PHILIPPINE BIDDING DOCUMENTS

Procurement of INFRASTRUCTURE PROJECTS

Government of the Republic of the Philippines

PROPOSED CONSTRUCTION OF HANDWASHING FACILITY AND REHABILITATION OF DAY CARE CENTER AT DISTRICT 2 AREA VII (CLUSTER 1)

Project number:
21-00172

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 INFRASTRACTURE & CONSULTANCY

2nd floor, Finance Building, Procurement Department, Quezon City Hall Complex, Elliptical Road, Quezon City

November 15, 2021

Invitation to Bid

No.	Project No.	Project Name	Location	Amount	Duration Cal. Days	Office	Source Fund
Buildings – Small B							
1	21-00156	Proposed Construction of Hand Washing Facility and Rehabilitation of Waterline System at Krus Na Ligas Elementary School (Simon Building)	Krus Na Ligas	1,136,052.36	60	Engineering Department	Special Education Fund
2	21-00157	Proposed Construction of Hand Washing Facility at Payatas C Elementary School	Payatas	1,278,401.32	60	Engineering Department	Special Education Fund
3	21-00158	Proposed Construction of Hand Washing Facility at Main Building of Balara High School	Pansol	1,282,912.05	60	Engineering Department	Special Education Fund
4	21-00159	Proposed Rehabilitation of Day Care Center at District 3 / Area XIII and XIV	Claro, Silangan & East Kamias	1,458,079.64	45	Engineering Department	Engineering - SB No. 1
5	21-00160	Proposed Construction of Hand Washing Facility and Rehabilitation of Waterline System at Ramon Magsaysay High School Belmonte Building)	Pinagkaisahan	1,731,551.85	90	Engineering Department	Special Education Fund
6	21-00161	Proposed Construction of Hand Washing Facility and Rehabilitation of Waterline at Bagong Pag-Asa Elementary School (SB Building)	Bagong Pag-Asa	1,801,334.79	60	Engineering Department	Special Education Fund
7	21-00162	Proposed Rehabilitation of Milagrosa Daycare Center and Livelihood Center	Milagrosa	2,198,687.07	75	Engineering Department	Engineering - SB No. 1
8	21-00163	Proposed Construction of Hand Washing Facility and Rehabilitation of Comfort Rooms and Waterline System at Aguinaldo Elementary School (Estrada Building)	San Roque	2,296,791.86	120	Engineering Department	Special Education Fund
9	21-00164	Proposed Construction of Hand Washing Facility and Rehabilitation of Day Care Center at District 2 Area VII (Cluster 5)	Payatas	2,871,590.18	60	Engineering Department	Engineering - SB No. 1
10	21-00165	Proposed Construction of Hand Washing Facility and Rehabilitation of Day Care Center at District 3 / Area XV	Matandang Balara & Pansol	3,027,863.77	60	Engineering Department	Engineering - SB No. 1

11	21-00166	Proposed Construction of Hand Washing Facility and Rehabilitation of Comfort Rooms and Waterline System at Maligaya Elementary School (Vargas Building)	Pasong Putik	3,565,679.65	90	Engineering Department	Special Education Fund
12	21-00167	Proposed Construction of Hand Washing Facility and Rehabilitation of Comfort Rooms and Waterline System at San Francisco High School (SB Building)	Ramon Magsaysay	4,900,074.64	60	Engineering Department	Special Education Fund
13	21-00168	Proposed Construction of Hand Washing Facility and Rehabilitation of Day Care Center at District 3 / Area XVI and XVIII	Villa Maria Clara, Bagumbuhay, Bayanihan, Escopa 3, Marilag	5,527,209.52	90	Engineering Department	Engineering - SB No. 1
14	21-00169	Proposed Construction of Hand Washing Facility and Rehabilitation of Day Care Center at District 4 / Area XIX	Kamuning, Obrero, Paligsahan, Roxas & South Triangle	7,108,186.57	60	Engineering Department	Engineering - SB No. 1
15	21-00170	Proposed Construction of Hand Washing Facility and Rehabilitation of Day Care Center at District 4 / Area XXIII	Old Capitol Site, San Vicente & U.P. Campus	8,767,692.58	90	Engineering Department	Engineering - SB No. 1
16	21-00171	Proposed Construction of Hand Washing Facility and Rehabilitation of Day Care Center at District 4 / Area XXIV	Central, Krus Na Ligas & Pinyahan	8,801,647.54	60	Engineering Department	Engineering - SB No. 1
17	21-00172	Proposed Construction of Hand Washing Facility and Rehabilitation of Day Care Center at District 2 Area VII (Cluster 1)	Bagong Silangan	8,899,769.12	90	Engineering Department	Engineering - SB No. 1
18	21-00173	Proposed Construction of Hand Washing Facility and Rehabilitation of Day Care Center at District 4 / Area XX	Horseshoe, Immaculate Concepcion, Kaunlaran, Pinagkaisahan & San Martin De Porres	9,342,308.35	60	Engineering Department	Engineering - SB No. 1
19	21-00174	Proposed Construction of Hand Washing Facility and Rehabilitation of Day Care Center at District 2 Area VII (Cluster 4)	Holy Spirit	9,513,555.66	90	Engineering Department	Engineering - SB No. 1
20	21-00175	Proposed Construction of Hand Washing Facility and Rehabilitation of Day Care Center at District 4 / Area XXII	Tatalon, Don Manuel, Doña Aurora, Doña Imelda, Doña Josefa, San Isidro Galas, Santol & Sto. Niño	11,988,174.41	90	Engineering Department	Engineering - SB No. 1
21	21-00176	Proposed Construction of Hand Washing Facility and Rehabilitation of Day Care Center at District 2 Area VII (Cluster 3)	Balonbato & Sangandaan	14,755,919.20	90	Engineering Department	Engineering - SB No. 1

22	21-00177	Proposed Construction of Hand Washing Facility and Rehabilitation of Day Care Center at District 2 Area VII (Cluster 2)	Batasan Hills	17,576,527.83	90	Engineering Department	Engineering - SB No. 1

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 ***16 November 2021 (Tuesday)*** 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)
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 on or before **November 23, 2021 - 5:00PM.**

6. The ***QC- BAC- INFRASTRUCTURE & CONSULTANCY*** will hold a Pre-Bid Conference[1] on **November 24, 2021** 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 6, 2021 – 9:00AM**. 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 6, 2021 - 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

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

[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.

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 CONSTRUCTION OF HANDWASHING FACILITY AND REHABILITATION OF DAY CARE CENTER AT DISTRICT 2 AREA VII (CLUSTER 1),** with Project Identification Number **21-00172.**

[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 **2021** in the amount of **Eight Million Eight Hundred Ninety-Nine Thousand Seven Hundred Sixty-Nine Pesos & 12/100 Ctvs. (P 8,899,769.12).**

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 **November 24, 2021, 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

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

PROPOSED CONSTRUCTION OF HAND WASHING FACILITY AND REHABILITATION OF ASPRER DAY CARE CENTER

<table>
<tr><th>Qnty.</th><th>Key Personnel</th><th>General Experience</th><th>Relevant Experience</th></tr>
<tr><td>1</td><td>Project Engineer</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>Foreman</td><td>3 years</td><td>3 years</td></tr>
<tr><td>7</td><td>Skilled Worker</td><td>3 years</td><td>3 years</td></tr>
<tr><td>1</td><td>Driver</td><td>3 years</td><td>3 years</td></tr>
<tr><td>7</td><td>Laborer</td><td>1 year</td><td>3 months</td></tr>
</table>

PROPOSED CONSTRUCTION OF HANDWASHING FACILITY AND REHABILITATION OF BAGONG SILANGAN DAY CARE CENTER

<table>
<tr><th>Qnty.</th><th>Key Personnel</th><th>General Experience</th><th>Relevant Experience</th></tr>
<tr><td>1</td><td>Project Engineer</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>
<tr><td>1</td><td>Safety Officer</td><td>3 years</td><td>3 years</td></tr>
</table>
</td></tr>
</table>

1	Foreman	3 years	3 years
6	Skilled Worker	3 years	3 years
1	Driver	3 years	3 years
12	Laborer	1 year	3 months

PROPOSED CONSTRUCTION OF HANDWASHING FACILITY AND REHABILITATION OF SITIO VETERANS DAY CARE CENTER

Qnty.	Key Personnel	General Experience	Relevant Experience
1	Project Engineer	3 years	3 years
1	DPWH duly accredited Materials Engineer	3 years	3 years
1	Safety Officer	3 years	3 years
1	Foreman	3 years	3 years
5	Skilled Worker	3 years	3 years
1	Driver	3 years	3 years
10	Laborer	1 year	3 months

PROPOSED REHABILITATION OF BAKAS DAY CARE CENTER

Qnty.	Key Personnel	General Experience	Relevant Experience
1	Project Engineer	3 years	3 years
1	Safety Officer	3 years	3 years
1	Foreman	3 years	3 years
6	Skilled Worker	3 years	3 years
1	Driver	3 years	3 years
5	Laborer	1 year	3 months

PROPOSED REHABILITATION OF COVENANT DAY CARE CENTER

Qnty.	Key Personnel	General Experience	Relevant Experience
1	Project Engineer	3 years	3 years
1	DPWH duly accredited Materials Engineer	3 years	3 years
1	Safety Officer	3 years	3 years
1	Foreman	3 years	3 years
6	Skilled Worker	3 years	3 years
1	Driver	3 years	3 years
11	Laborer	1 year	3 months

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.

10.5 The minimum major equipment requirements are the following:

PROPOSED CONSTRUCTION OF HAND WASHING FACILITY AND REHABILITATION OF ASPRER DAY CARE CENTER

Equipment	Capacity	Number of Units
Elf Truck		1
Scaffolding		as needed
Power Tools		as needed
Minor Tools		as needed

PROPOSED CONSTRUCTION OF HANDWASHING FACILITY AND REHABILITATION OF BAGONG SILANGAN DAY CARE CENTER

Equipment	Capacity	Number of Units
Elf Truck		1
Scaffolding		as needed
Power Tools		as needed
Minor Tools		as needed

	PROPOSED CONSTRUCTION OF HANDWASHING FACILITY AND REHABILITATION OF SITIO VETERANS DAY CARE CENTER Equipment — Capacity — Number of Units Elf Truck — 1 Scaffolding — as needed Power Tools — as needed Minor Tools — as needed **PROPOSED REHABILITATION OF BAKAS DAY CARE CENTER** Equipment — Capacity — Number of Units Elf Truck — 1 Scaffolding — as needed Power Tools — as needed Minor Tools — as needed **PROPOSED REHABILITATION OF COVENANT DAY CARE CENTER** Equipment — Capacity — Number of Units Elf Truck — 1 Scaffolding — as needed Power Tools — as needed Minor Tools — as needed Cut-Off Machine — as needed ***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 177,995.38 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 444,988.46 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 90 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.

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

PROJECT TITLE : **PROPOSED CONSTRUCTION OF HAND WASHING FACILITY AND REHABILITATION OF ASPRER DAY CARE CENTER**

LOCATION : **BARANGAY BAGONG SILANGAN, DISTRICT 2, QUEZON CITY**

TECHNICAL SPECIFICATIONS

I. 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. Personal Protective Equipment (PPE) shall consist of safety helmet/hard hat, safety reflectorized vest, safety insulated gloves, dust mask, safety shoes, safety goggles, and safety harness. Every skilled and unskilled worker, and the project foreman shall be provided PPE by the Contractor. Consideration of quantity shall be made for the Project Engineer, Materials Engineer, Safety Officer/Practitioner (as required) and project driver.

6 Construction safety materials shall consist of safety net, fire extinguisher and safety signage and posters.

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

E. Soil Poisoning. There are two methods usually adopted in soil poisoning which are as follows

1 Cordoning. This method is usually adopted when there is no visible evidence of termite infestation. Trenches in concentric circles, squares or rectangles are dug 150mm to 220mm wide and at least one meter apart and applied with Liquid Termicide Concentrate working solution at the rate of 8 liters per linear meter

2. Drenching. When soil show termite infestation, this method shall be applied. The building area shall be thoroughly drenched with Liquid Termicide Concentrate working solution at the rate of 24 liters per square meter

III. CIVIL / STRUCTURAL WORKS

A. METAL FABRICATION

1. Materials.

a. Steel and Iron. If not specified otherwise, use standard mill-finished structural steel shapes or bar iron in compliance with AISC Specifications for Design, Fabrication and Erection of Structural Steel for buildings

b Bolts, Nuts, Studs and Rivets. ASTM A 307 and A 325

c. Screws. Fed. Spec FF-S-85, Fed. Spec FF-S-92, and Fed. Spec. FF-S-111

d Metal Purlins. High grade galvanized steel with minimum tensile strength of 275 MPa, 1.4mm in thickness or approved equal.

2. Fabrication.

By mechanics skilled in the trade and in accordance with the manufacturer's directions. Metalwork shall be fabricated to allow for expansion and contraction of materials. Provide welding and bracing of adequate strength and durability, with tight, flush joints, dressed smooth and clean. Complete with bolts and nuts.

3 Metal Surfaces:

Surfaces shall be clean and free from all scale, flake, rust and rust pitting; well-formed and finished to shape and size, with sharp lines, angle and smooth surface. Shearing and punching shall leave clean true lines and surfaces. Weld or rivet permanent connections. Weld and flush rivets shall be used and finished flush smooth on surfaces that will be exposed after installation. Do not use screws or bolts where they can be avoided; when used, heads shall be countersunk, screwed up tight and threads nicked to prevent loosening.

4. Construction:

Thickness of metals and details of assembly and supports shall give ample strength and stiffness for the minimum loads specified or indicated. Joints exposed to weather shall be formed to exclude water

5 Welding:

Use welding electrode E70xx and perform welding, welding inspection and corrective welding in accordance with AWS D1.1. Weld in a manner to prevent permanent distortion of the connected parts. Weld continuously along the entire area of contact (except where tack welding is permitted. Do not tack weld exposed to connections). Grind smooth visible weld in finished installation.

B. ROOFING WORKS

1 The roof shall be covered with Ga. 24 pre-painted G.I. rib-type roofing sheets as shown on the plans. The roofing shall be secured to the purlins with min. 2 ½" max. 3" long Tek screws. Ridge rolls, hip rolls and valleys to be used shall be those compatible with the Ga. 24 pre-painted G.I. rib-type roofing sheets. They shall lap the roofing sheets at least 250mm. The ridge rolls, hip rolls and valleys shall be riveted to the roofing sheets.

2 The roof shall be covered with 6mm thick Rib-type polycarbonate sheets as shown on the plans. The roofing shall be secured to the purlins with min. 2 ½" max. 3" long Tek screws. Ridge rolls, hip rolls and valleys to be used shall be those compatible with the 6mm thick solid polycarbonate sheets. They shall lap the roofing sheets at least 250mm. The ridge rolls, hip rolls and valleys shall be riveted to the roofing sheets.

