PHILIPPINE BIDDING DOCUMENTS

Procurement of INFRASTRUCTURE PROJECTS

Government of the Republic of the Philippines

PROPOSED UPGRADING OF ELECTRICAL SYSTEM AT PLACIDO DEL MUNDO ELEMENTARY SCHOOL IN BARANGAY TALIPAPA

Project number:
23-00195

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.

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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

December 06, 2023

Invitation to Bid

No.	Project No.	Project Name	Location	Amount	Duration Cal. Days	Office	Source Fund
Buildings – Small A							
1	23-0144B	Proposed Rehabilitation of Plumbing and Sanitary System at West Fairview High School	Fairview	759,392.35	30	Engineering Department	Special Education Fund
Buildings – Small B							
2	23-00182	Quezon City Hall Solar PV Rehabilitation and Restoration in Civic Center Building E	Central	1,366,103.61	30	Engineering Department	Green Fund
3	23-00183	Proposed Installation of Fire Exits and Rehabilitation of Roof Eaves / Canopy at Tandang Sora Elementary School	Tandang Sora	1,907,681.16	60	Engineering Department	Special Education Fund
4	23-00184	Proposed Construction of Perimeter Fence at Bago Bantay Elementary School	Ramon Magsaysay	2,457,519.94	60	Engineering Department	Special Education Fund
5	23-00185	Quezon City Hall Solar PV Rehabilitation and Restoration in Main Building and Legislative Building	Central	2,729,857.96	60	Engineering Department	Green Fund
6	23-00186	Proposed Upgrading of Electrical System at Balingasa Elementary School	Balingasa	3,885,013.26	60	Engineering Department	Special Education Fund
7	23-00187	Proposed Replacement of Doors and Windows at Damong Maliit Elementary School	Nagkaisang Nayon	4,304,801.11	60	Engineering Department	Special Education Fund
8	23-00188	Proposed Rehabilitation of Water Supply System and Comfort Rooms at Ernesto Rondon High School	Project 6	4,422,445.41	60	Engineering Department	Special Education Fund
9	23-00189	Proposed Upgrading of Electrical System at San Diego Elementary School	Batasan Hills	4,973,139.87	60	Engineering Department	Special Education Fund
10	23-00190	Quezon City Hall Solar PV Rehabilitation and Restoration in Treasury Building South	Central	5,120,598.15	90	Engineering Department	Green Fund
11	23-00191	Proposed Upgrading of Electrical System at Manuel Luis Quezon Elementary School	Commonwealth	6,362,598.21	30	Engineering Department	Special Education Fund
12	23-00192	Proposed Construction of Connecting Bridge and Rehabilitation of Flora Ylagan High School	Pinyahan	9,737,822.47	150	Engineering Department	Special Education Fund

13	23-00193	Proposed Rehabilitation of Drainage System at Ramon Magsaysay Cubao High School	Pinagkaisahan	10,743,676.64	60	Engineering Department	Special Education Fund
14	23-00194	Proposed Rehabilitation of Comfort Rooms at GSIS Village Elementary School	Sangandaan	11,223,072.07	150	Engineering Department	Special Education Fund
15	23-00195	Proposed Upgrading of Electrical System at Placido Del Mundo Elementary School	Talipapa	11,543,755.95	150	Engineering Department	Special Education Fund
16	23-00196	Proposed Rehabilitation of Electrical System at Judge Feliciano Belmonte Sr. High School	Holy Spirit	16,792,451.40	150	Engineering Department	Special Education Fund
17	23-00197	Proposed Installation of Street Lights at Various Street	Batasan Hills	18,179,005.62	60	Engineering Department	20% CDF – Continuing Appropriation
18	23-00198	Proposed Upgrading of Plumbing System and Rehabilitation of Comfort Rooms at San Antonio Elementary School	Katipunan	20,971,311.15	150	Engineering Department	Special Education Fund
Buildings – Medium A							
19	23-00199	Proposed Installation of Street Lights at Various Street	Holy Spirit	45,445,874.36	150	Engineering Department	20% CDF – Continuing Appropriation
20	23-00200	Proposed Installation of Street Lights on Various Barangays of Quezon City	District IV	53,845,231.88	120	Engineering Department	20% CDF – Continuing Appropriation
21	23-00201	Proposed Mechanical Retrofitting of Treasury Building Including Rehabilitation of Façade	Central	34,424,453.96	180	Engineering Department	Engineering-Continuing Appropriation

1. The **QUEZON CITY LOCAL GOVERNMENT**, through *funding source of various years* intends to apply the sum stated above being the Approved Budget for the Contract (ABC) to payments under the contract *for the above stated Projects.* Bids received in excess of the ABC shall be automatically rejected at bid opening.

2. The **QUEZON CITY LOCAL GOVERNMENT** now invites bids for the above Procurement Project. 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).

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

4. Interested bidders may obtain further information from **QUEZON CITY LOCAL GOVERNMENT – BAC Secretariat** and inspect the Bidding Documents at the address given below *weekdays from **8:00 am. – 5:00 p.m.***

5. A complete set of Bidding Documents may be acquired by interested bidders on **December 07, 2023 (Thursday)** from given address and website/s below *and upon payment of a non-refundable fee for the Bidding Documents, pursuant to the latest Guidelines issued by the*

GPPB. The Procuring Entity shall allow the bidder to present its proof of payment for the fees *presented in person.*

STANDARD RATES:

Approved Budget for the Contract	Maximum Cost of Bidding Documents (in Philippine Peso)
500,000 and below	500.00
More than 500,000 up to 1 Million	1,000.00
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
More than 50 Million up to 500 Million	50,000.00
More than 500 Million	75,000.00

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.

6. The ***QC- BAC- INFRASTRUCTURE & CONSULTANCY*** will hold a Pre-Bid Conference[1] on **December 15, 2023** at **10:00 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)** which shall be open to prospective bidders.

   Virtual Conference (ZOOM APP)
   Meeting ID: 854 9489 0133
   Password: 273320

7. Bids must be duly received by the BAC Secretariat through manual submission at the office address as indicated below, on or before **December 27, 2023 – 9:00 AM**. Late bids shall not be accepted.

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

9. Bid opening shall be on **December 27, 2023 – 10:00 AM** at **2nd Floor**, **Procurement Department-Bidding Room, Finance Building**, **Quezon City Hall Compound** and/or via Zoom. Bids will be opened in the presence of the bidders' representatives who choose to attend the activity.

   Virtual Conference (ZOOM APP)
   Meeting ID: 810 3646 5257
   Password: 201522

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

10. 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 Sections 35.6 and 41 of the 2016 revised Implementing Rules and Regulations (IRR) of RA No. 9184, without thereby incurring any liability to the affected bidder or bidders.

11. 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: bacinfra.procurement@quezoncity.gov.ph
Website: **www.quezoncity.gov.ph**

12. You may visit the following websites:

For downloading of Bidding Documents: **https://quezoncity.gov.ph/public-notices/procurement/**

By:

ATTY. SHERRY R. GONZALVO
Vice Chairperson, BAC Infra and Consultapncy

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, **Quezon City Government** invites Bids for the **PROPOSED UPGRADING OF ELECTRICAL SYSTEM AT PLACIDO DEL MUNDO ELEMENTARY SCHOOL IN BARANGAY TALIPAPA,** with Project Identification Number **23-00195.**

[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 **2023** in the amount of **Eleven Million Five Hundred Forty Three Thousand Seven Hundred Fifty-Five Pesos and 95/100 Ctvs. (P 11,543,755.95).**

2.2. The source of funding is:

a. 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:

a. 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 criterial 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 on **December 15, 2023, 10:00 A.M. at 2nd Floor, Procurement Department-Bidding Room, Finance Building, Quezon City Hall Compound** and/or we encourage the prospective bidders to join through our **Virtual Conference (ZOOM APP) Meeting ID: 854 9489 0133 Password: 273320**

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:*

a. Philippine Pesos.

15. Bid Security

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

15.2. The Bid and bid security **in no case shall exceed One Hundred Twenty (120) calendar days from the date of opening of bids, unless duly extended by the bidder upon the request of the Head of the Procuring Entity (HoPE) of the Quezon City Local Government**. 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 **5** of the **IB.**

18. Opening and Preliminary Examination of Bids

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

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

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

19. Detailed Evaluation and Comparison of Bids

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

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

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

20. Post Qualification

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

21. Signing of the Contract

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

Section III. Bid Data Sheet

Notes on the Bid Data Sheet (BDS)

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

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

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

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

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

Bid Data Sheet

<table>
<tr><th>ITB Clause</th><th></th></tr>
<tr><td>5.2</td><td>For this purpose, similar contracts shall refer to contracts which have the same major categories of work.</td></tr>
<tr><td>7.1</td><td>Subcontracting is not allowed.</td></tr>
<tr><td>10.3</td><td>No additional contractor license or permit is required

In addition, eligible bidders shall qualify or comply with the following:

1. Bidders with valid Philippine Contractors Accreditation Board (PCAB)

Type

Buildings – Small B</td></tr>
<tr><td>10.4</td><td>The minimum work experience requirements for key personnel are the following:

<table>
<tr><th>Qnty.</th><th>Key Personnel</th><th>General Experience</th><th>Relevant Experience</th></tr>
<tr><td>1</td><td>Project in Charge</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>1</td><td>Trade Engineer/Leadman for Civil Works</td><td>3 years</td><td>3 years</td></tr>
<tr><td>1</td><td>Trade Engineer/Leadman for Electrical Works</td><td>3 years</td><td>3 years</td></tr>
<tr><td>1</td><td>Safety Officer</td><td>3 years</td><td>3 years</td></tr>
<tr><td>1</td><td>DPWH duly accredited Materials Engineer</td><td>3 years</td><td>3 years</td></tr>
</table>

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.</td></tr>
<tr><td>10.5</td><td>The minimum major equipment requirements are the following:

<table>
<tr><th>Equipment</th><th>Capacity</th><th>Number of Units</th></tr>
<tr><td>Dump Truck</td><td>12 yd3</td><td>2</td></tr>
<tr><td>Payloader</td><td></td><td>1</td></tr>
<tr><td>Bulldozer</td><td></td><td>1</td></tr>
<tr><td>Backhoe</td><td>0.80 cu.m.</td><td>1</td></tr>
<tr><td>Backhoe w/ Breaker</td><td>0.80 cu.m.</td><td>1</td></tr>
<tr><td>Plate Compactor</td><td>5HP</td><td>1</td></tr>
<tr><td>One Bagger Mixer</td><td></td><td>1</td></tr>
<tr><td>Bar Cutter</td><td></td><td>1</td></tr>
<tr><td>Bar Bender</td><td></td><td>1</td></tr>
</table>
</td></tr>
</table>

	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.
12	*[Insert Value Engineering clause if allowed.]*
15.1	The bid security shall be in the form of a Bid Securing Declaration with project number, or any of the following forms and amounts: a) The amount of not less than Php 230,875.12 or equivalent to two percent (2%) of ABC if bid security is in cash, cashier's/manager's check, bank draft/guarantee or irrevocable letter of credit; or b) The amount of not less than Php 577,187.80 or equivalent to five percent (5%) of ABC if bid security is in Surety Bond.
19.2	**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.
20	No additional requirement.
21	**Additional Contract Documents relevant to the Project as required:** **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

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

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

4. The Contractor's Obligations

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

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

5. Performance Security

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

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

6. Site Investigation Reports

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

7. Warranty

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

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

8. Liability of the Contractor

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

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

9. Termination for Other Causes

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

10. Dayworks

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

11. Program of Work

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

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

12. Instructions, Inspections and Audits

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

13. Advance Payment

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

14. Progress Payments

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

15. Operating and Maintenance Manuals

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

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

Section V. Special Conditions of Contract

Notes on the Special Conditions of Contract

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

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

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

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

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

Special Conditions of Contract

GCC Clause	
2	Completion of work shall be within 150 calendar days.
4.1	The Procuring Entity shall give possession of all parts of the Site to the Contractor upon receipt of the Notice to Proceed.
6	The site investigation reports are: *[list here the required site investigation reports.]*
7.2	*[Select one, delete the other.]* *[In case of permanent structures, such as buildings of types 4 and 5 as classified under the National Building Code of the Philippines and other structures made of steel, iron, or concrete which comply with relevant structural codes (e.g., DPWH Standard Specifications), such as, but not limited to, steel/concrete bridges, flyovers, aircraft movement areas, ports, dams, tunnels, filtration and treatment plants, sewerage systems, power plants, transmission and communication towers, railway system, and other similar permanent structures:]* Fifteen (15) years. *[In case of semi-permanent structures, such as buildings of types 1, 2, and 3 as classified under the National Building Code of the Philippines, concrete/asphalt roads, concrete river control, drainage, irrigation lined canals, river landing, deep wells, rock causeway, pedestrian overpass, and other similar semi-permanent structures:]* Five (5) years. *[In case of other structures, such as bailey and wooden bridges, shallow wells, spring developments, and other similar structures:]* Two (2) years.
10	Dayworks are applicable at the rate shown in the Contractor's original Bid.
13	The amount of the advance payment is no more that fifteen percent (15%) of the Contract Price subject to approval by the HOPE and compliance with the conditions under RA 9184 and its IRR.
14	No further instructions.
15.1	The date by which operating and maintenance manuals are required is *thirty (30) days* The date by which "as built" drawings are required as part of final payment
15.2	The amount to be withheld for failing to produce "as built" drawings and/or operating and maintenance manuals by the date required is ten (10%) percent of the contract price.

Section VI. Specifications

Notes on Specifications

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

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

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

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

Sample Clause: Equivalency of Standards and Codes

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

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

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

Republic of the Philippines
Quezon City
DEPARTMENT OF ENGINEERING
Civic Center Building B, Quezon City Hall Compound, Elliptical Road
Diliman, Central 1100 Quezon City
Trunkline: +63 2 8988 4242
E-mail address: engineering@quezoncity.gov.ph

PROJECT TITLE : **PROPOSED UPGRADING OF ELECTRICAL SYSTEM AT PLACIDO DEL MUNDO ELEMENTARY SCHOOL IN BARANGAY TALIPAPA**

LOCATION : **BARANGAY TALIPAPA, DISTRICT 6, QUEZON CITY**

TECHNICAL SPECIFICATIONS

1. GENERAL REQUIREMENTS

A. Comply with the current and existing laws, ordinances and applicable codes, rules and regulations, and standards. Any works performed contrary to the existing laws, rules and regulations, ordinances and standards without notice shall bear all cost arising therefrom.

B. Drawings, specifications, codes and standards are minimum requirements. Where requirements differ, the more stringent apply.

C. Should there be any change(s) in drawings or specifications, it is required to comply with the governing regulations, notify the implementing agency.

D. Photographs shall be taken as, when and where directed at intervals of not more than one month. The photographs shall be sufficient in number and location, to record the exact progress of the works. The photographs shall be retained and will become the property of the Government.

E. Site verification / inspection shall be conducted to validate the scope of works. No extra compensation and extension of time shall be given due to negligence or inadvertence.

F. The quality of materials shall be of the best grade of their respective kinds for the purpose. The work shall also be performed in the best and most capable manner in strict accordance with requirements of the plans and details. All materials not conforming to the requirements of these specifications shall be considered as defective.

G. All equipment and installations shall meet or exceed minimum requirements of the standards and codes.

H. Mobilization and Demobilization (if applicable)

1. Mobilization shall include all activities and related costs for transportation of personnel, equipment, and operating supplies to the site; establishment of offices, buildings, and other necessary general facilities for the operations at the site.

2. Demobilization shall include all activities and costs for transportation of personnel, equipment and supplies not anymore required within the construction site including the disassembly, removal and site clean-up of offices and other facilities assembled on the site specifically for this contract.

I. Execute work in strict accordance with the best practices of the trades in a thorough, substantial, workmanlike manner by competent workmen. Provide a competent, experienced, full-time supervisor who is authorized to make decisions on behalf of the Contractor.

J. Temporary Facilities and Utilities

1. All facilities shall be near the job site, where necessary and shall conform to the best standard for the required types.

2. Temporary facilities shall be provided and maintained including sanitary facilities and first aid stations.

3. Temporary utilities shall be sufficiently provided until the completion of the project such as water, power and communication

4 Temporary enclosure shall be provided around the construction site with adequate guard lights, railings and proper signage.

5. Temporary roadways shall be constructed and maintained to sustain loads to be carried on them during the entire construction period.

6. Upon completion of the work, the temporary facilities shall be demolished, hauled-out and disposed properly.

K. Adequate construction safety and health protection shall be provided at all times during the execution of work to both workers and property.

1. A fully-trained Medical Aide shall be employed permanently on the site who shall be engaged solely to medical duties.

2. The medical room shall be provided with waterproofing; it could be a building or room designated and used exclusively for the purpose and have a floor area of at least 15 square meters and a glazed window area of at least 2 square meters.

3. The location of the medical room and any other arrangements shall be made known to all employees by posting on prominent locations and suitable notices in the site.

4. Additional safety precautions shall be provided in the event of a pandemic. Protocols set forth by the government shall be strictly followed.

5. Construction safety shall consist of construction canopy and safety net.

L. Necessary protections to the adjacent property shall be provided to avoid untoward incidents / accidents.

M. Final cleaning of the work shall be employed prior to the final inspection for the certification of final acceptance. Final cleaning shall be applied on each surface or unit of work and shall be of condition expected for a building cleaning and maintenance program.

II. SITE WORKS

A. All grades, lines, levels and dimensions shall be verified as indicated on the plans and details. Any discrepancies or inconsistencies shall be reported before commencing work.

B. This Item shall consist of the removal wholly or in part, and satisfactory disposal of all buildings, fences, structures, old pavements, abandoned pipe lines, and any other obstructions which are not designated or permitted to remain, except for the obstructions to be removed and disposed of under other items in the Contract.

Removal and/or demolition of existing structures shall be done in accordance to safety procedures

C. All excavations shall be made to grade as indicated in the plans. Whenever water is encountered in the excavation process, it shall be removed by pumping, care being taken that the surrounding soil particles are not disturbed or removed.

The Contractor shall notify the Engineer sufficiently in advance of the beginning of any excavation so that cross-sectional elevations and measurements may be taken on the undisturbed ground. The natural ground adjacent to the structure shall not be disturbed without permission of the Engineer.

Trenches or foundation pits for structures or structure footings shall be excavated to the lines and grades or elevations shown on the Plans or as staked by the Engineer. They shall be of sufficient size to permit the placing of structures or structure footings of the full width and length shown. The elevations of the bottoms of footings, as shown on the Plans, shall be considered as approximate only and the Engineer may order, in writing, such changes in dimensions or elevations of footings as may be deemed necessary, to secure a satisfactory foundation.

Boulders, logs, and other objectionable materials encountered in excavation shall be removed.

After each excavation is completed, the Contractor shall notify the Engineer to that effect and no footing, bedding material or pipe culvert shall be placed until the Engineer has approved the depth of excavation and the character of the foundation material.

D. All excavated materials so far as suitable, shall be utilized as backfill. The surplus materials shall be disposed of in such manner as not to obstruct the stream or otherwise impair the efficiency or appearance of the structure. No excavated materials shall be deposited at any time so as to endanger the partly finished structure.

All backfills shall be placed in layers not exceeding to 150mm in thickness and each layer shall be thoroughly compacted by wetting, tamping and rolling.

III. CIVIL / STRUCTURAL WORKS

A. CONCRETE WORKS

1. Delivery, Storage, and Handling: All materials shall be so delivered, stored, and handled as to prevent the inclusion of foreign materials and the damage of materials by water or breakage. Package materials shall be delivered and stored in original packages until ready to be used. Packages or materials showing evidence of water or other damage shall be rejected

2. Unless otherwise specified herein, concrete works shall conform to the requirements of the ACI Building Code. Full cooperation shall be given on trades to install embedded items. Provisions shall be made for setting items not placed in the forms. Before concrete is placed, embedded items shall have been inspected and tested for concrete aggregates and other materials shall have been done

3. Materials

   a. Cement for concrete shall conform to the requirements of specifications for Portland Cement (ASTM C – 150).

   b Water used in mixing concrete shall be clean and free from other injurious amounts of oils, acids, alkaline, organic materials or other substances that may be deleterious to concrete or steel.

   c. Fine aggregates shall be beach or river sand conforming to ASTM C33, "Specification for Concrete Aggregates". Sand particle shall be course, sharp, clean free from salt, dust, loam, dirt and all foreign matters.

   d. Coarse aggregates shall be either natural gravel or crushed rock conforming to the "Specifications for Concrete Aggregates (ASTM C33). The minimum size of aggregates shall be larger than one fifth (1/5) of the narrowest dimensions between sides of the forms within which the concrete is to be cast nor larger than three fourths (3/4) of the minimum clear spacing between reinforcing bars or between reinforcing bars and forms.

