td><td>3 years</td></tr><tr><td>1</td><td>Driver</td><td>3 years</td><td>3 years</td></tr></table>	Qty.	<u>Key Personnel</u>	<u>General Experience</u>	<u>Relevant Experience</u>	1	Project Manager	3 years	3 years	1	Project Engineer	3 years	3 years	1	Materials Engineer	3 years	3 years	1	Equipment Operator	3 years	3 years	1	General Foreman	3 years	3 years	3	Skilled Worker	3 years	3 years	7	Laborer	3 years	3 years	1	Driver	3 years	3 years
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3	Skilled Worker	3 years	3 years																																		
7	Laborer	3 years	3 years																																		
1	Driver	3 years	3 years																																		

	<p><i>In addition, the bidder must execute an affidavit of undertaking duly notarized stating that the foregoing personnel shall perform work exclusively for the project until its completion. Please see attached bid forms.</i></p>																					
12.1(b)(iii.3)	<p>The minimum major equipment requirements are the following:</p> <table><thead><tr><th><u>Equipment</u></th><th><u>Capacity</u></th><th><u>Number of Units</u></th></tr></thead><tbody><tr><td><i>Minor Tools</i></td><td></td><td><i>1</i></td></tr><tr><td><i>Insulation Resistance Tester</i></td><td></td><td><i>1</i></td></tr><tr><td><i>Dumptruck</i></td><td></td><td><i>1</i></td></tr><tr><td><i>Jackhammer</i></td><td></td><td><i>1</i></td></tr><tr><td><i>Scaffolding (H-Frame)</i></td><td></td><td><i>1</i></td></tr><tr><td><i>Concrete Mixer (2-Bagger)</i></td><td></td><td><i>1</i></td></tr></tbody></table> <p><i>In addition, the bidder must execute an affidavit of undertaking duly notarized stating that the foregoing equipment shall be used exclusively for the project until its completion. Please see attached bid forms.</i></p>	<u>Equipment</u>	<u>Capacity</u>	<u>Number of Units</u>	<i>Minor Tools</i>		<i>1</i>	<i>Insulation Resistance Tester</i>		<i>1</i>	<i>Dumptruck</i>		<i>1</i>	<i>Jackhammer</i>		<i>1</i>	<i>Scaffolding (H-Frame)</i>		<i>1</i>	<i>Concrete Mixer (2-Bagger)</i>		<i>1</i>
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12.1.(b).(iii)	<p>The bidder’s authorized signatory is the one who executes the Omnibus Sworn Statement, otherwise, a separate Special Power of Attorney (SPA) shall be attached in support of the Omnibus Sworn Statement.</p> <p>An Affidavit of Site Inspection shall also be submitted or as part of the Omnibus Sworn Statement.</p>																					
13.1	“No additional Requirements.																					
13.1(b)	<p>This shall include all of the following documents:</p> <ul style="list-style-type: none">• Bid prices in the Bill of Quantities;• Detailed estimates, including a summary sheet indicating the unit prices of construction materials, labor rates, and equipment rentals used in coming up with the Bid; and• Cash flow by quarter or payment schedule.																					
13.2	<p>The ABC is Six Million Eight Hundred Four Thousand Nine Hundred Ninety Five Pesos & 05/100 Cts. (₱ 6,804,995.05). Any bid with a financial component exceeding this amount shall not be accepted.</p>																					
14.2	No further instructions																					
15.4	No further instruction																					
16.1	The bid prices shall be quoted in Philippine Pesos.																					
16.3	No further instructions.																					
17.1	<p>Bids will be valid until 120 calendar days from opening of bids</p> <p>Surety Bond issued by the private insurance company shall be callable on demand, valid up to 120cd, affixed with documentary stamps, with original Official Receipt of premium payment, and accompanied by a Certificate of Authority to issue such security by the Insurance Commission. For bonds issued by the GSIS certification by the Insurance</p>																					

	Commission and documentary stamps are not required.
18.1	<p>The bid security shall be in the form of a Bid Securing Declaration or any of the following forms and amounts:</p> <ul style="list-style-type: none"> • The amount of not less than ₱ 136,099.90 [2% of ABC], if bid security is in cash, cashier's/manager's check, bank draft/guarantee or irrevocable letter of credit; • The amount of not less than ₱ 340,249.75 [5% of ABC] if bid security is in Surety Bond.
18.2	The bid security shall be valid until 120 calendar days from opening of bids
20.3	Each Bidder shall submit <i>one</i> (1) original) and one (1) copies of the first and second components of its bid.
21	<p>The address for submission of bids is at Bids and Awards Committee (BAC) <i>Bidding Room, Procurement Department, 2nd Floor, Civic Center Building F, Quezon City Hall Compound, Barangay Central, Quezon City</i></p> <p>The deadline for submission of bids is 11:00 AM, October 28, 2020.</p>
24.1	<p>The place of bid opening is at Bids and Awards Committee (BAC) <i>Bidding Room, Procurement Department, 2nd Floor, Civic Center Building F, Quezon City Hall Compound, Barangay Central, Quezon City</i></p> <p>The date and time of bid opening is 1:00 PM, October 28, 2020.</p>
24.2	No further instructions.
24.3	No further instructions.
27.3	Partial bid is not allowed. The infrastructure project is packaged in a single lot and the lot shall not be divided into sub-lots for the purpose of bidding, evaluation, and contract award.
27.4	No further instructions.
28.2	None
31.4(f)	<p>Additional Contract Documents relevant to the Project as required:</p> <ol style="list-style-type: none"> 1. Construction Schedule and S-curve, 2. Manpower Schedule, 3. Construction Methods, 4. Equipment Utilization Schedule, 5. PERT/CPM or other acceptable tools of project scheduling, shall be included in the submission of Technical Proposal.

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

4.1. 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.

4.2. 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.

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.



Republika ng Pilipinas
Lungsod ng Quezon
CITY ENGINEERING DEPARTMENT
5th, 6th, 7th Floor, QC Civic Center Building "B"
Telephone Nos. 8988-4242 Local 8538



NAME OF PROJECT: **PROPOSED UPGRADING OD MAIN ELECTRICAL SERVICE
ENTRANCE OF SAN AGUSTIN ELEMENTARY SCHOOL**

LOCATION: **BARANGAY SAN AGUSTIN, DISTRICT 5, QUEZON CITY**

TECHNICAL SPECIFICATIONS

20-00045

PART 1 – GENERAL

1.1 REFERENCE`

The publications listed below form a part of his specification to the extent referenced. the publications are referred to in the text by the basic designation only.

1.1.1 American Society for Testing and Materials (ASTM)

ASTM A123/A123M (2000) Zinc (Hot-dip Galvanized) Coatings On Iron and Steel Products

ASTM B1 (1995) Hard – Drawn Copper Wire

ASTM BB (1999) Concentric-Lay-Stranded Copper Conductor, Hard, Medium – Hard or Soft

1.1.2 National Electrical Manufacturers Association (NEMA)

NEMA C80.3 (1994) Electrical Metallic Tubing – zinc Coated (EMT)

NEMA c57.12.28 (1999) Pad mounted equipment-Enclosure Integrity

NEMA TC 2 (1998) Electrical Polyvinyl Chloride (PVC) Tubing (EPT) and Conduit (EPC- 40)

NEMA TC3 (1999) PVC Fittings for Use with Rigid PVC Conduit ant Tubing

NEMA WD 1 (1999) General requirements for Wiring Devices

1.1.3 National Fire Protection Association (NFPA)

NFPA 70 (2002) National Electrical Code

1.1.4 Underwriters Laboratories Inc. (UL)

UL 1242 (1996; Mar 1998) Intermediate Metal Conduit

UL 467 (1993; Rev Apr 1999) Grounding & Bonding Equipment

UL 486A (1997; Rev Dec 1998) Wire Connection & Soldering Legs for Use with Copper Conductors

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UL 486C	(1997; Rev Aug 1998) Splicing Wire Connectors
UL 489	(1996; Rev thru Dec 1998) Molded-Case Circuit Breakers
UL 50	(1995; R 1999, Bul. 1999) Safety Enclosures for Electrical Equipment
UL510	(1994; R Apr 1998) Poly Vinyl Chloride Polyethylene & Rubber Insulating Tape
UL 514A	(1996; Rev Dec 1999) Metallic Outlet Boxes
UL 797	(1993; R1997) Electrical Metallic Tubing
UL 83	(1998; R 1999, Bul. 1999 & 2000) Thermoplastic-Insulated Wires & Cables
UL 869A	(1998) Service Equipment

20-00045

1.1.5 Institute of Integrated Electrical Engineer (IIEE)

PEC (2017) Philippine Electrical Code

1.1.6 Philippine National Standard (PNS)

BS (2002) Bureau of Standard

1.3 SUBMITTALS

Submit the following:

1.3.1 Shop Drawings

Panelboards

1.3.2 Product Data

Receptacles
Circuit breakers
Switches
Enclosed Circuit breakers

1.3.3 Test Reports

600-volt wiring test
Grounding system test



1.4 MAINTENANCE

1.4.1 Electrical Systems

Submit operation and maintenance manuals for electrical systems that provide basic data relating to the design, operation, and maintenance of the electrical distribution system for the building.

This shall include:

- a. Single line diagram of the "as-built" building electrical system.
- b. Manufacturers' operating and maintenance manuals on active electrical equipment.

20-00045

PART 2 – PRODUCTS

2.1 MATERIALS AND EQUIPMENT

Materials, equipment, and devices shall, as a minimum, meet requirements of UL, where UL standards are established for those items, and requirements of NFPA 70 and PEC.

2.2 CONDUIT AND FITTINGS

Shall conform to the following:

2.2.1 Rigid Nonmetallic Conduit

PVC Type EPC-40, in accordance with NEMA TC 2 and UL 651.

2.2.2 Intermediate Metal Conduit (IMC)

UL 1242, zinc-coated steel only.

2.2.3 Fittings for IMC threaded-type, Split couplings unacceptable.

2.2.4 Fittings for Rigid Nonmetallic Conduit

NEMA TC 3.

2.3 WIRE AND CABLES

Wires and cables shall meet applicable requirements of NFPA 70, PEC and PNS and UL for type of Insulation, jacket, and conductor specified or indicated. Wires and cables manufactured more than 12 months prior to date of delivery to site shall not be used.

2.3.1 Conductors, shall be stranded unless specifically indicated otherwise. Conductor sizes and ampacities shown are based on copper, unless indicated otherwise. All conductors shall be copper.

2.3.1.1 Equipment Manufacturer Requirements

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When manufacturer's equipment requires copper conductors at the terminations or requires copper conductors to be provided between components, of equipment, provide copper conductors or splices, splice boxes, and other work required to satisfy manufacturer's requirements.

2.3.2 Color Coding

Provide for service, feeder, branch, control, and signalling circuit conductors. Color shall be green for grounding conductors Color of ungrounded conductors in different voltage systems shall be as follows;

- a. 240 volt, single phase: black and red
- b. 240 volt, 3 phase: red and blue

20-00045

2.3.3 Insulation

Unless specified or indicated otherwise or required by NFPA 70, PEC and PNS, power and lighting wires shall be 600-volt. Type THW or THHN conforming to UL 83 except that grounding wire may be type TW conforming to UL 83, Where lighting fixtures require 90-degree Centigrade (C) conductors, provide only conductors with 90-degree C insulation or better.

2.3.4 Bonding Conductors

ASTM B1, Solid bare copper wire for sizes 8mm² and smaller diameter, ASTM B8, Class B, stranded bare copper wire for sizes 14mm² and larger diameter.

2.4 SPLICES AND TERMINATION COMPONENTS

UL 486A for wire connectors and UL 510 for Insulating tapes, Connectors for 5.5 mm² and smaller diameter wires shall be insulated, pressure-type in accordance with UL 486A or UL 486C (twist-on splicing connector). Provide solderless terminal lugs on stranded conductors.

2.5 PANELBOARDS

UL 67 and UL 50 having a short-circuit current rating of 10,000 amperes symmetrical minimum, Panelboards for use as service disconnecting means shall additionally conform to UL 869A, Panelboards shall be circuit breaker-equipped. Design shall be such that individual breakers can be removed without disturbing adjacent units or without loosening or removing supplemental insulation supplied as means of obtaining clearances as required by UL "Specific breaker placement" is required in panelboards to match the breaker placement indicated in the panelboard schedule on the drawings, Use of *Subfeed Breakers* is not acceptable unless specifically indicated otherwise, Main breaker shall be *Separated* mounted *above* branch breakers, Circuit breakers shall be bolt-on type, Where *space only* is indicated, make provisions for future installation of breakers. Panelboard locks shall be keyed same. Directories shall indicate load served by each circuit in panelboard, Directories shall also indicate source of service to panelboard (e.g. Panel PA served from Panel MDP), Type directories and mount in holder behind transparent protective covering. Panelboards shall be listed and labelled for their intended use, Enclosure shall be galvanized steel gauge 14. Paint coating system shall comply with NEMA C57.12.28 for galvanized steel.

2.5.1 Panelboard Buses

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Support copper bus bars on bases independent of circuit breakers. Main buses and back pans shall be designed so that breakers may be changed without machining, drilling, or tapping. Provide separate ground bus identified as equipment grounding bus per UL 67 for connecting conducting bus per UL 67 for connecting grounding conductors, bond steel cabinet.

2.5.2 Circuit Breakers

20-00045

UL 489, thermal magnetic-type having a minimum short-circuit current rating equal to the short-circuit current rating of the panelboard in which the circuit breaker shall be mounted. Breaker terminals shall be UL listed as suitable for type of conductor provided. Series rated circuit breakers and plug-in circuit breakers without a self-contained bracket and not secured by a positive locking device requiring mechanical release for removal are unacceptable. Series rated circuit breakers and plug-in circuit breakers are unacceptable.

2.5.2.1 Multipole Breakers

Provide common trip-type with single operating handle. Breaker design shall be such that overload in one pole automatically causes all poles to open. Maintain phase sequence throughout each panel so that three adjacent breaker poles are connected to Phases A, B, and C, respectively.

2.6 ENCLOSED CIRCUIT BREAKERS

UL 489, Individual molded case circuit breakers with voltage and continuous current ratings, number of poles, overload trip setting, and short circuit current interrupting rating as indicated. Enclosure type as indicated.

2.7 GROUNDING AND BONDING EQUIPMENT

UL 467, Ground rods shall be copper-clad steel, with minimum diameter of 20 mm and minimum length of 3050 mm.

PART 3 – EXECUTION

3.1 INSTALLATION

Electrical installations shall conform to requirements of NFPA 70 and PEC and to requirements specified herein.

3.1.1 Wiring Methods

Provide insulated conductors installed in IMC, and rigid non-metallic conduit except where specifically indicated or specified otherwise or required by NFPA 70 and PEC to be installed. Otherwise, Provide insulated green equipment grounding conductor for circuit(S) installed in conduit and raceways. Minimum conduit size shall be 15mm nominal inside diameter for low voltage lighting and power circuits.

3.1.1.2 Nonmetallic Conduit

a. Restrictions applicable to PVC Schedule 40

- (1) Do not use in areas where subject to severe physical damage
- (2) Do not use above grade

3.1.1.3 Service Entrance Conduit, Underground

20-00045

PVC, type-EPC 40, underground portion shall be encased in minimum of 75 mm of concrete and shall be installed minimum 460 mm below slab or grade.

3.1.2 Conduit Installation

Unless indicated otherwise, conceal conduit under floor slabs and within finished walls ceilings, and floors, install conduit parallel with or at right angles to ceilings, walls, and structural members where located above accessible ceilings and where conduit will be visible after completion of project.

3.1.2.1 Conduit through Floor Slabs

Where conduits rise through floor slabs. Curved portion of bends shall not be visible above finished slab.

3.1.2.2 Conduit Support

Support conduit by pipe straps, wall brackets, hangers, or ceiling trapeze. Fasten by concrete inserts or expansion bolts on concrete and by machine screws, welded threaded studs, or spring-tension clamps on steel work. Threaded C-Clamps may be used on IMC conduit only. Do not weld conduits of pipe straps to steel structures, Load applied to fasteners shall not exceed one-fourth proof test load. Fasteners attached to concrete ceiling shall be vibration resistant and shock-resistant. Holes cut to depth of more than 40 mm in reinforced concrete beams or to depth of more than 20 mm in concrete joints shall not cut main reinforcing bars. Fill unused holes. In partitions of light steel construction, use sheet metal screws. In suspended-ceiling construction, run conduit above ceiling. Do not support conduit by ceiling support system. Conduit and box systems shall be supported independently of both (a) tie wires supporting ceiling grid system, and (b) ceiling grid system into which ceiling panels are placed. Supporting means shall not be shared between electrical raceways and mechanical piping or ducts. Installation shall be coordinated with above-ceiling mechanical systems to assure maximum accessibility to all systems. Spring-steel fasteners may be used for lighting branch circuit conduit supports in suspended ceilings in dry locations.

3.1.2.3 Directional Changes in Conduit Runs

Make Changes in direction of runs with symmetrical bends or cast-metal fittings. Make field-made bends and offsets with hickey or conduit-bending machine. Do not install crushed or deformed conduits. Avoid trapped conduits. Prevent plaster, dirt, or trash

8

from lodging in conduits, boxes, fittings, and equipment during construction. Free clogged conduits of obstructions.

3.1.2.4 Pull Wire

Install pull wires in empty conduits, Pull wire shall be plastic having minimum 890-N tensile strength. Leave minimum 915 mm of slack at each end of pull wire.