3. All roofing sheets adjacent to concrete hollow block and other masonry walls such as property line firewalls, shall be provided with Gauge 26 pre-painted plain G.I. Flashing to extend to the top and over to the other side of the wall. All fasteners shall be placed at the top of the corrugations of the roofing sheets to prevent water from standing around the fasteners.

IV. ARCHITECTURAL WORKS

A. FLOOR FINISHES

1 600mm x 600mm Unglazed Ceramic Tiles including tile adhesive
2. 300mm x 300mm Unglazed Ceramic Tiles including tile adhesive
3 50mm concrete Topping with Plain Cement Finish
4. Carpet Tiles including adhesive (Auditorium)
5. 50mm Concrete Topping for Tiles
6. Plastering Guide/ Grooves

B. WALL FINISHES

1. 600mm x 600mm Unglazed Ceramic Tiles including tile adhesive
2. 300mm x 300mm Unglazed Ceramic Tiles including tile adhesive
3. 50mm concrete Topping with Plain Cement Finish
4. 50mm Concrete Topping for Tiles
5. Plastering Guide/ Grooves

C. 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

i 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 Painting 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

ii. 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 flowed out after application of paint.

Paints made for application by roller must be similar 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.

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

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

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

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

vii. 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.

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

D. CEILING FINISHES

6mm thick Fiber Cement Board with complete framing and accessories

E. DOORS & WINDOWS

Follow as per approved plan and specifications

V. SANITARY / PLUMBING WORKS

A. 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)

B. Supply, installation and testing of the following.

1 Potable water supply system complete in all respects including but not limited to submittals shop drawings, piping, water meters, valves, bibbs, insulation, all accessories required for complete and operational of the system

2. Water service connections including but not limited to water meters, float valves. Any and all other works involve in providing the complete operation of the water supply system.

3. Soil waste and vent system complete in all respect including but not limited to connection to existing sewer, submittals, shop drawings, pipes, fittings, valves, cleanout, drains, etc. Complete and operational

4. Storm drainage system complete in all respect including but not limited to connection to existing storm drainage, submittals, shop drawings, pipes, fittings, valves, cleanout, drains, etc. Complete and operational.

C. Workmanship and installation methods shall conform to the best modern practice. Employ skilled tradesmen to perform work under the direct supervision of fully qualified personnel.

D All equipment and installations shall meet or exceed minimum requirements of the Standards and Codes as specified in plans and program of work.

E Install equipment in strict accordance with manufacturers written recommendations.

F Physical sizes of all plant and equipment are to be suitable for the space allocated for the accommodation of such plant and equipment, taking into account the requirement of access for maintenance purposes.

G. In selecting makes and types of equipment, the Contractor shall ascertain that facilities for proper maintenance, repair and replacement are provided.

H. Where the Contractor proposes to use an item of equipment other than that specified or detailed in the drawing, which requires any redesign of the system, drawings showing the layout of the equipment and such redesign as required therefore shall be prepared by the Contractor at his own expenses. Where such approved deviation necessitates a different quantity and arrangement of materials and equipment's from that originally specified or indicated in the drawings, the Contractor shall furnish and install any such additional materials and equipment's required by the system at no additional cost.

I. Equipment catalogue and manufacturer's specifications must be submitted for examination and details shall be submitted for approval before any equipment is to be ordered.

J This shall include all information necessary to ascertain the equipment comply with this specification and drawings. Data and sales catalogue of a general nature will not be accepted.

K All materials, equipment, components and accessories shall be delivered to the Site in a new condition, properly packed and protected against damage or contamination or distortion, breakage or structural weakening due to handling, adverse weather or other circumstances and, as far as practicable, they shall be kept in the packing cases or under approved protective coverings until required for use.

L. Any items suffering from damage during manufacture, or in transit, or on site whilst in storage or during erection shall be rejected and replaced without extra cost.

M. All sanitary fittings and pipework shall be cleaned after installation and keep them in a new condition.

N All installed pipelines shall be flushed through with water rodded when necessary to ensure clearance of debris

O. Cleaning and flushing shall be carried out in sections as the installation becomes completed

P The Contractor shall carry out hydraulic test on the complete plumbing systems and the drainage system to show that it is functioning satisfactorily within the requirements of this Specification and local regulations.

Q. The Contractor shall provide suitable test pumps and arrange for a supply of water required in connection with testing of pipework. The test pump shall be fitted with pressure gauges which shall be of suitable range for the pressure being applied.

R Hydraulic tests shall be carried out as the pipework is installed and shall be completed before chases in walls and ducts are closed. Also test shall be carried out prior to false ceilings and other finishes are installed.

S. Testing apparatus shall be provided by the Contractor. Where any section of pipework or equipment is unable to withstand the maximum pipework test pressure, it shall be isolated during the pipework test then that section of pipework or equipment shall be re-tested at the appropriate test pressure

T The Sanitary Contractor must carry out any additional tests required by the end-user and/or approving agency.

U Drainage pipe shall be tested by filling the pipe with 3m of water higher than the test section and wait for 15 min. then check for leakage at every joints.

V Testing of drainage systems shall be carried out in sections by dividing the system horizontally. Each section shall comprise pipework and fitting for three floors/storeys required for testing

W Drainage pressure pipe shall be hydraulic tested at minimum pressure 50 psi

X. Hangers and supports for plumbing piping and equipment shall withstand the effects of gravity loads and stresses within limits and under conditions indicated according to ASCE/SEI 7.

Y. Install hangers and supports to allow controlled thermal and seismic movement of piping systems, to permit freedom of movement between pipe anchors, and to facilitate action of expansion joints, expansion loops, expansion bends, and similar units

Z Install lateral bracing with pipe hangers and supports to prevent swaying.

AA Install building attachments within concrete slabs or attach to structural steel. Install additional attachments at concentrated loads, including valves, flanges, and strainers, NPS 2-1/2 (DN 65) and larger and at changes in direction of piping. Install concrete inserts before concrete is placed; fasten inserts to forms and install reinforcing bars through openings at top of inserts.

BB. Install hangers and supports so that piping live and dead loads and stresses from movement will not be transmitted to connected equipment.

CC Install hangers and supports to provide indicated pipe slopes and to not exceed maximum pipe deflections allowed by ASME B31.9 for building services piping.

VI. 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 tape 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 panel boards shall not be smaller than 3.5 mm but all homeruns to panel board 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 PANEL BOARDS

1. This Item shall consist of the furnishing and installation of the power load center unit substation or low voltage switchgear and distribution panel boards 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 panel boards, 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 drawn out 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. Panel boards and Cabinets. Panel boards shall conform to the schedule of panel boards 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.

Panel boards 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. Panel boards shall be provided with directories and shall be printed to indicate load served by each circuit.

Panel board cabinets and trims shall be suitable for the type of mounting shown on the approved Plans. The inside and outside of panel board 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 panel boards shall have the rating, capacity and number of poles as shown on the approved Plans. Breakers shall be thermal magnetic type. Multiple breaker shall be 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 Panel boards 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. PANEL BOARDS

1 Fabricate and test panel boards 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 Panel boards: Same gauge and finish as panel board front with flanges for attachment to panel board, wall, and ceiling or floor.

e. Gutter Extension and Barrier: Same gage and finish as panel board 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 panel board 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.

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TECHNICAL SPECIFICATIONS
QUEZON CITY INFRASTRUCTURE PROJECT

PROJECT TITLE: **PROPOSED CONSTRUCTION OF HAND WASHING FACILITY AND REHABILITATION OF BAGONG SILANGAN DAY CARE CENTER**

LOCATION: **BARANGAY BAGONG SILANGAN, DISTRICT 2, QUEZON CITY**

I. GENERAL REQUIREMENTS

a. Comply with the current and existing laws, ordinances and applicable codes, rules and regulations and standards. Any works perform 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)

i 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.

ii 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

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

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

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

iv Temporary enclosure shall be provided within the construction site with adequate guard lights, railings and proper signages.

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

vi. 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.

i A fully trained Medical Aide shall be employed permanently on the site who shall be engaged solely from medical duties.

ii. The medical room shall be provided in waterproof. 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

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

iv. Additional safety precautions shall be provided in the observance of pandemic. Protocols set-forth by the government shall be strictly followed.

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 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 to work.

B. Removal / 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

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

III. CIVIL / STRUCTURAL WORKS

A. CONCRETE WORK

a. 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

b. 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.

c. Materials

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

ii 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.

iii. 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.

iv 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.

d Proportioning and Mixing

i 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

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

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

e Forms

i. 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" waterproof plywood and form lumber.

ii. 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.

iii. 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.

f Placing Reinforcement:

Steel reinforcement shall be provided as indicated, together with all necessary wire ties, chairs, spacer supported 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

g. Conveying and Placing Concrete:

i 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.

ii. Placing – concrete shall be worked readily into the corners and angles of the forms and around all reinforcement and imbedded 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.

iii 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.

iv. 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.

v. 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.

h. Curing

i. 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.

ii. 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.

i. Finishing

i. 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.

ii. 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.

B. MASONRY

a. Masonry Units (CHB):
   i. 100mm thick for all interior walls and exterior walls unless otherwise indicated

   ii. Use 400 psi for non-load bearing blocks and 700 psi for load bearing blocks where required

   iii Where full height walls are constructed with concrete hollow blocks, these shall extend up to the bottom of beam or slab unless otherwise indicated on plans. Provide stiffener columns & lintel beams as specified in the structural drawings or as specified or as deemed required to assure a stabilized wall due to height & other considerations

b. Sand:

   S-1, washed, clean and greenish in color.

c. Mortar

   One part "Portland" cement and two parts sand and water but not more than three parts sand and water.

d. Plaster bond

   Apply plaster bond to all wall area.

IV. ARCHITECTURAL WORKS

A. TILE WORKS

a. Both broken and unbroken old tiles must be chip-off
b. Surface should be smoothen & clean
c. Homogeneous tiles shall be soaked in clean water prior to installation.
d. Lay the tiles true to profile as specified in the plan

B. FABRICATED DOORS

All doors must be in approved quality as specified in the plan and program of works.

C. PAINTING WORKS

a. All primers, thinners and putty, also waterproofing for internal and external application shall be the same brand as the specified material.

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

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

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

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

f 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.

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

V. SANITARY / PLUMBING WORKS

A 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)

B. Supply, installation and testing of the following.

B.1 Potable water supply system complete in all respects including but not limited to submittals, shop drawings, piping, water meters, valves, bibbs, insulation, all accessories required for complete and operational of the system.

B.2 Water service connections including but not limited to water meters, float valves. Any and all other works involve in providing the complete operation of the water supply system

B.3 Soil waste and vent system complete in all respect including but not limited to connection to existing sewer, submittals, shop drawings, pipes, fittings, valves, cleanout, drains, etc. Complete and operational.

B.4 Storm drainage system complete in all respect including but not limited to connection to existing storm drainage, submittals, shop drawings pipes, fittings, valves, cleanout, drains, etc. Complete and operational.

C Workmanship and installation methods shall conform to the best modern practice. Employ skilled tradesmen to perform work under the direct supervision of fully qualified personnel

D All equipment and installations shall meet or exceed minimum requirements of the Standards and Codes as specified in plans and program of work.

E. Install equipment in strict accordance with manufacturers written recommendations.

F Physical sizes of all plant and equipment are to be suitable for the space allocated for the accommodation of such plant and equipment, taking into account the requirement of access for maintenance purposes.

G. In selecting makes and types of equipment, the Contractor shall ascertain that facilities for proper maintenance, repair and replacement are provided.

H. Where the Contractor proposes to use an item of equipment other than that specified or detailed in the drawing, which requires any redesign of the system, drawings showing the layout of the equipment and such redesign as required therefore shall be prepared by the Contractor at his own expenses. Where such approved deviation necessitates a different quantity and arrangement of materials and equipment's from that originally specified or indicated in the drawings, the Contractor shall furnish and install any such additional materials and equipment's required by the system at no additional cost.

I Equipment catalogue and manufacturer's specifications must be submitted for examination and details shall be submitted for approval before any equipment is to be ordered.

J. This shall include all information necessary to ascertain the equipment comply with this specification and drawings. Data and sales catalogue of a general nature will not be accepted

K. All materials equipment, components and accessories shall be delivered to the Site in a new condition, properly packed and protected against damage or contamination or distortion, breakage or structural weakening due to handling, adverse weather or other circumstances and, as far as practicable, they shall be kept in the packing cases or under approved protective coverings until required for use

L. Any items suffering from damage during manufacture, or in transit, or on site whilst in storage or during erection shall be rejected and replaced without extra cost.

M All sanitary fittings and pipework shall be cleaned after installation and keep them in a new condition

N. All installed pipelines shall be flushed through with water, rodded when necessary to ensure clearance of debris.

O. Cleaning and flushing shall be carried out in sections as the installation becomes completed.

P. The Contractor shall carry out hydraulic test on the complete plumbing systems and the drainage system to show that it is functioning satisfactorily within the requirements of this Specification and local regulations.

Q. The Contractor shall provide suitable test pumps and arrange for a supply of water required in connection with testing of pipework. The test pump shall be fitted with pressure gauges which shall be of suitable range for the pressure being applied.

R. Hydraulic tests shall be carried out as the pipework is installed and shall be completed before chases in walls and ducts are closed. Also test shall be carried out prior to false ceilings and other finishes are installed

S. Testing apparatus shall be provided by the Contractor. Where any section of pipework or equipment is unable to withstand the maximum pipework test pressure, it shall be isolated during the pipework test then that section of pipework or equipment shall be re-tested at the appropriate test pressure.

T. The Sanitary Contractor must carry out any additional tests required by the end-user and/or approving agency.

U. Drainage pipe shall be tested by filling the pipe with 3m. of water higher than the test section and wait for 15 min, then check for leakage at every joints.

V. Testing of drainage systems shall be carried out in sections by dividing the system horizontally. Each section shall comprise pipework and fitting for three floors/storeys required for testing.

W. Drainage pressure pipe shall be hydraulic tested at minimum pressure 50 psi

X Hangers and supports for plumbing piping and equipment shall withstand the effects of gravity loads and stresses within limits and under conditions indicated according to ASCE/SEI 7

Y. Install hangers and supports to allow controlled thermal and seismic movement of piping systems, to permit freedom of movement between pipe anchors, and to facilitate action of expansion joints, expansion loops, expansion bends, and similar units.