4. Proportioning and Mixing

   a Proportioning and mixing of concrete shall conform to the requirements for Item 405 of the standard specification with the following proportions:

   Cement: Sand: Gravel
   Class "A" - 1: 2: 3
   Class "B" - 1: 2: 4
   Class "C" - 1: 2 ½

   b. Concrete mixture to be used for concrete shall conform with the structural requirements.

   c Mixing – concrete shall be machine mixed. Mixing shall begin within 30 minutes after the cement has been added to the aggregates.

5. Forms

a. General – Forms shall be used whatever necessary to confine the concrete and shape it to the required lines, or to insure the concrete of contamination with materials caving from adjacent. excavated surfaces. Forms shall have sufficient strength to withstand the pressure resulting from placement and vibration of the concrete, and shall be maintained rigidly in correct position. Forms shall be sufficiently tight to prevent loss or mortar from the concrete. Forms shall be ¼" (6mm) thick ordinary plywood and form lumber.

b Cleaning of Forms – before placing the concrete. the contact surfaces of the formed hall be cleaned of encrustations of mortar. the grout or other foreign material.

c. Removal of Forms – forms shall be removed in a manner which will prevent damage to the concrete. Forms shall not be removed without approval. Any repairs of surface imperfections shall be formed at once and airing shall be started as soon as the surface is sufficiently hard to permit it without further damage.

6. Placing Reinforcement:

Steel reinforcement shall be provided as indicated, together with all necessary tie wires, chairs, spacers, supports and other devices necessary to install and secure the reinforcement properly. All reinforcement, when placed, shall be free from loose, flaky rust and scale, oil, grease, clay and other coating and foreign substances that would reduce or destroy its bond with concrete. Reinforcement shall be placed accurately and secured in place by use of metal or concrete supports, spacers and ties. Such supports shall be used in such manner that they will not be exposed or contribute in any way, to the discoloration or deterioration of the concrete

7 Conveying and Placing Concrete

a. Conveying – concrete shall be conveyed from mixer to forms as rapidly as applicable, by methods which will prevent segregation, or loss of ingredients. There will be no vertical drop greater than 1.5 meters except where suitable equipment is provided to prevent segregation and where specifically authorized.

b. Placing – concrete shall be worked readily into the corners and angles of the forms and around all reinforcement and embedded items without permitting the material to segregate, concrete shall be deposited as close as possible to its final position in the forms so that flow within the mass does not exceed two (2) meters and consequently segregation is reduced to a minimum near forms or embedded items. or elsewhere as directed, the discharge shall be so controlled that the concrete may be effectively compacted into horizontal layers not exceeding 30 centimeters in depth within the maximum lateral movement specified.

c. Time interval between mixing and placing. Concrete shall be placed before initial set has occurred and before it has contained its water content for more than 45 minutes. No concrete mix shall be placed before 60 complete revolution of the machine mixer.

d Consolidation of Concrete – concrete shall be consolidated with the aid of mechanical vibrating equipment and supplemented by the hand spading and tamping. Vibrators shall not be inserted into lower cursed that have commenced initial set; and reinforcement embedded in concepts beginning to set or already set shall not be disturbed by vibrators. Consolidation around major embedded parts shall by hand spading and tamping and vibrators shall not be used

e. Placing Concrete through reinforcement – In placing concrete through reinforcement, care shall be taken that no segregation of the coarse aggregate occurs. On the bottom of beams and slabs, where the congestion of steel near the forms makes placing difficult, a layer of mortar of the same cement-sand ratios as used in concrete shall be first deposited to cover the surfaces.

8. Curing

   a. General – All concrete shall be moist cured for a period not less than seven (7) consecutive days by an approved method or combination applicable to local conditions.

   b Moist Curing – The surface of the concrete shall be kept continuously wet by covering with burlap plastic or other approved materials thoroughly saturated with water and keeping the covering spraying or intermittent hosing.

9. Finishing

   a. Concrete surfaces shall not be plastered unless otherwise indicated. Exposed concrete surfaces shall be formed with plywood, and after removal of forms, the surfaces shall be smooth, true to line and shall present or finished appearance except for minor defects which can be easily repaired with patching with cement mortar, or can be grounded to a smooth surface to remove all joint marks of the form works.

   b. Concrete Slabs on Fill. The concrete slabs on fill shall be laid on a prepared foundation consisting of sub grade and granular fill with thickness equal to the thickness of the overlaying slab except when indicated.

IV. ARCHITECTURAL WORKS

A. PAINTING WORKS

1. Paint Materials. All types of paint material and other related products shall be subject to test as to material composition by the Bureau of Research and Standard, DPWH or the National Institute of Science and Technology.

2. Tinting Colors. Tinting colors shall be first grade quality pigment ground in alkyd resin that disperses and mixes easily with paint to produce the color desired. Use the same brand of paint and tinting color to effect good paint body

3. Skim coat. Skim coat shall be fine powder type material like kalsomine that can be mixed into putty consistency, with oil-based primers and paints to fill minor surface dents and imperfections.

4. Paint Schedule.

   a. Exterior Masonry Wall (plain cement plastered finish to be painted)

      i. 1 coat skim coating, 1 coat primer, 2 coats elastomeric paint finish

   b. Interior Masonry Wall (plain cement plastered finish to be painted)

      i. 1 coat skim coating, 1 coat primer, 2 coats latex paint finish

   c Interior Dry Wall

      i. 1 coat primer, 2 coats latex paint finish

   d. Ceiling Boards

      i. 1 coat primer, 2 coats latex paint finish

   e. Slab Soffit

      i 1 coat primer, 2 coats latex paint finish

   f. Metal / Steel Surfaces

      i. 1 coat primer, 2 coats epoxy enamel finish

5. Surface Preparation. All surfaces shall be in proper condition to receive the finish. Woodworks shall be hand-sanded smooth and dusted clean. All knot-holes pitch

pockets or sappy portions shall be sealed with natural wood filler. Nail holes. cracks or defects shall be carefully puttied after the first coat, matching the color of paint

Interior woodworks shall be sandpapered between coats. Cracks, holes of imperfections in plaster shall be filled with patching compound and smoothed off to match adjoining surfaces.

Concrete and masonry surfaces shall be coated with concrete neutralizer and allowed to dry before any painting primer coat is applied When surface is dried apply first coating. Hairline cracks and unevenness shall be patched and sealed with approved putty or patching compound. After all defects are corrected apply the finish coats as specified on the Plans (color scheme approved).

Metal shall be clean, dry and free from mill scale and rust. Remove all grease and oil from surfaces. Wash, unprimed galvanized metal with etching solution and allow it to dry. Where required to prime coat surface with Red Lead Primer same shall be approved by the Engineer

In addition, the Contractor shall undertake the following:

a. Voids, cracks, nick etc. will be repaired with proper patching material and finished flushed with surrounding surfaces.

b Marred or damaged shop coats on metal shall be spot primed with appropriate metal primer.

c Panting and varnishing works shall not be commenced when it is too hot or cold.

d. Allow appropriate ventilation during application and drying period

e All hardware will be fitted and removed or protected prior to painting and varnishing works.

6. Application. Paints when applied by brush shall become non-fluid. thick enough to lay down as adequate film of wet paint Brush marks shall have flawed out after application of paint.

Paints made for application by roller must be simlar to brushing paint. It must be non-sticky when thinned to spraying viscosity so that it will break up easily into droplets.

Paint is atomized by high pressure pumping rather than broken up by the large volume of air mixed with it. This procedure changes the required properties of the paint

7. Application shall be as per paint Manufacturer's specification and recommendation.

8. Provide all drop cloth and other covering requisite for protection of floors, walls, aluminum glass. finishes and other works.

9 All applications and methods used shall strictly follow the Manufacturer's Instructions and Specifications.

10 All surfaces including masonry wall shall be thoroughly cleaned, puttied, sandpapered, rubbed and polished; masonry wall shall be treated with Neutralizer.

11 All exposed finish hardware lighting fixtures and accessories, glass and the like shall be adequately protected so that these are not stained with paint and other painting materials prior to painting works.

12. All other surfaces endangered by stains and paint marks should be taped and covered with craft paper.

V. ELECTRICAL WORKS

A. CONDUITS, BOXES AND FITTINGS

1. This item shall consist of the furnishing and installation of the complete conduit work, consisting of electrical conduits; conduit boxes such as junction boxes, pull boxes, utility boxes, octagonal and square boxes; conduit fittings, such as couplings, locknuts and bushings and other electrical materials needed to complete the conduit roughing-in work of this project.

2. All materials shall be brand new and shall be of the approved type meeting all the requirements of the Philippine Electrical Code and bearing the Philippine Standard Agency (PSA) mark.

3. All works throughout shall be executed in the best practice in a workmanlike manner by qualified and experienced electricians under the immediate supervision of a duly licensed Electrical Engineer.

4. The work to be done under this division of specifications consists of the fabrication, furnishing, delivery and installation, complete in all details of the electrical work, at the subject premises and all work materials incidental to the proper completion of the installation, except those portions of the work which are expressly stated to be done by other fields. All works shall be done in accordance with the rules and regulations and with the specifications.

5. All lighting fixtures and lamps are as specified and listed on lighting fixture schedule

6. All grounding system installation shall be executed in accordance with the approved plans. Grounding system shall include building perimeter ground wires, ground rods, clamps, connectors, ground wells and ground wire taps as shown in the approved design

7. All auxiliary systems such as telephone and intercom system, time clock system, fire alarm system and public address/nurse's call/paging system installations shall be done in accordance with the approved design.

8. Upon completion of the electrical construction work, the contractor • shall provide all test equipment and personnel and to submit written copies of all test results.

9. The contractor shall guarantee the electrical installation are done and in accordance with the approved plans and specifications. The contractor shall guarantee that the electrical systems are free from all grounds and from all defective workmanship and materials and will remain so for a period of one year from date and acceptance of works. Any defect shall be remedied by the Contractor at his own expense

B. WIRES AND WIRING DEVICES

1. This item shall consist of the furnishing and installation of all wires and wiring devices consisting of electric wires and cables, wall switches, convenience receptacles, heavy duty receptacles and other devices shown on the approved Plans but not mentioned in these specifications

2. Wires and cables shall be of the approved type meeting all the requirements of the Philippine Electrical Code and bearing the Philippine Standard Agency (PSA) mark. Unless specified or indicated otherwise, all power and lighting conductors shall be insulated for 600 volts. All wires shall be copper, soft drawn and annealed, smooth and of cylindrical form and shall be centrally located inside the insulation

3. Conductors or wires shall not be drawn in conduits until after the cement plaster is dry and the conduits are thoroughly cleaned and free from dirt and moisture. In drawing wires into conduits, sufficient slack shall be allowed to permit easy connections for fixtures, switches, receptacles and other wiring devices without the use of additional splices.

4. All conductors of convenience outlets and lighting branch circuit homeruns shall be wired with a minimum of 3.5 mm in size. Circuit homeruns to panelboards shall not be smaller than 3.5 mm but all homeruns to panelboard more than 30 meters shall not be smaller than 5.5 mm. No conductor shall be less than 2 mm in size.

5 All wires of 14mm and larger in size shall be connected to panels and apparatus by means of approved type lugs or connectors of the solderless type, sufficiently large enough to enclose all strands of the conductors and securely fastened. They shall not loosen under vibration or normal strain.

6 All joints, taps and splices on wires larger than 14 mm shall be made of suitable solderless connectors of the approved type and size. They shall be taped with rubber and PVC tapes providing insulation not less than that of the conductors.

7. No splices or joints shall be permitted in either feeder or branch conductors except within outlet boxes or accessible junction boxes or pull boxes. All joints in branch circuit wiring shall be made mechanically and electrically secured by approved splicing devices and taped with rubber and PVC tapes in a manner which will make their insulation as that of the conductor.

8. All wall switches and receptacles shall be fitted with standard Bakelite face plate covers. Device plates for flush mounting shall be installed with all four edges in continuous contact with finished wall surfaces without the use of coiled wire or similar devices. Plaster filling shall not be permitted. Plates installed in wet locations shall be gasketed

9. When more than one switch or device is indicated in a single location gang plate shall be used.

C. POWER LOAD CENTER, SWITCHGEAR AND PANELBOARDS

1. This Item shall consist of the furnishing and installation of the power load center unit substation or low voltage switchgear and distribution panelboards at the location shown or the approved Plans complete with transformer, circuit breakers, cabinets and all accessories, completely wired and ready for service.

2. All materials shall be brand new and shall be of the approved type meeting all the requirements of the Philippine Electrical Code and bearing the Philippine Standard Agency (PSA) mark

3. Power Load Center Unit Substation. The Contractor shall furnish and install an indoor-type Power Load Center Unit Substation at the location shown on the approved Plans if required. It shall be totally metal-enclosed, dead front and shall consist of the following coordinated component parts:

   a. High Voltage Primary Section. High voltage primary incoming line section consisting of the following parts and related accessories.

      i. One (1) Air-filled Interrupter Switch 2-position (open-close) installed in a suitable air filled metal enclosure and shall have sufficient interrupting capacity to carry the electrical load. It shall be provided with key interlock with the cubicle for the power fuses to prevent access to the fuses unless the switch is open

      ii. Three (3)-power fuses mounted in separate compartments within the switch housing and accessible by a hinged door.

      iii One 1) set of high voltage potheads or 3-conductor cables or three single conductor cables.

      iv. Lightning arresters shall be installed at the high voltage cubicle if required.

      Items (i) and (ii) above could be substituted with a power circuit breaker with the correct rating and capacity.

   b Transformer Section. The transformer section shall consist of a power transformer with ratings and capacities as shown on the plans it shall be oil liquid-filled non-flammable type and designed in accordance with the latest applicable standards

The transformer shall be provided with four (4) approximately 2 1/2 % rated KVA taps on the primary winding in most cases one (1) above and three (3) below rated primary voltage and shall be changed by means of externally gang-operated manual tap changer only when the transformer is de-energized. Tap changing under load is acceptable if transformer has been so designed

The following accessories shall be provided with the transformer, namely: drain valve, sampling device, filling connection, oil liquid level gauge, ground pad, top filter press connection, lifting lugs, diagrammatic nameplate, relief valve, thermometer and other necessary related accessories

The high-voltage and low-voltage bushings and transition flange shall be properly coordinated for field connection to the incoming line section and low voltage switchboard section, respectively.

c. Low Voltage Switchboard Section. The low-voltage switchboard shall be standard modular-unitized units, metal-built, dead front, safety type construction and shall consist of the following:

   i. Switchboard Housing The housing shall be heavy gauge steel sheet, dead front type, gray enamel finish complete with frame supports, steel bracings, steel sheet panelboards, removable rear plates, copper busbars, and all other necessary accessories to insure sufficient mechanical strength and safety. It shall be provided with grounding bolts and clamps.

   ii. Secondary Metering Section. The secondary metering section shall consist of one (1) ammeter, AC, indicating type, one (1) voltmeter, AC indicating type, one (1) ammeter transfer switch for 3-phase; one (1) voltmeter transfer switch for 3-phase; and current transformers of suitable rating and capacity.

   The above-mentioned instruments shall be installed in one compartment above the main breaker and shall be complete with all necessary accessories completely wired, ready for use.

   iii. Main Circuit Breaker The main circuit breaker shall be draw-out type, manually or electrically operated as required with ratings and capacity as shown on the approved Plans

   The main breaker shall include insulated control switch if electrically operated, manual trip button, magnetic tripping devices, adjustable time overcurrent protection and instantaneous short circuit trip and all necessary accessories to insure safe and efficient operation.

   iv. Feeder Circuit Breakers. There shall be as many feeder breakers as are shown on the single line diagram or schematic riser diagram and schedule of loads and computations on the plans. The circuit breakers shall be drawout or molded case as required. The circuit breakers shall each have sufficient interrupting capacity and shall be manually operated complete with trip devices and all necessary accessories to insure safe and efficient operation. The number, ratings, capacities of the feeder branch circuit breakers shall be as shown on the approved Plans.

   Circuit breakers shall each be of the indicating type, providing 'ON' - "OFF and "TRIP" positions of the operating handles and shall each be provided with nameplate for branch circuit designation. The circuit breaker shall be so designed that an overload or short on one pole automatically causes all poles to open.

d. Low Voltage Switchgear (For projects requiring low-voltage switchgear only) The Contractor shall furnish and install a low-voltage switchgear at the location shown on the plans. It shall be metal-clad, dead front, free standing, safety type construction and shall have copper busbars of sufficient size, braced to resist allowable root mean square (RMS) symmetrical short circuit stresses, and all necessary accessories. The low-voltage switchgear shall consist of the switchgear housing, secondary metering, main breaker and feeder branch circuit.

e. Grounding System. All non-current carrying metallic parts like conduits, cabinets and equipment frames shall be properly grounded in accordance with the Philippine Electrical Code, latest edition.

The size of the ground rods and ground wires shall be as shown on the approved Plans. The ground resistance shall not be more than 5 ohms

f. Panelboards and Cabinets. Panelboards shall conform to the schedule of panelboards as shown on the approved Plans with respect to supply characteristics, rating of main lugs or main circuit breaker, number and ratings and capacities of branch circuit breakers

Panelboards shall consist of a factory completed dead front assembly mounted in an enclosing flush type cabinet consisting of code gauge galvanized sheet steel box with trim and door Each door shall be provided with catch lock and two (2) keys. Panelboards shall be provided with directories and shall be printed to indicate load served by each circuit.

Panelboard cabinets and trims shall be suitable for the type of mounting shown on the approved Plans. The inside and outside of panelboard cabinets and trims shall be factory painted with one rust-proofing primer coat and two finish shop coats of pearl gray enamel
paint.

Main and branch circuit breakers for panelboards shall have the rating, capacity and number of poles as shown on the approved Plans. Breakers shall be thermal magnetic type. Multiple breaker shall he of the common trip type having a single operating handle. For 50-ampere breaker or less, it may consist of single-pole breaker permanently assembled at the factory into a multi-pole unit.

4. The Contractor shall install the Power Load Center Unit Substation or Low-Voltage Switchgear and Panelboards at the locations shown on the approved Plans.

Standard panels and cabinets shall be used and assembled on the job All panels shall be of dead front construction furnished with trims for flush or surface mounting as required

D. Comply with the current applicable codes, ordinances, and regulations of the authority or authorities having jurisdiction, the rules, regulations and requirements of the utility companies (as applicable).

E. Drawings, specifications, codes and standards are minimum requirements. Where requirements differ, the more stringent apply.

F All equipment and installations shall meet or exceed minimum requirements of the Standards and Codes.

G. Execute work in strict accordance with the best practices of the trades in a thorough, substantial, workmanlike manner by competent workmen.

H When the tests and inspections have been completed, a label shall be attached to all devices tested. The label shall provide the name of the testing company, the date the tests were completed, and the initials of the person who performed the tests

I PANELBOARDS

1. Fabricate and test panelboards according to IEEE 344 to withstand seismic forces defined in Division 16 Sections 16073 and 16074 "Hangers and Supports for Electrical Systems and Vibration and Seismic controls for Electrical Systems" respectively.

2 Enclosures: Flush, Surface, Flush- and surface-mounted cabinets.

a. Rated for environmental conditions at installed location

i Indoor Dry and Clean Locations: NEMA Type 1

ii. Outdoor Locations. NEMA, Type 3R

iii Kitchen and Wash-Down Areas NEMA, Type 4X, stainless steel.

iv Indoor Locations Subject to Dust, Falling Dirt, and Dripping Noncorrosive Liquids: NEMA, Type 12.

v Outdoor Locations Subject to Dust, Falling Dirt, and Dripping Noncorrosive Liquids. NEMA, Type 5R

b Front: Secured to box with concealed trim clamps. For surface-mounted fronts, match box dimensions, for flush-mounted fronts, overlap box.

c. Hinged Front Cover: Entire front trim hinged to box and with standard door within hinged trim cover.

d Skirt for Surface-Mounted Panelboards: Same gauge and finish as panelboard front with flanges for attachment to panelboard, wall, and ceiling or floor

e. Gutter Extension and Barrier: Same gage and finish as panelboard enclosure, integral with enclosure body. Arrange to isolate individual panel sections.

f. Finishes:

i Panels and Trim. Steel and galvanized steel, factory finished immediately after cleaning and pretreating with manufacturer's standard two-coat, baked-on finish consisting of prime coat and thermosetting topcoat.

ii Back Boxes: Galvanized steel Same finish as panels and trim

iii Fungus Proofing: Permanent fungicidal treatment for overcurrent protective devices and other components.

g Directory Card: Inside panelboard door, mounted in transparent card holder metal frame with transparent protective cover

3 Incoming Mains Location: Top or Bottom.

4. Phase, Neutral, and Ground Buses:

a. Material: Hard-drawn copper, 98 percent conductivity

b. Equipment Ground Bus. Adequate for feeder and branch-circuit equipment grounding conductors; bonded to box.

c. Neutral Bus: 100 percent of phase bus 4. Extra-Capacity Neutral Bus. Neutral bus rated 200 percent of phase bus and UL listed as suitable for nonlinear loads.