3.1.2.5 Conduit Installed in Concrete Floor Slabs

20-00045

Locate so as not to adversely affect structural strength of slabs. Install conduit within middle one-third of concrete slab. Do not stack conduits. Space conduits horizontally not closer than three diameters, except at cabinet locations. Curved portions of bends shall not be visible above finish slab. Increase slab thickness as necessary to provide minimum 25 mm cover over conduit. Where embedded conduits cross building and/or expansion joints, provide suitable watertight expansion/deflection fittings and bonding jumpers. Expansion/deflection fittings shall allow horizontal and vertical movements of raceway. Conduit larger than 22 mm trade size shall be parallel with or at right angles to main reinforcement, when at right angles to reinforcement, conduit shall be close to one of supports of slab.

3.1.2.6 Locknuts and Bushings

Fasten conduits to sheet metal boxes and cabinets with two locknuts where required by NFPA 70 and NEC where insulated bushings are used, and where bushings cannot be brought into firm contact with the box; otherwise, use at least minimum single locknut and bushing. Locknuts shall have sharp edges for digging into wall of metal enclosures. Install bushing on ends of conduits, and provide insulating type where required by NFPA 70 and NEC.

3.1.3 Boxes, Outlets, and Supports

Provide boxes in wiring and raceway systems wherever required for pulling of wires, making connections, and mounting of devices or fixtures. Boxes for metallic raceways shall be cast-metal, except that nonmetallic boxes may be used with nonmetallic conduit system. Each box shall have volume required by NFPA 70 and NEC for number of conductors enclosed in box. Boxes for mounting lighting fixtures shall be minimum 100 mm square, or octagonal, except that smaller boxes may be installed as required by fixture configurations, as approved. Provide separate boxes for flush or recessed fixtures when required by fixture terminal operating temperature; fixtures shall be readily removable for access to boxes unless ceiling access panels are provided. Support boxes and pendants for surface-mounted fixtures on suspended ceilings independently of ceiling supports, or make adequate provisions for distributing load over ceiling support members in an approved manner. Fasten boxes and supports with wood screws on wood. With bolts and expansion shields on concrete, with toggle bolts on hollow masonry units, and with machine screws or welded studs on steel.

3.1.4 Conductor Identification



Provide conductor identification within each enclosure where tap, splice, or termination is made. For conductor's 14mm² and smaller diameter, color coding shall be by factory applied, color-impregnated insulation. For conductors 22mm² and larger diameter, color coding shall be by plastic-coated, self-sticking markers, colored nylon cable ties and plates; or heat shrink-type sleeves.

3.1.5 Splices

Make splices in accessible locations, make splices in conductors 5.5mm² and smaller diameter with insulated, pressure-type connector, Make splices in conductors 22mm² and larger diameter with solderless connector, and cover with insulation material equipment to conductor insulation.

20-00045

Seal openings around electrical penetrations through fire resistance-rated walls, partitions, floor, or ceilings.

3.1.6 Grounding and Bonding

In accordance with NFPA 70 and NEC. Ground exposed non-current-carrying metallic parts of electrical equipment, metallic raceway systems, grounding conductor in metallic and nonmetallic raceways, telephone system grounds. Make ground connection to driven ground rods on exterior of building. Interconnect all grounding media in or on the structure to provide a common ground potential.

3.1.6.1 Resistance

Maximum resistance-to-ground of grounding system shall not exceed 5 ohms, contact Engineer for further instructions.

3.1.6.2 Equipment Connections

Provide power wiring for the connection of motors and control equipment under this section of the specification. Except as otherwise specifically noted or specified, automatic control wiring, control devices, and protective devices within the control circuitry are not included in the section of the specifications but shall be provided under the section specifying the associated equipment.

3.2 FIELD QUALITY CONTROL

Furnish test equipment and personnel and submit written copies of test result. Give the engineer five (5) working days' notice prior to each test.

3.2.1 600-Volt Wiring Test

Test wiring rated 600 volt and less to verify that no short circuits or accidental grounds exist. Perform insulation resistance test on wiring 14 mm² and larger diameter using



Instrument which applies voltage of approximately 500 volts on provide direct reading of resistance, Minimum resistance shall be 250,000 ohms.

3.2.2 Grounding System Test

Test grounding system to ensure continuity, and that resistance to ground is not excessive. Test each ground rod for resistance to ground before making connections to rod; tie grounding system together and test for resistance to ground. Make resistance measurements in dry weather, not earlier that 48 hours after rainfall. Submit written results of each test to Engineer, and indicate location of rods as well as resistance and soil conditions at time measurements were made.

20-00045

4.0 Concrete Works

Concrete works must be done using 2 bagger mixers with 3000 psi or 4000 psi with Grade 40 or Grade 60 reinforcing bars as specified in the plan and program of works.

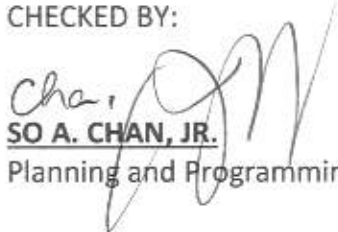
PREPARED BY:



STEPHANIE D. OVIEDO

Planning and Programming Division

CHECKED BY:



SO A. CHAN, JR.

Planning and Programming Division



Project Name : **PROPOSED UPGRADING OF MAIN ELECTRICAL SERVICE ENTRANCE OF SAN AGUSTIN ELEMENTARY SCHOOL**

Location : **BARANGAY RAMON MAGSAYSAY, DISTRICT 1, QUEZON CITY**

QUANTITY TAKE-OFF

20-00045

ITEM DESCRIPTION	UNIT	QUANTITY
Roughing-ins		
3 "Ø Entrance Cap Diecast "US"	sets	5
1 1/2 " Ø Entrance Cap Diecast "US"	sets	2
1 1/4 " Ø Entrance Cap Diecast "US"	sets	5
1 "Ø Entrance Cap Diecast "US"	sets	2
3 "Ø Locknut and Bushing US	pairs	8
1 1/2 "Ø Locknut and Bushing US	pairs	6
1 1/4 "Ø Locknut and Bushing US	pairs	12
1 "Ø Locknut and Bushing US	pairs	6
1 1/2 "Ø PVC Long Elbow	pcs	8
1 1/4 "Ø PVC Long Elbow	pcs	20
1 "Ø PVC Long Elbow	pcs	8
1 1/2 "Ø PVC Adapter	pcs	6
1 1/4 "Ø PVC Adapter	pcs	12
1 "Ø PVC Adapter	pcs	6
3 " Ø x 3/8" Ø U-Bolt with nut and washer	pairs	20
1 1/2 "Ø Malleable iron clamp	pcs	20
1 1/4 "Ø Malleable iron clamp	pcs	50
1 "Ø Malleable iron clamp	pcs	20
5/8 " x 10" oval eye bolt with nut	pair	1
5/8 Ø" 8' grounding rod with clamp	pair	1
500 Mcm Solderless Connector with two bolt	pcs	26
100 mm Ø Solderless Connector with two bolt	pcs	10
50 mm2 Ø Solderless Connector	pcs	4
38 mm2 Ø Solderless Connector	pcs	8
30 mm2 Ø Solderless Connector	pcs	4
14 mm2 Ø Solderless Connector	pcs	4
Secondary rack with 2 spool heavtduty beta	sets	24
Secondary rack with 3 spool heavtduty beta	sets	16
5/8" Ø x 1/2" Ø x 3" Expansion shield with lug screw with washer	pairs	72
3/4" Ø x 5/8" Ø x 3" Expansion shield with lug screw with washer	pairs	32
Wires & Cable		
250 mm2 THWN wire	mtrs	1250
200 mm2 THHN wire	mtrs	90
50 mm2 THHN wire	mtrs	80
38 mm2 THHN wire	mtrs	100
30 mm2 THHN wire	mtrs	80
14 mm2 THHN wire	mtrs	70
8.0 mm2 THHN wire	rolls	1
3.5 mm2 THHN wire	rolls	4
Panelboard		
1 set - Moulded circuit breaker 1000 AT, 3P, 230 V with 2 Branches,	assy	1
2 sets -400 AT, CB, 3P, 230 V, with Ground Terminal, Weatherproof type, "NEMA 12" Enclosure		
Miscellaneous & Consumables		
Electrical Tape	pcs	40
Rubber Tape	pcs	20

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ITEM DESCRIPTION	UNIT	QUANTITY
Masking tape	pcs	2
Hacksaw w/blade	kg	2
Torch w/ butane	pc	2
Vulcaseal	qrt	1
Pvc Solvent	qrt	1
Recondition and Straighten of Existing Wire at the back of Deped Bldg A, Deped Bldg B, and New DPWH Bldg.	lot	1
Certification of Insulation Resistance Test	lot	1
Civil Works		
Cement	bags	265
Sand	cum	25
Gravel	cum	48
Assorted RSB	kgs	2804
Assorted CWH	kgs	60
GI tie wire Gu 16	kgs	65
2" x 4" x 12' Form Lumber	bd.ft	2000
1/2" x 4' x 8' Form Plywood	pcs	20
1/2"Ø Steel bit	pcs	20
Excavation	cu.m.	5

20-00045

Prepared by:


STEPHANIE D. OVIEDO
 Planning and Programming Division

Checked and Submitted by:


SO A. CHAN, JR.
 Planning and Programming Division



Republika ng Pilipinas
Lungsod ng Quezon
CITY ENGINEERING DEPARTMENT
5th, 6th, 7th Floor, QC Civic Center Building "B"
Telephone Nos. 8988-4242 Local 8538



Project Name : **PROPOSED UPGRADING OF MAIN ELECTRICAL SERVICE ENTRANCE OF SAN AGUSTIN ELEMENTARY SCHOOL**

Location : **BARANGAY RAMON MAGSAYSAY, DISTRICT 1, QUEZON CITY**

PRICE LIST

20-00045

ITEM DESCRIPTION	UNIT	PRICE
Temporary lighting & water facilities	days	400.00
Steel Barricade with Caution tape (rental)	each	1,569.98
Billboard	pc	4,644.00
Safety Helmet	pcs	400.00
Safety Shoes	pcs	1,000.00
Safety Gloves	pcs	200.00
Vest	pcs	200.00
Face mask	pcs	150.00
Harness	pcs	1,500.00
Goggles	pcs	250.00
Roughing-ins		
3 "Ø Entrance Cap Diecast "US"	sets	1,200.00
1 1/2 " Ø Entrance Cap Diecast "US"	sets	700.00
1 1/4 " Ø Entrance Cap Diecast "US"	sets	400.00
1 "Ø Entrance Cap Diecast "US"	sets	300.00
3 "Ø Locknut and Bushing US	pairs	112.00
1 1/2 "Ø Locknut and Bushing US	pairs	62.00
1 1/4 "Ø Locknut and Bushing US	pairs	49.00
1 "Ø Locknut and Bushing US	pairs	37.00
1 1/2 "Ø PVC Long Elbow	pcs	120.00
1 1/4 "Ø PVC Long Elbow	pcs	90.00
1 "Ø PVC Long Elbow	pcs	60.00
1 1/2 "Ø PVC Adapter	pcs	38.00
1 1/4 "Ø PVC Adapter	pcs	31.00
1 "Ø PVC Adapter	pcs	23.00
3 " Ø x 3/8" Ø U-Bolt with nut and washer	pairs	45.00
1 1/2 "Ø Malleable iron clamp	pcs	60.00
1 1/4 "Ø Malleable iron clamp	pcs	50.00
1 "Ø Malleable iron clamp	pcs	40.00
5/8 " x 10" oval eye bolt with nut	pair	478.00
5/8 Ø" 8' grounding rod with clamp	pair	1,200.00
500 Mcm Solderless Connector with two bolt	pcs	900.00
100 mm Ø Solderless Connector with two bolt	pcs	300.00
50 mm2 Ø Solderless Connector	pcs	200.00
38 mm2 Ø Solderless Connector	pcs	150.00
30 mm2 Ø Solderless Connector	pcs	140.00
14 mm2 Ø Solderless Connector	pcs	100.00
Secondary rack with 2 spool heavtduty beta	sets	650.00
Secondary rack with 3 spool heavtduty beta	sets	900.00
5/8" Ø x 1/2" Ø x 3" Expansion shield with lug screw with washer	pairs	60.00
3/4" Ø x 5/8" Ø x 3" Expansion shield with lug screw with washer	pairs	80.00
Wires & Cable		
250 mm2 THWN wire	mtrs	2,218.50
200 mm2 THHN wire	mtrs	1,685.00
50 mm2 THHN wire	mtrs	468.00
38 mm2 THHN wire	mtrs	325.00
30 mm2 THHN wire	mtrs	285.00

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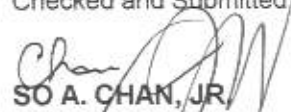
ITEM DESCRIPTION	UNIT	PRICE
14 mm2 THHN wire	mtrs	117.00
8.0 mm2 THHN wire	rolls	10,500.00
3.5 mm2 THHN wire	rolls	4,110.00
Panelboard		
1 set - Moulded circuit breaker 1000 AT, 3P, 230 V with two branches, 2 sets -400 AT, CB, 3P, 230 V, with ground terminal, enclosure, weather proof type, 14 "NEMA 12"	assy	257,957.00
Miscellaneous & Consumables		
Electrical Tape	pcs	56.00
Rubber Tape	pcs	190.00
Masking tape	pcs	50.00
Hacksaw w/blade	kg	300.00
Torch w/ butane	pc	600.00
Vulcaseal	qrt	640.00
Pvc Solvent	qrt	235.00
Recondition and Straighten of Existing Wire at the back of Deped Bldg A, Deped Bldg B, and New DPWH Bldg.	lot	30,000.00
Certification of Insulation Resistance Test	lot	20,000.00
Civil Works		
Cement	bags	240.00
Sand	cum	750.00
Gravel	cum	950.00
Assorted RSB	kgs	65.00
Assorted CWH	kgs	100.00
GI tie wire Gu 16	kgs	80.00
2" x 4" x 12' Form Lumber	bd.ft	35.00
1/2" x 4' x 8' Form Plywood	pcs	750.00
1/2"Ø Steel bit	pcs	750.00
Excavation	cu.m.	669.29

20-00045

Prepared by:


STEPHANIE D. OVIEDO
 Planning and Programming Division

Checked and Submitted by:


SO A. CHAN, JR.
 Planning and Programming Division

Section VII. Drawings

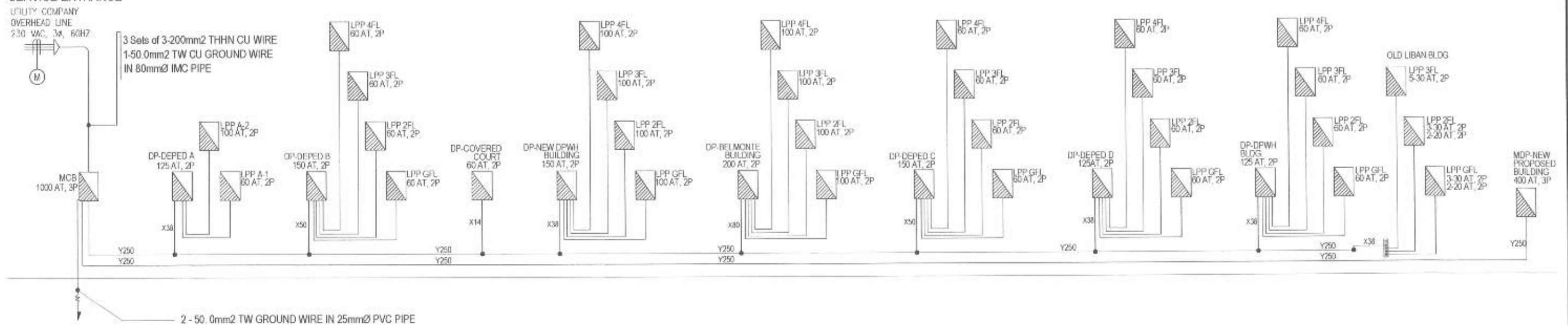
[Insert here a list of Drawings. The actual Drawings, including site plans, should be attached to this section, or annexed in a separate folder.]