Z. Install lateral bracing with pipe hangers and supports to prevent swaying.

AA. Install building attachments within concrete slabs or attach to structural steel. Install additional attachments at concentrated loads, including valves, flanges, and strainers, NPS 2-1/2 (DN 65) and larger and at changes in direction of piping. Install concrete inserts before concrete is placed; fasten inserts to forms and install reinforcing bars through openings at top of inserts.

BB. Install hangers and supports so that piping live and dead loads and stresses from movement will not be transmitted to connected equipment

CC. Install hangers and supports to provide indicated pipe slopes and to not exceed maximum pipe deflections allowed by ASME B31.9 for building services piping

VI. ELECTRICAL WORKS

A. 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).

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

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

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

E. 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.

F. PANELBOARDS

F 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

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

F.2 1 Rated for environmental conditions at installed location

i. Indoor Dry and Clean Locations: NEMA 250, Type 1.

ii. Outdoor Locations. NEMA 250, Type 3R

iii. Kitchen and Wash-Down Areas. NEMA 250, Type 4X, stainless steel.

iv. Other Wet or Damp Indoor Locations: NEMA 250, Type 4.

v. Indoor Locations Subject to Dust, Falling Dirt, and Dripping Noncorrosive Liquids: NEMA 250, Type 5 or Type 12.

F 2.2 Front: Secured to box with concealed trim clamps. For surface-mounted fronts, match box dimensions; for flush-mounted fronts, overlap box.

F.2.3 Hinged Front Cover: Entire front trim hinged to box and with standard door within hinged trim cover.

F.2.4 Skirt for Surface-Mounted Panelboards: Same gage and finish as panelboard front with flanges for attachment to panelboard, wall, and ceiling or floor.

F.2.5 Gutter Extension and Barrier. Same gage and finish as panelboard enclosure; integral with enclosure body. Arrange to isolate individual panel sections.

F 2 6 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.

F 2.7 Directory Card: Inside panelboard door, mounted in transparent card holder metal frame with transparent protective cover

F.3 Incoming Mains Locabon: Top or Bottom.

F.4 Phase, Neutral, and Ground Buses.

F.4 1 Material: Hard-drawn copper, 96 percent conductivity

F 4.2 Equipment Ground Bus. Adequate for feeder and branch-circuit equipment grounding conductors; bonded to box.

F.4.3 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.

VII. MECHANICAL WORKS

A. Air Conditioning and Refrigeration System

1 This item shall consist of furnishing and installation of air conditioning, refrigeration and ventilation systems, inclusive of necessary electrical connections, ductworks. grilles, pipes. and condensate drains and all other necessary accessories ready for service in accordance with the Plans and Specifications
2. The types, sizes, capacities, quantities and power characteristics of the compressor, evaporator. condenser, chilled water pump and condenser water pump shall be specified or as shown on the Plans.
3. The air conditioning system shall be entirely automatic in operation and shall not require the presence of an attendant except for periodic inspection for lubrication All equipment and materials shall be inspected upon delivery and shall be tested after installation. Piping shall not be buried, concealed or insulated until it has been inspected, tested and approved. Walls, floors and other parts of the structure and equipment damaged by the Contractor in the prosecution of the work shall be replaced as shown on the Plans.

B. WATER-PUMPING SYSTEM

1. This item shall consist of furnishing and installation of water pumping system, inclusive of all piping and pipe fitting connections, valves. controls, electrical wirings, tanks and all accessories ready for service in accordance with the approved Plans and Specifications.
2. Exposed piping shall be provided with concrete saddle or steel clamps or hangers to secure them firmly to the structures.

   Pipe threads shall be lubricated by white lead, red lead, Teflon or other approved lubrication before tightening

   Piping supports shall be placed at 3m intervals or less

C. AUTOMATIC WATER SPRINKLER SYSTEM

1. This item shall consist of furnishing and installation of automatic water sprinkler system, inclusive of all piping and pipe fitting connections. valves, controls, electrical wiring connection, and all accessories ready for service in accordance with the approved Plans and Specifications.

2. System operation and maintenance chart shall be submitted to the End User upon completion of the Contract. This shall include the locations of control valves and care of the new equipment

3 Marked instructions and identification sign boards: These sign boards shall be made of #14 gauge B I. sheet with baked enamel finish paint and letter instruction are shown on the Plans. Additional sign boards as may be required and not specified herewith shall be furnished at no extra cost. Sign boards shall be mounted on the equipment or wall nearest the equipment for easy identification and reading. Paints shall be basically gloss fire red and white.

D ELECTRIC ELEVATOR
E. ELECTRIC DUMBWAITER
F. OXYGEN, NITROUS OXIDE, VACUUM AND FUEL GAS SYSTEM
G. HEATING SYSTEM
H. BOILER

I. 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)

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

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

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

M 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.

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TECHNICAL SPECIFICATIONS
QUEZON CITY INFRASTRUCTURE PROJECT

PROJECT TITLE: **PROPOSED CONSTRUCTION OF HAND WASHING FACILITY AND REHABILITATION OF SITIO VETERANS DAY CARE CENTER**

LOCATION: **BARANGAY BAGONG SILANGAN, DISTRICT 2, QUEZON CITY**

I. GENERAL REQUIREMENTS

a. Comply with the current and existing laws, ordinances and applicable codes, rules and regulations and standards. Any works perform 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)

i. 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.

ii. 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

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

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

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

iv. Temporary enclosure shall be provided within the construction site with adequate guard lights, railings and proper signages.

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

vi. 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.

i. A fully trained Medical Aide shall be employed permanently on the site who shall be engaged solely from medical duties.

ii. The medical room shall be provided in waterproof; 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.

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

iv Additional safety precautions shall be provided in the observance of pandemic. Protocols set-forth by the government shall be strictly followed

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 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 to work

B. Removal / 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.

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

III. CIVIL / STRUCTURAL WORKS

A. CONCRETE WORK

a 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

b. 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.

c. Materials

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

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

iii. 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.

iv 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.

d. Proportioning and Mixing

i. 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

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

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

e Forms

i. 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 ¾" waterproof plywood and form lumber

ii 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

iii. 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

f Placing Reinforcement:

Steel reinforcement shall be provided as indicated, together with all necessary wire ties, chairs, spacer supported 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.

g. Conveying and Placing Concrete:

i. 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

ii. Placing – concrete shall be worked readily into the corners and angles of the forms and around all reinforcement and imbedded 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 consequentlly 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.

iii. 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.

iv. 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.

v 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 morter of the same cement-sand ratios as used in concrete shall be first deposited to cover the surfaces.

h. Curing

i. 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 condiitions.

ii. 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.

i. Finishing

i 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.

ii. 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.

B. MASONRY

a Masonry Units (CHB):

i 100mm thick for all interior walls and exterior walls unless otherwise indicated.

ii Use 400 psi for non-load bearing blocks and 700 psi for load bearing blocks where required.

iii Where full height walls are constructed with concrete hollow blocks, these shall extend up to the bottom of beam or slab unless otherwise indicated on plans. Provide stiffener columns & lintel beams as specified in the structural drawings or as specified or as deemed required to assure a stabilized wall due to height & other considerations

b. Sand:

S-1, washed clean and greenish in color.

c Mortar:

One part "Portland" cement and two parts sand and water but not more than three parts sand and water.

d. Plaster bond:

Apply plaster bond to all wall area.

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d Lay the tiles true to profile as specified in the plan

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All doors must be in approved quality as specified in the plan and program of works.

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B.2 Water service connections including but not limited to water meters, float valves. Any and all other works involve in providing the complete operation of the water supply system

B.3 Soil waste and vent system complete in all respect including but not limited to connection to existing sewer, submittals, shop drawings, pipes, fittings, valves, cleanout, drains, etc. Complete and operational

B.4 Storm drainage system complete in all respect including but not limited to connection to existing storm drainage, submittals, shop drawings, pipes, fittings, valves, cleanout, drains, etc. Complete and operational.

C Workmanship and installation methods shall conform to the best modern practice. Employ skilled tradesmen to perform work under the direct supervision of fully qualified personnel.

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T. The Sanitary Contractor must carry out any additional tests required by the end-user and/or approving agency

U. Drainage pipe shall be tested by filling the pipe with 3m. of water higher than the test section and wait for 15 min, then check for leakage at every joints.

V. Testing of drainage systems shall be carried out in sections by dividing the system horizontally. Each section shall comprise pipework and fitting for three floors/storeys required for testing.

W. Drainage pressure pipe shall be hydraulic tested at minimum pressure 50 psi

X. Hangers and supports for plumbing piping and equipment shall withstand the effects of gravity loads and stresses within limits and under conditions indicated according to ASCE/SEI 7.

Y Install hangers and supports to allow controlled thermal and seismic movement of piping systems, to permit freedom of movement between pipe anchors, and to facilitate action of expansion joints, expansion loops, expansion bends, and similar units.

Z. Install lateral bracing with pipe hangers and supports to prevent swaying.

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BB Install hangers and supports so that piping live and dead loads and stresses from movement will not be transmitted to connected equipment.

CC. Install hangers and supports to provide indicated pipe slopes and to not exceed maximum pipe deflections allowed by ASME B31.9 for building services piping.

VI. ELECTRICAL WORKS

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E. 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.

F. PANELBOARDS

F.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.

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

F 2.1 Rated for environmental conditions at installed location

i. Indoor Dry and Clean Locations: NEMA 250, Type 1.

ii Outdoor Locations. NEMA 250, Type 3R.

iii. Kitchen and Wash-Down Areas NEMA 250, Type 4X, stainless steel.

iv. Other Wet or Damp Indoor Locations. NEMA 250, Type 4.

v Indoor Locations Subject to Dust Falling Dirt, and Dripping Noncorrosive Liquids: NEMA 250, Type 5 or Type 12

F.2.2 Front: Secured to box with concealed trim clamps. For surface-mounted fronts, match box dimensions, for flush-mounted fronts, overlap box.

F.2.3 Hinged Front Cover Entire front trim hinged to box and with standard door within hinged trim cover.

F 2 4 Skirt for Surface-Mounted Panelboards: Same gage and finish as panelboard front with flanges for attachment to panelboard, wall, and ceiling or floor

F.2 5 Gutter Extension and Barrier. Same gage and finish as panelboard enclosure, integral with enclosure body Arrange to isolate individual panel sections.

F.2 6 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.

F.2.7 Directory Card: Inside panelboard door, mounted in transparent card holder metal frame with transparent protective cover

F.3 Incoming Mains Location: Top or Bottom.

F 4 Phase, Neutral, and Ground Buses:

F 4.1 Material. Hard-drawn copper. 98 percent conductivity.

F.4.2 Equipment Ground Bus: Adequate for feeder and branch-circuit equipment grounding conductors, bonded to box.

F.4 3 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.

VII. MECHANICAL WORKS

A. Air Conditioning and Refrigeration System

1 This item shall consist of furnishing and installation of air conditioning, refrigeration and ventilation systems, inclusive of necessary electrical connections, ductworks, grilles, pipes, and condensate drains and all other necessary accessories ready for service in accordance with the Plans and Specifications.
2 The types, sizes, capacities, quantities and power characteristics of the compressor, evaporator, condenser, chilled water pump and condenser water pump shall be specified or as shown on the Plans.
3. The air conditioning system shall be entirely automatic in operation and shall not require the presence of an attendant except for periodic inspection for lubrication. All equipment and materials shall be inspected upon delivery and shall be tested after installation. Piping shall not be buried, concealed or insulated until it has been inspected, tested and approved. Walls, floors and other parts of the structure and equipment damaged by the Contractor in the prosecution of the work shall be replaced as shown on the Plans.

B. WATER-PUMPING SYSTEM

1. This item shall consist of furnishing and installation of water pumping system, inclusive of all piping and pipe fitting connections, valves, controls, electrical wirings, tanks and all accessories ready for service in accordance with the approved Plans and Specifications.
2. Exposed piping shall be provided with concrete saddle or steel clamps or hangers to secure them firmly to the structures.

Pipe threads shall be lubricated by white lead, red lead, Teflon or other approved lubrication before tightening.

Piping supports shall be placed at 3m intervals or less.

C. AUTOMATIC WATER SPRINKLER SYSTEM

1 This item shall consist of furnishing and installation of automatic water sprinkler system, inclusive of all piping and pipe fitting connections, valves, controls, electrical wiring connection, and all accessories ready for service in accordance with the approved Plans and Specifications.

2 System operation and maintenance chart shall be submitted to the End User upon completion of the Contract. This shall include the locations of control valves and care of the new equipment.

3. Marked instructions and identification sign boards. These sign boards shall be made of #14 gauge G I sheet with baked enamel finish paint and letter instruction

are shown on the Plans. Additional sign boards as may be required and not specified herewith shall be furnished at no extra cost. Sign boards shall be mounted on the equipment or wall nearest the equipment for easy identification and reading. Paints shall be basically gloss fire red and white.

D. ELECTRIC ELEVATOR
E. ELECTRIC DUMBWAITER
F. OXYGEN, NITROUS OXIDE, VACUUM AND FUEL GAS SYSTEM
G. HEATING SYSTEM
H. BOILER

I. 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).

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

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

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

M 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.

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PROJECT TITLE : **PROPOSED REHABILITATION OF BAKAS DAY CARE CENTER**
LOCATION : BARANGAY BAGONG SILANGAN, DISTRICT 2, QUEZON CITY

TECHNICAL SPECIFICATIONS

I. 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. Personal Protective Equipment (PPE) shall consist of safety helmet/hard hat, safety reflectorized vest, safety insulated gloves, dust mask, safety shoes, safety goggles, and safety harness. Every skilled and unskilled worker, and the project foreman shall be provided PPE by the Contractor. Consideration of quantity shall be made for the Project Engineer, Materials Engineer, Safety Officer/Practitioner (as required) and project driver.

6. Construction safety materials shall consist of safety net, fire extinguisher and safety signage and posters.

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.

E Soil Poisoning. There are two methods usually adopted in soil poisoning which are as follows:

1. Cordoning. This method is usually adopted when there is no visible evidence of termite infestation. Trenches in concentric circles, squares or rectangles are dug 150mm to 220mm wide and at least one meter apart and applied with Liquid Termicide Concentrate working solution at the rate of 8 liters per linear meter.

2 Drenching. When soil show termite infestation, this method shall be applied. The building area shall be thoroughly drenched with Liquid Termicide Concentrate working solution at the rate of 24 liters per square meter.

III. CIVIL / STRUCTURAL WORKS

A. METAL FABRICATION

1 Materials:

a Steel and Iron. If not specified otherwise, use standard mill-finished structural steel shapes or bar iron in compliance with AISC Specifications for Design, Fabrication and Erection of Structural Steel for buildings.

b. Bolts, Nuts, Studs and Rivets. ASTM A 307 and A 325.

c Screws. Fed. Spec FF-S-85, Fed Spec FF-S-92, and Fed. Spec. FF-S-111.

d. Metal Purlins. High grade galvanized steel with minimum tensile strength of 275 MPa, 1.4mm in thickness or approved equal.