ENGR. BIEN ANGELLO O. MACALIA
Planning and Design Division

ENGR. MIKE JOSEPH G. ICAWAT
Planning and Design 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.]

DED0023_0361
B1 ID NO. 06-2023-0360

THE SITE

1 VICINITY MAP SCALE: NTS

THE SITE

2 LOCATION MAP SCALE: NTS

TABLE OF CONTENTS

Republika ng Pilipinas
Lalawigan ng Quezon
DEPARTMENT OF ENGINEERING

PROJECT TITLE:
PROPOSED UPGRADING OF ELECTRICAL SYSTEM AT PLACIDO DEL MUNDO ELEMENTARY SCHOOL IN BARANGAY TALIPAPA

LOCATION:
BARANGAY TALIPAPA, DISTRICT II, QUEZON CITY

DATE:
DESIGNED BY: CATT
DRAWN BY:
CHECKED BY: ROAI
REVISION NO.:

SUBMITTED BY:
ENGR. FREDISWINDO OL. DE GUZMAN
HEAD, PLANNING & DESIGN DIVISION

RECOMMENDING APPROVAL:
ATTY. MARK DALE RAMOND P. PERRAL
DIRECTOR

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

SHEET CONTENT:
VICINITY MAP
LOCATION MAP

SHEET NO.:
AR-01
01 19

GENERAL NOTES

1. ALL WORKS SHALL BE EXECUTED IN ACCORDANCE TO THE LATEST EDITION OF THE NATIONAL STRUCTURAL CODE OF THE PHILIPPINES, THE NATIONAL BUILDING CODE OF THE PHILIPPINES AND OTHER RELATED LAWS AND ORDINANCES OF THIS CITY.
2. ALL WORKS SHALL BE SUPERVISED BY A REGISTERED PROFESSIONAL RELATED TO THE ACTIVITIES BEING UNDERTAKEN.
3. ALL WORKS SHALL BE COORDINATED WITH THE RESPECTIVE TRADES SO TO AVOID CONFLICTS DURING EXECUTION OF ACTIVITIES.
4. ALL NECESSARY PERMITS SHALL BE SECURED AND TURNED OVER TO THE CITY.
5. ALL DRAWINGS AND SPECIFICATIONS SHALL BE CORRECTLY REVIEWED BY THE CONTRACTOR AND SHALL IMMEDIATELY BE INFORMED IF DISCREPANCY [illegible]
6. ALL DIMENSIONS, ELEVATIONS AND REFERENCES SHALL BE VERIFIED WITH THE ACTUAL CONDITION PRIOR TO EXECUTION.
7. SHOP DRAWINGS SHALL BE PROVIDED AS NECESSARY PRIOR TO THE EXECUTION.
8. ALL WORKS SHALL BE TESTED AND COMMISSIONED AS INDICATED IN THE SPECIFICATIONS WITH THE PRESENCE OF ALL PARTIES AND WITNESS [illegible] SHALL BE DOCUMENTED PROPERLY.
9. NO PIPES SHALL BE ALLOWED TO BE EMBEDDED IN STRUCTURAL MEMBERS UNLESS OTHERWISE ALLOWED.

10. FORMS AND SCAFFOLDING

10.1 PROVIDE ADEQUATE SHORING AND BRACING TO WITHSTAND THE IMPOSED LOADS DURING CONSTRUCTION.
10.2 ALIGNMENT SHALL BE ESTABLISHED AND VALIDATED PRIOR TO ANY CONCRETE POURING ACTIVITIES.

11. CONCRETE AND REINFORCEMENTS

11.1 ALL CONCRETE SHALL DEVELOP A MINIMUM COMPRESSIVE STRENGTH AT THE END OF TWENTY EIGHT (28) DAYS WITH CORRESPONDING MAXIMUM SIZE AGGREGATE AND SLUMPS AS FOLLOWS:

LOCATION	STRENGTH	MAX. SIZE OF AGGREGATES	MAX. SLUMP
a. SLAB ON GRADE, CURBS, PAVEMENTS, WALL FOOTING	3000 PSI (21 Mpa)	1 in. (25mm)	4 in. (100 mm)
b. BEAMS, COLUMNS, SUSPENDED SLAB, COLUMN FOOTING	4000 PSI (28 Mpa)	3/4 in. (19mm)	4 in. (100 mm)

11.2 ALL REINFORCING BARS SHALL CONFORM TO PNS49 GRADE 33 (230MPa) FOR 12mm Ø AND SMALLER BARS AND GRADE 415 (415MPa) FOR 16mm Ø AND LARGER BARS.
11.3 MAINTAIN MINIMUM CONCRETE COVER FOR REINFORCING STEEL AS FOLLOWS:

CONCRETE COVER	
CONCRETE DEPOSITED DIRECTLY AGAINST GROUND	75 mm
SUSPENDED SLABS	20 mm
SLAB ON GRADE	40 mm
WALLS ABOVE GRADE	25 mm
BEAMS & COLUMNS	40 mm

11.4 ALL ANCHOR BOLTS, DOWELS AND OTHER INSERTS SHALL BE PROPERLY POSITIONED AND SECURED IN PLACE PRIOR TO PLACING OF CONCRETE.
11.5 ALL CONCRETE SHALL BE KEPT MOIST FOR A MINIMUM OF SEVEN (7) CONSECUTIVE DAYS IMMEDIATELY AFTER POURING BY THE USE OF WET BURLAP, FOG SPRAYING, CURING COMPOUNDS OR OTHER APPROVED METHODS.
11.6 SCHEDULE FOR STRIPPING OF FORMS AND SHORES:

ITEMS	CURING TIME
FOUNDATION	24 HRS.
SUSPENDED SLAB EXCEPT WHEN ADDITIONAL LOADS ARE IMPOSED	18 DAYS
COLUMNS & WALLS	12 DAYS
BEAMS	21 DAYS

12. STRUCTURAL STEEL AND PLATES

12.1 ALL STRUCTURAL STEEL SHALL CONFORM TO ASTM A-36 SPECIFICATIONS WITH MINIMUM YIELD STRENGTH fy=250 MPa.
12.2 ANCHOR & FASTENER BOLTS: ALL BOLTS SHALL CONFORM TO ASTM [illegible] SPECIFICATIONS.
12.3 WELDING RODS: ALL WELDING RODS SHALL BE MILD STEEL ELECTRODE, LOW HYDROGEN E70XX WITH MINIMUM YIELD STRENGTH [illegible]

13. FOUNDATION

13.1 FOUNDATION IS DESIGNED BASED ON NATIONAL BUILDING CODE OF THE PHILIPPINES FOR AN ALLOWABLE SOIL BEARING CAPACITY OF [illegible] KPa.
13.2 FOUNDATION SHALL REST ON NATURAL SOIL UNLESS OTHERWISE NOTED BY THE ENGINEER. NO PART OF THE FOUNDATION SHALL REST ON FILL.
13.3 THE CONTRACTOR SHALL NOTIFY THE ENGINEER UPON COMPLETION OF FOUNDATION EXCAVATION FOR ACTUAL SOIL CONDITIONS WHICH DO NOT CONFORM TO THE SOIL BEARING CAPACITY FOR PROPER REVISION.

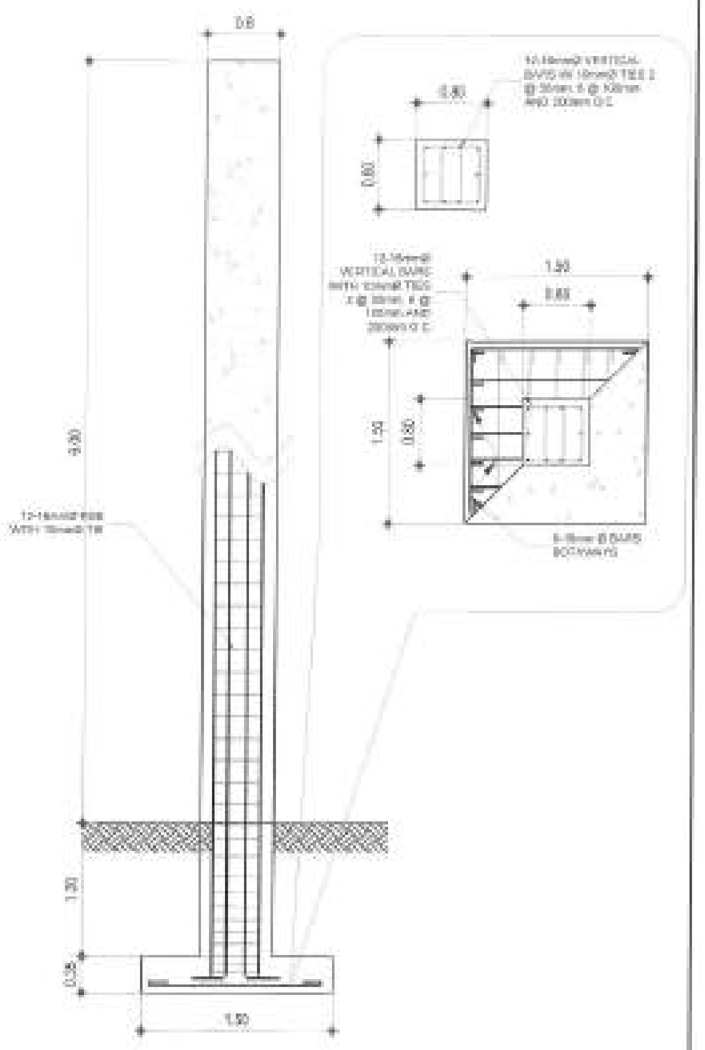
14. MASONRY WALLS

14.1 MORTAR & GROUT FOR ALL CONCRETE MASONRY SHALL CONFORM TO ASTM C270 - TYPE N & SHALL HAVE A MINIMUM OF 28 DAYS STANDARD CYLINDER COMPRESSIVE STRENGTH OF [illegible]
14.2 ALL CHB SHALL BE LAID OUT WITH THE CELLS IN UNOBSTRUCTED VERTICAL CONTINUITY. ALL CELLS ESPECIALLY THOSE WITH REINFORCEMENT SHALL BE FILLED WITH MORTAR.
14.3 REINFORCEMENT AS TABULATED BELOW SHALL BE PROVIDED UNLESS OTHERWISE SPECIFIED IN THE PLAN.
14.4 ALL MASONRY WALLS SHALL BE PROVIDED WITH STIFFENER BEAM BLOCK & STIFFENER AS REQUIRED.
14.4.1. [illegible]
14.4.2. [illegible]

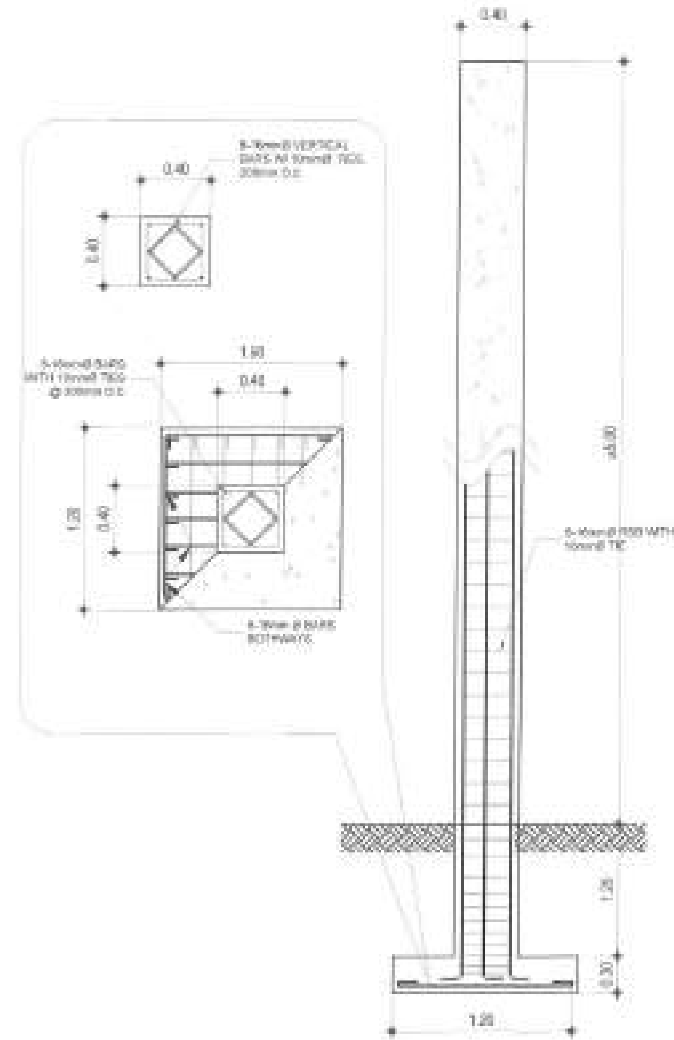
STIFFENER BEAM BLOCK

STIFFENER COLUMN DETAIL

1 GENERAL NOTES SCALE NTS.



2 SERVICE ENTRANCE POST SECTION AND DETAILS SCALE NTS.



3 DISTRIBUTION POST SECTION AND DETAILS SCALE NTS.

Republika ng Pilipinas Lungsod ng Quezon DEPARTMENT OF ENGINEERING	PROJECT TITLE: PROPOSED UPGRADING OF ELECTRICAL SYSTEM AT PLACIDO DEL MUNDO ELEMENTARY SCHOOL IN BARANGAY TALIPAPA LOCATION: BARANGAY TALIPAPA, DISTRICT II, QUEZON CITY	DATE: DESIGNED BY: DRAWN BY: CHECKED BY: REVISION NO.:	SUBMITTED BY: ENGR. FREDISWINDO [illegible] DE GUZMAN HEAD, PLANNING & DESIGN DIVISION	RECOMMENDING APPROVAL: ATTY. MARK DALE DIAMOND P. PERRAL CITY ENGINEER	APPROVED BY: HON. MA. JOSEFINA G. BELMONTE CITY MAYOR	SHEET CONTENT: GENERAL NOTES, SERVICE ENTRANCE POST SECTION AND DETAILS, DISTRIBUTION POST SECTION AND DETAILS SHEET NO.: ST-01 02 19

GENERAL NOTES FOR THREE PHASE SYSTEM

1. ALL WORKS SHALL BE EXECUTED IN ACCORDANCE TO THE LATEST EDITION OF THE PHILIPPINE ELECTRICAL CODE, PHILIPPINE ELECTRONICS CODE, THE NATIONAL BUILDING CODE OF THE PHILIPPINES AND OTHER RELATED LAWS AND ORDINANCES OF THIS CITY.
2. ALL WORKS SHALL BE SUPERVISED BY A REGISTERED PROFESSIONAL RELATED TO THE ACTIVITIES BEING UNDERTAKEN.
3. ALL WORKS SHALL BE COORDINATED WITH THE RESPECTIVE TRADES SO TO AVOID CONFLICTS DURING EXECUTION OF ACTIVITIES.
4. ALL NECESSARY PERMITS SHALL BE SECURED AND TURNED-OVER TO THE CITY.
5. ALL DRAWINGS AND SPECIFICATIONS SHALL BE CORRECTLY REVIEWED BY THE CONTRACTOR AND SHALL IMMEDIATELY BE INFORMED IF DISCREPANCY (IES) FOUND HEREIN.
6. ALL DIMENSIONS, ELEVATIONS AND REFERENCES, SHALL BE VERIFIED WITH THE ACTUAL CONDITION PRIOR TO EXECUTION.
7. SHOP DRAWINGS SHALL BE PROVIDED AS NECESSARY PRIOR TO THE EXECUTION.
8. ALL WORKS SHALL BE TESTED AND COMMISSIONED AS INDICATED IN THE SPECIFICATIONS WITH THE PRESENCE OF ALL PARTIES INVOLVED. HIRING TO SHALL BE COORDINATED PROPERLY.
9. ALL PIPES AND LAYOUT ARE ONLY DIAGRAMMATIC. ACTUAL LAYOUT OF PIPES AND FITTINGS, UNLESS OTHERWISE PROVIDED, SHALL BE PROPERLY COORDINATED.
10. NO PIPES SHALL BE ALLOWED TO BE EMBEDDED IN STRUCTURAL MEMBERS, UNLESS OTHERWISE APPROVED.
11. ALL PIPES, FITTINGS, EQUIPMENT AND FIXTURES SHALL BE INSTALLED IN ACCORDANCE TO MANUFACTURER'S SPECIFICATIONS AND INSTRUCTIONS.
12. SUPPORTS AND HANGERS SHALL BE PROVIDED ACCORDINGLY.
13. ALL EQUIPMENTS AND FIXTURES SHALL BE ENVIRONMENTAL FRIENDLY.
14. INSTALLATION OF SERVICE ENTRANCE
    14.1. THE TYPE OF SERVICE ENTRANCE SHALL BE THREE PHASE, THREE-WIRE PLUS GROUND, 60 HERTZ 230V AC NOMINAL.
    14.2. THE SERVICE ENTRANCE EQUIPMENT SHALL BE PROPERLY GROUNDED IN ACCORDANCE WITH THE PHILIPPINE ELECTRICAL CODE.
    14.3. THE MAIN OVERCURRENT PROTECTION DEVICE SHALL BE OF THERMAL MAGNETIC MOLDED MINIATURE BREAKER FOR ENCLOSURE.

15. INSTALLATIONS OF LIGHTING AND POWER SYSTEM
    15.1. ALL LIGHTING AND CONVENIENCE OUTLET CIRCUITS SHALL BE 3.5 SQ. MM. THWN COPPER WIRE UNLESS OTHERWISE NOTED. MINIMUM SIZE OF WIRE SHALL BE 3.5 SQ. MM. COPPER WIRE. ALL WIRES AND CABLES SHALL BE COLOR CODED AS FOLLOWS:
        PHASE A - RED
        PHASE B - YELLOW
        PHASE C - BLUE
        NEUTRAL - WHITE
        GROUND - GREEN
    15.2. ALL EMBEDDED BRANCH CIRCUITS SHALL BE PVC CONDUITS AND FOR EXPOSED INSTALLATION SHALL BE RIGIDLY SUPPORTED BY CONDUIT CLAMPS EVERY 700 MILLIMETERS AND/OR CONDUIT HANGER SUPPORTS EVERY 1500 MILLIMETERS.
    15.3. CONDUITS IN NO CASE SHALL NOT BE MORE THAN THE EQUIVALENT OF FOUR QUARTER BENDS IN ANY ONE RUN. ALL CONDUIT BENDS SHALL BE FIELD MADE BY USING HYDRAULIC BENDERS. MINIMUM BENDING RADIUS MUST BE IN ACCORDANCE TO THE CODE REQUIREMENTS.
    15.4. ALL POWER OUTLETS AND SWITCHES SHALL BE GROUNDING TYPE WITH PARALLEL SLOTS FOR 220 V.
    15.5. PROVIDE GROUND FAULT CURRENT INTERRUPTER CIRCUIT BREAKER FOR LOADS MARKED "GFCI" ON THE PLAN.
    15.6. ALL METALLIC CONDUITS, SWITCHES, LIGHTING FIXTURES, PANELBOARDS, EQUIPMENTS AND NON-CURRENT CARRYING METAL PARTS SHALL BE PROPERLY GROUNDED AND BONDED.
    15.7. THE GROUND RESISTANCE SHALL NOT BE MORE THAN 5 OHMS.
    15.8. ALL MOUNTING HEIGHTS FOR WALL MOUNTED DEVICES SHALL BE AS FOLLOWS:

A.	LIGHTING SWITCH	1400 MM ABOVE FLOOR FINISH
B.	CONVENIENCE OUTLET	- 300 MM ABOVE FLOOR FINISH 150MM ABOVE WORKING COUNTER
C.	PANELBOARD AND CABINETS	- 1800 MM ABOVE FLOOR FINISH
D.	EXIT LIGHT	- 150 MM TOP OF DOOR JAMB
E.	EMERGENCY LIGHT	- 2000 ABOVE FLOOR EMERGENCY

    15.1. PULL BOXES SHALL BE WHENEVER NECESSARY TO FACILITATE WIRE PULLING EVEN IF THEY ARE NOT INDICATED ON PLANS.
    15.2. FOR EACH SPARE BRANCH CIRCUIT IN PANELBOARD, PROVIDE ONE 25MM DIAMETER EMPTY CONDUIT TERMINATED TO 150MM OCTAGONAL BOX ABOVE CEILING. MINIMUM SIZE OF PULLBOX SHALL BE 150MM X150MM X 100MM.
    15.3. ALL CIRCUIT BREAKERS SHALL BE BOLT-ON TYPE WITH INTERRUPTING CAPACITY AS INDICATED IN THE PLANS. PANELBOARDS SHALL BE GALVANIZED SHEET POWDER COATED GAGE 16 MINIMUM.
    15.4. FEEDER AND BRANCH CIRCUIT CONDUCTORS IN CABLE TRAYS SHALL BE OPEN TYPE, BOXED AND TAGGED TO INDICATE CLEARLY THE ELECTRICAL CHARACTERISTICS SUCH AS CIRCUIT NUMBER AND PANEL DESIGNATION.
    15.5. 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 THEIRS RESPECTIVE SECTIONS.
    15.6. ALL MATERIALS TO BE USED AND THE EQUIPMENT TO BE INSTALLED SHALL BE OF THE BEST QUALITY, BRAND NEW AS SPECIFIED. IT MUST BE APPROVED TYPE FOR THE PARTICULAR LOCATION AND PURPOSE INTENDED.