GENERAL NOTES & SPECIFICATIONS

20-00045

- ALL ELECTRICAL WORKS SHALL BE DONE IN ACCORDANCE WITH THE PROVISIONS OF THE LATEST EDITION OF THE PHILIPPINE ELECTRICAL CODE, THE LAWS AND ORDINANCES OF THE LOCAL CODE ENFORCING AUTHORITIES AND THE REQUIREMENTS OF THE LOCAL POWER AND TELEPHONE UTILITY COMPANY.
- THE CONTRACTOR SHALL SECURE ALL PERMITS AND PAY ALL FEES REQUIRED FOR THE WORK AND SHALL FURNISH THE OWNER THROUGH THE ENGINEERS, FINAL CERTIFICATES OF ELECTRICAL INSPECTION AND APPROVAL FROM PROPER GOVERNMENT AUTHORITIES FOR COMPLETION OF WORK.
- LOCATION OF CONDUITS SHOWN ON THE DRAWING/PLAN ARE DIAGRAMMATIC. ALL CONDUITS SHALL BE INSTALLED IN A MANNER HEREINAFTER SPECIFIED AND SHALL WHEN NECESSARY BE BUILT-IN DURING CONSTRUCTION.
- ALL MATERIALS TO BE USED SHALL BE NEW AND INSTALLED IN APPLICATION FOR WHICH THEY ARE INTENDED.
- ALL ITEMS NOT SPECIFICALLY SHOWN ON THE PLAN BUT OBVIOUSLY REQUIRED IN CONSTRUCTION TO OBTAIN A WORKABLE INSTALLATION SHALL BE INCLUDED.
- ALL CONDUIT PIPES SHALL BE POLYVINYL CHLORIDE CONDUIT (PVC) EXCEPT AS NOTED ON THE PLANS AND SPECIFICATIONS. REFER TO SPECIFICATION FOR INSTALLATION REQUIREMENT.
- MINIMUM SIZE OF CONDUIT SHALL BE 20 MM DIAMETER.
- ALL CONDUIT SHALL BE CONCEALED UNLESS SPECIFICALLY SHOWN OR NOTED OTHERWISE. EXPOSED CONDUIT RUNS SHALL BE INSTALLED PARALLEL TO OR PERPENDICULAR WITH THE BUILDING LINE AND SUPPORTED BY CONDUIT CLAMPS EVERY 1.50 METERS.
- PROVIDE GALVANIZED PULLING WIRE G.A. 18 OR ALL EMPTY CONDUITS.
- PULL BOXES SHALL BE PROVIDED BY THE CONTRACTOR WHENEVER NECESSARY TO FACILITATE WIRE PULLING EVEN IF THESE ARE NOT INDICATED ON THE PLANS.
- FOR BOXES WITH MORE THAN FOUR WIRES ENTERING, USE 0.10 M X 0.10 M SQUARE BOX WITH ONE ADAPTER RING. (TYPICAL FOR RECEPTACLE BOXES)
- ALL LIGHTING AND CONVENIENCE OUTLET CIRCUITS SHALL BE 3 WIRE 3.5 SQ. MM THIN UNLESS OTHERWISE NOTED. MINIMUM SIZE OF WIRE SHALL BE 3.5 SQ. MM THW.
- ALL DUPLEX RECEPTACLE OUTLETS SHALL BE GROUNDING TYPE WITH PARALLEL SLOTS FOR 220 V.
- PROVIDE GROUND FAULT CURRENT INTERRUPTER CIRCUIT BREAKER FOR LOADS MARKED "GFCI" ON THE PLAN.
- ALL METALLIC CONDUITS, CABINETS AND EQUIPMENT SHALL BE PROPERLY GROUNDING AND BONDED.
- UNLESS OTHERWISE NOTED, MOUNTING HEIGHT FOR WALL MOUNTED DEVICES SHALL BE AS FOLLOWS:
RECEPTACLE OUTLET - 300 MM AFF
TELEPHONE OUTLET - 300 MM AFF
CATV OUTLET - 300 MM AFF
LIGHTING SWITCH - 1370 MM AFF
- LOCATION OF ELECTRICAL FIXTURES ARE APPROXIMATE ONLY FINAL LOCATIONS OF FIXTURES SHALL BE DETERMINED ON SITE TO AVOID INTERFERENCE WITH OTHER SYSTEMS AND/OR EQUIPMENT.
- REFER TO MECHANICAL, PLUMBING AND FIRE PROTECTION DRAWINGS FOR RATINGS AND LOCATIONS OF EQUIPMENT AS WELL AS THEIR CONTROL SEQUENCES AS SPECIFIED AND OR SHOWN UNDER THEIR RESPECTIVE SECTIONS.

SERVICE ENTRANCE



RISER DIAGRAM (WHOLE SCHOOL BUILDINGS)

SCALE: NTS



Republika ng Pilipinas
Lungsod ng Quezon
CITY ENGINEERING DEPARTMENT

PROJECT TITLE:
**PROPOSED UPGRADING OF MAIN
ELECTRICAL SERVICE ENTRANCE OF
SAN AGUSTIN ELEMENTARY SCHOOL**
LOCATION:
BARANGAY SAN AGUSTIN DISTRICT 5, QUEZON CITY

DRAWN BY: *G*
DATE:
CHECKED BY: *J*
REVISION NO:

SUBMITTED BY:
LEO S. DEL ROSARIO
LEO S. DEL ROSARIO
LEAD PLANNING & PROGRAM DIVISION

RECOMMENDING APPROVAL:
ENGR. ISMAANI R. VERZOSA, JR.
ENGR. ISMAANI R. VERZOSA, JR.
CITY ENGINEERING DEPARTMENT

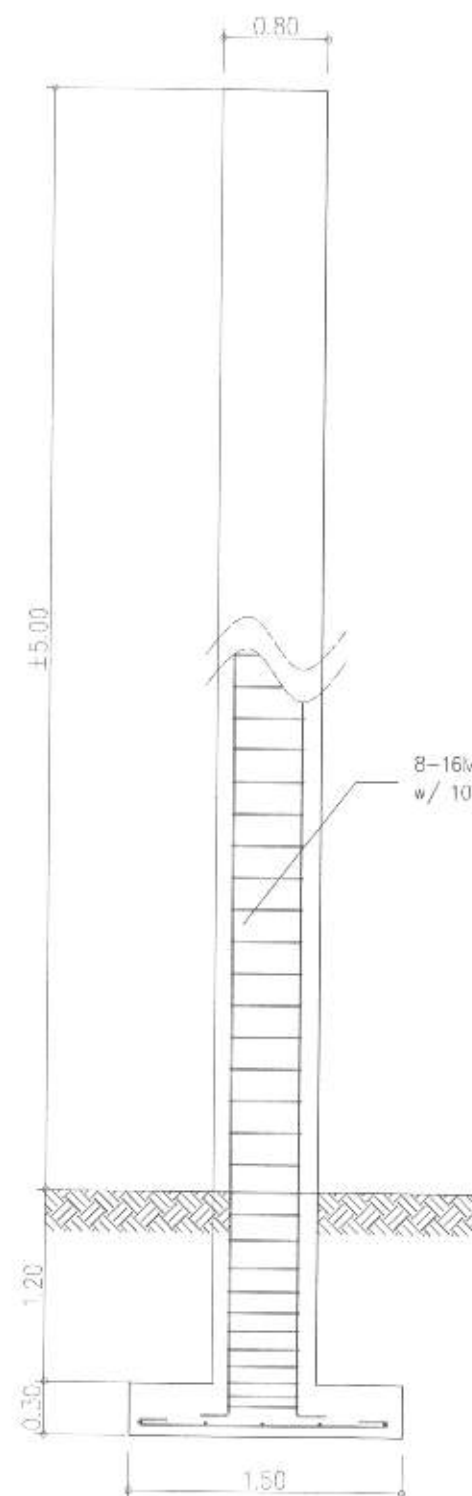
APPROVED BY:
HON. MA. JOSEFINA G. BELMONTE
HON. MA. JOSEFINA G. BELMONTE
CITY MAYOR, QUEZON CITY

SHEET CONTENTS:
GENERAL NOTES &
SPECIFICATION
RISER DIAGRAM (WHOLE
SCHOOL BUILDINGS)
SHEET NO:
E-01

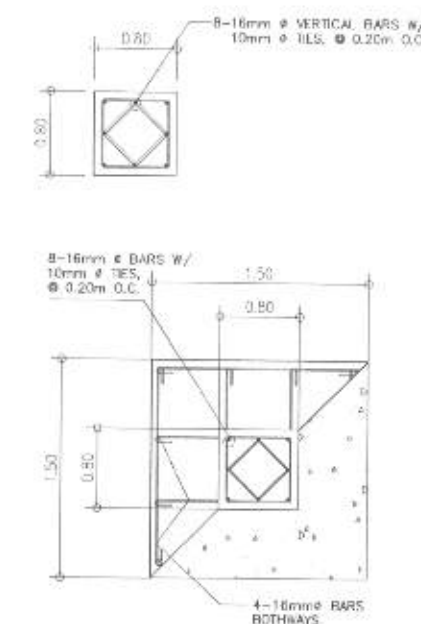
Diagram illustrating the components and specifications of a vertical electrical service rack:

- OVAL EYEBOLT, $\frac{5}{8}$ " Ø GALVANIZED
- WEATHERHEAD SERVICE ENTRANCE CAP
- CTC (PROVIDE MACHINE BOLT)
- LINE PHASE CONDUCTOR (drip loop must be at least 1.5m)
- LOAD PHASE CONDUCTOR (drip loop must be at least 1.5m)
- CT-METERING
- U-BOLT (every 2.5 ft)
- 80mmØ IMC (INTERMEDIATE METALLIC CONDUIT)
- 3-SPOOL SECONDARY RACK
- 3 sets of 3-200MM² THHN WIRE
1-50MM² TW WIRE GRD
1-80MMØ IMC PIPE
- 2 sets of 3-250MM² THWN WIRE
1-50MM² TW WIRE GRD
1-80MMØ IMC PIPE
- MOULDED CASE CIRCUIT BREAKER 1000AT, 1200AF, 3P, 230V, 60HZ W/ 1 SET OF 500AT, CB, 3P, 230V & 1 SET OF 400AT, CB, 3P, 230V, SERVICE PROTECTION IN NEMA 3R ENCLOSURE, WEATHERPROOF TYPE, WITH GROUND TERMINAL
- (Provide additional terminal lugs and ample space for wire termination)
- 1-50MM² TW WIRE, 1.6MMØ GROUNDING ROD W/ CONNECTOR
- VERIFY
- NGL

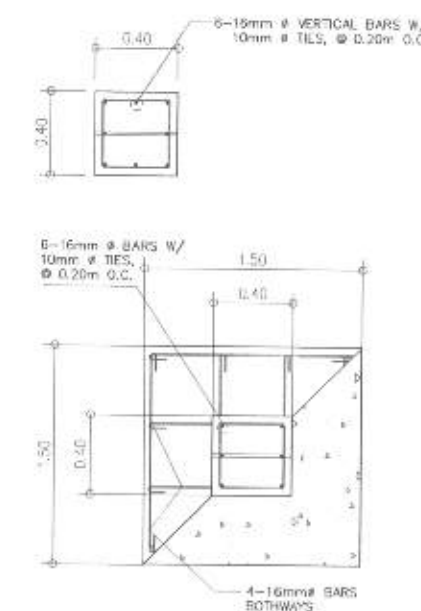
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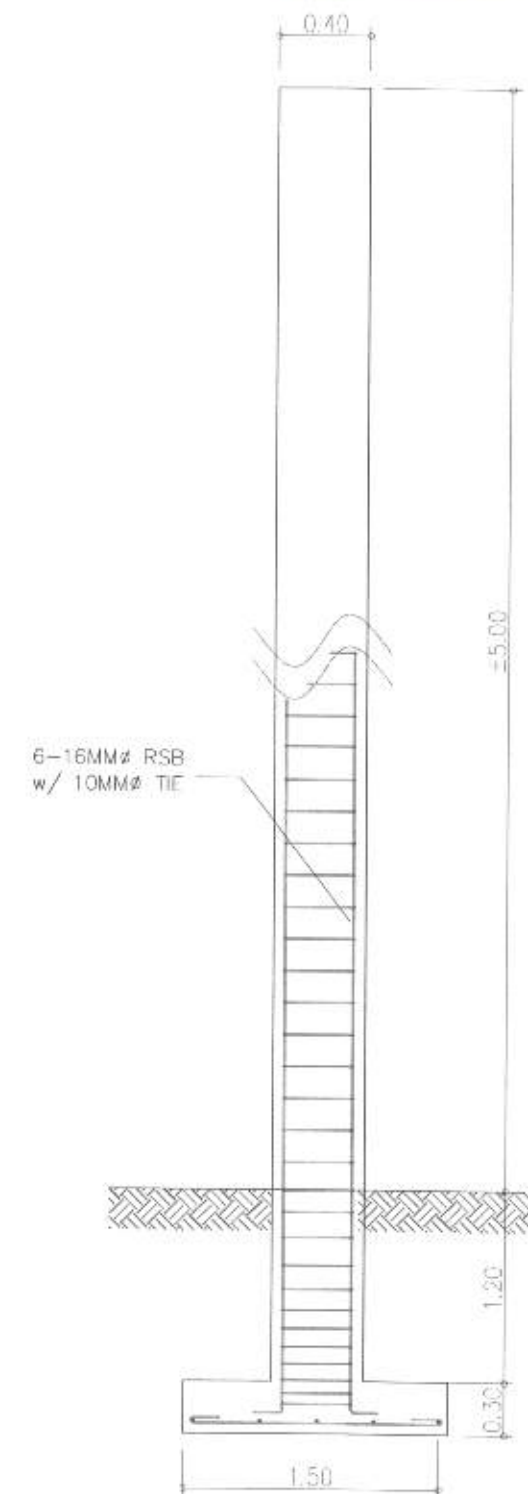
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PROJECT TITLE:	PROPOSED UPGRADING OF MAIN ELECTRICAL SERVICE ENTRANCE OF SAN AGUSTIN ELEMENTARY SCHOOL
LOCATION	BARANGAY SAN AGUSTIN DISTRICT 5, QUEZON CITY

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PROPOSED DISTRIBUTION
POLE DETAIL

PROPOSED SERVICE
ENTRANCE DETAIL
PROPOSED CONCRETE
METERING POLE DETAIL
PROPOSED DISTRIBUTION
POLE DETAIL
COLUMN FOOTING DETAIL

100

LPP1- DEPED A-1 - (GRD, 2ND & 3RD FLOOR LIGHTING AND POWER PANEL)

CKT. NO.	LOAD DESCRIPTION	VOLTS	VA	AMP.	AT	SIZE OF	
						WIRES	CONDUITS
1	21-L.O. (ALL CLASSRM.-GRD)	230	2100	9.13	30	2-3.5mm ² THHN COPPER WIRE 1-3.5mm ² TW GROUND WIRE	IN 20mm ^ø PVC PIPE
2	24-L.O. (ALL CLASSRM.-2ND)	230	2400	10.43	30	2-3.5mm ² THHN COPPER WIRE 1-3.5mm ² TW GROUND WIRE	IN 20mm ^ø PVC PIPE
3	24-L.O. (ALL CLASSRM.-3RD)	230	2400	10.43	30	2-3.5mm ² THHN COPPER WIRE 1-3.5mm ² TW GROUND WIRE	IN 20mm ^ø PVC PIPE
4	25-C.O. (HALLWAY & COMP.RM.)	230	4470	19.43	30	2-3.5mm ² THHN COPPER WIRE 1-3.5mm ² TW GROUND WIRE	IN 20mm ^ø PVC PIPE
TOTAL			11,370	49.43			

COMPUTATION :

$$IT = \frac{11,370 \text{ VA}}{230 \text{ V}}$$

$$= 49.43 \text{ AMPERES}$$

OVER CURRENT PROTECTION

USE : 60AT, 2P, 230V, 60Hz, MCCB IN NEMA 1R ENCLOSURE

MAIN FEEDER LINE

USE : 2 - 14mm² THHN CU WIRE & 1-22.0mm² TW GROUND WIRE
IN 25mm^ø RSC PIPE

20-00045

LPP1- DEPED B - (GROUND FLOOR LIGHTING AND POWER PANEL)

CKT. NO.	LOAD DESCRIPTION	VOLTS	VA	AMP.	AT	SIZE OF	
						WIRES	CONDUITS
1	24-L.O. (ALL CLASS ROOM)	230	2400	10.43	30	2-3.5mm ² THHN COPPER WIRE 1-3.5mm ² TW GROUND WIRE	IN 20mm ^ø PVC PIPE
2	9-L.O. (HALLWAY)	230	1600	6.96	20	2-3.5mm ² THHN COPPER WIRE 1-3.5mm ² TW GROUND WIRE	IN 20mm ^ø PVC PIPE
3	3-L.O. (STAIRS & STORAGE RM.)	230	300	1.30	20	2-3.5mm ² THHN COPPER WIRE 1-3.5mm ² TW GROUND WIRE	IN 20mm ^ø PVC PIPE
4	6-CRIT FAN	230	900	3.91	30	2-3.5mm ² THHN COPPER WIRE 1-3.5mm ² TW GROUND WIRE	IN 20mm ^ø PVC PIPE
5	6-C.O. (ALL CLASS ROOM)	230	1080	1.30	30	2-3.5mm ² THHN COPPER WIRE 1-3.5mm ² TW GROUND WIRE	IN 20mm ^ø PVC PIPE
6	2-FIRE ALARMS	230	300	1.30	30	2-3.5mm ² THHN COPPER WIRE 1-3.5mm ² TW GROUND WIRE	IN 20mm ^ø PVC PIPE
TOTAL			6,580	190.83			

COMPUTATION :

$$IT = \frac{6,580 \text{ VA}}{230 \text{ V}}$$

$$= 28.61 \text{ AMPERES}$$

OVER CURRENT PROTECTION

USE : 60AT, 2P, 230V, 60Hz, MCCB IN NEMA 1R ENCLOSURE

MAIN FEEDER LINE

USE : 2 - 14mm² THHN CU WIRE & 1-8.0mm² TW GROUND WIRE
IN 25mm^ø PVC PIPE

LPP2- DEPED A-2 - (GRD, 2ND & 3RD FLOOR LIGHTING AND POWER PANEL)

CKT. NO.	LOAD DESCRIPTION	VOLTS	VA	AMP.	AT	SIZE OF	
						WIRES	CONDUITS
1	21-L.O. (ALL CLASSRM.-GRD)	230	2100	9.13	30	2-3.5mm ² THHN COPPER WIRE 1-3.5mm ² TW GROUND WIRE	IN 20mm ^ø PVC PIPE
2	1-1HP A.C.U. OUTLET	230	1840	8	30	2-3.5mm ² THHN COPPER WIRE 1-3.5mm ² TW GROUND WIRE	IN 20mm ^ø PVC PIPE
3	15-C.O. (ALL CLASSRM. & O.FAN)	230	2490	10.82	30	2-3.5mm ² THHN COPPER WIRE 1-3.5mm ² TW GROUND WIRE	IN 20mm ^ø PVC PIPE
4	24-L.O. (ALL CLASSRM.-2ND)	230	2400	10.43	30	2-3.5mm ² THHN COPPER WIRE 1-3.5mm ² TW GROUND WIRE	IN 20mm ^ø PVC PIPE
TOTAL			8,830	38.39			