2 Fabrication:

By mechanics skilled in the trade and in accordance with the manufacturer's directions. Metalwork shall be fabricated to allow for expansion and contraction of materials. Provide welding and bracing of adequate strength and durability, with tight, flush joints, dressed smooth and clean. Complete with bolts and nuts

3. Metal Surfaces:

Surfaces shall be clean and free from all scale, flake, rust and rust pitting; well-formed and finished to shape and size, with sharp lines, angle and smooth surface. Shearing and punching shall leave clean true lines and surfaces. Weld or rivet permanent connections. Weld and flush rivets shall be used and finished flush smooth on surfaces that will be exposed after installation. Do not use screws or bolts where they can be avoided; when used, heads shall be countersunk, screwed up light and threads nicked to prevent loosening.

4. Construction.

   Thickness of metals and details of assembly and supports shall give ample strength and stiffness for the minimum loads specified or indicated. Joints exposed to weather shall be formed to exclude water.

5. Welding:

   Use welding electrode E70xx and perform welding, welding inspection and corrective welding in accordance with AWS D1.1. Weld in a manner to prevent permanent distortion of the connected parts. Weld continuously along the entire area of contact (except where tack welding is permitted). Do not tack weld exposed to connections). Grind smooth visible weld in finished installation.

B. ROOFING WORKS

1. The roof shall be covered with Ga. 24 pre-painted G.I. rib-type roofing sheets as shown on the plans. The roofing shall be secured to the purlins with min. 2 ½" max. 3" long Tek screws. Ridge rolls, hip rolls and valleys to be used shall be those compatible with the Ga. 24 pre-painted G.I. rib-type roofing sheets. They shall lap the roofing sheets at least 250mm. The ridge rolls, hip rolls and valleys shall be riveted to the roofing sheets.

2. The roof shall be covered with 6mm thick Rib-type polycarbonate sheets as shown on the plans. The roofing shall be secured to the purlins with min. 2 ½" max. 3" long Tek screws. Ridge rolls, hip rolls and valleys to be used shall be those compatible with the 6mm thick solid polycarbonate sheets. They shall lap the roofing sheets at least 250mm. The ridge rolls, hip rolls and valleys shall be riveted to the roofing sheets.

3. All roofing sheets adjacent to concrete hollow block and other masonry walls such as property line firewalls, shall be provided with Gauge 26 pre-painted plain G.I. Flashing to extend to the top and over to the other side of the wall. All fasteners shall be placed at the top of the corrugations of the roofing sheets to prevent water from standing around the fasteners.

IV. ARCHITECTURAL WORKS

A. FLOOR FINISHES

1. 600mm x 600mm Unglazed Ceramic Tiles including tile adhesive
2. 300mm x 300mm Unglazed Ceramic Tiles including tile adhesive
3. 50mm concrete Topping with Plain Cement Finish
4. Carpet Tiles including adhesive (Auditorium)
5. 50mm Concrete Topping for Tiles
6. Plastering Guide/ Grooves

B. WALL FINISHES

1. 600mm x 600mm Unglazed Ceramic Tiles including tile adhesive
2. 300mm x 300mm Unglazed Ceramic Tiles including tile adhesive
3. 50mm concrete Topping with Plain Cement Finish
4. 50mm Concrete Topping for Tiles
5. Plastering Guide/ Grooves

C. 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

i. 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. Painting 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.

ii. 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 similar 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.

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

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

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

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

vii. 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

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

D. CEILING FINISHES

6mm thick Fiber Cement Board with complete framing and accessories.

E. DOORS & WINDOWS

Follow as per approved plan and specifications.

V. SANITARY / PLUMBING WORKS

A. 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).

B. Supply, installation and testing of the following.

1. Potable water supply system complete in all respects including but not limited to submittals, shop drawings, piping, water meters, valves, bibbs, insulation, all accessories required for complete and operational of the system.

2. Water service connections including but not limited to water meters, float valves. Any and all other works involve in providing the complete operation of the water supply system.

3. Soil waste and vent system complete in all respect including but not limited to connection to existing sewer, submittals, shop drawings, pipes, fittings, valves, cleanout drains, etc. Complete and operational.

4 Storm drainage system complete in all respect including but not limited to connection to existing storm drainage, submittals, shop drawings, pipes, fittings, valves, cleanout drains, etc. Complete and operational.

C Workmanship and installation methods shall conform to the best modern practice. Employ skilled tradesmen to perform work under the direct supervision of fully qualified personnel.

D All equipment and installations shall meet or exceed minimum requirements of the Standards and Codes as specified in plans and program of work.

E. Install equipment in strict accordance with manufacturers written recommendations.

F. Physical sizes of all plant and equipment are to be suitable for the space allocated for the accommodation of such plant and equipment, taking into account the requirement of access for maintenance purposes

G In selecting makes and types of equipment, the Contractor shall ascertain that facilities for proper maintenance, repair and replacement are provided.

H Where the Contractor proposes to use an item of equipment other than that specified or detailed in the drawing, which requires any redesign of the system, drawings showing the layout of the equipment and such redesign as required therefore shall be prepared by the Contractor at his own expenses. Where such approved deviation necessitates a different quantity and arrangement of materials and equipment's from that originally specified or indicated in the drawings, the Contractor shall furnish and install any such additional materials and equipment's required by the system at no additional cost.

I Equipment catalogue and manufacturer's specifications must be submitted for examination and details shall be submitted for approval before any equipment is to be ordered.

J. This shall include all information necessary to ascertain the equipment comply with this specification and drawings. Data and sales catalogue of a general nature will not be accepted.

K. All materials, equipment, components and accessories shall be delivered to the Site in a new condition, properly packed and protected against damage or contamination or distortion, breakage or structural weakening due to handling, adverse weather or other circumstances and, as far as practicable, they shall be kept in the packing cases or under approved protective coverings until required for use

L. Any items suffering from damage during manufacture, or in transit, or on site whilst in storage or during erection shall be rejected and replaced without extra cost.

M. All sanitary fittings and pipework shall be cleaned after installation and keep them in a new condition.

N. All installed pipelines shall be flushed through with water, rodded when necessary to ensure clearance of debris.

O Cleaning and flushing shall be carried out in sections as the installation becomes completed.

P. The Contractor shall carry out hydraulic test on the complete plumbing systems and the drainage system to show that it is functioning satisfactorily within the requirements of this Specification and local regulations.

Q. The Contractor shall provide suitable test pumps and arrange for a supply of water required in connection with testing of pipework. The test pump shall be fitted with pressure gauges which shall be of suitable range for the pressure being applied.

R. Hydraulic tests shall be carried out as the pipework is installed and shall be completed before chases in walls and ducts are closed. Also test shall be carried out prior to false ceilings and other finishes are installed

S. Testing apparatus shall be provided by the Contractor. Where any section of pipework or equipment is unable to withstand the maximum pipework test pressure, it shall be isolated during the pipework test then that section of pipework or equipment shall be re-tested at the appropriate test pressure.

T. The Sanitary Contractor must carry out any additional tests required by the end-user and/or approving agency

U. Drainage pipe shall be tested by filling the pipe with 3m of water higher than the test section and wait for 15 min. then check for leakage at every joints.

V. Testing of drainage systems shall be carried out in sections by dividing the system horizontally. Each section shall comprise pipework and fitting for three floors/storeys required for testing.

W. Drainage pressure pipe shall be hydraulic tested at minimum pressure 50 psi

X. Hangers and supports for plumbing piping and equipment shall withstand the effects of gravity loads and stresses within limits and under conditions indicated according to ASCE/SEI 7

Y Install hangers and supports to allow controlled thermal and seismic movement of piping systems, to permit freedom of movement between pipe anchors, and to facilitate action of expansion joints, expansion loops, expansion bends, and similar units.

Z. Install lateral bracing with pipe hangers and supports to prevent swaying.

AA. Install building attachments within concrete slabs or attach to structural steel. Install additional attachments at concentrated loads, including valves, flanges, and strainers, NPS 2-1/2 (DN 65) and larger and at changes in direction of piping. Install concrete inserts before concrete is placed; fasten inserts to forms and install reinforcing bars through openings at top of inserts.

BB. Install hangers and supports so that piping live and dead loads and stresses from movement will not be transmitted to connected equipment.

CC. Install hangers and supports to provide indicated pipe slopes and to not exceed maximum pipe deflections allowed by ASME B31.9 for building services piping.

VI. 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 panel boards shall not be smaller than 3.5 mm but all homeruns to panel board 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 PANEL BOARDS

1. This item shall consist of the furnishing and installation of the power load center unit substation or low voltage switchgear and distribution panel boards 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 panel boards, 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 drawn out 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 Panel boards and Cabinets. Panel boards shall conform to the schedule of panel boards 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.

Panel boards 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. Panel boards shall be provided with directories and shall be printed to indicate load served by each circuit.

Panel board cabinets and trims shall be suitable for the type of mounting shown on the approved Plans. The inside and outside of panel board 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 panel boards shall have the rating, capacity and number of poles as shown on the approved Plans. Breakers shall be thermal magnetic type. Multiple breaker shall be 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 Panel boards 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. PANEL BOARDS

1. Fabricate and test panel boards 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 Panel boards: Same gauge and finish as panel board front with flanges for attachment to panel board, wall, and ceiling or floor.

e. Gutter Extension and Barrier: Same gage and finish as panel board 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 panel board 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, 96 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.

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TECHNICAL SPECIFICATIONS
QUEZON CITY INFRASTRUCTURE PROJECT

PROJECT TITLE : PROPOSED REHABILITATION OF COVENANT DAY CARE CENTER

LOCATION : BARANGAY BAGONG SILANGAN, DISTRICT 2, QUEZON CITY

I. GENERAL REQUIREMENTS

a. Comply with the current and existing laws, ordinances and applicable codes, rules and regulations and standards. Any works perform 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)

i. 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.

ii. 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

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

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

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

iv Temporary enclosure shall be provided within the construction site with adequate guard lights, railings and proper signages

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

vi. 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

i. A fully trained Medical Aide shall be employed permanently on the site who shall be engaged solely from medical duties.

ii The medical room shall be provided in waterproof 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.

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

iv. Additional safety precautions shall be provided in the observance of pandemic. Protocols set-forth by the government shall be strictly followed.

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 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 to work

B. Removal / 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.

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

E. Excavation shall be shored and braced by members of suitable sizes where necessary to prevent danger to persons, injurious caving or erosions. Shoring bracing and sheathing shall be removed, as the excavations are backfilled, in a manner such as to prevent injurious caving. The contractor shall keep all excavations free from water while construction is in progress.

III. CIVIL / STRUCTURAL WORKS

A. CONCRETE WORK

a. 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.

b 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.

c. Materials

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

ii. 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.

iii. 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.

iv. 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

d. Proportioning and Mixing

i 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

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

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

e Forms

i. 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 ¾" waterproof plywood and form lumber.

ii. 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

iii. 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

f. Placing Reinforcement:

Steel reinforcement shall be provided as indicated, together with all necessary wire ties, chairs, spacer supported 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.

g. Conveying and Placing Concrete:

i 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.

ii. Placing – concrete shall be worked readily into the corners and angles of the forms and around all reinforcement and imbedded 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.

iii. 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

iv 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.

v. 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.

h. Curing

i. 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.

ii 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

i. Finishing

i. 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.

iii. 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.

B. MASONRY

a Masonry Units (CHB)
   i 100mm thick for all interior walls and exterior walls unless otherwise indicated.

   ii Use 400 psi for non-load bearing blocks and 700 psi for load bearing blocks where required.

   iii. Where full height walls are constructed with concrete hollow blocks, these shall extend up to the bottom of beam or slab unless otherwise indicated on plans. Provide stiffener columns & lintel beams as specified in the structural drawings or as specified or as deemed required to assure a stabilized wall due to height & other considerations.

b. Sand:

   S-1, washed, clean and greenish in color.

c. Mortar:

   One part "Portland" cement and two parts sand and water but not more than three parts sand and water.

d. Plaster bond:

   Apply plaster bond to all wall area.

C. ROOFING WORKS

a The roof shall be covered with Ga. 24 pre-painted G.I. rib-type roofing sheets as shown on the plans. The roofing shall be secured to the purlins with min 2 ½" max 3" long Tek screws. Ridge rolls, hip rolls and valleys to be used shall be those compatible with the Ga. 24 pre-painted G.I. rib-type roofing sheets. They shall lap the roofing sheets at least 250mm. The ridge rolls, hip rolls and valleys shall be riveted to the roofing sheets.

b The roof shall be covered with 6mm thick Rib-type polycarbonate sheets as shown on the plans. The roofing shall be secured to the purlins with min 2 ½" max 3" long Tek screws. Ridge rolls, hip rolls and valleys to be used shall be those compatible with the 6mm thick solid polycarbonate sheets. They shall lap the roofing sheets at least 250mm. The ridge rolls, hip rolls and valleys shall be riveted to the roofing sheets.

c. All roofing sheets adjacent to concrete hollow block and other masonry walls such as property line firewalls, shall be provided with Gauge 26 pre-painted plain G.I. Flashing to extend to the top and over to the other side of the wall. All fasteners shall be placed at the top of the corrugations of the roofing sheets to prevent water from standing around the fasteners.

D. WATERPROOFING

a. Waterproofing.

Furnish all labor, materials, equipment, plant and other facilities required to complete all waterproofing work as shown on the drawings and herein specified. All applications shall be strictly performed by an approved waterproofing Contractor.

b. Testing:

Test waterproofed area by seventy-two (72) hours and check for any seepages.

Note: Thickness should be as per Manufacturers Specifications and Installation depending on the Areas to be applied with.

IV. ARCHITECTURAL WORKS

A. TILE WORKS

a. Both broken and unbroken old tiles must be chip-off
b. Surface should be smoothen & clean.
c. Homogeneous tiles shall be soaked in clean water prior to installation
d. Lay the tiles true to profile as specified in the plan

B. PROVISION OF CABINET

a Good Lumber must be 2" x 2" x 10' for support frames and main frames
b. 18mm thick Plywood must be used.
c. Countertop must be finished with 300mm x 300mm Tiles.

C. FABRICATED DOORS & WINDOWS

All doors and windows must be in approved quality as specified in the plan and program of works

D. PAINTING WORKS

a. All primers, thinners and putty, also waterproofing for internal and external application shall be the same brand as the specified material.

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

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

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

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

f. 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.

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

V. SANITARY / PLUMBING WORKS

A 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).

B. Supply installation and testing of the following

B.1 Potable water supply system complete in all respects including but not limited to submittals, shop drawings, piping, water meters, valves, bibbs, insulation, all accessories required for complete and operational of the system.