1 GENERAL NOTES

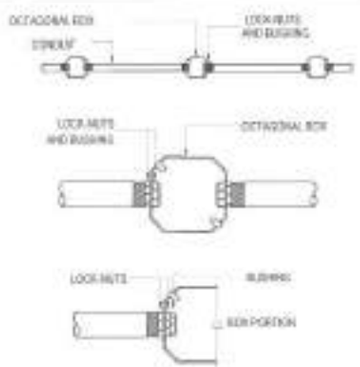
SCALE: NTS

DISTRIBUTION FEEDER LINE (F133 – 120mm² TW AERIAL)	PROPOSED SERVICE ENTRANCE
BRANCH LINE FROM BUILDING CONNECTED TO DISTRIBUTION FEEDER LINE	NEW DISTRIBUTION POST
PANEL BOARD	EXISTING DISTRIBUTION POST
TAPPING POINT	SERVICE ENTRANCE
SECONDARY RACK (BRAKE SUITS)	KILOWATT-HOUR METER

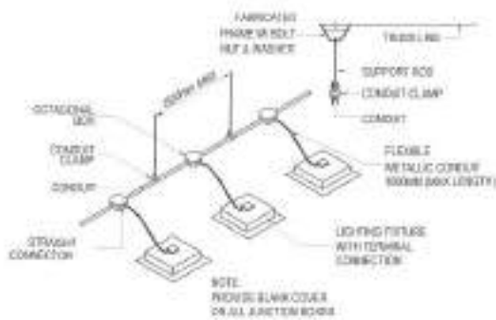
2 LEGENDS AND SYMBOLS

SCALE: NTS

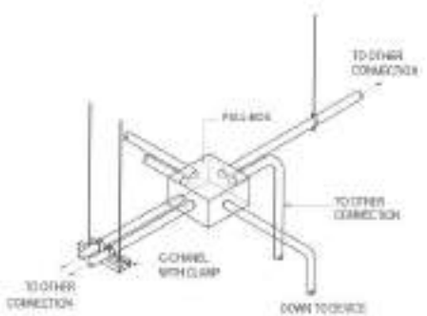
BENDING RADIUS DETAIL



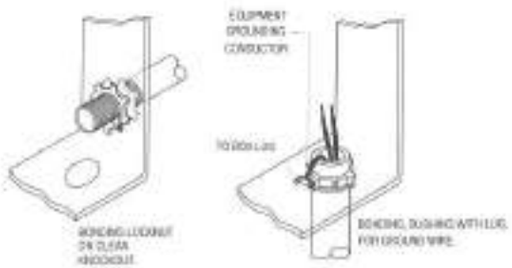
SPOT DETAIL OF CONDUIT RUN AND BOX



CONDUIT RUN FOR LIGHTING DISTRIBUTION IN ONE CIRCUIT (FOR EXPOSED OR INSIDE DROP-CEILING INSTALLATION)



PROPER CONDUIT LAYOUT @ PULL BOX



NOTE:
CONNECTION OF THREADED RIGID METAL CONDUIT OR INTERMEDIATE METALLIC CONDUIT TO A THREADED BOSS OR HUBLESS CONSERVED TO BE A BONDED CONDUIT TERMINATION.

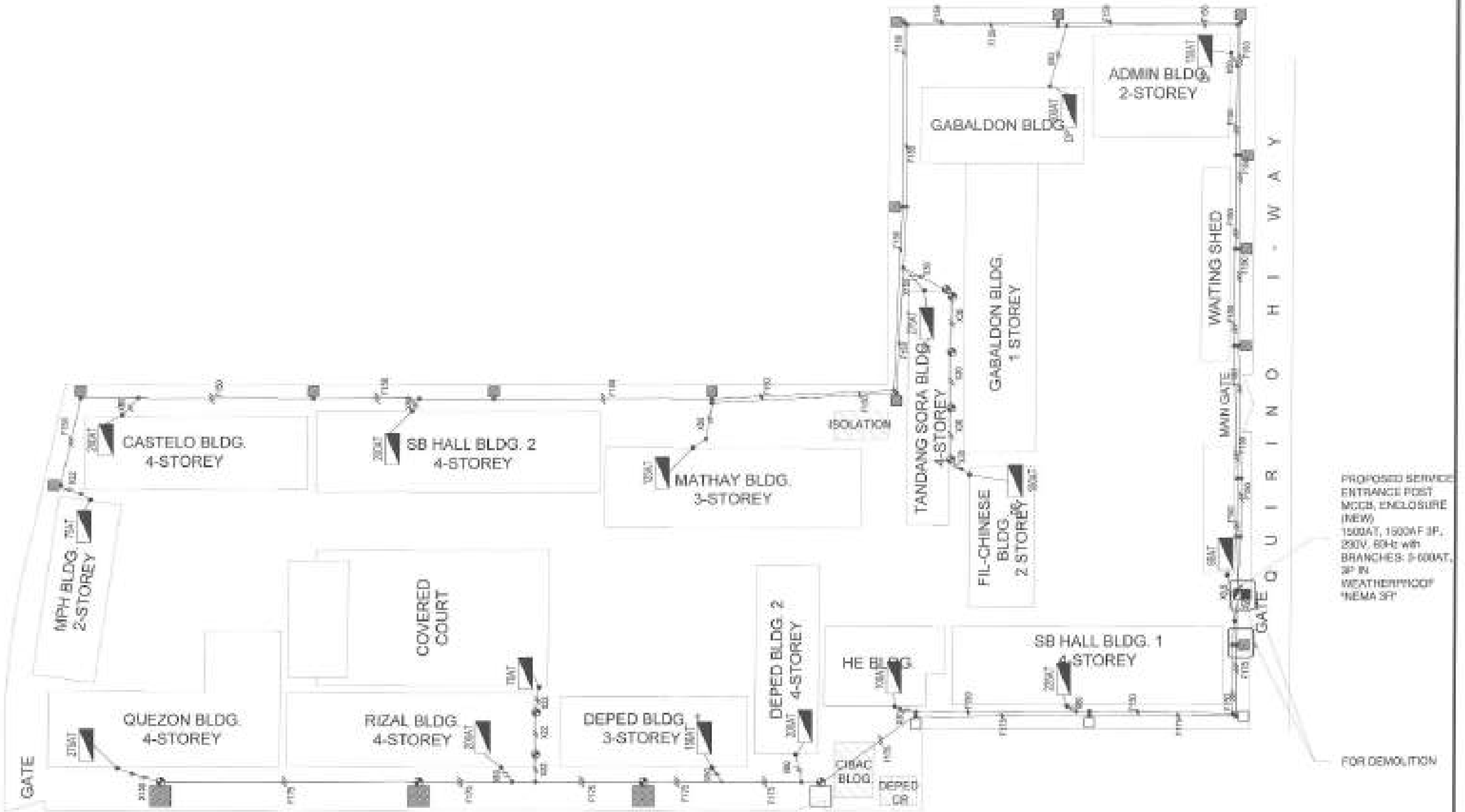
BONDED RACEWAY TERMINATION FOR SHEET METAL

3 MISCELLANEOUS DETAILS

SCALE: NTS

Republika ng Pilipinas
Lungsod ng Cavite
DEPARTMENT OF ENGINEERING

PROJECT TITLE: PROPOSED UPGRADING OF ELECTRICAL SYSTEM AT PLACIDO DEL MUNDO ELEMENTARY SCHOOL IN BARANGAY TALIPAPA LOCATION: BARANGAY TALIPAPA, DISTRICT III, CITY OF CAVITE	DATE: DESIGNED BY: DRAWN BY: CHECKED BY: REVISION NO.:	SUBMITTED BY: ENGR. FREDISWIN M. SC. DE GUZMAN HEAD, PLANNING & DESIGN DIVISION	RECOMMENDED APPROVAL: ATTY. MARK DALE GUIMMOND P. PERRAS CITY ENGINEER	APPROVED BY: HON. MA. JOSEFINA G. BELMONTE CITY MAYOR	SHEET CONTENT: GENERAL NOTES, LEGENDS AND SYMBOLS, MISCELLANEOUS DETAILS	SHEET NO. EL-01 03 19

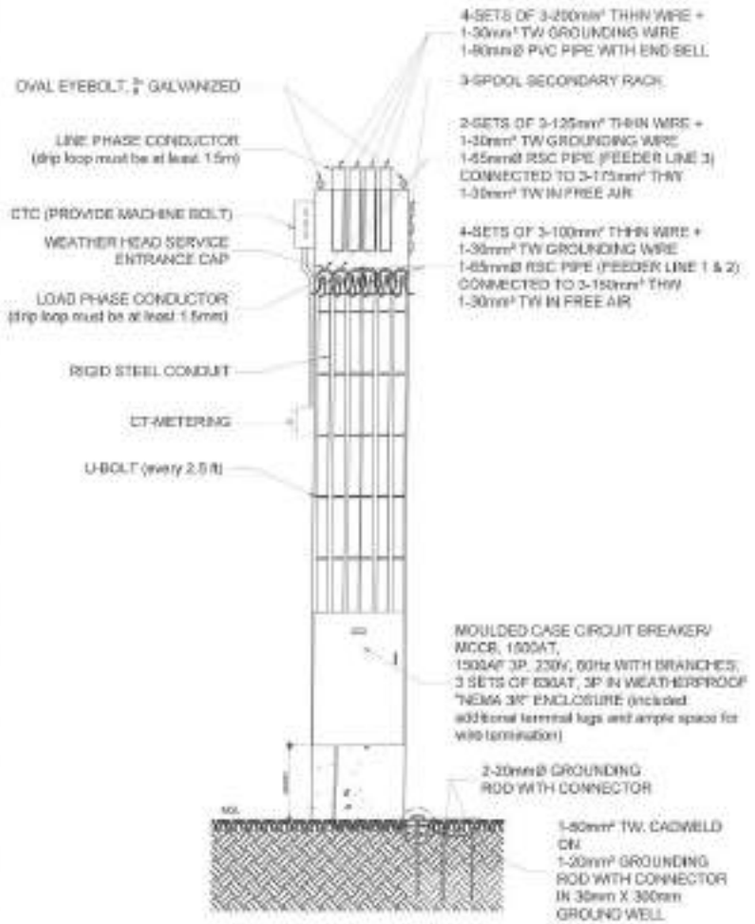


NOTE: EXISTING WIRE OF EACH BUILDING WILL BE TAP TO NEWLY INSTALLED FEEDER LINE.

1 SITE DEVELOPMENT PLAN / PROPOSED FEEDER LAYOUT

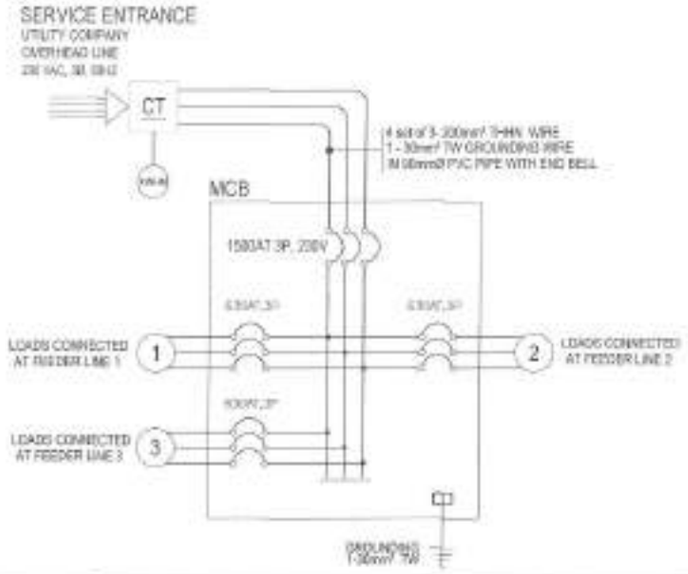
SCALE: NTS

Republika ng Pilipinas Lungsod ng Quezon DEPARTMENT OF ENGINEERING	PROJECT TITLE : PROPOSED UPGRADING OF ELECTRICAL SYSTEM AT PLACIDO DEL MUNDO ELEMENTARY SCHOOL IN BARANGAY TALIPAPA	DATE: DESIGNED BY: DRAWN BY: CHECKED BY:	SUBMITTED BY: ENGR. FREDISWINDA C. DE GUZMAN	RECOMMENDING APPROVAL : ATTY. MARK DALE DIAMOND P. PERRAL CITY ENGINEER	APPROVED BY : HON. MA. JOSEFINA G. BELMONTE CITY MAYOR	SHEET CONTENT: SITE DEVELOPMENT PLAN / PROPOSED FEEDER LAYOUT	SHEET NO. EL-02 04 19
	LOCATION: BARANGAY TALIPAPA, DISTRICT 6, QUEZON CITY	REVISION NO.:					



1 SERVICE ENTRANCE CONCRETE POST DETAILS

SCALE: NTS



1 SCHEMATIC DIAGRAM

SCALE: NTS

2 WIRE SCHEDULE

WIRE CODE	SIZE OF	
	WIRES	CONDUITS
X5.5	2-5.5mm² THHN COPPER WIRE 1-3.5mm² TW GROUND WIRE	IN 15mmØ RSC PIPE
X22	2-22mm² THHN COPPER WIRE 1-8.0mm² TW GROUND WIRE	IN 25mmØ RSC PIPE
X30	2-30mm² THHN COPPER WIRE 1-8.0mm² TW GROUND WIRE	IN 32mmØ RSC PIPE
X50	2-50mm² THHN COPPER WIRE 1-14mm² TW GROUND WIRE	IN 40mmØ RSC PIPE
X80	2-80mm² THHN COPPER WIRE 1-22mm² TW GROUND WIRE	IN 50mmØ RSC PIPE
X150	2-150mm² THHN COPPER WIRE 1-30mm² TW GROUND WIRE	IN 65mmØ RSC PIPE
2Y100	2 sets of 2-100mm² THHN COPPER WIRE 1-30mm² TW GROUND WIRE	IN 65mmØ RSC PIPE
2Y125	2 sets of 3-250mm² THHN COPPER WIRE 1-50mm² TW GROUND WIRE	IN 65mmØ RSC PIPE
4Y200	4 sets of 3-250mm² THHN COPPER WIRE 1-50mm² TW GROUND WIRE	IN 80mmØ RSC PIPE
F150	3-150mm² THW COPPER WIRE 1-30mm² TW GROUND WIRE	IN FREE AIR
F175	3-175mm² THW COPPER WIRE 1-30mm² TW GROUND WIRE	IN FREE AIR

SCALE: NTS

Republic of the Philippines
Land of the Charter
DEPARTMENT OF ENGINEERING

PROJECT TITLE:
PROPOSED UPGRADING OF ELECTRICAL SYSTEM AT PLACIDO DEL MUNDO ELEMENTARY SCHOOL IN BARANGAY TALIPAPA

LOCATION:
BARANGAY TALIPAPA, DISTRICT 6, QUEZON CITY

DATE:

DESIGNED BY:

DRAWN BY:

CHECKED BY: PEPE

REVISION NO.:

SUBMITTED BY:
ENGR. FREDISWINDO DE GUZMAN
HEAD, PLANNING & DESIGN DIVISION

RECOMMENDING APPROVAL:
ATTY. MARK DALE DIAMOND P. PERRAL
OIC-DIRECTOR

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

SHEET CONTENT:
SERVICE ENTRANCE CONCRETE POST DETAILS
SCHEMATIC DIAGRAM
WIRE SCHEDULE

SHEET NO.
EL-03
05 19

PANEL: **MAIN DISTRIBUTION PANEL (MDP)**
MAIN: **1500AT, 1500AF, 3P, 230V, MCCB**

CKT NO.	VOLTS	OUTLET		OTHER LOAD SERVICE	AMPERE LOAD			3Ø	VOLT AMPERE	CIRCUIT BREAKER	SIZE OF WIRE
		LO	CO		AB	CA	BC				
1	230			FEEDER LINE 1 / F1	229.61	237.70	216.63	0.00	168830.00	630AT, 3P, MCCB	2 sets of 3 - 100mm² THHN + 1 - 30mm² TW in 65mmØ RSC/2Y100
2	230			FEEDER LINE 2 / F2	177.04	231.52	211.70	0.00	141280.00	630AT, 3P, MCCB	2 sets of 3 - 100mm² THHN + 1 - 30mm² TW in 65mmØ RSC/2Y100
3	230			FEEDER LINE 3 / F3	266.61	207.13	216.00	0.00	96360.00	630AT, 3P, MCCB	2 sets of 3 - 125mm² THHN + 1 - 30mm² TW in 65mmØ RSC/2Y125
TOTAL					**673.26**	**676.35**	**644.32**	**0.00**	**406470.00**		

I = (676.35 x 1.732) + (12.00 x 0.25) = **1178.43 Amperes**

Feeder Line:

Use: 4 Sets of 3 - 200mm² THHN + 1 - 30mm² TW (G) in 90mmØ PVC/4Y200

PANEL: **FEEDER LINE 1**
MAIN: **630AT, 630AF, 3P, 230V, MCCB**

CKT NO.	VOLTS	OUTLET		OTHER LOAD SERVICE	AMPERE LOAD			3Ø	VOLT AMPERE	CIRCUIT BREAKER	SIZE OF WIRE
		LO	CO		AB	CA	BC				
1	230			ADMIN	115.35	0.00	0.00	0.00	30220.00	150AT, 2P, MCCB	2 - 50mm² THHN + 1 - 14mm² TW (G) in 50mmØ RSC/X50
2	230			GABALDON	0.00	158.52	0.00	0.00	35770.00	200AT, 2P, MCCB	2 - 80mm² THHN + 1 - 22mm² TW (G) in 50mmØ RSC/X80
3	230			FIL-CHINESE	0.00	79.17	0.00	0.00	17520.00	100AT, 2P, MCCB	2 - 30mm² THHN + 1 - 8.0mm² TW (G) in 32mmØ RSC/X30
2	230			TANDANG SORA	0.00	0.00	216.63	0.00	59040.00	275AT, 2P, MCCB	2 - 150mm² THHN + 1 - 30mm² TW (G) in 65mmØ RSC/X150
3	230			MATHAY	114.26	0.00	0.00	0.00	26280.00	150AT, 2P, MCCB	2 - 50mm² THHN + 1 - 14mm² TW (G) in 40mmØ RSC/X50
TOTAL					**229.61**	**237.70**	**216.63**	**0.00**	**168830.00**		

I = (237.70 x 1.732) + (12.00 x 0.25) = **414.69 Amperes**

Main Feeder:

Use: 2 sets 3 - 100mm² THHN + 1 - 30mm² TW in 65mmØ RSC/2Y100

Distribution Feeder:

Use: 3 - 150mm² THW + 1 - 30mm² TW (G) in FREE AIR

1 SCHEDULE OF LOADS

SCALE: NTS

Republika ng Pilipinas
Lungsod ng Quezon
DEPARTMENT OF ENGINEERING

PROJECT TITLE:
PROPOSED UPGRADING OF ELECTRICAL SYSTEM AT PLACIDO DEL MUNDO ELEMENTARY SCHOOL IN BARANGAY TALIPAPA

LOCATION:
BARANGAY TALIPAPA, DISTRICT II, QUEZON CITY

DATE:
DESIGNED BY:
DRAWN BY:
CHECKED BY: RPA
REVISION NO.:

SUBMITTED BY:
ENGR. FREDISMINDO L. DE GUZMAN
HEAD, PLANNING & DESIGN DIVISION

RECOMMENDING APPROVAL:
ATTY. MARK DALE DIAMOND P. PERRAL
CITY ENGINEER

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

SHEET CONTENT:
SCHEDULE OF LOADS

SHEET NO.
EL-04
06 19

PANEL: **FEEDER LINE 2**
MAIN: **630AT, 630AF, 3P, 230V, MCCB**

CKT NO.	VOLTS	OUTLET		OTHER LOAD SERVICE	AMPERE LOAD			3Ø	VOLT AMPERE	CIRCUIT BREAKER	SIZE OF WIRE
		LO	CO		AB	CA	BC				
1	230			PTA / JOURN / SOORMC	19.48	0.00	0.00	0.00	4480.00	30AT, 2P, MCCB	2 - 5.5mm² THHN + 1 - 3.5mm² TW (G) in 15mmØ RSC/X5.5
2	230			SB-2	0.00	152.35	0.00	0.00	35040.00	200AT, 2P, MCCB	2 - 80mm² THHN + 1 - 22mm² TW (G) in 50mmØ RSC/X80
3	230			CASTELO	157.57	0.00	0.00	0.00	36240.00	200AT, 2P, MCCB	2 - 80mm² THHN + 1 - 22mm² TW (G) in 50mmØ RSC/X80
4	230			MPH	0.00	0.00	59.35	0.00	12960.00	75AT, 2P, MCCB	2 - 22mm² THHN + 1 - 8.0mm² TW (G) in 25mmØ RSC/X22
5	230			SB-1	0.00	0.00	152.35	0.00	35040.00	200AT, 2P, MCCB	2 - 80mm² THHN + 1 - 22mm² TW (G) in 50mmØ RSC/X80
6	230			HE	0.00	79.17	0.00	0.00	17520.00	100AT, 2P, MCCB	2 - 30mm² THHN + 1 - 8.0mm² TW (G) in 32mmØ IMC/X30
TOTAL					**177.04**	**231.52**	**211.70**	**0.00**	**141280.00**		

I = (231.52 x 1.732) + (28.00 x 0.25) = **408.00 Amperes**

Main Feeder:

Use: 2 sets 3 - 100mm² THHN + 1 - 30mm² TW in 65mmØ RSC/2Y100

Distribution Feeder:

Use: 3 - 150mm² THW + 1 - 30mm² TW (G) in FREE AIR

PANEL: **FEEDER LINE 3**
MAIN: **630AT, 630AF, 3P, 230V, MCCB**

CKT NO.	VOLTS	OUTLET		OTHER LOAD SERVICE	AMPERE LOAD			3Ø	VOLT AMPERE	CIRCUIT BREAKER	SIZE OF WIRE
		LO	CO		AB	CA	BC				
1	230			DEPED - 2	152.35	0.00	0.00	0.00	35040.00	200AT, 2P, MCCB	2 - 80mm² THHN + 1 - 22mm² TW (G) in 50mmØ RSC/X80
2	230			DEPED - 1	114.26	0.00	0.00	0.00	26280.00	150AT, 2P, MCCB	2 - 50mm² THHN + 1 - 14mm² TW (G) in 40mmØ RSC/X50
3	230			RIZAL	0.00	152.35	0.00	0.00	35040.00	200AT, 2P, MCCB	2 - 80mm² THHN + 1 - 22mm² TW (G) in 50mmØ RSC/X80
4	230			QUEZON (L-SHAPE)	0.00	0.00	216.00	0.00	49680.00	275AT, 2P, MCCB	2 - 150mm² THHN + 1 - 30mm² TW (G) in 65mmØ RSC/X150
5	230			COVERED COURT / STAGE	0.00	54.78	0.00	0.00	12600.00	75AT, 2P, MCCB	2 - 22mm² THHN + 1 - 8.0mm² TW (G) in 25mmØ RSC/X22
					0.00	0.00	0.00	0.00			
TOTAL					**266.61**	**207.13**	**216.00**	**0.00**	**96360.00**		

I = (266.61 x 1.732) + (28.00 x 0.25) = **468.77 Amperes**

Main Feeder:

Use: 2 sets 3 - 125mm² THHN + 1 - 30mm² TW in 65mmØ RSC/2Y125

Distribution Feeder:

Use: 3 - 175mm² THW + 1 - 30mm² TW (G) in FREE AIR

1 SCHEDULE OF LOADS

SCALE :NTS

Republika ng Pilipinas
Lungsod ng Quezon
DEPARTMENT OF ENGINEERING

PROJECT TITLE:
PROPOSED UPGRADING OF ELECTRICAL SYSTEM AT PLACIDO DEL MUNDO ELEMENTARY SCHOOL IN BARANGAY TALIPAPA

LOCATION:
BARANGAY TALIPAPA, DISTRICT 6, QUEZON CITY

DATE:
DESIGNED BY:
DRAWN BY:
CHECKED BY: RBN
REVISION NO.:

SUBMITTED BY:
ENGR. FREDISWIN DL. DE GUZMAN
HEAD, PLANNING & DESIGN DIVISION

RECOMMENDING APPROVAL:
ATTY. MARK DAIMOND P. PERRAL
CITY ENGINEER

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

SHEET CONTENT:
SCHEDULE OF LOADS

SHEET NO.
EL-05
07 19

PANEL: **ADMIN BUILDING: DISTRIBUTION PANEL**
MAIN: **150AT, 200AF, 2P, 230V, MCCB**

CKT NO.	VOLTS	OUTLET		OTHER LOAD SERVICE	AMPERE LOAD			3Ø	VOLT AMPERE	CIRCUIT BREAKER	SIZE OF WIRE
		LO	CO		AB	CA	BC				
1	230	10			4.55				1000	20AT, 2P, Bolt-On	2 - 3.5mm² THHN + 1 - 2.0mm² TW (G) in 20mmØ PVC
2	230	9			4.09				900	20AT, 2P, Bolt-On	2 - 3.5mm² THHN + 1 - 2.0mm² TW (G) in 20mmØ PVC
3	230	10			4.55				1000	20AT, 2P, Bolt-On	2 - 3.5mm² THHN + 1 - 2.0mm² TW (G) in 20mmØ PVC
4	230	9			4.09				900	20AT, 2P, Bolt-On	2 - 3.5mm² THHN + 1 - 2.0mm² TW (G) in 20mmØ PVC
5	230		5		4.09				900	20AT, 2P, Bolt-On	2 - 3.5mm² THHN + 1 - 2.0mm² TW (G) in 20mmØ PVC
6	230		5		4.09				900	20AT, 2P, Bolt-On	2 - 3.5mm² THHN + 1 - 2.0mm² TW (G) in 20mmØ PVC
7	230		9		7.36				1620	20AT, 2P, Bolt-On	2 - 3.5mm² THHN + 1 - 2.0mm² TW (G) in 20mmØ PVC
8	230			PACU	98.86				21000	125AT, 2P, Bolt-On	2 - 38mm² THHN + 1 - 14mm² TW (G) in 20mmØ PVC
9	230			SPACE	4.55				1000		
10	230			SPARE	4.55				1000		
TOTAL					**140.77**	**0.00**	**0.00**	**0.00**	**30220.00**		

I = (140.77 + (13.64 x 0.25)) x 80% D.F. **115.35 Amperes**

Feeder Line:

Use: 2 - 50mm² THHN + 1 - 14mm² TW (G) in 50mmØ RSC/IMC

PANEL: **ADMIN BUILDING: PACU**
MAIN: **125AT, 200AF, 2P, 230V, MCCB**

CKT NO.	VOLTS	OUTLET		OTHER LOAD SERVICE	AMPERE LOAD			3Ø	VOLT AMPERE	CIRCUIT BREAKER	SIZE OF WIRE
		LO	CO		AB	CA	BC				
1	230			1 - 2.5HP ACU	13.64				3000	30AT, 2P, Bolt-On	2 - 5.5mm² THHN + 1 - 3.5mm² TW (G) in 15mmØ IMC
2	230			1 - 2.5HP ACU	13.64				3000	30AT, 2P, Bolt-On	2 - 5.5mm² THHN + 1 - 3.5mm² TW (G) in 15mmØ IMC
3	230			1 - 2.5HP ACU	13.64				3000	30AT, 2P, Bolt-On	2 - 5.5mm² THHN + 1 - 3.5mm² TW (G) in 15mmØ IMC
4	230			1 - 2.5HP ACU	13.64				3000	30AT, 2P, Bolt-On	2 - 5.5mm² THHN + 1 - 3.5mm² TW (G) in 15mmØ IMC
5	230			1 - 2.5HP ACU	13.64				3000	30AT, 2P, Bolt-On	2 - 5.5mm² THHN + 1 - 3.5mm² TW (G) in 15mmØ IMC
6	230			1 - 2.5HP ACU	13.64				3000	30AT, 2P, Bolt-On	2 - 5.5mm² THHN + 1 - 3.5mm² TW (G) in 15mmØ IMC
7	230			SPARE	6.82				1500	20AT, 2P, Bolt-On	
8	230			SPARE	6.82				1500	20AT, 2P, Bolt-On	
TOTAL					**95.45**	**0.00**	**0.00**	**0.00**	**21000.00**		

I = 95.45 + (13.64 x 0.25) **98.86 Amperes**

Feeder Line:

Use: 2 - 38mm² THHN + 1 - 14mm² TW (G) in 40mmØ IMC

1 SCHEDULE OF LOADS

SCALE: NTS

Republika ng Pilipinas
Lungsod ng Quezon
DEPARTMENT OF ENGINEERING

PROJECT TITLE:
PROPOSED UPGRADING OF ELECTRICAL SYSTEM AT PLACIDO DEL MUNDO ELEMENTARY SCHOOL IN BARANGAY TALIPAPA

LOCATION:
BARANGAY TALIPAPA, DISTRICT 6, QUEZON CITY

DATE:
DESIGNED BY:
DRAWN BY:
CHECKED BY: RBN
REVISION NO.:

SUBMITTED BY:
ENGR. FREDISWIN A. DE GUZMAN
HEAD, PLANNING & DESIGN DIVISION

RECOMMENDING APPROVAL:
ATTY. MARK DALE DIAMOND P. PERRAL
CITY ENGINEER

APPROVED BY:
HON. MA. JOBEFINA G. BELMONTE
CITY MAYOR

SHEET CONTENT:
SCHEDULE OF LOADS

EXHIBIT NO.:
EL-06
08 19

PANEL: **GABALDON BUILDING: DISTRIBUTION PANEL**
MAIN: **200AT, 200AF, 2P, 230V, MCCB**

CKT NO.	VOLTS	OUTLET		OTHER LOAD SERVICE	AMPERE LOAD			3Ø	VOLT AMPERE	CIRCUIT BREAKER	SIZE OF WIRE
		LO	CO		AB	CA	BC				
1	230	20			8.70				2000	20AT, 2P, Bolt-On	2 - 3.5mm² THHN + 1 - 2.0mm² TW (G) in 20mmØ PVC
2	230	15			6.52				1500	20AT, 2P, Bolt-On	2 - 3.5mm² THHN + 1 - 2.0mm² TW (G) in 20mmØ PVC
3	230	20			8.70				2000	20AT, 2P, Bolt-On	2 - 3.5mm² THHN + 1 - 2.0mm² TW (G) in 20mmØ PVC
4	230	15			6.52				1500	20AT, 2P, Bolt-On	2 - 3.5mm² THHN + 1 - 2.0mm² TW (G) in 20mmØ PVC
5	230		12		9.39				2160	20AT, 2P, Bolt-On	2 - 3.5mm² THHN + 1 - 2.0mm² TW (G) in 20mmØ PVC
6	230		12		9.39				2160	20AT, 2P, Bolt-On	2 - 3.5mm² THHN + 1 - 2.0mm² TW (G) in 20mmØ PVC
7	230		12		9.39				2160	20AT, 2P, Bolt-On	2 - 3.5mm² THHN + 1 - 2.0mm² TW (G) in 20mmØ PVC
8	230		12		9.39				2160	20AT, 2P, Bolt-On	2 - 3.5mm² THHN + 1 - 2.0mm² TW (G) in 20mmØ PVC
9	230			4 - ORBIT FAN	3.13				720	20AT, 2P, Bolt-On	2 - 3.5mm² THHN + 1 - 2.0mm² TW (G) in 20mmØ PVC
10	230			4 - ORBIT FAN	3.13				720	20AT, 2P, Bolt-On	2 - 3.5mm² THHN + 1 - 2.0mm² TW (G) in 20mmØ PVC
11	230			4 - ORBIT FAN	3.13				720	20AT, 2P, Bolt-On	2 - 3.5mm² THHN + 1 - 2.0mm² TW (G) in 20mmØ PVC
12	230			4 - ORBIT FAN	3.13				720	20AT, 2P, Bolt-On	2 - 3.5mm² THHN + 1 - 2.0mm² TW (G) in 20mmØ PVC
13	230			PACU	75.00				17250	100AT, 2P, Bolt-On	2 - 30mm² THHN + 1 - 8.0mm² TW (G) in 32mmØ IMC
14	230			SPACE							
TOTAL					**155.52**	**0.00**	**0.00**	**0.00**	**35770.00**		

I = 155.52 + (12 x 0.25) **158.52 Amperes**

Feeder Line:

Use: 2 - 80mm² THHN + 1 - 22mm² TW (G) in 50mmØ RSC/KBO

PANEL: **GABALDON BUILDING: PACU**
MAIN: **100AT, 100AF, 2P, 230V, MCCB**

CKT NO.	VOLTS	OUTLET		OTHER LOAD SERVICE	AMPERE LOAD			3Ø	VOLT AMPERE	CIRCUIT BREAKER	SIZE OF WIRE
		LO	CO		AB	CA	BC				
1	230			1 - 2HP ACU	12.00				2760	30AT, 2P, Bolt-On	2 - 5.5mm² THHN + 1 - 3.5mm² TW (G) in 20mmØ PVC
2	230			1 - 2HP ACU	12.00				2760	30AT, 2P, Bolt-On	2 - 5.5mm² THHN + 1 - 3.5mm² TW (G) in 20mmØ PVC
3	230			1 - 2HP ACU	12.00				2760	30AT, 2P, Bolt-On	2 - 5.5mm² THHN + 1 - 3.5mm² TW (G) in 20mmØ PVC
4	230			1 - 2HP ACU	12.00				2760	30AT, 2P, Bolt-On	2 - 5.5mm² THHN + 1 - 3.5mm² TW (G) in 20mmØ PVC
5	230			1 - 2HP ACU	12.00				2760	30AT, 2P, Bolt-On	2 - 5.5mm² THHN + 1 - 3.5mm² TW (G) in 20mmØ PVC
6	230			1 - 3HP ACU	12.00				2760		
TOTAL					**72.00**	**0.00**	**0.00**	**0.00**	**16560.00**		

I = 72 + (12 x 0.25) **75.00 Amperes**

Feeder Line:

Use: 2 - 30mm² THHN + 1 - 8.0mm² TW (G) in 32mmØ IMC

1 SCHEDULE OF LOADS

SCALE: NTS

Republika ng Pilipinas
Lungsod ng Quezon
DEPARTMENT OF ENGINEERING

PROJECT TITLE:
PROPOSED UPGRADING OF ELECTRICAL SYSTEM AT PLACIDO DEL MUNDO ELEMENTARY SCHOOL IN BARANGAY TALIPAPA

LOCATION:
BARANGAY TALIPAPA, DISTRICT II, QUEZON CITY

DATE:
DESIGNED BY:
DRAWN BY:
CHECKED BY: RCR
REVISION NO.:

SUBMITTED BY:
ENGR. FREDISMUNDO L. DE GUZMAN
ASST. PLANNING & DESIGN DIVISION

RECOMMENDING APPROVAL:
ATTY. MARK DALE EDMOND P. PERRALES
CITY ENGINEER

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

SHEET CONTENT:
SCHEDULE OF LOADS

SHEET NO.
EL-07
09 19

PANEL: **FIL-CHINESES BUILDING: DISTRIBUTION PANEL**
MAIN: **100AT, 100AF, 2P, 230V, MCCB**

CKT NO.	VOLTS	OUTLET		OTHER LOAD SERVICE	AMPERE LOAD			3Ø	VOLT AMPERE	CIRCUIT BREAKER	SIZE OF WIRE
		LO	CO		AB	CA	BC				
1	230	15			6.52				1500	20AT, 2P, Bolt-On	2 - 3.5mm² THHN + 1 - 2.0mm² TW (G) in 20mmØ PVC
2	230	15			6.52				1500	20AT, 2P, Bolt-On	2 - 3.5mm² THHN + 1 - 2.0mm² TW (G) in 20mmØ PVC
3	230	15			6.52				1500	20AT, 2P, Bolt-On	2 - 3.5mm² THHN + 1 - 2.0mm² TW (G) in 20mmØ PVC
4	230		15		11.74				2700	20AT, 2P, Bolt-On	2 - 3.5mm² THHN + 1 - 2.0mm² TW (G) in 20mmØ PVC
5	230		15		11.74				2700	20AT, 2P, Bolt-On	2 - 3.5mm² THHN + 1 - 2.0mm² TW (G) in 20mmØ PVC
6	230		15		11.74				2700	20AT, 2P, Bolt-On	2 - 3.5mm² THHN + 1 - 2.0mm² TW (G) in 20mmØ PVC
7	230			4 - ORBIT FAN	3.13				720	20AT, 2P, Bolt-On	2 - 3.5mm² THHN + 1 - 2.0mm² TW (G) in 20mmØ PVC
8	230			4 - ORBIT FAN	3.13				720	20AT, 2P, Bolt-On	2 - 3.5mm² THHN + 1 - 2.0mm² TW (G) in 20mmØ PVC
9	230			4 - ORBIT FAN	3.13				720	20AT, 2P, Bolt-On	2 - 3.5mm² THHN + 1 - 2.0mm² TW (G) in 20mmØ PVC
5	230			1 - 2HP ACU	12.00				2760	30AT, 2P, Bolt-On	2 - 5.5mm² THHN + 1 - 3.5mm² TW (G) in 20mmØ PVC
TOTAL					**76.17**	**0.00**	**0.00**	**0.00**	**17520.00**		

I = 76.17 + (12 x 0.25) **79.17 Amperes**

Feeder Line:

Use: 2 - 30mm² THHN + 1 - 8.0mm² TW (G) in 32mmØ RSC/X30

PANEL: **TANDANG SORA BUILDING: LPP1, 2, 3, & 4 (TYPICAL)**
MAIN: **75AT, 100AF, 2P, 230V, MCCB**

CKT NO.	VOLTS	OUTLET		OTHER LOAD SERVICE	AMPERE LOAD			3Ø	VOLT AMPERE	CIRCUIT BREAKER	SIZE OF WIRE
		LO	CO		AB	CA	BC				
1	230	13			5.65				1300	20AT, 2P, Bolt-On	2 - 3.5mm² THHN + 1 - 2.0mm² TW (G) in 20mmØ PVC
2	230	13			5.65				1300	20AT, 2P, Bolt-On	2 - 3.5mm² THHN + 1 - 2.0mm² TW (G) in 20mmØ PVC
3	230	13			5.65				1300	20AT, 2P, Bolt-On	2 - 3.5mm² THHN + 1 - 2.0mm² TW (G) in 20mmØ PVC
4	230	13			5.65				1300	20AT, 2P, Bolt-On	2 - 3.5mm² THHN + 1 - 2.0mm² TW (G) in 20mmØ PVC
5	230		8		6.26				1440	20AT, 2P, Bolt-On	2 - 3.5mm² THHN + 1 - 2.0mm² TW (G) in 20mmØ PVC
6	230		8		6.26				1440	20AT, 2P, Bolt-On	2 - 3.5mm² THHN + 1 - 2.0mm² TW (G) in 20mmØ PVC
7	230		8		6.26				1440	20AT, 2P, Bolt-On	2 - 3.5mm² THHN + 1 - 2.0mm² TW (G) in 20mmØ PVC
8	230		8		6.26				1440	20AT, 2P, Bolt-On	2 - 3.5mm² THHN + 1 - 2.0mm² TW (G) in 20mmØ PVC
9	230			4 - ORBIT FAN	3.13				720	20AT, 2P, Bolt-On	2 - 3.5mm² THHN + 1 - 2.0mm² TW (G) in 20mmØ PVC
10	230			4 - ORBIT FAN	3.13				720	20AT, 2P, Bolt-On	2 - 3.5mm² THHN + 1 - 2.0mm² TW (G) in 20mmØ PVC
11	230			4 - ORBIT FAN	3.13				720	20AT, 2P, Bolt-On	2 - 3.5mm² THHN + 1 - 2.0mm² TW (G) in 20mmØ PVC
12	230			4 - ORBIT FAN	3.13				720	20AT, 2P, Bolt-On	2 - 3.5mm² THHN + 1 - 2.0mm² TW (G) in 20mmØ PVC
TOTAL					**60.17**	**0.00**	**0.00**	**0.00**	**13840.00**		