COMPUTATION :

$$IT = \frac{8,830 \text{ VA}}{230 \text{ V}}$$

$$= 38.39 \text{ AMPERES}$$

OVER CURRENT PROTECTION

USE : 100AT, 2P, 230V, 60Hz, MCCB IN NEMA 1R ENCLOSURE

MAIN FEEDER LINE

USE : 2 - 30mm² THWN-2 WIRE & 1-8.0mm² THWN-2 GROUND WIRE
IN 32mm^ø RSC PIPE

TYPICAL LPP2, 3 & 4 - DEPED B - (2ND, 3RD & 4TH FLOOR LIGHTING AND POWER PANEL)

CKT. NO.	LOAD DESCRIPTION	VOLTS	VA	AMP.	AT	SIZE OF	
						WIRES	CONDUITS
1	24-L.O. (ALL CLASS ROOM)	230	2400	5.21	20	2-3.5mm ² THHN COPPER WIRE 1-3.5mm ² TW GROUND WIRE	IN 20mm ^ø PVC PIPE
2	11-L.O. (H.WAY,STAIRS&STO.RM.)	230	1100	4.78	20	2-3.5mm ² THHN COPPER WIRE 1-3.5mm ² TW GROUND WIRE	IN 20mm ^ø PVC PIPE
3	6-ORBIT FAN	230	900	3.47	20	2-3.5mm ² THHN COPPER WIRE 1-3.5mm ² TW GROUND WIRE	IN 20mm ^ø PVC PIPE
4	6-C.O. (ALL CLASS ROOM)	230	1080	2.61	30	2-3.5mm ² THHN COPPER WIRE 1-3.5mm ² TW GROUND WIRE	IN 20mm ^ø PVC PIPE
5	2-FIRE ALARMS	230	300	1.30	30	2-3.5mm ² THHN COPPER WIRE 1-3.5mm ² TW GROUND WIRE	IN 20mm ^ø PVC PIPE
TOTAL			5,780	25.13			

COMPUTATION :

$$IT = \frac{5,780 \text{ VA}}{230 \text{ V}}$$

$$= 25.13 \text{ AMPERES}$$

OVER CURRENT PROTECTION

USE : 60AT, 2P, 230V, 60Hz, MCCB IN NEMA 1R ENCLOSURE

MAIN FEEDER LINE

USE : 2 - 14mm² THHN CU WIRE & 1-8.0mm² TW GROUND WIRE
IN 25mm^ø PVC PIPE

MAIN DISTRIBUTION PANEL: DEPED A

CKT. NO.	LOAD DESCRIPTION	VOLTS	VA	AMPERES	AT	SIZE OF	
						WIRES	CONDUITS
1	LPP-1	230	11,370	49.43	60	2-14.0mm ² THWN-2 COPPER WIRE 1-8.0mm ² THWN-2 GROUND WIRE	IN 25mm ^ø PVC PIPE
2	LPP-2	230	8,830	38.39	100	2-14.0mm ² THWN-2 COPPER WIRE 1-8.0mm ² THWN-2 GROUND WIRE	IN 25mm ^ø PVC PIPE
TOTAL			20,200	97.83			

COMPUTATION :

$$IT = \frac{23,920 \text{ VA}}{230 \text{ V}}$$

$$= 104.0 \text{ AMPERES}$$

OVER CURRENT PROTECTION

USE : 125AT, 2P, 230V, 60Hz, MCCB IN NEMA 1R ENCLOSURE

MAIN FEEDER LINE

USE : 2 - 38mm² THHN CU WIRE & 1-14.0mm² TW GROUND WIRE
IN 32mm^ø RSC PIPE

MAIN DISTRIBUTION PANEL: DEPED B

CKT. NO.	LOAD DESCRIPTION	VOLTS	VA	AMPERES	AT	SIZE OF	
						WIRES	CONDUITS
1	LPP-1	230	6,580	28.61	60	2-14.0mm ² THWN-2 COPPER WIRE 1-8.0mm ² THWN-2 GROUND WIRE	IN 25mm ^ø PVC PIPE
2	LPP-2	230	5,780	25.13	60	2-14.0mm ² THWN-2 COPPER WIRE 1-8.0mm ² THWN-2 GROUND WIRE	IN 25mm ^ø PVC PIPE
3	LPP-3	230	5,780	25.13	60	2-14.0mm ² THWN-2 COPPER WIRE 1-8.0mm ² THWN-2 GROUND WIRE	IN 25mm ^ø PVC PIPE
4	LPP-4	230	5,780	25.13	60	2-14.0mm ² THWN-2 COPPER WIRE 1-8.0mm ² THWN-2 GROUND WIRE	IN 25mm ^ø PVC PIPE
TOTAL			23,920	104			

COMPUTATION :

$$IT = \frac{23,920 \text{ VA}}{230 \text{ V}}$$

$$= 104.0 \text{ AMPERES}$$

OVER CURRENT PROTECTION

USE : 150AT, 2P, 230V, 60Hz, MCCB IN NEMA 1R ENCLOSURE

MAIN FEEDER LINE

USE : 2 - 50mm² THHN CU WIRE & 1-14.0mm² TW GROUND WIRE
IN 40mm^ø RSC PIPE

SCHEDULE OF LOADS 1 OF 8
SCALE: NTS



Republika ng Pilipinas
Lungsod ng Quezon
CITY ENGINEERING DEPARTMENT

PROJECT TITLE:

**PROPOSED UPGRADING OF MAIN
ELECTRICAL SERVICE ENTRANCE OF
SAN AGUSTIN ELEMENTARY SCHOOL**

LOCATION:

BARANGAY SAN AGUSTIN DISTRICT 5, QUEZON CITY

DRAWN BY:

CHECKED BY:

DESIGNED BY:

REVISIONS:

SUBMITTAL:

ENGR. LEO S. DEL ROSARIO
HEAD PLANNING & PROGRAMS DIVISION

RECOMMENDING APPROVAL:

ENGR. JOSE G. VERZOSA, JR.
CITY ENGINEERING DEPARTMENT

APPROVED BY:

HON. MA. JOSEFINA G. BELMONTE
CITY MAYOR, QUEZON CITY

SHEET CONTENTS:

SCHEDULE OF LOADS 1 OF 8

SHEET NO:

E-04

LPP1- BELMONTE BUILDING - (GROUND FLOOR LIGHTING AND POWER PANEL)

CKT. NO.	LOAD DESCRIPTION	VOLTS	VA	AMP.	AT	SIZE OF	
						WIRES	CONDUITS
1	12-L.O. (ALL CLASS ROOM)	230	1200	5.21	20	2-3.5mm ² THHN COPPER WIRE 1-3.5mm ² TW GROUND WIRE	IN 20mm ^ø PVC PIPE
2	12-L.O. (ALL CLASS ROOM)	230	1200	5.21	20	2-3.5mm ² THHN COPPER WIRE 1-3.5mm ² TW GROUND WIRE	IN 20mm ^ø PVC PIPE
3	7-L.O. (HALLWAY & STAIRS)	230	700	3.04	20	2-3.5mm ² THHN COPPER WIRE 1-3.5mm ² TW GROUND WIRE	IN 20mm ^ø PVC PIPE
4	4-L.O. COMFORT ROOM	230	400	1.73	20	2-3.5mm ² THHN COPPER WIRE 1-3.5mm ² TW GROUND WIRE	IN 20mm ^ø PVC PIPE
5	8-DUPLEX C.O. (ALL CLASS RM.)	230	1440	6.26	20	2-3.5mm ² THHN COPPER WIRE 1-3.5mm ² TW GROUND WIRE	IN 20mm ^ø PVC PIPE
6	8-ORBIT & WALL FAN	230	800	3.47	20	2-3.5mm ² THHN COPPER WIRE 1-3.5mm ² TW GROUND WIRE	IN 20mm ^ø PVC PIPE
7	8-ORBIT & WALL FAN	230	800	3.47	20	2-3.5mm ² THHN COPPER WIRE 1-3.5mm ² TW GROUND WIRE	IN 20mm ^ø PVC PIPE
8	8-ORBIT & WALL FAN	230	800	3.47	30	2-3.5mm ² THHN COPPER WIRE 1-3.5mm ² TW GROUND WIRE	IN 20mm ^ø PVC PIPE
TOTAL			7,340	31.91			

COMPUTATION :

$$IT = \frac{7,340 \text{ VA}}{230 \text{ V}}$$

$$= 31.91 \text{ AMPERES}$$

OVER CURRENT PROTECTION

USE : 100AT, 2P, 230V, 60Hz, MCCB IN NEMA 1R ENCLOSURE

MAIN FEEDER LINE

USE : 2 - 30mm² THHN CU WIRE & 1-8.0mm² TW GROUND WIRE
IN 32mm^ø PVC PIPE

LPP3- BELMONTE BUILDING - (3RD FLOOR LIGHTING AND POWER PANEL)

CKT. NO.	LOAD DESCRIPTION	VOLTS	VA	AMP.	AT	SIZE OF	
						WIRES	CONDUITS
1	12-L.O. (ALL CLASS ROOM)	230	1200	5.21	20	2-3.5mm ² THHN COPPER WIRE 1-3.5mm ² TW GROUND WIRE	IN 20mm ^ø PVC PIPE
2	12-L.O. (ALL CLASS ROOM)	230	1200	5.21	20	2-3.5mm ² THHN COPPER WIRE 1-3.5mm ² TW GROUND WIRE	IN 20mm ^ø PVC PIPE
3	7-L.O. (HALLWAY & STAIRS)	230	700	3.04	20	2-3.5mm ² THHN COPPER WIRE 1-3.5mm ² TW GROUND WIRE	IN 20mm ^ø PVC PIPE
4	4-L.O. COMFORT ROOM	230	400	1.73	20	2-3.5mm ² THHN COPPER WIRE 1-3.5mm ² TW GROUND WIRE	IN 20mm ^ø PVC PIPE
5	8-DUPLEX C.O. (ALL CLASS RM.)	230	1440	6.26	20	2-3.5mm ² THHN COPPER WIRE 1-3.5mm ² TW GROUND WIRE	IN 20mm ^ø PVC PIPE
6	12-ORBIT & WALL FAN	230	1800	7.82	20	2-3.5mm ² THHN COPPER WIRE 1-3.5mm ² TW GROUND WIRE	IN 20mm ^ø PVC PIPE
7	12-ORBIT & WALL FAN	230	1800	7.82	20	2-3.5mm ² THHN COPPER WIRE 1-3.5mm ² TW GROUND WIRE	IN 20mm ^ø PVC PIPE
TOTAL			8,540	37.13			

COMPUTATION :

$$IT = \frac{8,540 \text{ VA}}{230 \text{ V}}$$

$$= 37.13 \text{ AMPERES}$$

OVER CURRENT PROTECTION

USE : 100AT, 2P, 230V, 60Hz, MCCB IN NEMA 1R ENCLOSURE

MAIN FEEDER LINE

USE : 2 - 30mm² THHN WIRE & 1-22.0mm² TW GROUND WIRE
IN 50mm^ø PVC PIPE

LPP2- BELMONTE BUILDING - (2ND FLOOR LIGHTING AND POWER PANEL)

CKT. NO.	LOAD DESCRIPTION	VOLTS	VA	AMP.	AT	SIZE OF	
						WIRES	CONDUITS
1	15-L.O. (ALL CLASS ROOM)	230	1500	6.52	20	2-3.5mm ² THHN COPPER WIRE 1-3.5mm ² TW GROUND WIRE	IN 20mm ^ø PVC PIPE
2	15-L.O. (ALL CLASS ROOM)	230	1500	6.52	20	2-3.5mm ² THHN COPPER WIRE 1-3.5mm ² TW GROUND WIRE	IN 20mm ^ø PVC PIPE
3	7-L.O. (HALLWAY & STAIRS)	230	700	3.04	20	2-3.5mm ² THHN COPPER WIRE 1-3.5mm ² TW GROUND WIRE	IN 20mm ^ø PVC PIPE
4	10-DUPLEX C.O. (ALL CLASS RM.)	230	1800	7.82	20	2-3.5mm ² THHN COPPER WIRE 1-3.5mm ² TW GROUND WIRE	IN 20mm ^ø PVC PIPE
5	15-ORBIT & WALL FAN	230	2250	9.78	20	2-3.5mm ² THHN COPPER WIRE 1-3.5mm ² TW GROUND WIRE	IN 20mm ^ø PVC PIPE
6	15-ORBIT & WALL FAN	230	2250	9.78	30	2-3.5mm ² THHN COPPER WIRE 1-3.5mm ² TW GROUND WIRE	IN 20mm ^ø PVC PIPE
TOTAL			10,000	43.47			

COMPUTATION :

$$IT = \frac{10,000 \text{ VA}}{230 \text{ V}}$$

$$= 43.48 \text{ AMPERES}$$

OVER CURRENT PROTECTION

USE : 100AT, 2P, 230V, 60Hz, MCCB IN NEMA 1R ENCLOSURE

MAIN FEEDER LINE

USE : 2 - 30mm² THHN CU WIRE & 1-8.0mm² TW GROUND WIRE
IN 32mm^ø PVC PIPE

LPP4- BELMONTE BUILDING - (4TH FLOOR LIGHTING AND POWER PANEL)

CKT. NO.	LOAD DESCRIPTION	VOLTS	VA	AMP.	AT	SIZE OF	
						WIRES	CONDUITS
1	15-L.O. (ALL CLASS ROOM)	230	1500	6.52	20	2-3.5mm ² THHN COPPER WIRE 1-3.5mm ² TW GROUND WIRE	IN 20mm ^ø PVC PIPE
2	15-L.O. (ALL CLASS ROOM)	230	1500	6.52	20	2-3.5mm ² THHN COPPER WIRE 1-3.5mm ² TW GROUND WIRE	IN 20mm ^ø PVC PIPE
3	7-L.O. (HALLWAY & STAIRS)	230	700	3.04	20	2-3.5mm ² THHN COPPER WIRE 1-3.5mm ² TW GROUND WIRE	IN 20mm ^ø PVC PIPE
4	8-DUPLEX C.O. (ALL CLASS RM.)	230	1440	6.26	20	2-3.5mm ² THHN COPPER WIRE 1-3.5mm ² TW GROUND WIRE	IN 20mm ^ø PVC PIPE
5	10-ORBIT & WALL FAN	230	1500	6.52	20	2-3.5mm ² THHN COPPER WIRE 1-3.5mm ² TW GROUND WIRE	IN 20mm ^ø PVC PIPE
6	10-ORBIT & WALL FAN	230	1500	6.52	20	2-3.5mm ² THHN COPPER WIRE 1-3.5mm ² TW GROUND WIRE	IN 20mm ^ø PVC PIPE
7	10-ORBIT & WALL FAN	230	1500	6.52	20	2-3.5mm ² THHN COPPER WIRE 1-3.5mm ² TW GROUND WIRE	IN 20mm ^ø PVC PIPE
TOTAL			9,640	41.91			

COMPUTATION :

$$IT = \frac{9,640 \text{ VA}}{230 \text{ V}}$$

$$= 41.91 \text{ AMPERES}$$

OVER CURRENT PROTECTION

USE : 100AT, 2P, 230V, 60Hz, MCCB IN NEMA 1R ENCLOSURE

MAIN FEEDER LINE

USE : 2 - 30.0 mm² THHN CU WIRE & 1-8.0mm² TW GROUND WIRE
IN 32mm^ø PVC PIPE

SCHEDULE OF LOADS 2 OF 8

SCALE: NTS



Republika ng Pilipinas
Lungsod ng Quezon
CITY ENGINEERING DEPARTMENT

PROJECT TITLE:

PROPOSED UPGRADING OF MAIN
ELECTRICAL SERVICE ENTRANCE OF
SAN AGUSTIN ELEMENTARY SCHOOL

LOCATION:

BARANGAY SAN AGUSTIN DISTRICT 5, QUEZON CITY

DRAWN BY:

DATE:

DESIGNED BY:

REVIEWED:

SUBMITTED BY:

ENGR. LEO S. DEL ROSARIO
HEAD, PLANNING & PROGRAMMING DIVISION

RECOMMENDING APPROVAL:

ENGR. ISAGANI R. VERZOSA, JR.
CHIEF, CITY ENGINEERING DEPARTMENT

APPROVED BY:

HON. MA. JOSEFINA G. BELMONTE
CITY MAYOR, QUEZON CITY

SHEET CONTENTS:

SCHEDULE OF LOADS 2 OF 8

SHEET NO.