B.2 Water service connections including but not limited to water meters, float valves. Any and all other works involve in providing the complete operation of the water supply system.

B.3 Soil waste and vent system complete in all respect including but not limited to connection to existing sewer, submittals, shop drawings, pipes, fittings, valves, cleanout, drains, etc. Complete and operational.

B.4 Storm drainage system complete in all respect including but not limited to connection to existing storm drainage, submittals, shop drawings, pipes. fittings, valves, cleanout, drains, etc. Complete and operational.

C. Workmanship and installation methods shall conform to the best modern practice. Employ skilled tradesmen to perform work under the direct supervision of fully qualified personnel.

D All equipment and installations shall meet or exceed minimum requirements of the Standards and Codes as specified in plans and program of work.

E. Install equipment in strict accordance with manufacturers written recommendations.

F Physical sizes of all plant and equipment are to be suitable for the space allocated for the accommodation of such plant and equipment, taking into account the requirement of access for maintenance purposes

G. In selecting makes and types of equipment, the Contractor shall ascertain that facilities for proper maintenance, repair and replacement are provided.

H Where the Contractor proposes to use an item of equipment other than that specified or detailed in the drawing, which requires any redesign of the system drawings showing the layout of the equipment and such redesign as required therefore shall be prepared by the Contractor at his own expenses. Where such approved deviation necessitates a different quantity and arrangement of materials and equipment's from that originally specified or indicated in the drawings, the Contractor shall furnish and install any such additional materials and equipment's required by the system at no additional cost

I. Equipment catalogue and manufacturer's specifications must be submitted for examination and details shall be submitted for approval before any equipment is to be ordered.

J. This shall include all information necessary to ascertain the equipment comply with this specification and drawings. Data and sales catalogue of a general nature will not be accepted.

K. All materials, equipment, components and accessories shall be delivered to the Site in a new condition. properly packed and protected against damage or contamination or distortion, breakage or structural weakening due to handling, adverse weather or other circumstances and, as far as practicable, they shall be kept in the packing cases or under approved protective coverings until required for use.

L. Any items suffering from damage during manufacture, or in transit, or on site whilst in storage or during erection shall be rejected and replaced without extra cost.

M. All sanitary fittings and pipework shall be cleaned after installation and keep them in a new condition.

N. All installed pipelines shall be flushed through with water, rodded when necessary to ensure clearance of debris.

O. Cleaning and flushing shall be carried out in sections as the installation becomes completed.

P. The Contractor shall carry out hydraulic test on the complete plumbing systems and the drainage system to show that it is functioning satisfactorily within the requirements of this Specification and local regulations.

Q. The Contractor shall provide suitable test pumps and arrange for a supply of water required in connection with testing of pipework. The test pump shall be fitted with pressure gauges which shall be of suitable range for the pressure being applied.

R. Hydraulic tests shall be carried out as the pipework is installed and shall be completed before chases in walls and ducts are closed. Also test shall be carried out prior to false ceilings and other finishes are installed.

S. Testing apparatus shall be provided by the Contractor. Where any section of pipework or equipment is unable to withstand the maximum pipework test pressure, it shall be isolated during the pipework test then that section of pipework or equipment shall be re-tested at the appropriate test pressure.

T The Sanitary Contractor must carry out any additional tests required by the end-user and/or approving agency

U. Drainage pipe shall be tested by filling the pipe with 3m. of water higher than the test section and wait for 15 min, then check for leakage at every joints.

V. Testing of drainage systems shall be carried out in sections by dividing the system horizontally. Each section shall comprise pipework and fitting for three floors/storeys required for testing

W Drainage pressure pipe shall be hydraulic tested at minimum pressure 50 psi

X. Hangers and supports for plumbing piping and equipment shall withstand the effects of gravity loads and stresses within limits and under conditions indicated according to ASCE/SEI 7.

Y. Install hangers and supports to allow controlled thermal and seismic movement of piping systems, to permit freedom of movement between pipe anchors, and to facilitate action of expansion joints, expansion loops, expansion bends and similar units.

Z Install lateral bracing with pipe hangers and supports to prevent swaying

AA Install building attachments within concrete slabs or attach to structural steel. Install additional attachments at concentrated loads, including valves, flanges, and strainers, NPS 2-1/2 (DN 65) and larger and at changes in direction of piping. Install concrete inserts before concrete is placed; fasten inserts to forms and install reinforcing bars through openings at top of inserts.

BB Install hangers and supports so that piping live and dead loads and stresses from movement will not be transmitted to connected equipment

CC Install hangers and supports to provide indicated pipe slopes and to not exceed maximum pipe deflections allowed by ASME B31.9 for building services piping.

VI. ELECTRICAL WORKS

A 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).

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

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

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

E 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.

F. PANELBOARDS

F.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.

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

F 2.1 Rated for environmental conditions at installed location

i. Indoor Dry and Clean Locations: NEMA 250, Type 1.

ii. Outdoor Locations: NEMA 250, Type 3R

iii. Kitchen and Wash-Down Areas NEMA 250, Type 4X, stainless steel.

iv. Other Wet or Damp Indoor Locations. NEMA 250. Type 4.

v. Indoor Locations Subject to Dust, Falling Dirt, and Dripping Noncorrosive Liquids. NEMA 250. Type 5 or Type 12.

F.2.2 Front: Secured to box with concealed trim clamps. For surface-mounted fronts, match box dimensions; for flush-mounted fronts, overlap box.

F.2.3 Hinged Front Cover: Entire front trim hinged to box and with standard door within hinged trim cover

F 2.4 Skirt for Surface-Mounted Panelboards: Same gage and finish as panelboard front with flanges for attachment to panelboard, wall, and ceiling or floor

F.2 5 Gutter Extension and Barrier: Same gage and finish as panelboard enclosure; integral with enclosure body Arrange to isolate individual panel sections.

F.2 6 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.

F.2.7 Directory Card: Inside panelboard door, mounted in transparent card holder metal frame with transparent protective cover.

F.3 Incoming Mains Location: Top or Bottom.

F.4 Phase, Neutral, and Ground Buses:

F.4.1 Material: Hard-drawn copper, 98 percent conductivity

F.4.2 Equipment Ground Bus: Adequate for feeder and branch-circuit equipment grounding conductors; bonded to box.

F.4.3 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

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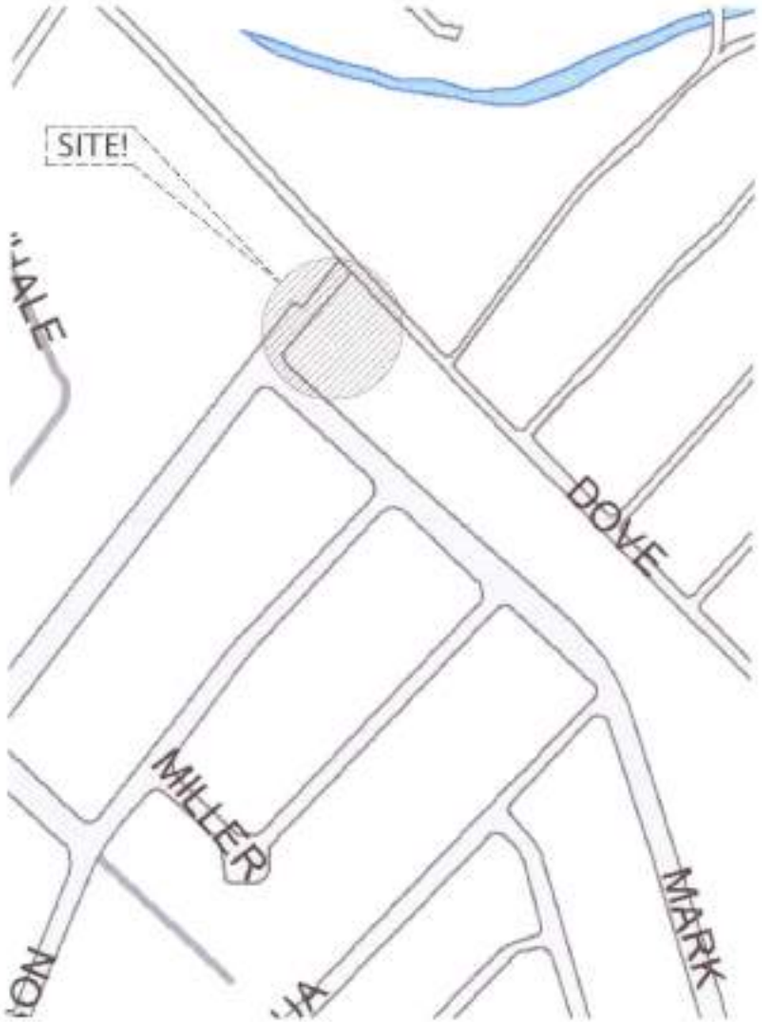
Section VII. Drawings

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

1 **VICINITY MAP** NTS.



2 **LOCATION PLAN** NTS.

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Republika ng Pilipinas
Lungsod ng Quezon
CITY ENGINEERING DEPARTMENT

PROJECT TITLE:
PROPOSED CONSTRUCTION OF HAND WASHING AND REHABILITATION OF ASPRER DAY CARE CENTER

LOCATION:
BARANGAY BAGONG SILANGAN, DISTRICT 1, QUEZON CITY

DRAWN BY:
DATE: AUG. 12, 2021
CHECKED BY:
REVISIONS:

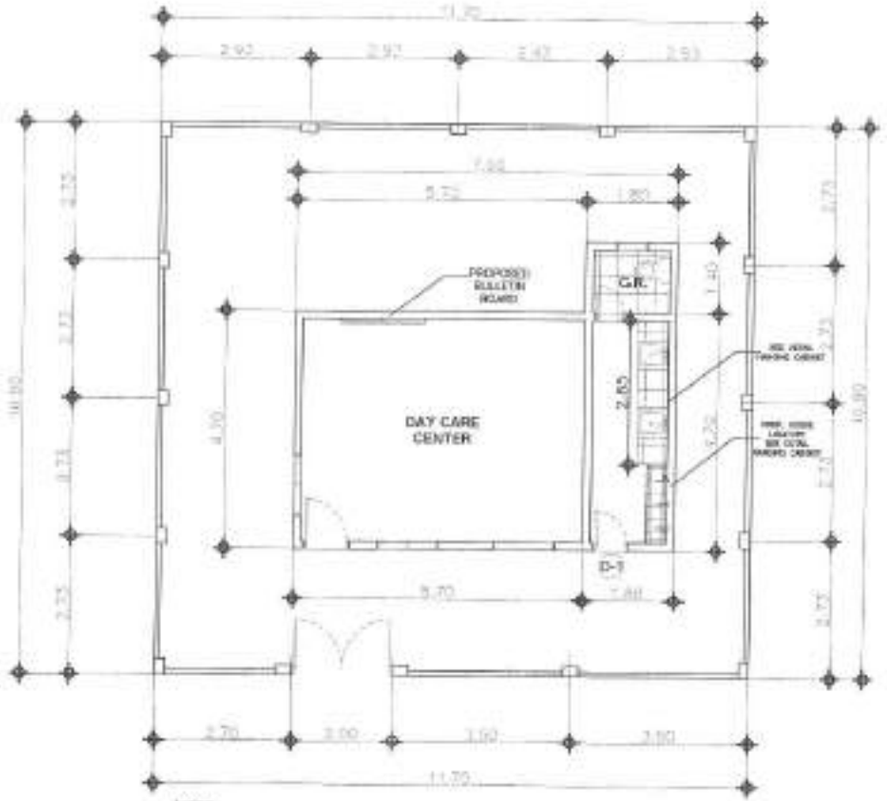
SUBMITTED BY:
ENGR. LEO S. DEL ROSARIO
HEAD, PLANNING & PROGRAMMING DIVISION

RECOMMENDING APPROVAL:
ENGR. ISIDRO M. R. VERZOSA, JR.
OIC, DEPUTY ENGINEERING DEPARTMENT

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

SHEET CONTENT: VICINITY MAP LOCATION MAP

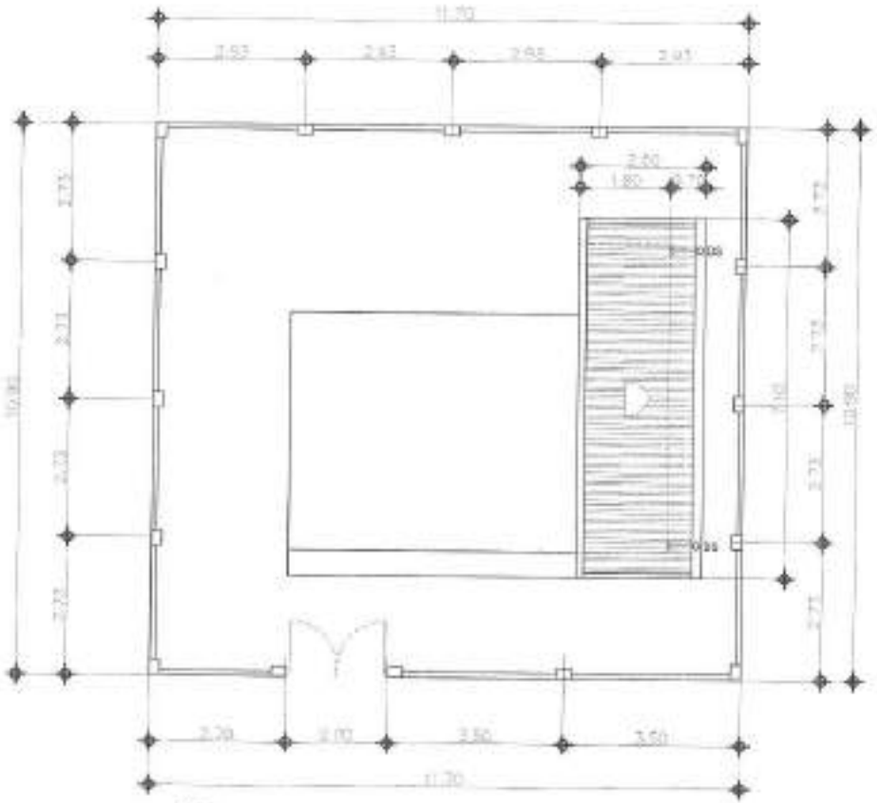
SHEET NO.: AR-1 1/14



NOTE
INTERIOR WALLS & EXTERIOR WALLS TO BE REPAINTED

1 DAY CARE FLOOR PLAN

SCALE 1:100m.



NOTE
REPLACEMENT OF ROOFING AND DOWN SPOUT

2 ROOFING PLAN

SCALE 1:100m.