I = 13840 / 230 **60.17 Amperes**

Feeder Line:

Use: 2 - 22mm² THHN + 1 - 8.0mm² TW (G) in 25mmØ IMC

1 SCHEDULE OF LOADS

SCALE: NTS

Republika ng Pilipinas Lungsod ng Quezon **DEPARTMENT OF ENGINEERING**	PROJECT TITLE: PROPOSED UPGRADING OF ELECTRICAL SYSTEM AT PLACIDO DEL MUNDO ELEMENTARY SCHOOL IN BARANGAY TALIPAPA LOCATION: BARANGAY TALIPAPA, DISTRICT 6, QUEZON CITY	DATE: DESIGNED BY: REVISION NO.:	DRAWN BY: CHECKED BY:	SUBMITTED BY: ENGR. FREDISWINDA L. DE GUZMAN HEAD, PLANNING & DESIGN DIVISION	RECOMMENDING APPROVAL: ATTY. MARK DALE DIAMOND P. PERRAL CITY ENGINEER	APPROVED BY: HON. MA. JOSEFINA G. BELMONTE CITY MAYOR	SHEET CONTENT: SCHEDULE OF LOADS	SHEET NO.: EL-08 10 19

PANEL: TANDANG SORA BUILDING: DISTRIBUTION PANEL (DP)
MAIN: 275AT, 275AF, 2P, 230V, MCCB

CKT NO.	VOLTS	OUTLET		OTHER LOAD SERVICE	AMPERE LOAD			3Ø	VOLT AMPERE	CIRCUIT BREAKER	SIZE OF WIRE
		LO	CO		AB	CA	BC				
1	230			LPP1	60.17	0.00	0.00		17520.00	75AT, 2P, MCCB	2 - 22mm² THHN + 1 - 8.0mm² TW (G) in 25mmØ IMC
2	230			LPP2	60.17	0.00	0.00		13840.00	75AT, 2P, MCCB	2 - 22mm² THHN + 1 - 8.0mm² TW (G) in 25mmØ IMC
3	230			LPP3	60.17	0.00	0.00		13840.00	75AT, 2P, MCCB	2 - 22mm² THHN + 1 - 8.0mm² TW (G) in 25mmØ IMC
4	230			LPP4	60.17	0.00	0.00		13840.00	75AT, 2P, MCCB	2 - 22mm² THHN + 1 - 8.0mm² TW (G) in 25mmØ IMC
TOTAL					240.70	0.00	0.00	0.00	59040.00		

I = (59040 / 230) x 90% D.F. **216.63 Amperes**

Feeder Line:

Use: 2 - 150mm² THHN + 1 - 30mm² TW (G) in 65mmØ RSC/X150

PANEL: MATHAY BUILDING: LPP1, 2 & 3 (TYPICAL)
MAIN: 60AT, 100AF, 2P, 230V, MCCB

CKT NO.	VOLTS	OUTLET		OTHER LOAD SERVICE	AMPERE LOAD			3Ø	VOLT AMPERE	CIRCUIT BREAKER	SIZE OF WIRE
		LO	CO		AB	CA	BC				
1	230	15			6.52				1500	20AT, 2P, Bolt-On	2 - 3.5mm² THHN + 1 - 2.0mm² TW (G) in 20mmØ PVC
2	230	15			6.52				1500	20AT, 2P, Bolt-On	2 - 3.5mm² THHN + 1 - 2.0mm² TW (G) in 20mmØ PVC
3	230		8		6.26				1440	20AT, 2P, Bolt-On	2 - 3.5mm² THHN + 1 - 2.0mm² TW (G) in 20mmØ PVC
4	230		8		6.26				1440	20AT, 2P, Bolt-On	2 - 3.5mm² THHN + 1 - 2.0mm² TW (G) in 20mmØ PVC
5	230			8 - ORBIT FAN	6.26				1440	20AT, 2P, Bolt-On	2 - 3.5mm² THHN + 1 - 2.0mm² TW (G) in 20mmØ PVC
6	230			8 - ORBIT FAN	6.26				1440	20AT, 2P, Bolt-On	2 - 3.5mm² THHN + 1 - 2.0mm² TW (G) in 20mmØ PVC
8	230			SPACE							
TOTAL					38.09	0.00	0.00	0.00	8760.00		

I = 11000 / 230 **38.09 Amperes**

Feeder Line:

Use: 2 - 14mm² THHN + 1 - 8.0mm² TW (G) in 25mmØ IMC

PANEL: MATHAY BUILDING: DISTRIBUTION PANEL
MAIN: 150AT, 200AF, 2P, 230V, MCCB

CKT NO.	VOLTS	OUTLET		OTHER LOAD SERVICE	AMPERE LOAD			3Ø	VOLT AMPERE	CIRCUIT BREAKER	SIZE OF WIRE
		LO	CO		AB	CA	BC				
1	230			LPP1	38.09	0.00	0.00		8760.00	60AT, 2P, MCCB	2 - 14mm² THHN + 1 - 8.0mm² TW (G) in 25mmØ IMC
2	230			LPP2	38.09	0.00	0.00		8760.00	60AT, 2P, MCCB	2 - 14mm² THHN + 1 - 8.0mm² TW (G) in 25mmØ IMC
3	230			LPP3	38.09	0.00	0.00		8760.00	60AT, 2P, MCCB	2 - 14mm² THHN + 1 - 8.0mm² TW (G) in 25mmØ IMC
TOTAL					114.26	0.00	0.00	0.00	26280.00		

I = 33000 / 230 **114.26 Amperes**

Feeder Line:

Use: 2 - 50mm² THHN + 1 - 14mm² TW (G) in 40mmØ RSC/X50

1 SCHEDULE OF LOADS

SCALE: NTS

Republika ng Pilipinas
Lungsod ng Quezon
DEPARTMENT OF ENGINEERING

PROJECT TITLE:
PROPOSED UPGRADING OF ELECTRICAL SYSTEM AT PLACIDO DEL MUNDO ELEMENTARY SCHOOL IN BARANGAY TALIPAPA

LOCATION:
BARANGAY TALIPAPA, DISTRICT 6, QUEZON CITY

DATE:
DESIGNED BY:
DRAWN BY:
CHECKED BY:
PROVISION NO.:

SUBMITTED BY:
ENGR. FREDISWINDO M. DE GUZMAN
HEAD, PLANNING & DESIGN DIVISION

RECOMMENDING APPROVAL:
ATTY. MARK DALE EDMOND P. PERRALES
CITY ENGINEER

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

SHEET CONTENT:
SCHEDULE OF LOADS

SHEET NO.:
EL-09
11 | 19

PANEL: WAITING AREA/PTA/JOURN/SDDRMC BUILDING: DISTRIBUTION PANEL
MAIN: 30AT, 100AF, 2P, 230V, MCCB

CKT NO.	VOLTS	OUTLET		OTHER LOAD SERVICE	AMPERE LOAD			3Ø	VOLT AMPERE	CIRCUIT BREAKER	SIZE OF WIRE
		LO	CO		AB	CA	BC				
1	230	16			6.96				1600	20AT, 2P, Bolt-On	2 - 3.5mm² THHN + 1 - 2.0mm² TW (G) in 20mmØ PVC
2	230		10		7.83				1800	20AT, 2P, Bolt-On	2 - 3.5mm² THHN + 1 - 2.0mm² TW (G) in 20mmØ PVC
3	230			6 - ORBIT FAN	4.70				1080	20AT, 2P, Bolt-On	2 - 3.5mm² THHN + 1 - 2.0mm² TW (G) in 20mmØ PVC
4	230			SPACE							
TOTAL					19.48	0.00	0.00	0.00	4480.00		

I = 8800 / 230 **19.48 Amperes**

Feeder Line:

Use: 2 - 5.5mm² THHN + 1 - 3.5mm² TW (G) in 15mmØ RSC/IMC

PANEL: SB HALL BUILDING 2: LPP1, 2, 3 & 4 (TYPICAL)
MAIN: 60AT, 100AF, 2P, 230V, MCCB

CKT NO.	VOLTS	OUTLET		OTHER LOAD SERVICE	AMPERE LOAD			3Ø	VOLT AMPERE	CIRCUIT BREAKER	SIZE OF WIRE
		LO	CO		AB	CA	BC				
1	230	15			6.52				1500	20AT, 2P, Bolt-On	2 - 3.5mm² THHN + 1 - 2.0mm² TW (G) in 20mmØ PVC
2	230	15			6.52				1500	20AT, 2P, Bolt-On	2 - 3.5mm² THHN + 1 - 2.0mm² TW (G) in 20mmØ PVC
3	230		8		6.26				1440	20AT, 2P, Bolt-On	2 - 3.5mm² THHN + 1 - 2.0mm² TW (G) in 20mmØ PVC
4	230		8		6.26				1440	20AT, 2P, Bolt-On	2 - 3.5mm² THHN + 1 - 2.0mm² TW (G) in 20mmØ PVC
5	230			8 - ORBIT FAN	6.26				1440	20AT, 2P, Bolt-On	2 - 3.5mm² THHN + 1 - 2.0mm² TW (G) in 20mmØ PVC
6	230			8 - ORBIT FAN	6.26				1440	20AT, 2P, Bolt-On	2 - 3.5mm² THHN + 1 - 2.0mm² TW (G) in 20mmØ PVC
TOTAL					38.09	0.00	0.00	0.00	8760.00		

I = 8760 / 230 **38.09 Amperes**

Feeder Line:

Use: 2 - 14mm² THHN + 1 - 8.0mm² TW (G) in 25mmØ IMC

PANEL: SB HALL BUILDING 2: DISTRIBUTION PANEL (DP)
MAIN: 200AT, 200AF, 2P, 230V, MCCB

CKT NO.	VOLTS	OUTLET		OTHER LOAD SERVICE	AMPERE LOAD			3Ø	VOLT AMPERE	CIRCUIT BREAKER	SIZE OF WIRE
		LO	CO		AB	CA	BC				
1	230			LPP1	38.09	0.00	0.00	0.00	8760.00	60AT, 2P, MCCB	2 - 14mm² THHN + 1 - 8.0mm² TW (G) in 32mmØ IMC
2	230			LPP2	38.09	0.00	0.00	0.00	8760.00	60AT, 2P, MCCB	2 - 14mm² THHN + 1 - 8.0mm² TW (G) in 32mmØ IMC
3	230			LPP3	38.09	0.00	0.00	0.00	8760.00	60AT, 2P, MCCB	2 - 14mm² THHN + 1 - 8.0mm² TW (G) in 32mmØ IMC
4	230			LPP4	38.09	0.00	0.00	0.00	8760.00	60AT, 2P, MCCB	2 - 14mm² THHN + 1 - 8.0mm² TW (G) in 32mmØ IMC
TOTAL					152.35	0.00	0.00	0.00	35040.00		

I = 35040 / 230 **152.35 Amperes**

Feeder Line:

Use: 2 - 80mm² THHN + 1 - 22mm² TW (G) in 50mmØ RSC/IMC

1 SCHEDULE OF LOADS

SCALE: NTS

Republika ng Pilipinas
Lungsod ng Quezon
DEPARTMENT OF ENGINEERING

PROJECT TITLE:
PROPOSED UPGRADING OF ELECTRICAL SYSTEM AT PLACIDO DEL MUNDO ELEMENTARY SCHOOL IN BARANGAY TALIPAPA

LOCATION:
BARANGAY TALIPAPA, DISTRICT 6, QUEZON CITY

DATE:
DESIGNED BY:
DRAWN BY:
CHECKED BY: FEN
REVISION NO.

SUBMITTED BY:
ENGR. FREDISMINDA G. DE GUZMAN
HEAD, PLANNING & DESIGN DIVISION

RECOMMENDING APPROVAL:
ATTY. MARK DALE EDMOND P. PERRAL
CITY ENGINEER

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

EXHIBIT CONTENT: SCHEDULE OF LOADS

EXHIBIT NO.: EL-10
SHEET NO.: 12 / 19

PANEL: **CASTELO BUILDING: LPP1, 2, 3 & 4 (TYPICAL)**
MAIN: **60AT, 100AF, 2P, 230V, MCCB**

CKT NO.	VOLTS	OUTLET		OTHER LOAD SERVICE	AMPERE LOAD			3Ø	VOLT AMPERE	CIRCUIT BREAKER	SIZE OF WIRE
		LO	CO		AB	CA	BC				
1	230	14			6.09				1400	20AT, 2P, Bolt-On	2 - 3.5mm² THHN + 1 - 2.0mm² TW (G) in 20mmØ PVC
2	230	14			6.09				1400	20AT, 2P, Bolt-On	2 - 3.5mm² THHN + 1 - 2.0mm² TW (G) in 20mmØ PVC
3	230	14			6.09				1400	20AT, 2P, Bolt-On	2 - 3.5mm² THHN + 1 - 2.0mm² TW (G) in 20mmØ PVC
4	230		5		3.91				900	20AT, 2P, Bolt-On	2 - 3.5mm² THHN + 1 - 2.0mm² TW (G) in 20mmØ PVC
5	230		5		3.91				900	20AT, 2P, Bolt-On	2 - 3.5mm² THHN + 1 - 2.0mm² TW (G) in 20mmØ PVC
6	230		5		3.91				900	20AT, 2P, Bolt-On	2 - 3.5mm² THHN + 1 - 2.0mm² TW (G) in 20mmØ PVC
7	230			4 - ORBIT FAN	3.13				720	20AT, 2P, Bolt-On	2 - 3.5mm² THHN + 1 - 2.0mm² TW (G) in 20mmØ PVC
8	230			4 - ORBIT FAN	3.13				720	20AT, 2P, Bolt-On	2 - 3.5mm² THHN + 1 - 2.0mm² TW (G) in 20mmØ PVC
9	230			4 - ORBIT FAN	3.13				720	20AT, 2P, Bolt-On	2 - 3.5mm² THHN + 1 - 2.0mm² TW (G) in 20mmØ PVC
10	230			SPACE							
TOTAL					**39.39**	**0.00**	**0.00**	**0.00**	**9060.00**		

I = 9060 / 230 **39.39 Amperes**

Feeder Line:

Use: 2 - 14mm² THHN + 1 - 8.0mm² TW (G) in 25mmØ IMC

PANEL: **CASTELO BUILDING: DISTRIBUTION PANEL (DP)**
MAIN: **200AT, 200AF, 2P, 230V, MCCB**

CKT NO.	VOLTS	OUTLET		OTHER LOAD SERVICE	AMPERE LOAD			3Ø	VOLT AMPERE	CIRCUIT BREAKER	SIZE OF WIRE
		LO	CO		AB	CA	BC				
1	230			LPP1	39.39	0.00	0.00	0.00	9060.00	60AT, 2P, MCCB	2 - 14mm² THHN + 1 -8.0mm² TW (G) in 25mmØ IMC
2	230			LPP2	39.39	0.00	0.00	0.00	9060.00	60AT, 2P, MCCB	2 - 14mm² THHN + 1 -8.0mm² TW (G) in 25mmØ IMC
3	230			LPP3	39.39	0.00	0.00	0.00	9060.00	60AT, 2P, MCCB	2 - 14mm² THHN + 1 -8.0mm² TW (G) in 25mmØ IMC
4	230			LPP4	39.39	0.00	0.00	0.00	9060.00	60AT, 2P, MCCB	2 - 14mm² THHN + 1 -8.0mm² TW (G) in 25mmØ IMC
TOTAL					**157.57**	**0.00**	**0.00**	**0.00**	**36240.00**		

I = 36240 / 230 **157.57 Amperes**

Feeder Line:

Use: 2 - 80mm² THHN + 1 - 22mm² TW (G) in 50mmØ RSC/X80

1 SCHEDULE OF LOADS

SCALE :NTS

Republika ng Pilipinas
Lungsod ng Quezon
DEPARTMENT OF ENGINEERING

PROJECT TITLE:
PROPOSED UPGRADING OF ELECTRICAL SYSTEM AT PLACIDO DEL MUNDO ELEMENTARY SCHOOL IN BARANGAY TALIPAPA

LOCATION:
BARANGAY TALIPAPA, DISTRICT 6, QUEZON CITY

DATE:
DESIGNED BY:
DRAWN BY:
CHECKED BY:
REVISION NO.:

SUBMITTED BY:
ENGR. FREDISWALD C. DE GUZMAN
HEAD, PLANNING & DESIGN DIVISION

RECOMMENDING APPROVAL:
ATTY. MARK DAVE DIAMOND P. FERNAL
CITY ENGINEER

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

SHEET CONTENT:
SCHEDULE OF LOADS

SHEET NO.
EL-11
13 19

PANEL: **MPH BUILDING: DISTRIBUTION PANEL**
MAIN: **75AT, 10KAF, 2P, 230V, MCCB**

CKT NO.	VOLTS	OUTLET		OTHER LOAD SERVICE	AMPERE LOAD			3ϕ	VOLT AMPERE	CIRCUIT BREAKER	SIZE OF WIRE
		LO	CO		AB	CA	BC				
1	230	12			5.22				1200	20AT, 2P, Bolt-On	2 - 3.5mm² THHN + 1 - 2.0mm² TW (G) in 20mmØ PVC
2	230	12			5.22				1200	20AT, 2P, Bolt-On	2 - 3.5mm² THHN + 1 - 2.0mm² TW (G) in 20mmØ PVC
3	230		10		7.83				1800	20AT, 2P, Bolt-On	2 - 3.5mm² THHN + 1 - 2.0mm² TW (G) in 20mmØ PVC
4	230		10		7.83				1800	20AT, 2P, Bolt-On	2 - 3.5mm² THHN + 1 - 2.0mm² TW (G) in 20mmØ PVC
5	230			4 - ORBIT FAN	3.13				720	20AT, 2P, Bolt-On	2 - 3.5mm² THHN + 1 - 2.0mm² TW (G) in 20mmØ PVC
6	230			4 - ORBIT FAN	3.13				720	20AT, 2P, Bolt-On	2 - 3.5mm² THHN + 1 - 2.0mm² TW (G) in 20mmØ PVC
7	230			1 - 2HP ACU	12.00				2760	30AT, 2P, Bolt-On	2 - 5.5mm² THHN + 1 - 3.5mm² TW (G) in 20mmØ PVC
8	230			1 - 2HP ACU	12.00				2760	30AT, 2P, Bolt-On	2 - 5.5mm² THHN + 1 - 3.5mm² TW (G) in 20mmØ PVC
9	230			SPACE							
				TOTAL	**56.35**	**0.00**	**0.00**	**0.00**	**12960.00**		

I = 11920 / 230 **59.35 Amperes**

Feeder Line:

Use: 2 - 22mm² THHN + 1 - 8.0mm² TW (G) in 25mmØ RSC/X22

PANEL: **SB HALL BUILDING 1: LPP1, 2, 3 & 4 (TYPICAL)**
MAIN: **60AT, 100AF, 2P, 230V, MCCB**

CKT NO.	VOLTS	OUTLET		OTHER LOAD SERVICE	AMPERE LOAD			3ϕ	VOLT AMPERE	CIRCUIT BREAKER	SIZE OF WIRE
		LO	CO		AB	CA	BC				
1	230	15			6.52				1500	20AT, 2P, Bolt-On	2 - 3.5mm² THHN + 1 - 2.0mm² TW (G) in 20mmØ PVC
2	230	15			6.52				1500	20AT, 2P, Bolt-On	2 - 3.5mm² THHN + 1 - 2.0mm² TW (G) in 20mmØ PVC
3	230		8		6.26				1440	20AT, 2P, Bolt-On	2 - 3.5mm² THHN + 1 - 2.0mm² TW (G) in 20mmØ PVC
4	230		8		6.26				1440	20AT, 2P, Bolt-On	2 - 3.5mm² THHN + 1 - 2.0mm² TW (G) in 20mmØ PVC
5	230			8 - ORBIT FAN	6.26				1440	20AT, 2P, Bolt-On	2 - 3.5mm² THHN + 1 - 2.0mm² TW (G) in 20mmØ PVC
6	230			8 - ORBIT FAN	6.26				1440	20AT, 2P, Bolt-On	2 - 3.5mm² THHN + 1 - 2.0mm² TW (G) in 20mmØ PVC
				TOTAL	**38.09**	**0.00**	**0.00**	**0.00**	**8760.00**		

I = 8760 / 230 **38.09 Amperes**

Feeder Line:

Use: 2 - 14mm² THHN + 1 - 8.0mm² TW (G) in 25mmØ IMC

1 SCHEDULE OF LOADS

SCALE: NTS

Republika ng Pilipinas
Lungsod ng Quezon
DEPARTMENT OF ENGINEERING

PROJECT TITLE:
PROPOSED UPGRADING OF ELECTRICAL SYSTEM AT PLACIDO DEL MUNDO ELEMENTARY SCHOOL IN BARANGAY TALIPAPA

LOCATION: BARANGAY TALIPAPA, DISTRICT 6, QUEZON CITY

DATE:
DESIGNED BY:
DRAWN BY:
CHECKED BY: RDN
REVISION NO.:

SUBMITTED BY: ENGR. FREDISWIN[illegible] DE GUZMAN, HEAD, PLANNING & DESIGN DIVISION

RECOMMENDING APPROVAL: ATTY. MARK DALE DIAMOND P. PERRAL, CITY ENGINEER

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

SHEET CONTENT: SCHEDULE OF LOADS

SHEET NO.: EL-12 | 14 | 19

PANEL: **SB HALL BUILDING 1: DISTRIBUTION PANEL (DP)**
MAIN: **200AT, 200AF, 2P, 230V, MCCB**

CKT NO.	VOLTS	OUTLET		OTHER LOAD SERVICE	AMPERE LOAD			3Ø	VOLT AMPERE	CIRCUIT BREAKER	SIZE OF WIRE
		LO	CO		AB	CA	BC				
1	230			LPP1	38.09	0.00	0.00	0.00	8760.00	75AT, 2P, MCCB	2 - 38mm² THHN + 1 -14mm² TW (G) in 32mmØ IMC
2	230			LPP2	38.09	0.00	0.00	0.00	8760.00	75AT, 2P, MCCB	2 - 22mm² THHN + 1 -8.0mm² TW (G) in 25mmØ IMC
3	230			LPP3	38.09	0.00	0.00	0.00	8760.00	75AT, 2P, MCCB	
4	230			LPP4	38.09	0.00	0.00	0.00	8760.00	75AT, 2P, MCCB	
TOTAL					**152.35**	**0.00**	**0.00**	**0.00**	**35040.00**		

I = 35040 / 230 **152.35 Amperes**

Feeder Line:

Use: 2 - 80mm² THHN + 1 - 22mm² TW (G) in 50mmØ RSC/XBD

PANEL: **HE BUILDING: DISTRIBUTION PANEL (Proposed)**
MAIN: **100AT, 100AF, 2P, 230V, MCCB**

CKT NO.	VOLTS	OUTLET		OTHER LOAD SERVICE	AMPERE LOAD			3Ø	VOLT AMPERE	CIRCUIT BREAKER	SIZE OF WIRE
		LO	CO		AB	CA	BC				
1	230	15			6.52				1500	20AT, 2P, Bolt-On	2 - 3.5mm² THHN + 1 - 2.0mm² TW (G) in 20mmØ PVC
2	230	15			6.52				1500	20AT, 2P, Bolt-On	2 - 3.5mm² THHN + 1 - 2.0mm² TW (G) in 20mmØ PVC
3	230	15			6.52				1500	20AT, 2P, Bolt-On	2 - 3.5mm² THHN + 1 - 2.0mm² TW (G) in 20mmØ PVC
4	230		15		11.74				2700	20AT, 2P, Bolt-On	2 - 3.5mm² THHN + 1 - 2.0mm² TW (G) in 20mmØ PVC
5	230		15		11.74				2700	20AT, 2P, Bolt-On	2 - 3.5mm² THHN + 1 - 2.0mm² TW (G) in 20mmØ PVC
6	230		15		11.74				2700	20AT, 2P, Bolt-On	2 - 3.5mm² THHN + 1 - 2.0mm² TW (G) in 20mmØ PVC
7	230			4 - ORBIT FAN	3.13				720	20AT, 2P, Bolt-On	2 - 3.5mm² THHN + 1 - 2.0mm² TW (G) in 20mmØ PVC
8	230			4 - ORBIT FAN	3.13				720	20AT, 2P, Bolt-On	2 - 3.5mm² THHN + 1 - 2.0mm² TW (G) in 20mmØ PVC
9	230			4 - ORBIT FAN	3.13				720	20AT, 2P, Bolt-On	2 - 3.5mm² THHN + 1 - 2.0mm² TW (G) in 20mmØ PVC
5	230			1 - 2HP ACU	12.00				2760	30AT, 2P, Bolt-On	2 - 5.5mm² THHN + 1 - 3.5mm² TW (G) in 20mmØ PVC
TOTAL					**76.17**	**0.00**	**0.00**	**0.00**	**17520.00**		

I = 76.17 + (12 x 0.25) **79.17 Amperes**

Feeder Line:

Use: 2 - 30mm² THHN + 1 - 8.0mm² TW (G) in 32mmØ IMC/X30

1 SCHEDULE OF LOADS

SCALE: NTS

Republika ng Pilipinas
Lungsod ng Quezon
DEPARTMENT OF ENGINEERING

PROJECT TITLE:
PROPOSED UPGRADING OF ELECTRICAL SYSTEM AT PLACIDO DEL MUNDO ELEMENTARY SCHOOL IN BARANGAY TALIPAPA

LOCATION:
BARANGAY TALIPAPA, DISTRICT II, QUEZON CITY

DATE:
DESIGNED BY:
DRAWN BY:
CHECKED BY:
REVISION NO.:

SUBMITTED BY:
ENGR. FREDISWINDA DL. DE GUZMAN
HEAD, PLANNING & DESIGN SECTION

RECOMMENDING APPROVAL:
ATTY. MARK DALE EDMOND P. PERRAL
CITY ENGINEER

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

SHEET CONTENT:
SCHEDULE OF LOADS

SHEET NO.
EL-13
15 19

PANEL: DEPED BUILDING 2: LPP1, 2, 3 & 4 (TYPICAL)
MAIN: 60AT, 100AF, 2P, 230V, MCCB

CKT NO.	VOLTS	OUTLET		OTHER LOAD SERVICE	AMPERE LOAD			3Ø	VOLT AMPERE	CIRCUIT BREAKER	SIZE OF WIRE
		LO	CO		AB	CA	BC				
1	230	15			6.52				1500	20AT, 2P, Bolt-On	2 - 3.5mm² THHN + 1 - 2.0mm² TW (G) in 20mmØ PVC
2	230	15			6.52				1500	20AT, 2P, Bolt-On	2 - 3.5mm² THHN + 1 - 2.0mm² TW (G) in 20mmØ PVC
3	230		8		6.26				1440	20AT, 2P, Bolt-On	2 - 3.5mm² THHN + 1 - 2.0mm² TW (G) in 20mmØ PVC
4	230		8		6.26				1440	20AT, 2P, Bolt-On	2 - 3.5mm² THHN + 1 - 2.0mm² TW (G) in 20mmØ PVC
5	230			8 - ORBIT FAN	6.26				1440	20AT, 2P, Bolt-On	2 - 3.5mm² THHN + 1 - 2.0mm² TW (G) in 20mmØ PVC
6	230			8 - ORBIT FAN	6.26				1440	20AT, 2P, Bolt-On	2 - 3.5mm² THHN + 1 - 2.0mm² TW (G) in 20mmØ PVC
TOTAL					38.09	0.00	0.00	0.00	8760.00		

I = 8760 / 230 **38.09 Amperes**

Feeder Line:

Use: 2 - 14mm² THHN + 1 - 8.0mm² TW (G) in 25mmØ IMC

PANEL: DEPED BUILDING 2: DISTRIBUTION PANEL (DP)
MAIN: 200AT, 200AF, 2P, 230V, MCCB

CKT NO.	VOLTS	OUTLET		OTHER LOAD SERVICE	AMPERE LOAD			3Ø	VOLT AMPERE	CIRCUIT BREAKER	SIZE OF WIRE
		LO	CO		AB	CA	BC				
1	230			LPP1	38.09	0.00	0.00	0.00	8760.00	75AT, 2P, MCCB	2 - 38mm² THHN + 1 -14mm² TW (G) in 32mmØ IMC
2	230			LPP2	38.09	0.00	0.00	0.00	8760.00	75AT, 2P, MCCB	2 - 22mm² THHN + 1 -8.0mm² TW (G) in 25mmØ IMC
3	230			LPP3	38.09	0.00	0.00	0.00	8760.00	75AT, 2P, MCCB	
4	230			LPP4	38.09	0.00	0.00	0.00	8760.00	75AT, 2P, MCCB	
TOTAL					152.35	0.00	0.00	0.00	35040.00		

I = 35040 / 230 **152.35 Amperes**

Feeder Line:

Use: 2 - 80mm² THHN + 1 - 22mm² TW (G) in 50mmØ RSC/IMC

1 SCHEDULE OF LOADS

SCALE: NTS

Republika ng Pilipinas
Lungsod ng Quezon
DEPARTMENT OF ENGINEERING

PROJECT TITLE:
PROPOSED UPGRADING OF ELECTRICAL SYSTEM AT PLACIDO DEL MUNDO ELEMENTARY SCHOOL IN BARANGAY TALIPAPA

LOCATION:
BARANGAY TALIPAPA, DISTRICT II, QUEZON CITY

DATE:
DESIGNED BY:
DRAWN BY:
CHECKED BY: HDN
REVISION NO.:

SUBMITTED BY:
ENGR. FREDISWALD C. DE GUZMAN
HEAD, PLANNING & DESIGN SECTION

RECOMMENDING APPROVAL:
ATTY. MARK DAVE RAYMOND P. PERRAL
CITY ENGINEER

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

SHEET CONTENT:
SCHEDULE OF LOADS

SHEET NO.
EL-14
16 19

PANEL: **DEPED BUILDING 1: LPP1, 2, & 3 (TYPICAL)**
MAIN: **60AT, 100AF, 2P, 230V, MCCB**

CKT NO.	VOLTS	OUTLET		OTHER LOAD SERVICE	AMPERE LOAD			3Ø	VOLT AMPERE	CIRCUIT BREAKER	SIZE OF WIRE
		LO	CO		AB	CA	BC				
1	230	15			6.52				1500	20AT, 2P, Bolt-On	2 - 3.5mm² THHN + 1 - 2.0mm² TW (G) in 20mmØ PVC
2	230	15			6.52				1500	20AT, 2P, Bolt-On	2 - 3.5mm² THHN + 1 - 2.0mm² TW (G) in 20mmØ PVC
3	230		8		6.26				1440	20AT, 2P, Bolt-On	2 - 3.5mm² THHN + 1 - 2.0mm² TW (G) in 20mmØ PVC
4	230		8		6.26				1440	20AT, 2P, Bolt-On	2 - 3.5mm² THHN + 1 - 2.0mm² TW (G) in 20mmØ PVC
5	230			8 - ORBIT FAN	6.26				1440	20AT, 2P, Bolt-On	2 - 3.5mm² THHN + 1 - 2.0mm² TW (G) in 20mmØ PVC
6	230			8 - ORBIT FAN	6.26				1440	20AT, 2P, Bolt-On	2 - 3.5mm² THHN + 1 - 2.0mm² TW (G) in 20mmØ PVC
TOTAL					38.09	0.00	0.00	0.00	8760.00		

I = 8760 / 230 **38.09 Amperes**

Feeder Line:

Use: 2 - 14mm² THHN + 1 - 8.0mm² TW (G) in 25mmØ IMC

PANEL: **DEPED BUILDING 1: DISTRIBUTION PANEL (DP)**
MAIN: **150AT, 200AF, 2P, 230V, MCCB**

CKT NO.	VOLTS	OUTLET		OTHER LOAD SERVICE	AMPERE LOAD			3Ø	VOLT AMPERE	CIRCUIT BREAKER	SIZE OF WIRE
		LO	CO		AB	CA	BC				
1	230			LPP1	38.09	0.00	0.00	0.00	8760.00	75AT, 2P, MCCB	2 - 38mm² THHN + 1 -14mm² TW (G) in 32mmØ IMC
2	230			LPP2	38.09	0.00	0.00	0.00	8760.00	75AT, 2P, MCCB	2 - 22mm² THHN + 1 - 8.0mm² TW (G) in 25mmØ IMC
3	230			LPP3	38.09	0.00	0.00	0.00	8760.00	75AT, 2P, MCCB	
TOTAL					114.26	0.00	0.00	0.00	26280.00		

I = 35040 / 230 **114.26 Amperes**

Feeder Line:

Use: 2 - 50mm² THHN + 1 - 14mm² TW (G) in 40mmØ RSC/XSO

1 SCHEDULE OF LOADS

SCALE :NTS

Department of Engineering

PROJECT TITLE:
PROPOSED UPGRADING OF ELECTRICAL SYSTEM AT PLACIDO DEL MUNDO ELEMENTARY SCHOOL IN BARANGAY TALIPAPA

LOCATION:
BARANGAY TALIPAPA, DISTRICT II, QUEZON CITY

DATE:
DESIGNED BY:
DRAWN BY:
CHECKED BY:
REVISION NO.:

SUBMITTED BY:
ENGR. FREDISWINDA M. DE GUZMAN
HEAD, PLANNING & DESIGN DIVISION

RECOMMENDING APPROVAL:
ATTY. MARK DELEDIAMOND P. PERRAL
CITY ENGINEER

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

SHEET CONTENT:
SCHEDULE OF LOADS

SHEET NO.
EL-15
17 19

PANEL: RIZAL BUILDING: LPP1, 2, 3 & 4 (TYPICAL)
MAIN: 60AT, 100AF, 2P, 230V, MCCB

CKT NO.	VOLTS	OUTLET		OTHER LOAD SERVICE	AMPERE LOAD			3Ø	VOLT AMPERE	CIRCUIT BREAKER	SIZE OF WIRE
		LO	CO		AB	CA	BC				
1	230	15			6.52				1500	20AT, 2P, Bolt-On	2 - 3.5mm² THHN + 1 - 2.0mm² TW (G) in 20mmØ PVC
2	230	15			6.52				1500	20AT, 2P, Bolt-On	2 - 3.5mm² THHN + 1 - 2.0mm² TW (G) in 20mmØ PVC
3	230		8		6.26				1440	20AT, 2P, Bolt-On	2 - 3.5mm² THHN + 1 - 2.0mm² TW (G) in 20mmØ PVC
4	230		8		6.26				1440	20AT, 2P, Bolt-On	2 - 3.5mm² THHN + 1 - 2.0mm² TW (G) in 20mmØ PVC
5	230			8 - ORBIT FAN	6.26				1440	20AT, 2P, Bolt-On	2 - 3.5mm² THHN + 1 - 2.0mm² TW (G) in 20mmØ PVC
6	230			8 - ORBIT FAN	6.26				1440	20AT, 2P, Bolt-On	2 - 3.5mm² THHN + 1 - 2.0mm² TW (G) in 20mmØ PVC
TOTAL					38.09	0.00	0.00	0.00	8760.00		

I = 8760 / 230 **38.09 Amperes**

Feeder Line:

Use: 2 - 14mm² THHN + 1 - 8.0mm² TW (G) in 25mmØ IMC

PANEL: RIZAL BUILDING: DISTRIBUTION PANEL (DP)
MAIN: 200AT, 200AF, 2P, 230V, MCCB

CKT NO.	VOLTS	OUTLET		OTHER LOAD SERVICE	AMPERE LOAD			3Ø	VOLT AMPERE	CIRCUIT BREAKER	SIZE OF WIRE
		LO	CO		AB	CA	BC				
1	230			LPP1	38.09	0.00	0.00	0.00	8760.00	75AT, 2P, MCCB	2 - 38mm² THHN + 1 -14mm² TW (G) in 32mmØ IMC
2	230			LPP2	38.09	0.00	0.00	0.00	8760.00	75AT, 2P, MCCB	2 - 22mm² THHN + 1 -8.0mm² TW (G) in 25mmØ IMC
3	230			LPP3	38.09	0.00	0.00	0.00	8760.00	75AT, 2P, MCCB	
4	230			LPP4	38.09	0.00	0.00	0.00	8760.00	75AT, 2P, MCCB	
TOTAL					152.35	0.00	0.00	0.00	35040.00		

I = 35040 / 230 **152.35 Amperes**

Feeder Line:

Use: 2 - 80mm² THHN + 1 - 22mm² TW (G) in 50mmØ RSC/IMC

PANEL: STAGE & COVERED COURT: DISTRIBUTION PANEL (DP)
MAIN: 75AT, 100AF, 2P, 230V, MCCB

CKT NO.	VOLTS	OUTLET		OTHER LOAD SERVICE	AMPERE LOAD			3Ø	VOLT AMPERE	CIRCUIT BREAKER	SIZE OF WIRE
		LO	CO		AB	CA	BC				
1	230	30			13.04				3000	20AT, 2P, Bolt-On	2 - 3.5mm² THHN + 1 - 2.0mm² TW (G) in 20mmØ PVC
2	230	30			13.04				3000	20AT, 2P, Bolt-On	2 - 3.5mm² THHN + 1 - 2.0mm² TW (G) in 20mmØ PVC
3	230	30			13.04				3000	20AT, 2P, Bolt-On	2 - 3.5mm² THHN + 1 - 2.0mm² TW (G) in 20mmØ PVC
4	230		20		15.65				3600	20AT, 2P, Bolt-On	2 - 3.5mm² THHN + 1 - 2.0mm² TW (G) in 20mmØ PVC
TOTAL					54.78	0.00	0.00	0.00	12600.00		

I = 3520 / 230 **54.78 Amperes**

Feeder Line:

Use: 2 - 22mm² THHN + 1 - 8.0mm² TW (G) in 25mmØ RSC/IMC

1 SCHEDULE OF LOADS

SCALE: NTS

Republika ng Pilipinas
Lungsod ng Quezon
DEPARTMENT OF ENGINEERING

PROJECT TITLE:
PROPOSED UPGRADING OF ELECTRICAL SYSTEM AT PLACIDO DEL MUNDO ELEMENTARY SCHOOL IN BARANGAY TALIPAPA

LOCATION: BARANGAY TALIPAPA, DISTRICT 6, QUEZON CITY

DATE:
DESIGNED BY:
DRAWN BY:
CHECKED BY: FEM
REVISION NO.:

SUBMITTED BY:
ENGR. FREDISWALDO L. DE GUZMAN
HEAD, PLANNING & DESIGN DIVISION

RECOMMENDING APPROVAL:
ATTY. MARK DAVID RAYMOND P. PERRAL
CITY ENGINEER

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

SHEET CONTENT: SCHEDULE OF LOADS

SHEET NO.: EL-16
18 19

PANEL: **QUEZON BUILDING (L-SHAPE): LPP1, 2, 3 & 4 (TYPICAL)**
MAIN: **75AT, 100AF, 2P, 230V, MCCB**

CKT NO.	VOLTS	OUTLET		OTHER LOAD SERVICE	AMPERE LOAD			3Ø	VOLT AMPERE	CIRCUIT BREAKER	SIZE OF WIRE
		LO	CO		AB	CA	BC				
1	230	15			6.52				1500	20AT, 2P, Bolt-On	2 - 3.5mm² THHN + 1 - 2.0mm² TW (G) in 20mmØ PVC
2	230	15			6.52				1500	20AT, 2P, Bolt-On	2 - 3.5mm² THHN + 1 - 2.0mm² TW (G) in 20mmØ PVC
3	230	15			6.52				1500	20AT, 2P, Bolt-On	2 - 3.5mm² THHN + 1 - 2.0mm² TW (G) in 20mmØ PVC
4	230		8		6.26				1440	20AT, 2P, Bolt-On	2 - 3.5mm² THHN + 1 - 2.0mm² TW (G) in 20mmØ PVC
5	230		8		6.26				1440	20AT, 2P, Bolt-On	2 - 3.5mm² THHN + 1 - 2.0mm² TW (G) in 20mmØ PVC
6	230		6		4.70				1080	20AT, 2P, Bolt-On	2 - 3.5mm² THHN + 1 - 2.0mm² TW (G) in 20mmØ PVC
7	230			8 - ORBIT FAN	6.26				1440	20AT, 2P, Bolt-On	2 - 3.5mm² THHN + 1 - 2.0mm² TW (G) in 20mmØ PVC
8	230			8 - ORBIT FAN	6.26				1440	20AT, 2P, Bolt-On	2 - 3.5mm² THHN + 1 - 2.0mm² TW (G) in 20mmØ PVC
9	230			6 - ORBIT FAN	4.70				1080	20AT, 2P, Bolt-On	2 - 3.5mm² THHN + 1 - 2.0mm² TW (G) in 20mmØ PVC
10	230			SPACE							
TOTAL					54.00	0.00	0.00	0.00	12420.00		