E-05

20-00045

MAIN DISTRIBUTION PANEL: BELMONTE BUILDING

CKT. NO.	LOAD DESCRIPTION	VOLTS	VA	AMPERES	AT	SIZE OF	
						WIRES	CONDUITS
1	LPP-1	230	7,340	31.91	100	2-30mm ² THHN-2 COPPER WIRE 1-8.0mm ² THHN-2 GROUND WIRE	IN 32mm ³ PVC PIPE
2	LPP-2	230	10,000	43.47	100	2-30mm ² THHN-2 COPPER WIRE 1-8.0mm ² THHN-2 GROUND WIRE	IN 32mm ³ PVC PIPE
3	LPP-3	230	8,540	37.13	100	2-30mm ² THHN-2 COPPER WIRE 1-8.0mm ² THHN-2 GROUND WIRE	IN 32mm ³ PVC PIPE
4	LPP-4	230	8,840	38.41	100	2-30mm ² THHN-2 COPPER WIRE 1-8.0mm ² THHN-2 GROUND WIRE	IN 32mm ³ PVC PIPE
TOTAL			35,520	154.44			

COMPUTATION :

$$IT = \frac{35,520 \text{ VA}}{230 \text{ V}}$$

$$= 154.44 \text{ AMPERES}$$

OVER CURRENT PROTECTION

USE : 200AT, 2P, 230V, 60Hz, MCCB IN NEMA 1R ENCLOSURE

MAIN FEEDER LINE

USE : 2 - 80.0 mm² THHN CU WIRE & 1-22.0mm² TW GROUND WIRE
IN 50mm³ RSC PIPE

MAIN DISTRIBUTION PANEL: DEPED C (VARGAS BUILDING)

CKT. NO.	LOAD DESCRIPTION	VOLTS	VA	AMPERES	AT	SIZE OF	
						WIRES	CONDUITS
1	LPP-1	230	7,500	32.61	100	2-30mm ² THHN COPPER WIRE 1-8.0mm ² TW GROUND WIRE	IN 32mm ³ PVC PIPE
2	LPP-2	230	7,500	32.61	100	2-30mm ² THHN COPPER WIRE 1-8.0mm ² TW GROUND WIRE	IN 32mm ³ PVC PIPE
3	LPP-3	230	8,800	38.26	100	2-30mm ² THHN COPPER WIRE 1-8.0mm ² TW GROUND WIRE	IN 32mm ³ PVC PIPE
4	LPP-4	230	8,800	38.26	100	2-30mm ² THHN COPPER WIRE 1-8.0mm ² TW GROUND WIRE	IN 32mm ³ PVC PIPE
TOTAL			32,600	141.73			

COMPUTATION :

$$IT = \frac{32,600 \text{ VA}}{230 \text{ V}}$$

$$= 141.73 \text{ AMPERES}$$

OVER CURRENT PROTECTION

USE : 150AT, 2P, 230V, 60Hz, MCCB IN NEMA 1R ENCLOSURE

MAIN FEEDER LINE

USE : 2 - 50mm² THHN CU WIRE & 1-14mm² TW GROUND WIRE
IN 40mm³ RSC PIPE

TYPICAL LPP1 & 2: DEPED C (VARGAS BUILDING) - (GRD & 2ND FLOOR LIGHTING AND POWER PANEL)

CKT. NO.	LOAD DESCRIPTION	VOLTS	VA	AMP.	AT	SIZE OF	
						WIRES	CONDUITS
1	42-L.O. (ALL CLASSRM. & HALLWAY)	230	4200	18.26	30	2-3.5mm ² THHN COPPER WIRE 1-3.5mm ² TW GROUND WIRE	IN 20mm ³ PVC PIPE
2	10-DUPLEX C.O. & 10-FAN (ALL CLASSROOMS)	230	3300	14.34	30	2-3.5mm ² THHN COPPER WIRE 1-3.5mm ² TW GROUND WIRE	IN 20mm ³ PVC PIPE
TOTAL			7,500	32.61			

COMPUTATION :

$$IT = \frac{7,500 \text{ VA}}{230 \text{ V}}$$

$$= 32.61 \text{ AMPERES}$$

OVER CURRENT PROTECTION

USE : 60AT, 2P, 230V, 60Hz, MCCB IN NEMA 1R ENCLOSURE

MAIN FEEDER LINE

USE : 2 - 14.0 mm² THHN CU WIRE & 1-8.0mm² TW GROUND WIRE
IN 25mm³ PVC PIPE

TYPICAL LPP1, 2, 3 & 4: DPWH BUILDING-(GRD, 2ND, 3RD & 4TH FLOOR LIGHTING AND POWER PANEL)

CKT. NO.	LOAD DESCRIPTION	VOLTS	VA	AMP.	AT	SIZE OF	
						WIRES	CONDUITS
1	18-L.O. (ALL CLASSROOM)	230	1800	7.82	20	2-3.5mm ² THHN COPPER WIRE 1-3.5mm ² TW GROUND WIRE	IN 20mm ³ PVC PIPE
2	15-L.O. (HALLWAY & STAIRS)	230	1500	6.52	20	2-3.5mm ² THHN COPPER WIRE 1-3.5mm ² TW GROUND WIRE	IN 20mm ³ PVC PIPE
3	6-DUPLEX C.O. (ALL CLASSROOM)	230	1080	4.70	20	2-3.5mm ² THHN COPPER WIRE 1-3.5mm ² TW GROUND WIRE	IN 20mm ³ PVC PIPE
4	6-ORBIT & WALL FANS	230	900	3.91	20	2-3.5mm ² THHN COPPER WIRE 1-3.5mm ² TW GROUND WIRE	IN 20mm ³ PVC PIPE
5	6-L.O. (COMFORT ROOM)	230	600	2.61	20	2-3.5mm ² THHN COPPER WIRE 1-3.5mm ² TW GROUND WIRE	IN 20mm ³ PVC PIPE
TOTAL			5,880	25.56			

COMPUTATION :

$$IT = \frac{5,880 \text{ VA}}{230 \text{ V}}$$

$$= 25.56 \text{ AMPERES}$$

OVER CURRENT PROTECTION

USE : 60AT, 2P, 230V, 60Hz, MCCB IN NEMA 1R ENCLOSURE

MAIN FEEDER LINE

USE : 2 - 14mm² THHN CU WIRE & 1-8.0mm² TW GROUND WIRE
IN 25mm³ PVC PIPE

TYPICAL LPP3 & 4: DEPED C (VARGAS BUILDING) - (3RD & 4TH FLOOR LIGHTING AND POWER PANEL)

CKT. NO.	LOAD DESCRIPTION	VOLTS	VA	AMP.	AT	SIZE OF	
						WIRES	CONDUITS
1	15-L.O. (ALL CLASS ROOM)	230	1500	6.52	20	2-3.5mm ² THHN COPPER WIRE 1-3.5mm ² TW GROUND WIRE	IN 20mm ³ PVC PIPE
2	15-L.O. (ALL CLASS ROOM)	230	1500	6.52	20	2-3.5mm ² THHN COPPER WIRE 1-3.5mm ² TW GROUND WIRE	IN 20mm ³ PVC PIPE
3	10-L.O. (HALLWAY & STAIRS)	230	1000	4.34	20	2-3.5mm ² THHN COPPER WIRE 1-3.5mm ² TW GROUND WIRE	IN 20mm ³ PVC PIPE
4	10-DUPLEX C.O. (ALL CLASS RM.)	230	1800	7.82	20	2-3.5mm ² THHN COPPER WIRE 1-3.5mm ² TW GROUND WIRE	IN 20mm ³ PVC PIPE
5	10-ORBIT & WALL FAN	230	1500	6.52	20	2-3.5mm ² THHN COPPER WIRE 1-3.5mm ² TW GROUND WIRE	IN 20mm ³ PVC PIPE
6	10-ORBIT & WALL FAN	230	1500	6.52	20	2-3.5mm ² THHN COPPER WIRE 1-3.5mm ² TW GROUND WIRE	IN 20mm ³ PVC PIPE
TOTAL			8,800	38.26			

COMPUTATION :

$$IT = \frac{8,800 \text{ VA}}{230 \text{ V}}$$

$$= 38.26 \text{ AMPERES}$$

OVER CURRENT PROTECTION

USE : 60AT, 2P, 230V, 60Hz, MCCB IN NEMA 1R ENCLOSURE

MAIN FEEDER LINE

USE : 2 - 14.0 mm² THHN CU WIRE & 1-8.0mm² TW GROUND WIRE
IN 25mm³ PVC PIPE

MAIN DISTRIBUTION PANEL: DPWH BUILDING

CKT. NO.	LOAD DESCRIPTION	VOLTS	VA	AMPERES	AT	SIZE OF	
						WIRES	CONDUITS
1	LPP-1	230	5,880	25.56	60	2-14mm ² THHN COPPER WIRE 1-8.0mm ² TW GROUND WIRE	IN 25mm ³ PVC PIPE
2	LPP-2	230	5,880	25.56	60	2-14mm ² THHN COPPER WIRE 1-8.0mm ² TW GROUND WIRE	IN 25mm ³ PVC PIPE
3	LPP-3	230	5,880	25.56	60	2-14mm ² THHN COPPER WIRE 1-8.0mm ² TW GROUND WIRE	IN 25mm ³ PVC PIPE
4	LPP-4	230	5,880	25.56	60	2-14mm ² THHN COPPER WIRE 1-8.0mm ² TW GROUND WIRE	IN 25mm ³ PVC PIPE
TOTAL			23,520	102.26			

COMPUTATION :

$$IT = \frac{23,520 \text{ VA}}{230 \text{ V}}$$

$$= 102.26 \text{ AMPERES}$$

OVER CURRENT PROTECTION

USE : 125AT, 2P, 230V, 60Hz, MCCB IN NEMA 1R ENCLOSURE

MAIN FEEDER LINE

USE : 2 - 38mm² THHN CU WIRE & 1-14mm² TW GROUND WIRE
IN 32mm³ RSC PIPE

SCHEDULE OF LOADS 3 OF 8
SCALE: NTS



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LOCATION:
BARANGAY SAN AGUSTIN DISTRICT 5, QUEZON CITY

DESIGN BY:
DATE:
CHECKED BY:
REVISION NO.:

SUBMITTED BY:
ENGR. LEO S. DEL ROSARIO
ELECTRICAL ENGINEERING DIVISION

RECOMMENDING APPROVAL:
ENGR. ISAGANI R. VERZOSA, JR.
CITY ENGINEERING DEPARTMENT

APPROVED BY:
HON. MA. JOSEFINA G. BELMONTE
CITY MAYOR, QUEZON CITY

SHEET CONTENTS:
SCHEDULE OF LOADS 3 OF 8
SHEET NO.
E-06

TYPICAL LPP1 & 2: DEPED D (VARGAS BUILDING) - (GRD & 2ND FLOOR LIGHTING AND POWER PANEL)

CKT. NO.	LOAD DESCRIPTION	VOLTS	VA	AMP.	AT	SIZE OF	
						WIRES	CONDUITS
1	7-L.O. (ALL CLASS ROOM)	230	700	3.04	20	2-3.5mm ² THHN COPPER WIRE 1-3.5mm ² TW GROUND WIRE	IN 20mm ² PVC PIPE
2	6-L.O. (ALL CLASS ROOM)	230	600	2.61	20	2-3.5mm ² THHN COPPER WIRE 1-3.5mm ² TW GROUND WIRE	IN 20mm ² PVC PIPE
3	6-L.O. (ALL CLASS ROOM)	230	600	2.61	20	2-3.5mm ² THHN COPPER WIRE 1-3.5mm ² TW GROUND WIRE	IN 20mm ² PVC PIPE
4	10-L.O. (HALLWAY & STAIRS)	230	1000	4.34	20	2-3.5mm ² THHN COPPER WIRE 1-3.5mm ² TW GROUND WIRE	IN 20mm ² PVC PIPE
5	10-DUPLEX C.O. (ALL CLASS RM.)	230	1800	7.82	20	2-3.5mm ² THHN COPPER WIRE 1-3.5mm ² TW GROUND WIRE	IN 20mm ² PVC PIPE
6	5-ORBIT & WALL FAN	230	750	3.26	20	2-3.5mm ² THHN COPPER WIRE 1-3.5mm ² TW GROUND WIRE	IN 20mm ² PVC PIPE
7	5-ORBIT & WALL FAN	230	750	3.26	20	2-3.5mm ² THHN COPPER WIRE 1-3.5mm ² TW GROUND WIRE	IN 20mm ² PVC PIPE
TOTAL			6,200	26.95			

COMPUTATION :

$$IT = \frac{6,200 \text{ VA}}{230 \text{ V}}$$

$$= 26.95 \text{ AMPERES}$$

OVER CURRENT PROTECTION

USE : 60AT, 2P, 230V, 60Hz, MCCB IN NEMA 1R ENCLOSURE

MAIN FEEDER LINE

USE : 2 - 14.0 mm² THWN-2 WIRE & 1-8.0mm² THWN-2 GROUND WIRE
IN 25mm² PVC PIPE

TYPICAL LPP3 & 4: DEPED D (VARGAS BUILDING) - (3RD & 4TH FLOOR LIGHTING AND POWER PANEL)

CKT. NO.	LOAD DESCRIPTION	VOLTS	VA	AMP.	AT	SIZE OF	
						WIRES	CONDUITS
1	8-L.O. (ALL CLASS ROOM)	230	800	3.47	20	2-3.5mm ² THHN COPPER WIRE 1-3.5mm ² TW GROUND WIRE	IN 20mm ² PVC PIPE
2	8-L.O. (ALL CLASS ROOM)	230	800	3.47	20	2-3.5mm ² THHN COPPER WIRE 1-3.5mm ² TW GROUND WIRE	IN 20mm ² PVC PIPE
3	8-L.O. (ALL CLASS ROOM)	230	800	3.47	20	2-3.5mm ² THHN COPPER WIRE 1-3.5mm ² TW GROUND WIRE	IN 20mm ² PVC PIPE
4	10-L.O. (HALLWAY & STAIRS)	230	1000	4.34	20	2-3.5mm ² THHN COPPER WIRE 1-3.5mm ² TW GROUND WIRE	IN 20mm ² PVC PIPE
5	10-DUPLEX C.O. (ALL CLASS RM.)	230	1800	7.82	20	2-3.5mm ² THHN COPPER WIRE 1-3.5mm ² TW GROUND WIRE	IN 20mm ² PVC PIPE
6	8-ORBIT & WALL FAN	230	1200	5.21	20	2-3.5mm ² THHN COPPER WIRE 1-3.5mm ² TW GROUND WIRE	IN 20mm ² PVC PIPE
7	8-ORBIT & WALL FAN	230	1200	5.21	20	2-3.5mm ² THHN COPPER WIRE 1-3.5mm ² TW GROUND WIRE	IN 20mm ² PVC PIPE
TOTAL			7,600	33.04			

COMPUTATION :

$$IT = \frac{7,600 \text{ VA}}{230 \text{ V}}$$

$$= 33.04 \text{ AMPERES}$$

OVER CURRENT PROTECTION

USE : 60AT, 2P, 230V, 60Hz, MCCB IN NEMA 1R ENCLOSURE

MAIN FEEDER LINE

USE : 2 - 14mm² THHN WIRE & 1-8.0mm² TW GROUND WIRE
IN 25mm² PVC PIPE

MAIN DISTRIBUTION PANEL: DEPED D (VARGAS BUILDING)

CKT. NO.	LOAD DESCRIPTION	VOLTS	VA	AMPERES	AT	SIZE OF	
						WIRES	CONDUITS
1	LPP-1	230	6,200	26.95	100	2-30mm ² THHN COPPER WIRE 1-8.0mm ² TW GROUND WIRE	IN 32mm ² PVC PIPE
2	LPP-2	230	6,200	26.95	100	2-30mm ² THHN COPPER WIRE 1-8.0mm ² TW GROUND WIRE	IN 32mm ² PVC PIPE
3	LPP-3	230	7,600	33.04	100	2-30mm ² THHN COPPER WIRE 1-8.0mm ² TW GROUND WIRE	IN 32mm ² PVC PIPE
4	LPP-4	230	7,600	33.04	100	2-30mm ² THHN COPPER WIRE 1-8.0mm ² TW GROUND WIRE	IN 32mm ² PVC PIPE
TOTAL			27,600	120			

COMPUTATION :

$$IT = \frac{27,600 \text{ VA}}{230 \text{ V}}$$

$$= 120 \text{ AMPERES}$$

OVER CURRENT PROTECTION

USE : 125AT, 2P, 230V, 60Hz, MCCB IN NEMA 1R ENCLOSURE

MAIN FEEDER LINE

USE : 2 - 38.0 mm² THHN CU WIRE & 1-14mm² TW GROUND WIRE
IN 32mm² RSC PIPE

MAIN DISTRIBUTION PANEL: NEW DPWH BUILDING

CKT. NO.	LOAD DESCRIPTION	VOLTS	VA	AMPERES	AT	SIZE OF	
						WIRES	CONDUITS
1	LPA	230	12475	46.39	60	2-14.0mm ² THHN COPPER WIRE 1-8.0mm ² TW GROUND WIRE	IN 25mm ² PVC PIPE
2	LPB	230	7482	26.02	60	2-14.0mm ² THHN COPPER WIRE 1-8.0mm ² TW GROUND WIRE	IN 25mm ² PVC PIPE
3	BOOSTER PUMP, 3HP, 1W	230	3210	17.0	60	2-14.0mm ² THHN COPPER WIRE 1-8.0mm ² TW GROUND WIRE	IN 25mm ² PVC PIPE
TOTAL			23,863	103.77			

COMPUTATION :

$$IT = \frac{23863 \text{ VA} + (17 \times 0.25)}{230 \text{ V}}$$

$$= 103.77 \text{ AMPERES}$$

OVER CURRENT PROTECTION

USE : 150AT, 2P, 230V, 60Hz, MCCB IN NEMA 1R ENCLOSURE

MAIN FEEDER LINE

USE : 2 - 38mm² THHN CU WIRE & 1-14mm² TW GROUND WIRE
IN 40mm² IMC PIPE

LPP- COVERED COURT & STAGE FLOOR LIGHTING AND POWER PANEL

CKT. NO.	LOAD DESCRIPTION	VOLTS	VA	AMP.	AT	SIZE OF	
						WIRES	CONDUITS
1	11-L.O. (STAGE)	230	1100	4.78	30	2-3.5mm ² THHN COPPER WIRE 1-3.5mm ² TW GROUND WIRE	IN 20mm ² PVC PIPE
2	2-DUPLEX C.O. (STAGE)	230	360	1.56	30	2-3.5mm ² THHN COPPER WIRE 1-3.5mm ² TW GROUND WIRE	IN 20mm ² PVC PIPE
3	6-C.O. (WALL FAN)	230	900	3.91	30	2-3.5mm ² THHN COPPER WIRE 1-3.5mm ² TW GROUND WIRE	IN 20mm ² PVC PIPE
4	4-L.O. (400 WATTS SPOTLIGHTS)	230	1600	6.95	30	2-3.5mm ² THHN COPPER WIRE 1-3.5mm ² TW GROUND WIRE	IN 20mm ² PVC PIPE
TOTAL			3,960	17.21			

COMPUTATION :

$$IT = \frac{3,960 \text{ VA}}{230 \text{ V}}$$

$$= 17.21 \text{ AMPERES}$$

OVER CURRENT PROTECTION

USE : 60AT, 2P, 230V, 60Hz, MCCB IN NEMA 1R ENCLOSURE

MAIN FEEDER LINE

USE : 2 - 14mm² THHN CU WIRE & 1-8.0mm² TW GROUND WIRE
IN 25mm² PVC PIPE

SCHEDULE OF LOADS 4 OF 8

SCALE: NTS



Republika ng Pilipinas
Lungsod ng Quezon
CITY ENGINEERING DEPARTMENT

PROJECT TITLE
PROPOSED UPGRADING OF MAIN
ELECTRICAL SERVICE ENTRANCE OF
SAN AGUSTIN ELEMENTARY SCHOOL
LOCATION
BARANGAY SAN AGUSTIN DISTRICT 5, QUEZON CITY

DESIGNED BY
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RECOMMENDING APPROVAL
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HEAD PLANNING & PROGRAMMING DIVISION

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ENGR. ISAGANI R. VERZOSA, JR.
CITY ENGINEERING DEPARTMENT

APPROVED BY
HON. MA. JOSEFINA G. BELMONTE
CITY MAYOR, QUEZON CITY

SHEET CONTENTS
SCHEDULE OF LOADS 4 OF 8

SHEET NO.