Republika ng Pilipinas
Lungsod ng Quezon
CITY ENGINEERING DEPARTMENT

PROJECT TITLE :
PROPOSED CONSTRUCTION OF HAND WASHING AND REHABILITATION OF ASPRER DAY CARE CENTER
LOCATION:
BARANGAY BAGONG SILANGAN, DISTRICT 1, QUEZON CITY

DRAWN BY:
DATE : AUG. 13, 2021
CHECKED BY:
REVISION NO.:

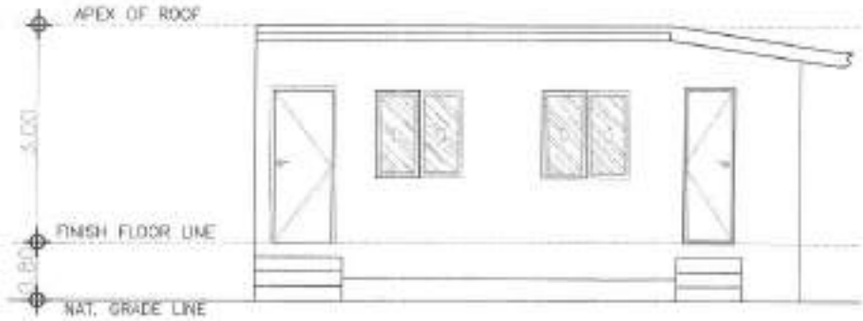
SUBMITTED BY:
ENGR. LEO S. DEL ROSARIO
HEAD, PLANNING & PROGRAMMING DIVISION

RECOMMENDING APPROVAL :
ENGR. ISAGANI R. VERZOSA, JR.
CITY ENGINEER/OIC-DEPARTMENT

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

SHEET CONTENT:
DAY CARE FLOOR PLAN
ROOFING PLAN

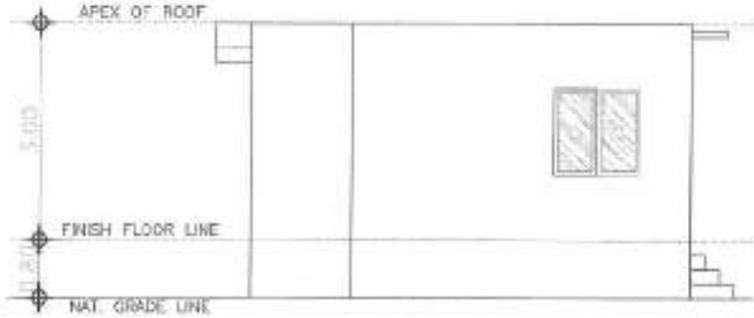
SHEET NO.
AR-2
2/14



NOTE:
INTERIOR WALLS & EXTERIOR WALLS TO BE REPAINTED

1 FRONT ELEVATION

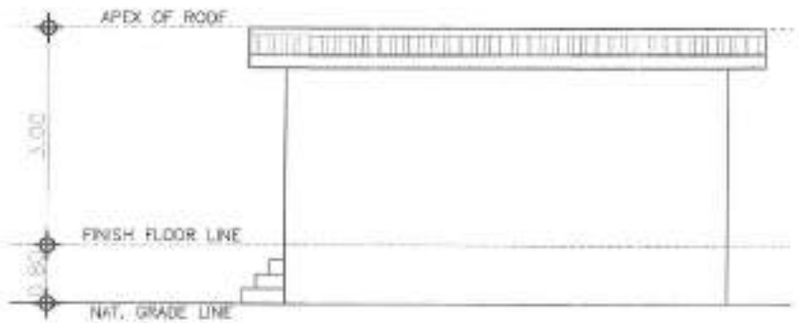
SCALE 1:70m.



NOTE:
INTERIOR WALLS & EXTERIOR WALLS TO BE REPAINTED

3 LEFT SIDE ELVATION

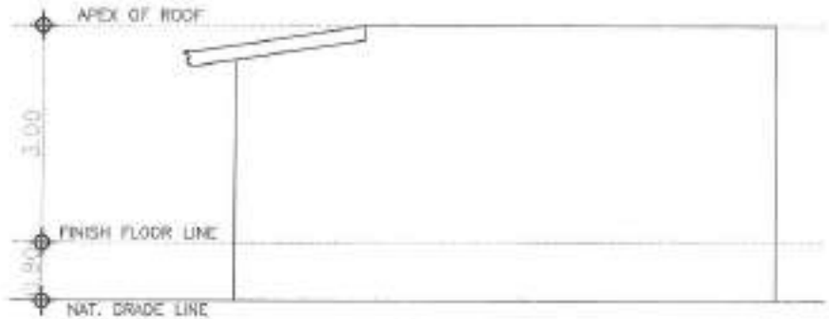
SCALE 1:70m.



NOTE:
INTERIOR WALLS & EXTERIOR WALLS TO BE REPAINTED

2 RIGHT SIDE ELEVATION

SCALE 1:70m.



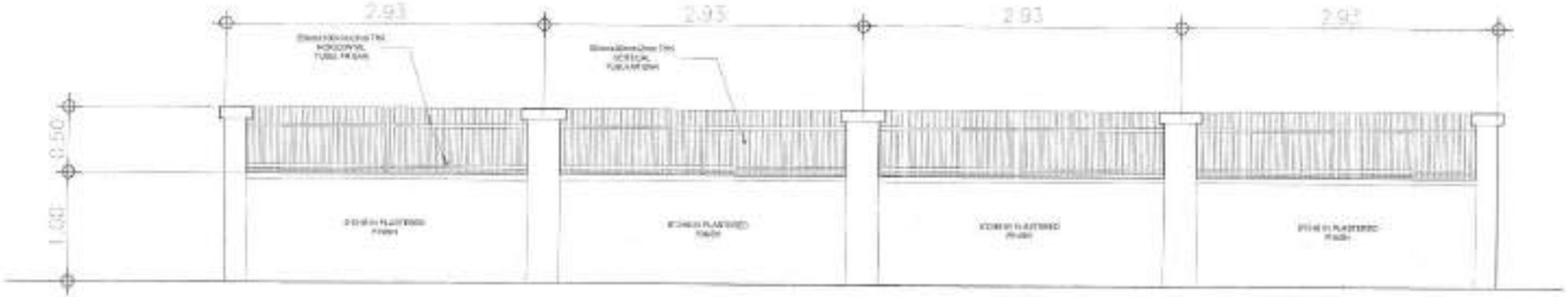
NOTE:
INTERIOR WALLS & EXTERIOR WALLS TO BE REPAINTED

4 REAR ELEVATION

SCALE 1:70m.

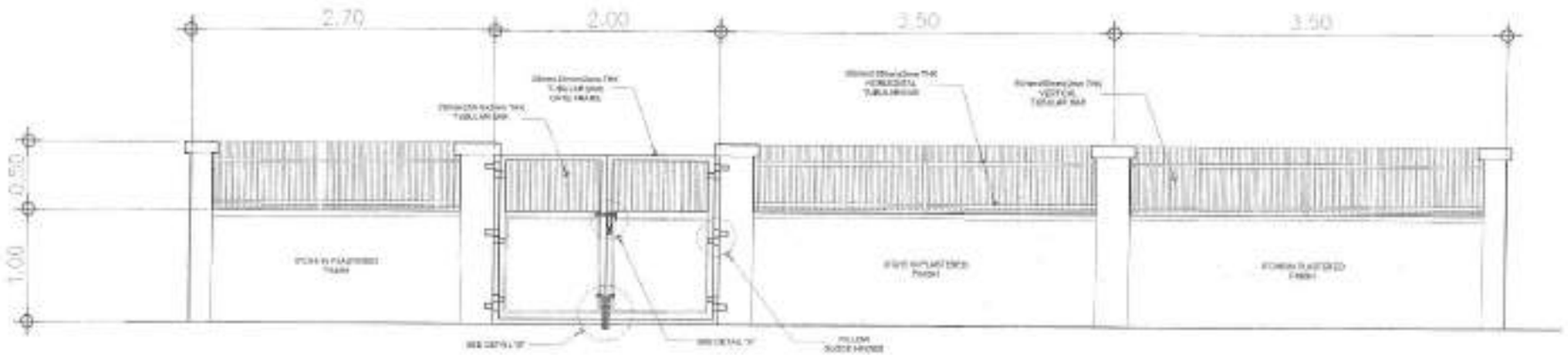
Republika ng Pilipinas
Lungsod ng Quezon
CITY ENGINEERING DEPARTMENT

PROJECT TITLE: PROPOSED CONSTRUCTION OF HAND WASHING AND REHABILITATION OF ASPRER DAY CARE CENTER LOCATION: BARANGAY BAGONG SILANGAN DISTRICT 1, QUEZON CITY	DRAWN BY:	SUBMITTED BY: ENGR. LEO S. DEL ROSARIO	RECOMMENDING APPROVAL: ENGR. ISAGANI R. VERZOSA, JR.	APPROVED BY: HON. MA. JOSEFINA G. BELMONTE	SHEET CONTENT: FRONT ELEVATION RIGHT SIDE ELEV. LEFT SIDE ELEV. REAR ELEVATION	SHEET NO.: AR-3 (3 | 14)
	DATE: AUG. 13, 2021					
	CHECKED BY:					
	REVISION NO.					



1 ELEVATION OF PERIMETER FENCE "B"

SCALE 1:40m.

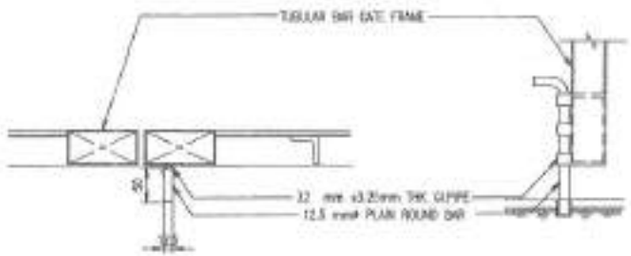


2 ELEVATION OF PERIMETER FENCE & ENTRANCE GATE "A"

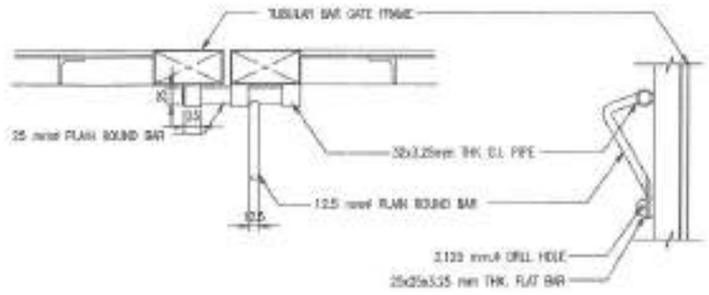
SCALE 1:40m.

Republika ng Pilipinas
Lungsod ng Quezon
CITY ENGINEERING DEPARTMENT

PROJECT TITLE: PROPOSED CONSTRUCTION OF HAND WASHING AND REHABILITATION OF ASPRER DAY CARE CENTER	DRAWN BY:	SUBMITTED BY:	RECOMMENDING APPROVAL:	APPROVED BY:	SHEET CONTENT	SHEET NO.
LOCATION: BARANGAY BAGONG SILANGAN, DISTRICT 1, QUEZON CITY	DATE: AUG. 12, 2021 CHECKED BY: REVISION NO.	ENGR. LEO S. DEL ROSARIO HEAD, PLANNING & PROGRAMMING DIVISION	ENGR. RACHEL R. VERZOSA, JR. OIC-CITY ENGINEER'S DEPARTMENT	HON. MA. JOSEFINA G. BELMONTE CITY MAYOR, QUEZON CITY	ELEVATION OF PERIMETER FENCE "B" ELEVATION OF PERIMETER FENCE & ENTRANCE GATE "A"	AR-4 4 | 14



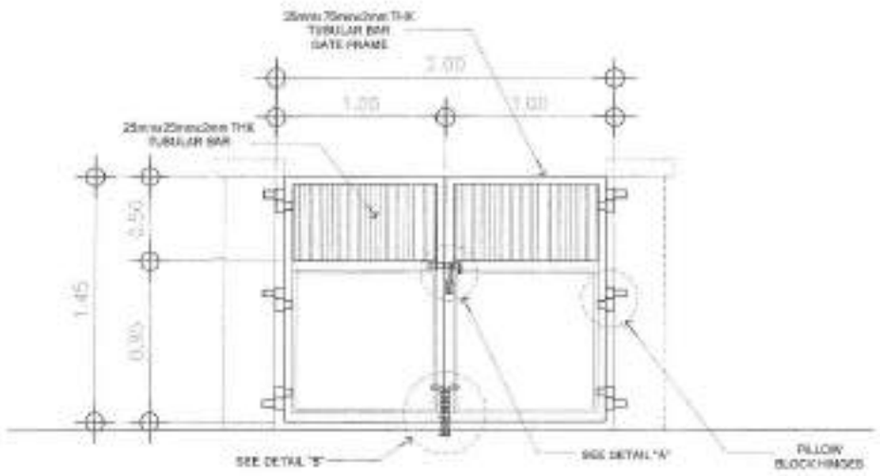
DETAIL A



DETAIL B

1 GATE FOOT BOLT AND BARREL BOLT DETAIL

NTS



2 MAIN ENTRANCE GATE DETAIL

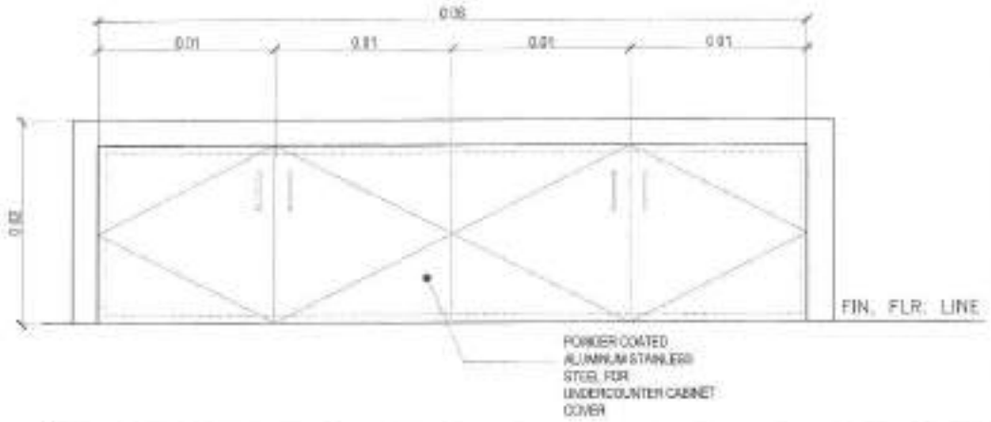
SCALE 1:40m

METAL DOOR
(1 set)