I = 8760 / 230 **54.00 Amperes**

Feeder Line:

Use: 2 - 22mm² THHN + 1 - 8.0mm² TW (G) in 25mmØ IMC

PANEL: **QUEZON BUILDING (L-SHAPE): DISTRIBUTION PANEL (DP)**
MAIN: **275AT, 275AF, 2P, 230V, MCCB**

CKT NO.	VOLTS	OUTLET		OTHER LOAD SERVICE	AMPERE LOAD			3Ø	VOLT AMPERE	CIRCUIT BREAKER	SIZE OF WIRE
		LO	CO		AB	CA	BC				
1	230			LPP1	54.00	0.00	0.00	0.00	12420.00	75AT, 2P, MCCB	2 - 38mm² THHN + 1 -14mm² TW (G) in 32mmØ IMC
2	230			LPP2	54.00	0.00	0.00	0.00	12420.00	75AT, 2P, MCCB	2 - 22mm² THHN + 1 -8.0mm² TW (G) in 25mmØ IMC
3	230			LPP3	54.00	0.00	0.00	0.00	12420.00	75AT, 2P, MCCB	
4	230			LPP4	54.00	0.00	0.00	0.00	12420.00	75AT, 2P, MCCB	
TOTAL					216.00	0.00	0.00	0.00	49680.00		

I = 35040 / 230 **216.00 Amperes**

Feeder Line:

Use: 2 - 150mm² THHN + 1 - 30mm² TW (G) in 65mmØ RSC/X150

1 SCHEDULE OF LOADS

SCALE: NTS

Republika ng Pilipinas
Lungsod ng Quezon
DEPARTMENT OF ENGINEERING

PROJECT TITLE:
PROPOSED UPGRADING OF ELECTRICAL SYSTEM AT PLACIDO DEL MUNDO ELEMENTARY SCHOOL IN BARANGAY TALIPAPA

LOCATION:
BARANGAY TALIPAPA, DISTRICT II, QUEZON CITY

DATE:
DESIGNED BY:
DRAWN BY:
CHECKED BY: FBN
REVISION NO:

SUBMITTED BY:
ENGR. FREDISWALD G. DE GUZMAN
HEAD, PLANNING & DESIGN DIVISION

RECOMMENDING APPROVAL:
ATTY. MARK DALE DIAMOND P. PERRAL
OIC-DIRECTOR

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

SHEET CONTENT:
SCHEDULE OF LOADS

SHEET NO.
EL-17
19 | 19

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.

PROJECT TITLE : **PROPOSED UPGRADING OF ELECTRICAL SYSTEM AT PLACIDO DEL MUNDO ELEMENTARY SCHOOL**

LOCATION : **BARANGAY TALIPAPA, DISTRICT 6, QUEZON CITY**

PROJECT NO. : **23 - 00195**

DURATION : **One Hundred Fifty (150) Calendar Days**

BREAKDOWN OF COST

ITEM NO.	DESCRIPTION	ESTIMATED DIRECT COST	TOTAL MARK-UP		VAT	TOTAL INDIRECT COST	TOTAL COST
			%	VALUE			
PART I	OTHER GENERAL REQUIREMENTS						
PART II	CIVIL AND ELECTRICAL WORKS						
PART A	EARTHWORKS						
PART B	PLAIN AND REINFORCED CONCRETE WORKS						
PART C	FINISHING AND OTHER CIVIL WORKS						
PART D	ELECTRICAL WORKS						
	TOTAL OF PART III						
GRAND TOTAL							

T O T A L C O S T ₱_____

LUMP SUM BID IN WORDS : _____

Contractor : _____

BILL OF QUANTITIES

(Building Construction/Rehabilitation Project)

PROJECT TITLE : **PROPOSED UPGRADING OF ELECTRICAL SYSTEM AT PLACIDO DEL MUNDO ELEMENTARY SCHOOL**

LOCATION : **BARANGAY TALIPAPA, DISTRICT 6, QUEZON CITY**

PROJECT NO. : **23 - 00195**

DURATION : **One Hundred Fifty (150) Calendar Days**

ITEM CODE	DESCRIPTION	QUANTITY	UNIT	ESTIMATED DIRECT COST	MARK-UP IN %		TOTAL MARK-UP		VAT	TOTAL INDIRECT COST	TOTAL COST	UNIT COST
					OCM	PROFIT	%	VALUE				
PART I	**OTHER GENERAL REQUIREMENTS**											
B.5	Project Billboard / Sign Board	1	ea									
B.7	Occupational Safety and Health	5	month									
B.24	Scaffolding (Rental)	1	ls									
	TOTAL OF PART II											
PART II	**CIVIL AND ELECTRICAL WORKS**											
PART A	**EARTHWORKS**											
800(1)	Clearing and Grubbing	9	sq.m.									
801(6)	Removal of Actual Structures	3	cu.m.									
803(1)c	Structure Excavation (Solid Rock)	13	cu.m.									
804(1)a	Embankment from Structure Excavation	14	cu.m.									
804(4)	Gravel Fill	1	cu.m.									
	SUB-TOTAL OF PART A											
PART B	**PLAIN AND REINFORCED CONCRETE**											
900(5)	Structural Concrete, On-site Mix, 4000psi, 28 days	13	cu.m.									
902(1)a	Reinforcing Steel, Grade 40	517	kg									
902(1)b	Reinforcing Steel, Grade 60	697	kg									
903(2)	Forms and Falseworks	74	sq.m.									
	SUB-TOTAL OF PART B											
PART C	**FINISHING AND OTHER CIVIL WORKS**											
1032(1)a	Painting Works, Masonry/Concrete	54	sq.m.									
	Earth Pit	1	unit									
	SUB-TOTAL OF PART C											
PART D	**ELECTRICAL WORKS**											
1101 (10)	Conduits, Boxes and Fittings	1	l.s.									
1101 (33)	Wires and Wiring Devices	1	l.s.									
1102 (1)a	Panelboard with Main and Branch Breakers	1	l.s.									
1109 (1)	Grounding System	1	l.s.									
	SUB-TOTAL OF PART D											
	TOTAL OF PART II											
	GRAND TOTAL											

Section IX. Checklist of Technical and Financial Documents

Notes on the Checklist of Technical and Financial Documents

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

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

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

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

Checklist of Technical and Financial Documents

I. TECHNICAL COMPONENT ENVELOPE

Class "A" Documents

Legal Documents

☐ (a) Valid PhilGEPS Registration Certificate (Platinum Membership) (all pages);
and

☐ (b) Registration certificate from Securities and Exchange Commission (SEC), Department of Trade and Industry (DTI) for sole proprietorship, or Cooperative Development Authority (CDA) for cooperatives or its equivalent document;
and

☐ (c) Mayor's or Business permit issued by the city or municipality where the principal place of business of the prospective bidder is located, or the equivalent document for Exclusive Economic Zones or Areas;
and

☐ (e) Tax clearance per E.O. No. 398, s. 2005, as finally reviewed and approved by the Bureau of Internal Revenue (BIR).

Technical Documents

☐ (f) Statement of the prospective bidder of all its ongoing government and private contracts, including contracts awarded but not yet started, if any, whether similar or not similar in nature and complexity to the contract to be bid *(please see attached prescribed forms required by the QC – BAC for Infrastructure and Consultancy)*; **and**

☐ (g) Statement of the bidder's Single Largest Completed Contract (SLCC) similar to the contract to be bid, except under conditions provided under the rules with an attached Notice of Award, Notice to Proceed, Contract and Certificate of Acceptance *(please see attached prescribed form required by the QC – BAC for Infrastructure and Consultancy)*; **and**

☐ (h) Philippine Contractors Accreditation Board (PCAB) License;
or
Special PCAB License in case of Joint Ventures;
and registration for the type and cost of the contract to be bid; **and**

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

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

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

☐ b. List of contractor's key personnel (*e.g.*, Project Manager, Project Engineers, Materials Engineers, and Foremen), to be assigned to the contract to be bid, with their complete qualification and experience data *(please see attached prescribed form required by the QC – BAC for Infrastructure and Consultancy)*;

☐ c. List of contractor's major equipment units, which are owned, leased, and/or under purchase agreements, supported by proof of ownership or certification of availability of equipment from the equipment

lessor/vendor for the duration of the project, as the case may be *(please see attached prescribed form required by the QC – BAC for Infrastructure and Consultancy)*; **and**

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

Additional Technical Requirements:

- ☐ Certificate of Site Inspection or Affidavit of Site Inspection as part of Omnibus Sworn Statement
- ☐ Affidavit of Undertaking for Key Personnel and Equipment *(please see attached prescribed form required by the QC – BAC for Infrastructure and Consultancy)*
- ☐ Equipment Utilization Schedule
- ☐ Manpower Schedule
- ☐ Construction Schedule and S-Curve
- ☐ PERT-CMP
- ☐ Construction Methods

Financial Documents

☐ (l) The prospective bidder's audited financial statements, showing, among others, the prospective bidder's total and current assets and liabilities, stamped "received" by the BIR or its duly accredited and authorized institutions, for the preceding calendar year which should not be earlier than two (2) years from the date of bid submission; **and**

☐ (m) The prospective bidder's computation of Net Financial Contracting Capacity (NFCC) *(please see attached prescribed form required by the QC – BAC for Infrastructure and Consultancy).*

Class "B" Documents

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

II. FINANCIAL COMPONENT ENVELOPE

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

Other documentary requirements under RA No. 9184

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

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

☐ (r) Cash Flow by Quarter.

Bid Form for the Procurement of Infrastructure Projects

[shall be submitted with the Bid]

BID FORM

Date : _____

Project Identification No. : _____

To: [name and address of Procuring Entity]

Having examined the Philippine Bidding Documents (PBDs) including the Supplemental or Bid Bulletin Numbers *[insert numbers]*, the receipt of which is hereby duly acknowledged, we, the undersigned, declare that:

a. We have no reservation to the PBDs, including the Supplemental or Bid Bulletins, for the Procurement Project: *[insert name of contract]*;

b. We offer to execute the Works for this Contract in accordance with the PBDs;

c. The total price of our Bid in words and figures, excluding any discounts offered below is: *[insert information]*;

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

e. The total bid price includes the cost of all taxes, such as, but not limited to: *[specify the applicable taxes, e.g. (i) value added tax (VAT), (ii) income tax, (iii) local taxes, and (iv) other fiscal levies and duties]*, which are itemized herein and reflected in the detailed estimates,

f. Our Bid shall be valid within the a period stated in the PBDs, and it shall remain binding upon us at any time before the expiration of that period;

g. 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, or a Performance Securing Declaration in lieu of the the allowable forms of Performance Security, subject to the terms and conditions of issued GPPB guidelines[1] for this purpose;

h. 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;

i. 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

j. We understand that you are not bound to accept the Lowest Calculated Bid or any other Bid that you may receive.

---

[1] currently based on GPPB Resolution No. 09-2020

k. 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].

l. 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: _____

Legal Capacity: _____

Signature: _____

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

Date: _____

Bid Securing Declaration Form

[shall be submitted with the Bid if bidder opts to provide this form of bid security]

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

BID SECURING DECLARATION
Project Identification No.: *[Insert 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 procurement 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 the 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 No. 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; and
   c. I am/we are declared 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 OR ITS AUTHORIZED REPRESENTATIVE]
[Insert signatory's legal capacity]
Affiant

[Jurat]
[Format shall be based on the latest Rules on Notarial Practice]

Omnibus Sworn Statement (Revised)

[shall be submitted with the Bid]

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], as shown in the attached duly notarized Special Power of Attorney;

   [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], as shown in the attached [state title of attached document showing proof of authorization (e.g., duly notarized Secretary's Certificate, Board/Partnership Resolution, or Special Power of Attorney, 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, **by itself or by relation, membership, association, affiliation, or controlling interest with another blacklisted person or entity as defined and provided for in the Uniform Guidelines on Blacklisting;**

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 responsibilities as a Bidder in compliance with the Philippine Bidding Documents, which includes:

   a. Carefully examining all of the Bidding Documents;
   b. Acknowledging all conditions, local or otherwise, affecting the implementation of the Contract;
   c. Making an estimate of the facilities available and needed for the contract to be bid, if any; and
   d. Inquiring or securing 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.

10. **In case advance payment was made or given, failure to perform or deliver any of the obligations and undertakings in the contract shall be sufficient grounds to constitute criminal liability for Swindling (Estafa) or the commission of fraud with unfaithfulness or abuse of confidence through misappropriating or converting any payment received by a person or entity under an obligation involving the duty to deliver certain goods or services, to the prejudice of the public and the government of the Philippines pursuant to Article 315 of Act No. 3815 s. 1930, as amended, or the Revised Penal Code.**

11. We pledge that the project will be completed in accordance and congruency with the approved plans and programs.

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

[Insert NAME OF BIDDER OR ITS AUTHORIZED REPRESENTATIVE]
[Insert signatory's legal capacity]
Affiant

[Jurat]
[Format shall be based on the latest Rules on Notarial Practice]

Contract Agreement Form for the Procurement of Infrastructure Projects (Revised)

[not required to be submitted with the Bid, but it shall be submitted within ten (10) days after receiving the Notice of Award]

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 *[contract price in words and figures in specified currency]* 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 as required by the 2016 revised Implementing Rules and Regulations of Republic Act No. 9184 shall be deemed to form and be read and construed as part of this Agreement, *viz.*:

   a. Philippine Bidding Documents (PBDs);
      i. Drawings/Plans;
      ii. Specifications;
      iii. Bill of Quantities;
      iv. General and Special Conditions of Contract;
      v. Supplemental or Bid Bulletins, if any;

   b. Winning bidder's bid, including the Eligibility requirements, Technical and Financial Proposals, and all other documents or statements submitted;

   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;

   c. Performance Security;

   d. Notice of Award of Contract and the Bidder's conforme thereto; and

   e. Other contract documents that may be required by existing laws and/or the Procuring Entity concerned in the PBDs. **Winning bidder agrees that additional contract documents or information prescribed by the GPPB that are subsequently required for submission after the contract execution, such as the Notice to Proceed, Variation Orders, and Warranty Security, shall likewise form part of the Contract.**

3. In consideration for the sum of *[total contract price in words and figures]* or such other sums as may be ascertained, *[Named of the bidder]* agrees to *[state the object of the contract]* in accordance with his/her/its Bid.

4. The *[Name of the procuring entity]* agrees to pay the above-mentioned sum in accordance with the terms of the Bidding.

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

[Insert Name and Signature] *[Insert Name and Signature]*

[Insert Signatory's Legal Capacity] *[Insert Signatory's Legal Capacity]*

for: *for:*

[Insert Procuring Entity] *[Insert Name of Supplier]*

Acknowledgment

[Format shall be based on the latest Rules on Notarial Practice]

LIST OF ALL ON-GOING GOVERNMENT AND PRIVATE CONTRACTS

NAME OF CONTRACTOR: _____

PROJECT TITLE (Name of the Contract) & EXACT PROJECT LOCATION	DATE OF CONTRACT	CONTRACT DURATION	PROJECT OWNER & POSTAL ADDRESS	NATURE OF WORK	CONTRACTOR'S ROLE (SOLE CONTRACTOR, SUBCONTRACTOR, PARTNER IN A JV) and PERCENTAGE OF PARTICIPATION	TOTAL CONTRACT VALUE AT AWARD	DATE OF COMPLETION or ESTIMATED COMPLETION TIME	TOTAL CONTRACT VALUE AT COMPLETION IF APPLICABLE	PERCENTAGE		VALUE OF OUTSTANDING WORKS (IN PHP)
									ACTUAL ACCOMPLISHMENT	PLANNED ACCOMPLISHMENT	
									TOTAL AMOUNT (Php) OF OUTSTANDING WORKS		

PHOTOCOPY ADDITIONAL FORMS, IF NECESSARY

LIST OF ALL AWARDED BUT NOT YET STARTED GOVERNMENT AND PRIVATE CONTRACTS OF THE BIDDER

NAME OF CONTRACTOR: _____

PROJECT TITLE: _____

PROJECT TITLE & EXACT LOCATION	MAJOR SCOPE OF WORKS & DATE STARTED	NAME AND ADDRESS OF PROJECT OWNER	CONTRACT PRICE (PHP) AS AWARDED	DATE OF SCHEDULED COMPLETION	ROLE OF BIDDER IN THE CONTRACT SOLE CONTRACTOR / SUB-CONTRACTOR/PARTNER IN A
		TOTAL AMOUNT OF CONTRACT (Php)			

PHOTOCOPY ADDITIONAL FORMS, IF NECESSARY

SINGLE LARGEST COMPLETED CONTRACT SIMILAR TO THE CONTRACT TO BE BID

NAME OF CONTRACTOR: _____

PROJECT TITLE: _____

PROJECT TITLE (Name of the Contract) & EXACT PROJECT LOCATION	DATE OF CONTRACT	CONTRACT DURATION	PROJECT OWNER & POSTAL ADDRESS	NATURE OF WORK	CONTRACTOR'S ROLE (SOLE CONTRACTOR, SUBCONTRACTOR, PARTNER IN A JV) and PERCENTAGE OF PARTICIPATION	TOTAL CONTRACT VALUE AT AWARD	DATE OF COMPLETION or ESTIMATED COMPLETION TIME	TOTAL CONTRACT VALUE AT COMPLETION IF APPLICABLE

PHOTOCOPY ADDITIONAL FORMS, IF NECESSARY

LIST OF MAJOR EQUIPMENT TO BE USED FOR THE PROJECT

NAME OF CONTRACTOR: _____

PROJECT TITLE: _____

TYPE	DESCRIPTION / CAPACITY	SERIAL NO.	YEAR ACQUIRED	PRESENT LOCATION (SPECIFIC ADDRESS)	STATUS OF AVAILABILITY (OWNED/LEASED)

PHOTOCOPY ADDITIONAL FORMS, IF NECESSARY

A. LIST OF KEY CONSTRUCTION PERSONNEL TO BE ASSIGNED TO THE PROJECT

NAME OF CONTRACTOR: _____

PROJECT TITLE: _____

NAME	POSITION	AGE	EDUCATIONAL ATTAINMENT	TYPE OF CONSTRUCTION EXPERIENCE	NO.OF YEARS WITH THE CONTRACTOR	PROFESSION	PRC NO.

PHOTOCOPY ADDITIONAL FORMS, IF NECESSARY

COMPUTATION OF NET FINANCIAL CONTRACTING CAPACITY (NFCC)

NAME OF BIDDER: _____

CURRENT ASSETS*		PHP	
(LESS) CURRENT LIABILITIES*	(LESS)	PHP	
NETWORTH		PHP	
NETWORTH x 15	x 15	PHP	
(LESS) VALUE OF ALL OUTSTANDING ON-GOING CONTRACTS**	(LESS)	PHP	
(LESS) VALUE OF ALL AWARDED BUT NOT YET STARTED CONTRACTS AS OF DATE**	(LESS)	PHP	
NET FINANCIAL CONTRACTING CAPACITY		PHP	

NOTES:

* CURRENT ASSETS AND LIABILITIES BASED ON AUDITED FINANCIAL STATEMENT FOR THE PRECEDING CALENDAR YEAR SUBMITTED TO B.I.R.

** BASED ON LIST OF ON-GOING AND AWRDED BUT NOT YEY STARTED CONTRACTS SUBMITTED

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


Republic of the Philippines
gppb
Government Procurement Policy Board