E-07

20-00045

TYPICAL LPP1 & 2: OLD LIBAN BUILDING - (GND & 2ND FLOOR LIGHTING AND POWER PANEL)

CKT. NO.	LOAD DESCRIPTION	VOLTS	VA	AMP.	AT	SIZE OF	
						WIRES	CONDUITS
1	3-DUPLEX C.O. (HALLWAY)	230	540	2.34	30	2-3.5mm ² THHN COPPER WIRE 1-3.5mm ² TW GROUND WIRE	IN 20mm ³ PVC PIPE
2	6-DUPLEX C.O. (ALL CLASSROOM)	230	1080	4.70	30	2-3.5mm ² THHN COPPER WIRE 1-3.5mm ² TW GROUND WIRE	IN 20mm ³ PVC PIPE
3	12-ORBIT & WALL FANS	230	1800	7.82	30	2-3.5mm ² THHN COPPER WIRE 1-3.5mm ² TW GROUND WIRE	IN 20mm ³ PVC PIPE
4	12-L.O. (ALL CLASSROOM)	230	1200	5.21	20	2-3.5mm ² THHN COPPER WIRE 1-3.5mm ² TW GROUND WIRE	IN 20mm ³ PVC PIPE
5	7-L.O. (HALLWAY & STAIRS)	230	700	3.04	20	2-3.5mm ² THHN COPPER WIRE 1-3.5mm ² TW GROUND WIRE	IN 20mm ³ PVC PIPE
TOTAL			5,320	23.13			

COMPUTATION :

$$IT = \frac{5,320 \text{ VA}}{230 \text{ V}}$$

$$= 23.13 \text{ AMPERES}$$

OVER CURRENT PROTECTION

USE : 60AT, 2P, 230V, 60Hz, MCCB IN NEMA 1R ENCLOSURE

MAIN FEEDER LINE

USE : 2 - 14.0 mm² THWN-2 WIRE & 1-8.0mm² THWN-2 GROUND WIRE
IN 25mm³ PVC PIPE

TYPICAL LPP3 : OLD LIBAN BUILDING - (3RD FLOOR LIGHTING AND POWER PANEL)

CKT. NO.	LOAD DESCRIPTION	VOLTS	VA	AMP.	AT	SIZE OF	
						WIRES	CONDUITS
1	3-DUPLEX C.O. (HALLWAY)	230	540	2.34	30	2-3.5mm ² THHN COPPER WIRE 1-3.5mm ² TW GROUND WIRE	IN 20mm ³ PVC PIPE
2	6-DUPLEX C.O. (ALL CLASSROOM)	230	1080	4.70	30	2-3.5mm ² THHN COPPER WIRE 1-3.5mm ² TW GROUND WIRE	IN 20mm ³ PVC PIPE
3	12-ORBIT & WALL FANS	230	1800	7.82	30	2-3.5mm ² THHN COPPER WIRE 1-3.5mm ² TW GROUND WIRE	IN 20mm ³ PVC PIPE
4	12-L.O. (ALL CLASSROOM)	230	1200	5.21	20	2-3.5mm ² THHN COPPER WIRE 1-3.5mm ² TW GROUND WIRE	IN 20mm ³ PVC PIPE
5	7-L.O. (HALLWAY & STAIRS)	230	700	3.04	20	2-3.5mm ² THHN COPPER WIRE 1-3.5mm ² TW GROUND WIRE	IN 20mm ³ PVC PIPE
TOTAL			5,320	23.13			

COMPUTATION :

$$IT = \frac{5,320 \text{ VA}}{230 \text{ V}}$$

$$= 23.13 \text{ AMPERES}$$

OVER CURRENT PROTECTION

USE : 60AT, 2P, 230V, 60Hz, MCCB IN NEMA 1R ENCLOSURE

MAIN FEEDER LINE

USE : 2 - 14mm² THHN CU WIRE & 1-8.0mm² TW GROUND WIRE
IN 25mm³ PVC PIPE

MAIN DISTRIBUTION PANEL: OLD LIBAN BUILDING

CKT. NO.	LOAD DESCRIPTION	VOLTS	VA	AMPERES	AT	SIZE OF	
						WIRES	CONDUITS
1	LPP-1	230	5,320	23.13	60	2-14mm ² THHN COPPER WIRE 1-8.0mm ² TW GROUND WIRE	IN 25mm ³ PVC PIPE
2	LPP-2	230	5,320	23.13	60	2-14mm ² THHN COPPER WIRE 1-8.0mm ² TW GROUND WIRE	IN 25mm ³ PVC PIPE
3	LPP-3	230	5,320	23.13	60	2-14mm ² THHN COPPER WIRE 1-8.0mm ² TW GROUND WIRE	IN 25mm ³ PVC PIPE
4	SPARE	230	-	-	-	-	-
TOTAL			15,960	69.40			

COMPUTATION :

$$IT = \frac{15,960 \text{ VA}}{230 \text{ V}}$$

$$= 69.40 \text{ AMPERES}$$

OVER CURRENT PROTECTION

USE : 100AT, 2P, 230V, 60Hz, MCCB IN NEMA 1R ENCLOSURE

MAIN FEEDER LINE

USE : 2 - 30.0 mm² THWN-2 WIRE & 1-14.0mm² THWN-2 GROUND WIRE
IN 32mm³ RSC PIPE

LIGHTING PANEL A (LP-A) : GROUND FLOOR

CKT. NO.	LOAD DESCRIPTION	VOLTS	VA	AMPERE			AT	SIZE OF	
				AB	CA	BC		WIRES	CONDUITS
1	11-LIGHTING OUTLETS	220	1100	5.00			20	3-3.5mm ² THHN CU & GRND WIRE	IN 20mm ³ PVC PIPE
2	12-L.O. & 3-CEILING FANS	220	1740	7.91			20	3-3.5mm ² THHN CU & GRND WIRE	IN 20mm ³ PVC PIPE
3	8-LIGHTING OUTLETS	220	800		3.64		20	3-3.5mm ² THHN CU & GRND WIRE	IN 20mm ³ PVC PIPE
4	9-LIGHTING OUTLETS	220	800		4.09		20	3-3.5mm ² THHN CU & GRND WIRE	IN 20mm ³ PVC PIPE
5	8-L.O. & 2-CEILING FANS	220	1160			5.27	20	3-3.5mm ² THHN CU & GRND WIRE	IN 20mm ³ PVC PIPE
6	8-L.O. & 2-CEILING FANS	220	1160			5.27	20	3-3.5mm ² THHN CU & GRND WIRE	IN 20mm ³ PVC PIPE
7	6-L.O. & 2-CEILING FANS	220	1160	5.27			20	3-3.5mm ² THHN CU & GRND WIRE	IN 20mm ³ PVC PIPE
8	10-L.O. & 2-CEILING FANS	220	1360	6.18			20	3-3.5mm ² THHN CU & GRND WIRE	IN 20mm ³ PVC PIPE
9	15-LIGHTING OUTLETS	220	1500		6.82		20	3-3.5mm ² THHN CU & GRND WIRE	IN 20mm ³ PVC PIPE
10	8-L.O. & 2-CEILING FANS	220	1160		5.27		20	3-3.5mm ² THHN CU & GRND WIRE	IN 20mm ³ PVC PIPE
11	12-LIGHTING OUTLETS	220	1200			5.45	20	3-3.5mm ² THHN CU & GRND WIRE	IN 20mm ³ PVC PIPE
12	9-LIGHTING OUTLETS	220	900			4.09	20	3-3.5mm ² THHN CU & GRND WIRE	IN 20mm ³ PVC PIPE
13	8-L.O. & 2-CEILING FANS	220	1160	5.27			20	3-3.5mm ² THHN CU & GRND WIRE	IN 20mm ³ PVC PIPE
14	5-L.O. & 2-CEILING FANS	220	1160	5.27			20	3-3.5mm ² THHN CU & GRND WIRE	IN 20mm ³ PVC PIPE
15	11-L.O. & 3-CEILING FANS	220	1361		6.28		20	3-3.5mm ² THHN CU & GRND WIRE	IN 20mm ³ PVC PIPE
16	13-LIGHTING OUTLETS	220	1300		5.91		20	3-3.5mm ² THHN CU & GRND WIRE	IN 20mm ³ PVC PIPE
17	9-LIGHTING OUTLETS	220	900			4.09	20	3-3.5mm ² THHN CU & GRND WIRE	IN 20mm ³ PVC PIPE
18	5-L.O., 2-C.O. & 1-L.O.&C.O.(GUARD HOUSE)	220	1500			6.82	20	3-3.5mm ² THHN CU & GRND WIRE	IN 20mm ³ PVC PIPE
19	12-L.O. & 1-POST LAMP	220	1200	5.45			20	3-3.5mm ² THHN CU & GRND WIRE	IN 20mm ³ PVC PIPE
20	SPARE	220						EMPTY	EMPTY
TOTAL			22,741	40.35	32.01	30.99			

COMPUTATION :

$$IT = 40.35 \text{ AMPERES} \times 1.732$$

$$= 69.89 \text{ AMPERES}$$

OVER CURRENT PROTECTION

USE : 70AT/100AF, 3P, 18kAIC, 230V, 60Hz, TMCB IN NEMA 1R ENCLOSURE

MAIN FEEDER LINE

USE : 3 - 22.0 mm² THHN WIRE & 1-8.0mm² TW GROUND WIRE
IN 25mm³ (3/4"Ø) IMC PIPE / Y22

SCHEDULE OF LOADS 5 OF 8

SCALE: NTS



Republika ng Pilipinas
Lungsod ng Quezon
CITY ENGINEERING DEPARTMENT

PROJECT TITLE:

PROPOSED UPGRADING OF MAIN
ELECTRICAL SERVICE ENTRANCE OF
SAN AGUSTIN ELEMENTARY SCHOOL

LOCATION:

BARANGAY SAN AGUSTIN DISTRICT 5, QUEZON CITY

DRAWN BY:

DATE:

CHECKED BY:

REVISION:

SUBMITTED BY:

ENGR. LEO S. DEL ROSARIO
HEAD, PLANNING & PROGRAMMING DIVISION

RECOMMENDING APPROVAL:

ENGR. ISIDORO R. VERZOSA, JR.
CITY ENGINEERING DEPARTMENT

APPROVED BY:

HON. MA. JOSEFINA G. BELMONTE
CITY MAYOR, QUEZON CITY

SHEET CONTENTS:

SCHEDULE OF LOADS 5 OF 8

SHEET NO.

E-08

POWER AIR CONDITIONING UNIT (PACU) : GROUND FLOOR AND SECOND FLOOR

CKT. NO.	LOAD DESCRIPTION	VOLTS	VA	AMPERE			AT	SIZE OF	
				AB	CA	BC		WIRES	CONDUITS
1	1-2Hp A.C.U. OUTLET	220	2760	12.55			30	3-3.5mm ² THHN CU & GRND WIRE	IN 20mm ³ PVC PIPE
2	1-2Hp A.C.U. OUTLET	220	2760	12.55			30	3-3.5mm ² THHN CU & GRND WIRE	IN 20mm ³ PVC PIPE
3	1-2Hp A.C.U. OUTLET	220	2760		12.55		30	3-3.5mm ² THHN CU & GRND WIRE	IN 20mm ³ PVC PIPE
4	1-2Hp A.C.U. OUTLET	220	2760		12.55		30	3-3.5mm ² THHN CU & GRND WIRE	IN 20mm ³ PVC PIPE
5	1-2Hp A.C.U. OUTLET	220	2760			12.55	30	3-3.5mm ² THHN CU & GRND WIRE	IN 20mm ³ PVC PIPE
6	1-2Hp A.C.U. OUTLET	220	2760			12.55	30	3-3.5mm ² THHN CU & GRND WIRE	IN 20mm ³ PVC PIPE
7	1-2Hp A.C.U. OUTLET	220	2760	12.55			30	3-3.5mm ² THHN CU & GRND WIRE	IN 20mm ³ PVC PIPE
8	1-2Hp A.C.U. OUTLET	220	2760	12.55			30	3-3.5mm ² THHN CU & GRND WIRE	IN 20mm ³ PVC PIPE
9	1-2Hp A.C.U. OUTLET	220	2760		12.55		30	3-3.5mm ² THHN CU & GRND WIRE	IN 20mm ³ PVC PIPE
10	1-2Hp A.C.U. OUTLET	220	2760		12.55		30	3-3.5mm ² THHN CU & GRND WIRE	IN 20mm ³ PVC PIPE
11	1-2Hp A.C.U. OUTLET	220	2760			12.55	30	3-3.5mm ² THHN CU & GRND WIRE	IN 20mm ³ PVC PIPE
12	1-2Hp A.C.U. OUTLET	220	2760			12.55	30	3-3.5mm ² THHN CU & GRND WIRE	IN 20mm ³ PVC PIPE
13	1-TR A.C.U. OUTLET	220	2760	8.36			30	3-3.5mm ² THHN CU & GRND WIRE	IN 20mm ³ PVC PIPE
14	SPARE	220	1840				30	EMPTY	EMPTY
TOTAL				37.220	58.56	50.20	50.20		

COMPUTATION :

$$IT = (58.56 \text{ AMPERES} \times 1.732) + (25\% \times 12.55)$$

$$= 104.57 \text{ AMPERES}$$

OVER CURRENT PROTECTION

USE : 125AT/200AF, 3P, 22kAIC, 230V, 60Hz, TMCB IN NEMA 1R ENCLOSURE

MAIN FEEDER LINE

USE : 3 - 38.0 mm² THHN CU WIRE & 1-22.0mm² TW GROUND WIRE
IN 40mm³ (1-1/2"Ø) IMC PIPE / Y38

LIGHTING PANEL B (LP-B) : SECOND FLOOR

CKT. NO.	LOAD DESCRIPTION	VOLTS	VA	AMPERE			AT	SIZE OF	
				AB	CA	BC		WIRES	CONDUITS
1	8-LIGHTING OUTLETS	220	900	4.10			20	3-3.5mm ² THHN CU & GRND WIRE	IN 20mm ³ PVC PIPE
2	12-L.O. & 3-CEILING FANS	220	1660	7.55			20	3-3.5mm ² THHN CU & GRND WIRE	IN 20mm ³ PVC PIPE
3	8-LIGHTING OUTLETS	220	1400		6.36		20	3-3.5mm ² THHN CU & GRND WIRE	IN 20mm ³ PVC PIPE
4	9-LIGHTING OUTLETS	220	1160		5.27		20	3-3.5mm ² THHN CU & GRND WIRE	IN 20mm ³ PVC PIPE
5	8-L.O. & 2-CEILING FANS	220	1360			6.18	20	3-3.5mm ² THHN CU & GRND WIRE	IN 20mm ³ PVC PIPE
6	8-L.O. & 2-CEILING FANS	220	1940			8.82	20	3-3.5mm ² THHN CU & GRND WIRE	IN 20mm ³ PVC PIPE
7	8-L.O. & 2-CEILING FANS	220	1160	5.27			20	3-3.5mm ² THHN CU & GRND WIRE	IN 20mm ³ PVC PIPE
8	10-L.O. & 2-CEILING FANS	220	1160	5.27			20	3-3.5mm ² THHN CU & GRND WIRE	IN 20mm ³ PVC PIPE
9	15-LIGHTING OUTLETS	220	1208		5.49		20	3-3.5mm ² THHN CU & GRND WIRE	IN 20mm ³ PVC PIPE
10	8-L.O. & 2-CEILING FANS	220	1160		5.27		20	3-3.5mm ² THHN CU & GRND WIRE	IN 20mm ³ PVC PIPE
11	12-LIGHTING OUTLETS	220	1160			5.27	20	3-3.5mm ² THHN CU & GRND WIRE	IN 20mm ³ PVC PIPE
12	SPARE	220						EMPTY	EMPTY
13	SPARE	220						EMPTY	EMPTY
14	SPARE	220						EMPTY	EMPTY
TOTAL				14.268	22.19	22.39	20.27		