3 SCHEDULE OF DOOR

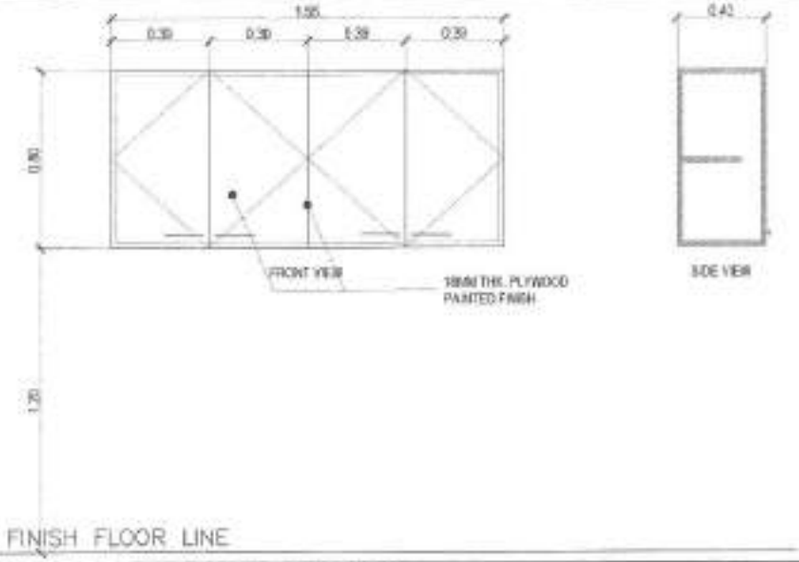
SCALE 1:40m

Republika ng Pilipinas Lungsod ng Quezon CITY ENGINEERING DEPARTMENT	PROJECT TITLE : PROPOSED CONSTRUCTION OF HAND WASHING AND REHABILITATION OF ASPRER DAY CARE CENTER LOCATION: BARANGAY BAGONG SILANGAN DISTRICT 1, QUEZON CITY	DRAWN BY : DATE : AUG. 15, 2021 CHECKED BY : JRE REVISION NO.:	SUBMITTED BY: ENGR. LEO S. DEL ROSARIO	RECOMMENDING APPROVAL : ENGR. GIOVANNI R. VERZOSA, JR.	APPROVED BY : HON. MA. JOSEFINA G. BELMONTE	SHEET CONTENT : GATE FOOT BOLT AND BARREL BOLT DETAIL MAIN ENTRANCE GATE DETAIL SCHEDULE OF DOOR	SHEET NO. AR-5 5 | 14



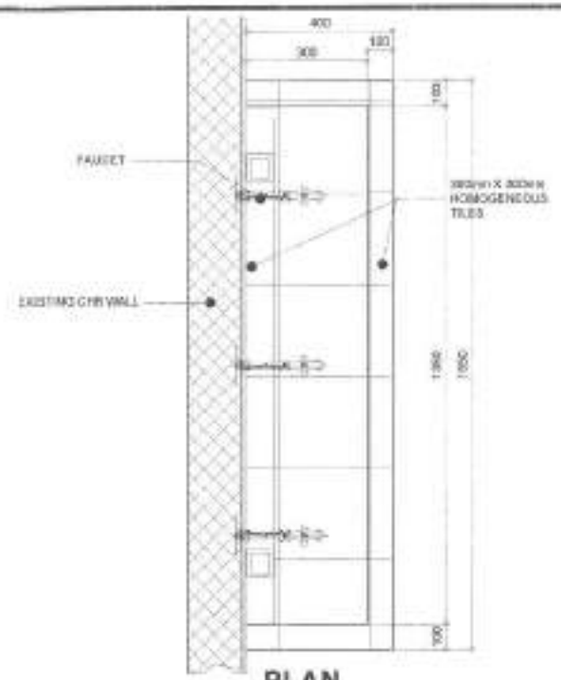
1 DETAIL OF UNDERCOUNTER CABINET

SCALE 1:40

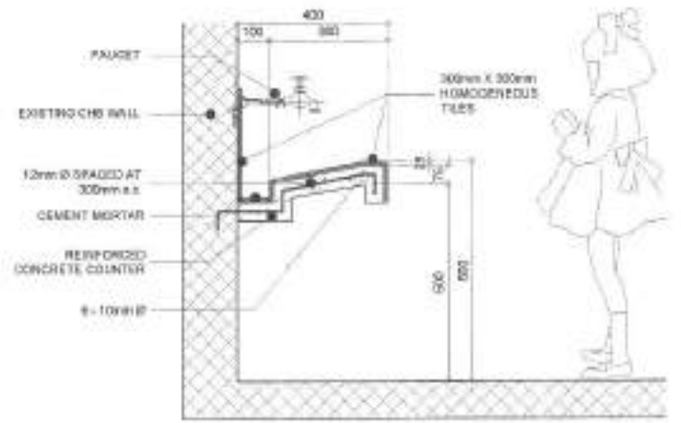


2 HANGING CABINET DETAIL

SCALE 1:40



PLAN



SECTION

3 DETAIL OF KIDDY HAND WASHING

NTS

Republika ng Pilipinas
Lungsod ng Quezon
CITY ENGINEERING DEPARTMENT

PROJECT TITLE :	PROPOSED CONSTRUCTION OF HAND WASHING AND REHABILITATION OF ASPRER DAY CARE CENTER
LOCATION:	BARANGAY BAGONG SILANGAN, DISTRICT 1, QUEZON CITY
DRAWN BY :	
DATE :	AUG. 13, 2021
CHECKED BY :	
REVISION NO. :	
SUBMITTED BY :	ENGR. LEO S. DEL ROSARIO, HEAD - PLANNING & PROGRAMMING DIVISION
RECOMMENDING APPROVAL :	ENGR. EUGENE R. VERZOSA, JR., CITY ENGINEERING DEPARTMENT
APPROVED BY :	HON. MA. JOSEFINA G. BELMONTE, CITY MAYOR, QUEZON CITY
SHEET CONTENT	DET. OF COUNTER CABINET HANGING CABINET DET. DET. OF KIDDY HAND WASHING
SHEET NO.	AR-6 6 | 14

1. CONSTRUCTION NOTES AND TYPICAL DETAILS APPLY TO ALL DRAWINGS UNLESS OTHERWISE SHOWN OR NOTED. MODIFY TYPICAL DETAILS AS DIRECTED TO MEET SPECIAL CONDITIONS.
2. SHOP DRAWINGS WITH ERECTION AND PLACING DIAGRAMS OF ALL STRUCTURAL FOR ENGINEER'S APPROVAL BEFORE FABRICATION.
3. CONTRACTOR SHALL VERIFY ALL DIMENSIONS BEFORE ALL WORK IS TO BEGIN,CHECK WITH MECHANICAL AND ELECTRICAL CONTRACTORS FOR CONDUITS, PIPE SLEEVES, ETC. TO BE EMBEDDED IN CONCRETE.
4. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO PROVIDE ADEQUATE SHORINGS AND BRACINGS OF THE STRUCTURE FOR ALL LOADS THAT MAYBE IMPOSED DURING CONSTRUCTION.
5. IN CASE OF QUESTION ARISING FORM THE INTERPRETATION OF OR CONFLICT WITH OTHER DOCUMENTS, THE ATTENTION OF THE OWNER/ENGINEER SHALL BE CALLED IN WRITING.

CONCRETE& REINFORCEMENT

1. ALL MATERIALS AND WORKMANSHIP SHALL CONFORM WITH THE LATEST BUILDINGS CODE OF AMERICAN CONCRETE INSTITUTE(ACI-318).
2. ALL CONCRETE SHALL DEVELOP A MINIMUM COMPREHENSIVE STRENGTH AT THE END OF TWENTY EIGHT(28) DAYS WITH CORRESPONDING MAXIMUM SIZE AGGREGATE AND SLUMPS AS FOLLOWS:

	LOCATION	STRENGTH	MAX. SIZE OF AGGREGATES
A.	SLAB ON GRADE	3000 PSI (20.685Mpa)	1 in. (25mm)
	CURBS, SIDEWALK WALL FOOTING,FOUNDATIONS		3/4
B.	BEAMS, PEDESTAL	4000PSI (27.580Mpa)	

3. ALL REINFORCING BARS SHALL CONFORM TO ASTM(A-15-625) GRADE 40 FOR 12mmø AND SMALLER BARS AND GRADE 60 FOR 16mmø AND LARGER BARS.
4. IN GENERAL, THE LATEST EDITION OF ACI-315, MANUAL OF STANDARD PRACTICE DETAILING REINFORCED CONCRETE STRUCTURES SHALL BE ADHERED TO UNLESS OTHERWISE SHOWN OR NOTED.
5. MAINTAIN MINIMUM CONCRETE COVER FOR REINFORCING STEEL AS FOLLLOWS:

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

6. SPLICES SHALL BE SECURELY WIRED TOGETHER AND SHALL LAP OR EXTEND IN ACCORDANCE WITH TABLE 1(TABLE OF LAP SPLICE AND ANCHORAGE, LENGTH) UNLESS OTHERWISE SHOWN ON DRAWINGS, SPLICES SHALL BE STAGGERED WHENEVER POSSIBLE.
7. ALL ANCHOR BOLTS, DOWELS, AND OTHER INSERTS SHALL BE PROPERLY POSITIONED AND SECURED IN PLACE PRIOR TO PLACING OF CONCRETE.
8. CONTRACTOR SHALL NOTE AND PROVIDE ALL MISCELLANEOUS CURBS, SILL, STOOLS EQUIPMENTS, AND MECHANICAL BASES THAT ARE REQUIRED BY THE ARCHITECTURAL, ELECTRICAL AND MECHANICAL DRAWINGS.
9. 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.
10. STRIPPING OF FORMS AND SHORES:

NOTE:

CONCRETE					
COLUMN	4000Psi	STAIRS	3000Psi	SLAB ON GRADE	3000Psi
BEAM	4000Psi	FOUNDATION/FOTTING	3000Psi	WALL FOOTING	3000Psi

STRUCTURAL STEEL AND PLATES

1. FOUNDATION STRUCTURAL STEEL SHALL CONFORM TO ASTM(A-36) SPECIFICATIONS WITH MINIMUM YIELD STRENGTH, fy=250 MPa.
2. ANCHOR & FASTENER BOLT, ALL BOLTS SHALL CONFORM TO ASTM(A-307) SPECIFICATIONS.
3. WELDING RODS, ALL WELDING RODS SHALL BE MILD STEEL ELECTRODE, LOW HYDROGEN E7015 WITH MINIMUM YIELD STRENGTH=420MPa.
4. ALL CONNECTIONS ARE FULL WELDS UNLESS OTHERWISE NOTED. ALL ARCH WELDING ELECTRODES SHALL CONFORM TO THE REQUIREMENTS OF AMERICAN WELDING SOCIETY SPECIFICATIONS SURFACES TO BE WELDED SHALL BE SMOOTH, UNIFORM & FREE FORM TEARS AND OTHER DEFECTS WHICH WOULD ADVERSELY AFFECT THE QUALITY OF THE WELD.

FOUNDATION

1. FOUNDATION IS DESIGNED BASED ON NATIONAL BUILDING CODE OF THE PHILIPPINES FOR AN ALLOWABLE SOIL BEARING CAPACITY OF 240KPa.
2. FOUNDATION SHALL REST ON NATURAL SOIL, UNLESS OTHERWISE NOTED BY THE ENGINEER, NO PART OF THE FOUNDATION SHALL REST ON FILL.
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.

1 GENERAL NOTES

NTS.

Republika ng Pilipinas
Lungsod ng Quezon
CITY ENGINEERING DEPARTMENT

PROJECT TITLE:
PROPOSED CONSTRUCTION OF HAND WASHING AND REHABILITATION OF ASPRER DAY CARE CENTER

LOCATION:
BARANGAY BAGONG SILANGAN DISTRICT 1, QUEZON CITY

DRAWN BY:
DATE: AUG. 10, 2021
CHECKED BY: Jm
REVISION NO.

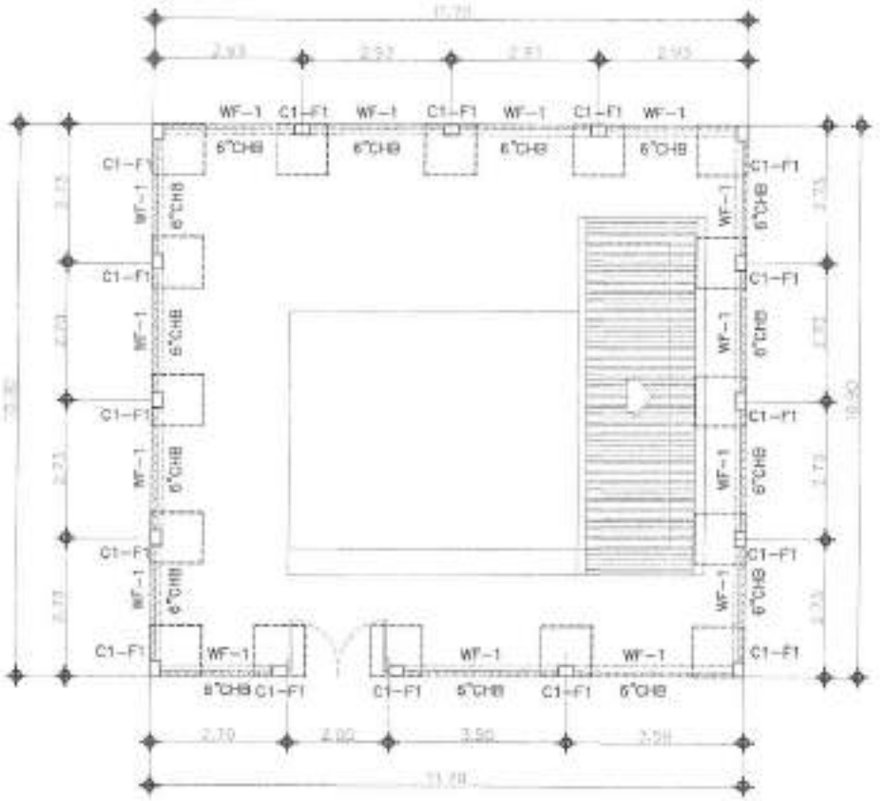
SUBMITTED BY:
ENGR. LEO S. DEL ROSARIO
HEAD, PLANNING & PROGRAMMING DIVISION

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

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

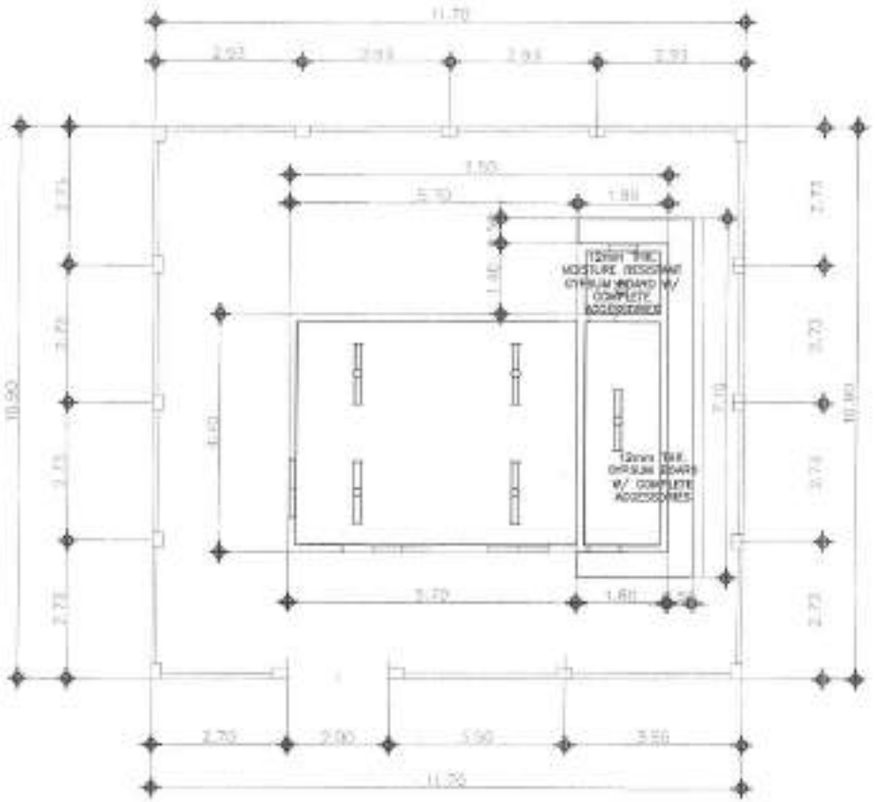
SHEET CONTENT: GENERAL NOTES

SHEET NO.: ST-1 / 7 / 14



1 FOUNDATION PERIMETER FENCE PLAN

SCALE 1:70m.