COMPUTATION :

$$IT = 22.39 \text{ AMPERES} \times 1.732$$

$$= 38.78 \text{ AMPERES}$$

OVER CURRENT PROTECTION

USE : 60AT/100AF, 3P, 18kAIC, 230V, 60Hz, TMCB IN NEMA 1R ENCLOSURE

MAIN FEEDER LINE

USE : 3 - 14.0 mm² THHN WIRE & 1-8.0mm² TW GROUND WIRE
IN 25mm³ (3/4"Ø) IMC PIPE / Y14

POWER PANEL A (PP-A) : GROUND FLOOR

CKT. NO.	LOAD DESCRIPTION	VOLTS	VA	AMPERE			AT	SIZE OF	
				AB	CA	BC		WIRES	CONDUITS
1	8-C.O. & 2-EMERGENCY LIGHTS	220	1800	8.18			20	3-3.5mm ² THHN CU & GRND WIRE	IN 20mm ³ PVC PIPE
2	6-C.O. & 1-EMERGENCY LIGHTS	220	1260	5.73			20	3-3.5mm ² THHN CU & GRND WIRE	IN 20mm ³ PVC PIPE
3	MANUAL FIRE ALARM	220	1500		8.82		20	3-3.5mm ² THHN CU & GRND WIRE	IN 20mm ³ PVC PIPE
4	5-C.O. & 1-EMERGENCY LIGHT & 1-EXIT LIGHT	220	1260		5.73		20	3-3.5mm ² THHN CU & GRND WIRE	IN 20mm ³ PVC PIPE
5	7-C.O. & 2-EMERGENCY LIGHTS	220	1620			7.38	20	3-3.5mm ² THHN CU & GRND WIRE	IN 20mm ³ PVC PIPE
6	13-DUPLEX CONVENIENCE OUTLETS	220	2340			10.64	20	3-3.5mm ² THHN CU & GRND WIRE	IN 20mm ³ PVC PIPE
7	10-C.O. & 1-EMERGENCY LIGHT & 1-EXIT LIGHT	220	2160	9.82			20	3-3.5mm ² THHN CU & GRND WIRE	IN 20mm ³ PVC PIPE
8	10-C.O. & 3-EMERGENCY LIGHTS	220	2340	10.64			20	3-3.5mm ² THHN CU & GRND WIRE	IN 20mm ³ PVC PIPE
9	8-C.O. & 2-EMERGENCY LIGHT & 1-EXIT LIGHT	220	1560		9.00		20	3-3.5mm ² THHN CU & GRND WIRE	IN 20mm ³ PVC PIPE
10	SPARE	220						EMPTY	EMPTY
TOTAL				16.260	34.37	21.55	18.00		

COMPUTATION :

$$IT = 34.37 \text{ AMPERES} \times 1.732$$

$$= 59.53 \text{ AMPERES}$$

OVER CURRENT PROTECTION

USE : 60AT/100AF, 3P, 18kAIC, 230V, 60Hz, TMCB IN NEMA 1R ENCLOSURE

MAIN FEEDER LINE

USE : 3 - 14.0 mm² THHN CU WIRE & 1-8.0mm² TW GROUND WIRE
IN 25mm³ (3/4"Ø) IMC PIPE / Y14

POWER PANEL B (PP-B) : SECOND FLOOR

CKT. NO.	LOAD DESCRIPTION	VOLTS	VA	AMPERE			AT	SIZE OF	
				AB	CA	BC		WIRES	CONDUITS
1	4-C.O. & 1-EMERGENCY LIGHT & 1-EXIT LIGHT	220	1080	4.91			20	3-3.5mm ² THHN CU & GRND WIRE	IN 20mm ³ PVC PIPE
2	7-C.O. & 1-EMERGENCY LIGHTS	220	1440	7.29			20	3-3.5mm ² THHN CU & GRND WIRE	IN 20mm ³ PVC PIPE
3	10-C.O. & 2-EMERGENCY LIGHT & 1-EXIT LIGHT	220	2340		10.64		20	3-3.5mm ² THHN CU & GRND WIRE	IN 20mm ³ PVC PIPE
4	11-DUPLEX CONVENIENCE OUTLETS	220	1980		9.00		20	3-3.5mm ² THHN CU & GRND WIRE	IN 20mm ³ PVC PIPE
5	8-C.O. & 2-EMERGENCY LIGHTS	220	1800			8.18	20	3-3.5mm ² THHN CU & GRND WIRE	IN 20mm ³ PVC PIPE
6	9-DUPLEX CONVENIENCE OUTLETS	220	1620			7.36	20	3-3.5mm ² THHN CU & GRND WIRE	IN 20mm ³ PVC PIPE
7	8-C.O. & 1-EXIT LIGHTS	220	1620	7.36			20	3-3.5mm ² THHN CU & GRND WIRE	IN 20mm ³ PVC PIPE
8	9-C.O. & 2-EMERGENCY LIGHT & 1-EXIT LIGHT	220	2160	9.82			20	3-3.5mm ² THHN CU & GRND WIRE	IN 20mm ³ PVC PIPE
9	PP COMPUTER LABORATORY	220	14,880	21.25	25.10	21.28	70	3-22.0mm ² THHN CU & GRND WIRE	IN 25mm ³ PVC PIPE
10	SPARE	220						EMPTY	EMPTY
TOTAL				28.920	50.57	40.92	40.64		

COMPUTATION :

$$IT = 50.57 \text{ AMPERES} \times 1.732$$

$$= 87.59 \text{ AMPERES}$$

OVER CURRENT PROTECTION

USE : 100AT/100AF, 3P, 18kAIC, 230V, 60Hz, TMCB IN NEMA 1R ENCLOSURE

MAIN FEEDER LINE

USE : 3 - 30.0 mm² THHN CU WIRE & 1-22.0mm² TW GROUND WIRE
IN 40mm³ IMC (1-1/2"Ø) PIPE / Y30

SCHEDULE OF LOADS 6 OF 8

SCALE: NTS



Republika ng Pilipinas
Lungsod ng Quezon
CITY ENGINEERING DEPARTMENT

PROJECT TITLE

PROPOSED UPGRADING OF MAIN
ELECTRICAL SERVICE ENTRANCE OF
SAN AGUSTIN ELEMENTARY SCHOOL

LOCATION

BARANGAY SAN AGUSTIN DISTRICT 5, QUEZON CITY

DRAWN BY

DATE

CHECKED BY

REVIEWED BY

SUBMITTED BY

DATE

CHECKED BY

REVIEWED BY

RECOMMENDING APPROVAL

DATE

CHECKED BY

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RECOMMENDING APPROVAL

20-00045

MAIN DISTRIBUTION PANEL (MDP) - NEW HB BUILDING

CKT. NO.	LOAD DESCRIPTION	VOLTS	VA	AMPERE			AT	SIZE OF WIRES & CONDUIT
				AB	CA	BC		
1	LPA(GROUND FLOOR)	220	12,741	40.35	51.01	30.88	30	1/2"
2	PPM(GROUND FLOOR)	220	16,260	34.37	21.55	18.00	20	1/4"
3	LPB(SECOND FLOOR)	220	14,255	25.19	29.39	20.27	20	1/4"
4	PEB(SECOND FLOOR)	220	28,920	50.57	40.92	40.64	20	3/8"
5	LPC(THIRD FLOOR)	220	14,522	22.54	20.27	22.39	20	1/4"
6	PPC(THIRD FLOOR)	220	14,540	23.73	27.00	17.18	20	1/4"
7	LPC(FOURTH FLOOR)	220	14,635	21.08	20.27	22.39	20	1/4"
8	PPC(FOURTH FLOOR)	220	14,940	23.73	27.00	17.18	30	1/4"
9	PACU(GRD FLOOR AND SECOND FLOOR)	220	37,720	58.56	50.20	50.20	30	3/8"
10	1-Hp BOOSTER PUMP	220	2,640		12		30	3/8"
11	SPARE	220					30	
12	SPARE	220					30	
TOTAL			181,592	302.73	273.61	239.24		

COMPUTATION :

$$IT = (302.73 \text{ AMPERES} \times 1.732)$$

$$= 524.34 \text{ AMPERES}$$

APPLYING 75% D.F. :

$$= 524.34 \text{ AMPERES} \times 0.75 \text{ D.F.} = 393.28 \text{ AMPERES}$$

OVER CURRENT PROTECTION

USE : 400AT/1000AF, 3P, 85kAIC, 230V, 60Hz, MCCB IN NEMA 5R ENCLOSURE

MAIN FEEDER LINE

USE : 3 - 250.0 mm² THHN WIRE & 1-50.0mm² TW GROUND WIRE
IN 80mm \varnothing (3" \varnothing) IMC PIPE / Y250

FEEDER LINE 1 / F1

FEED FROM: MAIN DISTRIBUTION PANEL @ SERVICE ENTRANCE

CKT. NO.	LOAD DESCRIPTION	VOLTS	VA	AMPERES			AT	SIZE OF WIRES & CONDUITS
				AB	CA	BC		
1	DEPED A	230	29,200	87.83			125	2-38.0mm ² THHN COPPER WIRE IN 32mm \varnothing RSC PIPE 1-14.0mm ² TW GROUND WIRE
2	DEPED B	230	23,920	104.0			150	2-50.0mm ² THHN COPPER WIRE IN 40mm \varnothing RSC PIPE 1-14.0mm ² TW GROUND WIRE
3	DEPED C (VARGAS BUILDING)	230	32,600		141.73		150	2-50.0mm ² THHN COPPER WIRE IN 40mm \varnothing RSC PIPE 1-14.0mm ² TW GROUND WIRE
4	BELMONTE BUILDING	230	35,520		154.44		200	2-80.0mm ² THHN COPPER WIRE IN 50mm \varnothing RSC PIPE 1-22.0mm ² TW GROUND WIRE
5	DEPED D (VARGAS BUILDING)	230	27,600			120.0	125	2-38.0mm ² THHN COPPER WIRE IN 32mm \varnothing RSC PIPE 1-14.0mm ² TW GROUND WIRE
6	DPWH BUILDING	230	23,520			102.26	125	2-38.0mm ² THHN COPPER WIRE IN 32mm \varnothing RSC PIPE 1-14.0mm ² TW GROUND WIRE
7	NEW DPWH BUILDING	230	23,863	103.77			150	2-38.0mm ² THHN COPPER WIRE IN 32mm \varnothing IMC PIPE 1-14.0mm ² TW GROUND WIRE
8	SPARE	230	-	-	-	-	-	-
9	OLD LIBAN BUILDING	230	15,960			69.40	100	2-14.0mm ² THHN COPPER WIRE IN 25mm \varnothing PVC PIPE 1-8.0mm ² TW GROUND WIRE
10	COVERED COURT & STAGE	230	3,960			17.21	60	
TOTAL			206,947	295.59	296.17	308.87		

COMPUTATION :

$$IT = 308.87(1.732)$$

$$= 534.96 \text{ AMP} \times (0.80 \text{ DF})$$

$$IT = 427.98 \text{ AMPERES}$$

OVER CURRENT PROTECTION

USE : 500AT, 800AF, 3P, 240V, 60Hz, MCCB, BOLT-ON TYPE

MAIN FEEDER LINE

USE : 1 Set of 3 - 250mm² THHN WIRE & 1-50mm² TW GROUND WIRE
in 80mm \varnothing IMC PIPEUSE : 3 - 250mm² THHN WIRE IN FREE AIR

MAIN DISTRIBUTION PANEL

FEED FROM: SERVICE ENTRANCE

CKT. NO.	LOAD DESCRIPTION	VOLTS	VA	AMPERES			AT	SIZE OF WIRES & CONDUITS
				AB	CA	BC		
1	FEEDER LINE 1	230	206,947	294.72	296.17	308.87	450	3-250mm ² THHN COPPER WIRE IN FREE AIR
2	FEEDER LINE 2	230	181,592	302.73	273.61	239.24	400	3-250mm ² THHN COPPER WIRE IN FREE AIR
3								
TOTAL			388,539	597.45	569.78	548.11		

COMPUTATION :

$$IT = (597.45 + (12.55 \times 25\%))(1.732)$$

$$= 1,040.25 \text{ AMP} \times 0.90 \text{ DF}$$

$$IT = 936.22 \text{ AMPERES}$$

OVER CURRENT PROTECTION

USE : 1000AT, 3P, 240V, 60Hz, MCCB IN NEMA 5R ENCLOSURE

MAIN FEEDER LINE

USE : 3 Sets of 3 - 200 mm² THHN WIRE & 1-50mm² TW GROUND WIRE
in 80mm \varnothing IMC PIPE

FEEDER LINE 2 / F2

FEED FROM: MAIN DISTRIBUTION PANEL @ SERVICE ENTRANCE

CKT. NO.	LOAD DESCRIPTION	VOLTS	VA	AMPERES			AT	SIZE OF WIRES & CONDUITS
				AB	CA	BC		
1	NEW HB BUILDING	230	181,592	302.73	273.61	239.24	400	3-250mm ² THHN COPPER WIRE IN 80mm \varnothing IMC PIPE 1-50mm ² TW GROUND WIRE
TOTAL			181,592	302.73	273.61	239.24		

COMPUTATION :

$$IT = (302.73 + (12.55 \times 25\%))(1.732)$$

$$= 308.16 \text{ AMPERES}$$

OVER CURRENT PROTECTION

USE : 400AT, 800AF, 3P, 240V, 60Hz, MCCB, BOLT-ON TYPE

MAIN FEEDER LINE

USE : 1 Set of 3 - 250 mm² THHN WIRE & 1-50 mm² TW GROUND WIRE
in 80mm \varnothing IMC PIPEUSE : 3 - 250.0 mm² THWN WIRE IN FREE AIR

SCHEDULE OF LOADS 8 OF 8

SCALE: NTS



Republika ng Pilipinas
Lungsod ng Quezon
CITY ENGINEERING DEPARTMENT

PROJECT TITLE

PROPOSED UPGRADING OF MAIN
ELECTRICAL SERVICE ENTRANCE OF
SAN AGUSTIN ELEMENTARY SCHOOL

LOCATION

BARANGAY SAN AGUSTIN DISTRICT 5, QUEZON CITY

DRAWN BY

DATE

CHECKED BY

REVISION

SUBMITTED BY

DATE

CHECKED BY

REVISION

RECOMMENDING APPROVAL

DATE

CHECKED BY

REVISION

APPROVED BY

DATE

CHECKED BY

REVISION

HON. MA. JOSEFINA G. BELMONTE

CITY MAYOR, QUEZON CITY

DATE

REVISION

SHEET CONTENTS:

SCHEDULE OF LOADS 8 OF 8

SHEET NO.

E-11

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.

BILL OF QUANTITIES

(Building Construction/Rehabilitation Project)

PROJECT TITLE : PROPOSED UPGRADING OF MAIN ELECTRICAL SERVICE ENTRANCE OF SAN AGUSTIN ELEMENTARY SCHOOL

LOCATION : BRGY. SAN AGUSTIN, DISTRICT 5, QUEZON CITY

PROJECT NO. 20 - 00045

DURATION : One Hundred Fifty (150) calendar days

Scope of Works :

- 1 Upgrading and remodeling of main electrical service entrance.
- 2 Installation of main protection circuit breaker
- 3 Wiring and installation of electrical feederline
- 4 Construction of one (1) unit concrete metering pole
- 5 Construction of fifteen (15) units concrete distribution pole
- 6 Recondition and straighten of existing wire (2-100 mm² THHN wire) at the back of Deped bldg. A, Deped Bldg. B, and new construction DPWH Bldg,
- 7 Certification of Insulation Resistance Test

ITEM NO.	WORK DESCRIPTION AND SCOPE OF WORKS	UNIT	QTY	UNIT COST	TOTAL CPOST
A.	GENERAL REQUIREMENTS				
	Temporary lighting & water facilities	days	150	P	P
	Steel Barricade with Caution tape (rental)	each	4		
	Billboard	pc	1		
	Construction Safety and Health				
	Safety Helmet	pcs	16		
	Safety Shoes	pcs	16		
	Safety Gloves	pcs	13		
	Vest	pcs	13		
	Face Mask	pcs	16		
	Harness	pcs	3		
	Goggles	pcs	13		
	Direct Cost A				P

ITEM NO.	WORK DESCRIPTION AND SCOPE OF WORKS	UNIT	QTY	UNIT COST	TOTAL COST
B.	INSTALLATION OF ELECTRICAL SYSTEM				
I.	Roughing-ins				
	3 "Ø Entrance Cap Diecast "US"	sets	5		
	1 1/2 " Ø Entrance Cap Diecast "US"	sets	2		
	1 1/4 " Ø Entrance Cap Diecast "US"	sets	5		
	1 "Ø Entrance Cap Diecast "US"	sets	2		
	3 "Ø x 10' IMC Pipe	pcs	5		
	1 "Ø x 10' IMC Pipe	pcs	1		
	1 1/2 "Ø x 10' PVC Pipe	pcs	12		
	1 1/4 "Ø x 10' PVC Pipe	pcs	30		
	1 "Ø x 10' PVC Pipe	pcs	12		
	3 "Ø Locknut and Bushing US	pairs	8		
	1 1/2 "Ø Locknut and Bushing US	pairs	6		
	1 1/4 "Ø Locknut and Bushing US	pairs	12		
	1 "Ø Locknut and Bushing US	pairs	6		
	1 1/2 "Ø PVC Long Elbow	pcs	8		
	1 1/4 "Ø PVC Long Elbow	pcs	20		
	1 "Ø PVC Long Elbow	pcs	8		
	1 1/2 "Ø PVC Adapter	pcs	6		
	1 1/4 "Ø PVC Adapter	pcs	12		
	1 "Ø PVC Adapter	pcs	6		
	3 " Ø x 3/8" Ø U-Bolt with nut and washer	pairs	20		
	1 1/2 "Ø Malleable iron clamp	pcs	20		
	1 1/4 "Ø Malleable iron clamp	pcs	50		
	1 "Ø Malleable iron clamp	pcs	20		
	5/8 " x 10" oval eye bolt with nut	pair	1		
	5/8 Ø" 8' grounding rod with clamp	pair	1		
	500 Mcm Solderless Connector with two bolt	pcs	26		
	100 mm Ø Solderless Connector with two bolt	pcs	10		
	50 mm2 Ø Solderless Connector	pcs	4		
	38 mm2 Ø Solderless Connector	pcs	8		
	30 mm2 Ø Solderless Connector	pcs	4		
	14 mm2 Ø Solderless Connector	pcs	4		
	Secondary rack with 2 spool heavtduty beta	sets	24		
	Secondary rack with 3 spool heavtduty beta	sets	16		
	5/8" Ø x 1/2" Ø x 3" Expansion shield with lug screw with washer	pairs	72		
	3/4" Ø x 5/8" Ø x 3" Expansion shield with lug screw with washer	pairs	32		

ITEM NO.	WORK DESCRIPTION AND SCOPE OF WORKS	UNIT	QTY	UNIT COST	TOTAL COST
II.	Wires & Cable				
	250 mm2 THWN wire	mtrs	1,250		
	200 mm2 THHN wire	mtrs	90		
	50 mm2 THHN wire	mtrs	80		
	38 mm2 THHN wire	mtrs	100		
	30 mm2 THHN wire	mtrs	80		
	14 mm2 THHN wire	mtrs	70		
	8.0 mm2 THHN wire	rolls	1		
	3.5 mm2 THHN wire	rolls	4		
III.	Panelboard				
	1 set - Moulded Case Circuit Breaker: 1000 AT, 3P, 230 V, 60Hz with 2 Branches: 1 set -400 AT, MCCB, 3P, 230 V, 60Hz	assy	1		P
	1 set -500 AT, MCCB, 3P, 230 V, 60Hz with Ground Terminal, Weatherproof type, "NEMA 3R" Enclosure				
IV.	Miscellaneous & Consumables				
	Electrical Tape	pcs	40		
	Rubber Tape	pcs	20		
	Masking tape	pcs	2		
	Hacksaw w/blade	kg	2		
	Torch w/ butane	pc	2		
	Vulcaseal	qrt	1		
	Pvc Solvent	qrt	1		
	Materials Cost				P
	Labor Cost				
	Direct Cost B				P
C.	CIVIL WORKS				
I.	Concrete Metering Pole one (1) unit and Concrete Distribution Pole (15) units				
	Cement	bags	265		
	Sand	cum	25		
	Gravel	cum	48		
	Assorted RSB	kgs	2,804		
	Assorted CWH	kgs	60		
	GI tie wire Gu 16	kgs	65		
	2" x 4" x 12' Form Lumber	bd.ft	2,000		
	1/2" x 4' x 8' Form Plywood	pcs	20		
	Materials Cost				P
	Labor Cost				

ITEM NO.	WORK DESCRIPTION AND SCOPE OF WORKS	UNIT	QTY	UNIT COST	TOTAL CPOST
II.	Excavation	cum	5		
	Direct Cost C				P
D.	RECONDITION & STRAIGHTEN OF EXISTING WIRE				
	Recondition and Straighten of Existing Wire at the back of Deped Bldg A, Deped Bldg B, and New DPWH Bldg.	lot	1		
	Direct Cost D				P
E.	INSULATION RESISTANCE TEST				
	Certification of Insulation Resistance Test	lot	1		
	Direct Cost E				P
<div>TOTAL DIRECT COST P</div> <div>OCM</div> <div>Profit</div> <div>VAT</div> <div>TOTAL PROJECT COST P</div>					

SUMMARY

A.	GENERAL REQUIREMENT	P
B.	INSTALLATION OF ELECTRICAL SYSTEM	
C.	CIVIL WORKS	
D.	RECONDITION & STRAIGHTEN OF EXISTING WIRE	
E.	INSULATION RESISTANCE TEST	
	TOTAL DIRECT COST	P
	OCM	
	Profit	
	VAT	
	TOTAL PROJECT COST	P

Name of Project

: PROPOSED UPGRADING OF MAIN ELECTRICAL SERVICE ENTRANCE OF SAN AGUSTIN
ELEMENTARY SCHOOL

Location

: ASECION AVE., BARANGAY GREATER LAGRO, DISTRICT 5, QUEZON CITY

Project No.

: 20 - 00045

Duration

: One Hundred Fifty (150) calendar days

BREAKDOWN OF COST

Item of Work (Description)		MATERIALS COST	LABOR COST	INDIRECT COST	AGGREGATE COST
A.	GENERAL REQUIREMENTS				
B.	INSTALLATION OF ELECTRICAL SYSTEM				
C.	CIVIL WORKS				
D.	RECONDITION & STRAIGHTEN OF EXISTING WIRE				
E.	INSULATION RESISTANCE TEST				

TOTAL P

TOTAL LUMP SUM IN WORDS

:

Contractor

:

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.

Bid Form

Date: _____

IB¹ N°: _____

To: *[name and address of PROCURING ENTITY]*

Address: *[insert address]*

We, the undersigned, declare that:

- (a) We have examined and have no reservation to the Bidding Documents, including Addenda, for the Contract *[insert name of contract]*;
- (b) We offer to execute the Works for this Contract in accordance with the Bid and Bid Data Sheet, General and Special Conditions of Contract accompanying this Bid;

The total price of our Bid, excluding any discounts offered below is: *[insert information]*;

The discounts offered and the methodology for their application are: *[insert information]*;

- (c) Our Bid shall be valid for a period of *[insert number]* days from the date fixed for the Bid submission deadline in accordance with the Bidding Documents, and it shall remain binding upon us and may be accepted at any time before the expiration of that period;
- (d) If our Bid is accepted, we commit to obtain a Performance Security in the amount of *[insert percentage amount]* percent of the Contract Price for the due performance of the Contract;
- (e) Our firm, including any subcontractors or suppliers for any part of the Contract, have nationalities from the following eligible countries: *[insert information]*;
- (f) We are not participating, as Bidders, in more than one Bid in this bidding process, other than alternative offers in accordance with the Bidding Documents;
- (g) Our firm, its affiliates or subsidiaries, including any subcontractors or suppliers for any part of the Contract, has not been declared ineligible by the Funding Source;
- (h) We understand that this Bid, together with your written acceptance thereof included in your notification of award, shall constitute a binding contract between us, until a formal Contract is prepared and executed; and

¹ If ADB, JICA and WB funded projects, use IFB.

- (i) We understand that you are not bound to accept the Lowest Calculated Bid or any other Bid that you may receive.
- (j) We likewise certify/confirm that the undersigned, is the duly authorized representative of the bidder, and granted full power and authority to do, execute and perform any and all acts necessary to participate, submit the bid, and to sign and execute the ensuing contract for the [Name of Project] of the [Name of the Procuring Entity].
- (k) We acknowledge that failure to sign each and every page of this Bid Form, including the Bill of Quantities, shall be a ground for the rejection of our bid.

Name: _____

In the capacity of: _____

Signed: _____

Duly authorized to sign the Bid for and on behalf of: _____

Date: _____

Form of Contract Agreement

THIS AGREEMENT, made this *[insert date]* day of *[insert month]*, *[insert year]* between *[name and address of PROCURING ENTITY]* (hereinafter called the “Entity”) and *[name and address of Contractor]* (hereinafter called the “Contractor”).

WHEREAS, the Entity is desirous that the Contractor execute *[name and identification number of contract]* (hereinafter called “the Works”) and the Entity has accepted the Bid for *[insert the amount in specified currency in numbers and words]* by the Contractor for the execution and completion of such Works and the remedying of any defects therein.

NOW THIS AGREEMENT WITNESSETH AS FOLLOWS:

1. In this Agreement, words and expressions shall have the same meanings as are respectively assigned to them in the Conditions of Contract hereinafter referred to.
2. The following documents shall be attached, deemed to form, and be read and construed as integral part of this Agreement, to wit:
 - (a) General and Special Conditions of Contract;
 - (b) Drawings/Plans;
 - (c) Specifications;
 - (d) Invitation to Bid;
 - (e) Instructions to Bidders;
 - (f) Bid Data Sheet;
 - (g) Addenda and/or Supplemental/Bid Bulletins, if any;
 - (h) Bid form, including all the documents/statements contained in the Bidder’s bidding envelopes, as annexes, and all other documents submitted (e.g., Bidder’s response to request for clarifications on the bid), including corrections to the bid, if any, resulting from the Procuring Entity’s bid evaluation;
 - (i) Eligibility requirements, documents and/or statements;
 - (j) Performance Security;
 - (k) Notice of Award of Contract and the Bidder’s conforme thereto;
 - (l) Other contract documents that may be required by existing laws and/or the Entity.
3. In consideration of the payments to be made by the Entity to the Contractor as hereinafter mentioned, the Contractor hereby covenants with the Entity to execute and complete the Works and remedy any defects therein in conformity with the provisions of this Contract in all respects.

4. The Entity hereby covenants to pay the Contractor in consideration of the execution and completion of the Works and the remedying of defects wherein, the Contract Price or such other sum as may become payable under the provisions of this Contract at the times and in the manner prescribed by this Contract.

IN WITNESS whereof the parties thereto have caused this Agreement to be executed the day and year first before written.

Signed, sealed, delivered by _____ the _____ (for the Entity)

Signed, sealed, delivered by _____ the _____ (for the Contractor).

Binding Signature of Procuring Entity

Binding Signature of Contractor

[Addendum showing the corrections, if any, made during the Bid evaluation should be attached with this agreement]

Omnibus Sworn Statement

REPUBLIC OF THE PHILIPPINES)
CITY/MUNICIPALITY OF _____) S.S.

AFFIDAVIT

I, *[Name of Affiant]*, of legal age, *[Civil Status]*, *[Nationality]*, and residing at *[Address of Affiant]*, after having been duly sworn in accordance with law, do hereby depose and state that:

1. *Select one, delete the other:*

If a sole proprietorship: I am the sole proprietor or authorized representative of *[Name of Bidder]* with office address at *[address of Bidder]*;

If a partnership, corporation, cooperative, or joint venture: I am the duly authorized and designated representative of *[Name of Bidder]* with office address at *[address of Bidder]*;

2. *Select one, delete the other:*

If a sole proprietorship: As the owner and sole proprietor or authorized representative of *[Name of Bidder]*, I have full power and authority to do, execute and perform any and all acts necessary to participate, submit the bid, and to sign and execute the ensuing contract for *[Name of the Project]* of the *[Name of the Procuring Entity]* *[insert "as shown in the attached duly notarized Special Power of Attorney" for the authorized representative]*;

If a partnership, corporation, cooperative, or joint venture: I am granted full power and authority to do, execute and perform any and all acts necessary to participate, submit the bid, and to sign and execute the ensuing contract for *[Name of the Project]* of the *[Name of the Procuring Entity]*, accompanied by the duly notarized Special Power of Attorney, Board/Partnership Resolution, or Secretary's Certificate, whichever is applicable;

3. *[Name of Bidder]* is not "blacklisted" or barred from bidding by the Government of the Philippines or any of its agencies, offices, corporations, or Local Government Units, foreign government/foreign or international financing institution whose blacklisting rules have been recognized by the Government Procurement Policy Board;
4. Each of the documents submitted in satisfaction of the bidding requirements is an authentic copy of the original, complete, and all statements and information provided therein are true and correct;

5. *[Name of Bidder]* is authorizing the Head of the Procuring Entity or its duly authorized representative(s) to verify all the documents submitted;

6. ***Select one, delete the rest:***

If a sole proprietorship: The owner or sole proprietor is not related to the Head of the Procuring Entity, members of the Bids and Awards Committee (BAC), the Technical Working Group, and the BAC Secretariat, the head of the Project Management Office or the end-user unit, and the project consultants by consanguinity or affinity up to the third civil degree;

If a partnership or cooperative: None of the officers and members of *[Name of Bidder]* is related to the Head of the Procuring Entity, members of the Bids and Awards Committee (BAC), the Technical Working Group, and the BAC Secretariat, the head of the Project Management Office or the end-user unit, and the project consultants by consanguinity or affinity up to the third civil degree;

If a corporation or joint venture: None of the officers, directors, and controlling stockholders of *[Name of Bidder]* is related to the Head of the Procuring Entity, members of the Bids and Awards Committee (BAC), the Technical Working Group, and the BAC Secretariat, the head of the Project Management Office or the end-user unit, and the project consultants by consanguinity or affinity up to the third civil degree;

7. *[Name of Bidder]* complies with existing labor laws and standards; and
8. *[Name of Bidder]* is aware of and has undertaken the following responsibilities as a Bidder:
- a) Carefully examine all of the Bidding Documents;
 - b) Acknowledge all conditions, local or otherwise, affecting the implementation of the Contract;
 - c) Made an estimate of the facilities available and needed for the contract to be bid, if any; and
 - d) Inquire or secure Supplemental/Bid Bulletin(s) issued for the *[Name of the Project]*.
9. *[Name of Bidder]* did not give or pay directly or indirectly, any commission, amount, fee, or any form of consideration, pecuniary or otherwise, to any person or official, personnel or representative of the government in relation to any procurement project or activity.

IN WITNESS WHEREOF, I have hereunto set my hand this ____ day of ____, 20__ at _____, Philippines.

Bidder's Representative/Authorized Signatory

SUBSCRIBED AND SWORN to before me this ____ day of *[month]* *[year]* at *[place of execution]*, Philippines. Affiant/s is/are personally known to me and was/were identified by me through competent evidence of identity as defined in the 2004 Rules on Notarial Practice (A.M. No. 02-8-13-SC). Affiant/s exhibited to me his/her *[insert type of government identification card used]*, with his/her photograph and signature appearing thereon, with no. _____ and his/her Community Tax Certificate No. _____ issued on ____ at _____.

Witness my hand and seal this ____ day of *[month]* *[year]*.

NAME OF NOTARY PUBLIC

Serial No. of Commission _____

Notary Public for _____ until _____

Roll of Attorneys No. _____

PTR No. _____ *[date issued]*, *[place issued]*

IBP No. _____ *[date issued]*, *[place issued]*

Doc. No. _____

Page No. _____

Book No. _____

Series of _____

* This form will not apply for WB funded projects.

Bid-Securing Declaration

(REPUBLIC OF THE PHILIPPINES)

CITY OF _____) S.S.

X-----X

Invitation to Bid *[Insert reference number]*

To: *[Insert name and address of the Procuring Entity]*

I/We, the undersigned, declare that:

1. I/We understand that, according to your conditions, bids must be supported by a Bid Security, which may be in the form of a Bid-Securing Declaration.
2. I/We accept that: (a) I/we will be automatically disqualified from bidding for any contract with any procuring entity for a period of two (2) years upon receipt of your Blacklisting Order; and, (b) I/we will pay the applicable fine provided under Section 6 of the Guidelines on the Use of Bid Securing Declaration, within fifteen (15) days from receipt of written demand by the procuring entity for the commission of acts resulting to the enforcement of the bid securing declaration under Sections 23.1(b), 34.2, 40.1 and 69.1, except 69.1 (f), of the IRR of RA 9184; without prejudice to other legal action the government may undertake.
3. I/We understand that this Bid-Securing Declaration shall cease to be valid on the following circumstances:
 - a. Upon expiration of the bid validity period, or any extension thereof pursuant to your request;
 - b. I am/we are declared ineligible or post-disqualified upon receipt of your notice to such effect, and (i) I/we failed to timely file a request for reconsideration or (ii) I/we filed a waiver to avail of said right;
 - c. I am/we are declared as the bidder with the Lowest Calculated Responsive Bid, and I/we have furnished the performance security and signed the Contract.

IN WITNESS WHEREOF, I/We have hereunto set my/our hand/s this ____ day of *[month]* *[year]* at *[place of execution]*.

[Insert NAME OF BIDDER'S AUTHORIZED REPRESENTATIVE]
[Insert signatory's legal capacity]

Affiant

SUBSCRIBED AND SWORN to before me this ____ day of *[month]* *[year]* at *[place of execution]*, Philippines. Affiant/s is/are personally known to me and was/were identified by me through competent evidence of identity as defined in the 2004 Rules on Notarial Practice (A.M. No. 02-8-13-SC). Affiant/s exhibited to me his/her *[insert type of government identification card used]*, with his/her photograph and signature appearing thereon, with no. _____.

Witness my hand and seal this ____ day of *[month]* *[year]*.

NAME OF NOTARY PUBLIC

Serial No. of Commission _____
Notary Public for _____ **until** _____
Roll of Attorneys No. _____
PTR No. __, *[date issued]*, *[place issued]*
IBP No. __, *[date issued]*, *[place issued]*
Doc. No. ____
Page No. ____
Book No. ____
Series of ____.

REPUBLIC OF THE PHILIPPINES)

_____) S. S.

AFFIDAVIT OF UNDERTAKING

I, _____, of legal age, Filipino, _____ **[OFFICER OR REPRESENTATIVE]**

with office address at _____ after having been duly sworn to in accordance with law, hereby voluntary depose and state:

That I am duly authorized representative of the **[Name of Bidder]** to execute this undertaking as evidenced by Secretary's Certificate and Board Resolution.

That **[Name of Bidder]** bidding for the (Name of Project)

That relative to the aforementioned Project, the **[Name of Bidder]** hereby undertake that the equipment to be use and the key personnel to be assign shall exclusively be used and will only perform to the said project until its completion.

That I am executing this affidavit to attest to the truth of the foregoing and in compliance with the submission of the technical requirements for the public bidding of the said project.

IN WITNESS HEREOF, I have hereunto signed my name below this _____ day of _____, _____ at _____.

AFFIANT FURTHER SAYETH NAUGHT.

Affiant

SUBSCRIBED AND SWORN TO BEFORE ME this ____ day of _____, _____ in _____,

affiant exhibiting to me his/her _____ issued at _____ on _____.

Doc. No. ;
Page No. ;
Book No. ;
Series of 2020

Notary Public