2 REFLECTED CEILING PLAN

SCALE 1:70m.

Republika ng Pilipinas
Lungsod ng Quezon
CITY ENGINEERING DEPARTMENT

PROJECT TITLE:
PROPOSED CONSTRUCTION OF HAND WASHING AND REHABILITATION OF ASPRER DAY CARE CENTER

LOCATION:
BARANGAY BAGONG SILANGAN DISTRICT 1, QUEZON CITY

DRAWN BY:
DATE: Aug. 13, 2021
CHECKED BY:
REVISION NO.:

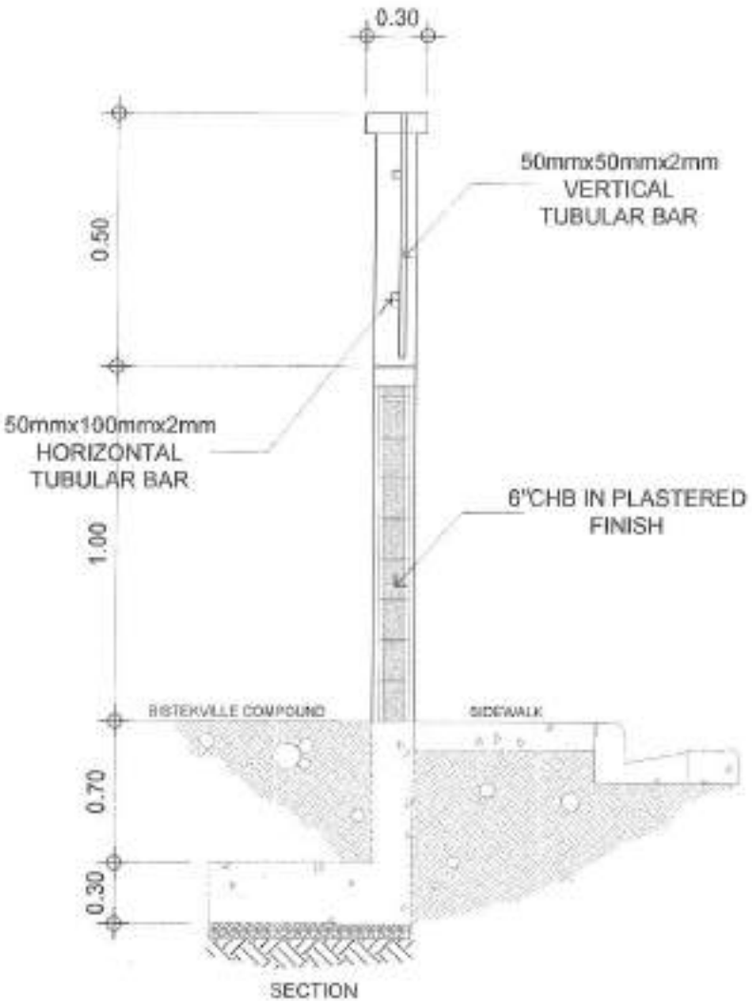
SUBMITTED BY:
ENGR. LEO S. DEL ROSARIO

RECOMMENDING APPROVAL:
ENGR. ISAGANI R. VERZOSA, JR.

APPROVED BY:
HON. MA. JOSEFINA G. BELMONTE

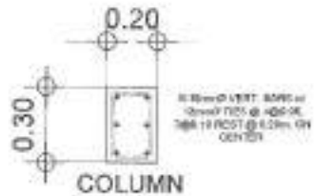
SHEET CONTENT:
FOUNDATION REFLECTED CEILING PLAN

SHEET NO.:
ST-2
8/14

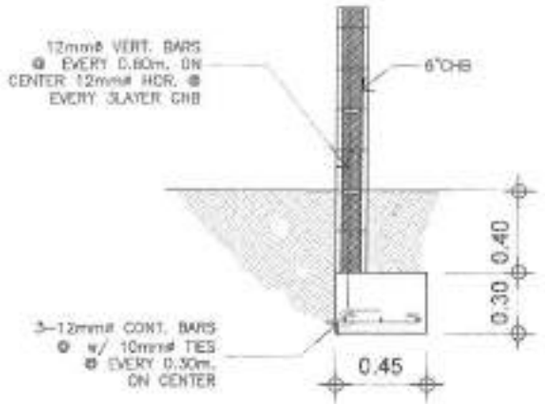


SECTION

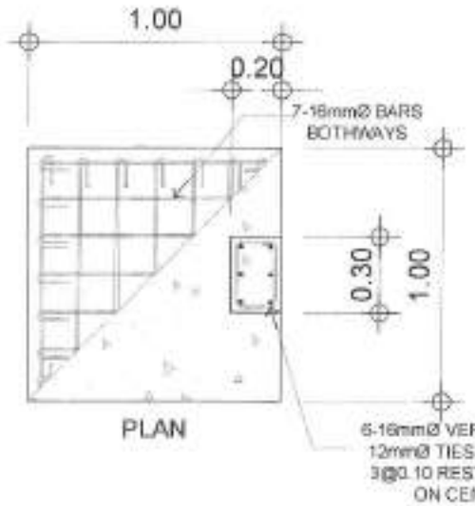
1 CROSS SECTION OF PERIMETER FENCE SCALE 1:25m.



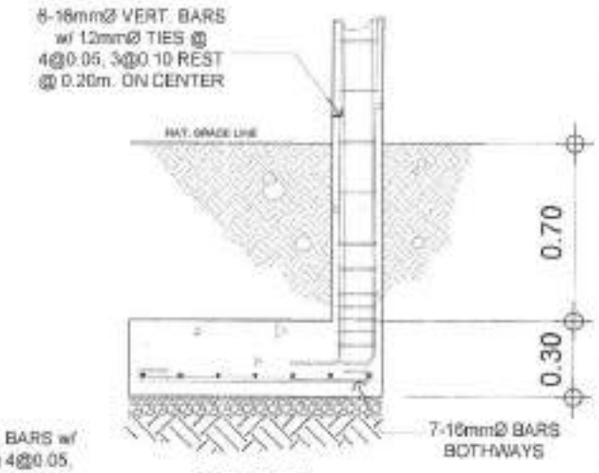
COLUMN



WALL FOOTING
DETAIL(WF-1)



PLAN



SECTION

2 COLUMN AND WALL FOOTING DETAIL SCALE 1:20m.

Republika ng Pilipinas
Lungsod ng Quezon
CITY ENGINEERING DEPARTMENT

PROJECT TITLE:
PROPOSED CONSTRUCTION OF HAND WASHING AND REHABILITATION OF ASPRER DAY CARE CENTER
LOCATION:
BARANGAY BAGONG SILANGAN DISTRICT 1, QUEZON CITY

DRAWN BY:
DATE: AUG. 13, 2021
CHECKED BY:
REVISION NO.:

SUBMITTED BY:
ENGR. LEO S. DEL ROSARIO
HEAD, PLANNING PROGRAMMING DIVISION

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

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

SHEET CONTENT:
CROSS SECTION OF PERIMETER FENCE
COL. & FTG. DET.
WALL FOOTING DET.

SHEET NO.
ST-3
9/14

1 GENERAL NOTES

1. ALL THE PLUMBING/SANITARY WORKS INCLUDED HEREIN SHALL BE EXECUTED ACCORDING TO THE PROVISION OF THE PHILIPPINE PLUMBING CODE , THE NATIONAL BUILDING CODE, RULES AND REGULATION OF THE CITY.
2. COORDINATE THE DRAWINGS WITH OTHER RELATED DRAWINGS AND SPECIFICATION REQUIRED, THE ENGINEER AND ARCHITECT SHALL BE NOTIFIED IMMEDIATELY OF ANY DISCREPANCY FOUND THEREIN.
3. ALL PIPES SHALL BE INSTALLED AS INDICATED ON PLANS. ANY RELOCATION REQUIRED FOR PROPER EXECUTION OF OTHER TRADES SHALL BE WITH PRIOR APPROVAL OF THE ENGINEER OR ARCHITECT.
4. PROPOSED SANITARY UTILITIES SHALL BE CONFORM TO THE ACTUAL LOCATION, DEPTH, AND INVERT ELEVATION OF ALL EXISTING STRUCTURES AND PIPES AS VERIFIED BY THE CONTRACTOR.
5. ALL SLOPES FOR HORIZONTAL DRAINAGE SHALL MAINTAIN 1% MIN. UNLESS OTHERWISE SPECIFIED.
6. SIZES OF WATER SUPPLY PIPES TO FIXTURES SHALL BE IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTION.
7. THE CONTRACTOR SHALL VERIFY ALL EXISTING UTILITIES AT SITE AND COORDINATE THE WORKS WITH THE SEWER LINE EFFLUENT DISPOSAL POINT AND WATER LINE SERVICE CONNECTING POINT.
8. ALL WATER PIPE AND WATER TANKS SHALL BE THOROUGHLY FLUSHED AND DISINFECTED WITH LIQUID CHOLORINE OR HYDROCHLORIDE SOLUTION.
9. ALL WATER PIPES SHALL BE HYDROSTATICALLY TESTED TO A PRESSURE 1-1/2 THE DESIGNED WORKING PRESSURE OF THE SYSTEM.
10. ALL SANITARY AND STORM DRAINAGE PIPES SHALL BE HYDROSTATICALLY TESTED AT LEAST 3.0 MTS. HEAD TO ENSURE THAT THE SYSTEM IF IT IS WATER TIGHT.
11. ALL DIMENSIONS ARE IN METERS AND ALL PIPES SIZES ARE IN MILLIMETER UNLESS OTHERWISE SPECIFIED.
12. EVERY PLUMBING FIXTURES INDICATED ON PLANS SHOULD BE PROPERLY VENTILATED.

2 LEGEND AND SYMBOLS

NTS

I. WATER DISTRIBUTION SYSTEM :

———	CWL	COLD WATER LINE
	CWR/CWD	COLD WATER RISER/DOWNFEED
⋈	GV	GATE VALVE
⋈	CV	CHECK VALVE
⋈	FC	FLEXIBLE COUPLING
⋈	UP	UNION PATENTE
⋈	FLV	FLOAT VALVE
	SP	SUMP PUMP
	PG	PRESSURE GAUGE
Ⓜ	WM	WATER METER

II. SEWER/WASTE AND VENT SYSTEM :

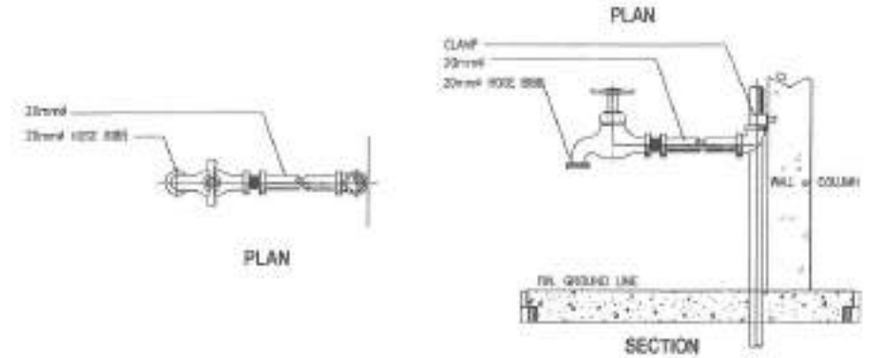
———	SP / WP	SOIL PIPE / WASTE PIPE
———	VS / VAD	VENT STACK / VENT AT CEILING
———	DP	STORM DRAIN PIPE
◔	DS	DRAINAGE STACK / DOWNSPOUT
○	SVTH	SPACE VENT/EXTENDED THROUGH ROOF
◔	SS	SOIL STACK
——◍	FCO/ GCO	FLOOR CLEANOUT / GROUND CLEANOUT
——◍	CCO	CEILING CLEAN-OUT
	SPDR	SUMP PIT DISCHARGE RISER
	SPDP	SUMP PIT DISCHARGE PIPE
▣	AD/CB	AREA DRAIN/CATCH BASIN

III. FIXTURES AND OTHER LEGEND

FS	FLOOR DRAIN
RD	ROOF DRAIN
SHO	SHOWER
WC	WATER CLOSET
LAV	LAVATORY
URI	URINAL
KS	KITCHEN SINK
BD	BUILDING DRAIN
DD	DECK DRAIN
CCO	CEILING CLEANOUT
FCO	FLOOR/GROUND CLEANOUT
DS	DOWNSPOUT
mm	millimeter
Ø	mm DIAMETER
SHO	SHOWER DRAIN
CB	CATCH BASIN
MH	MANHOLE
→	DIRECTION OF FLOW

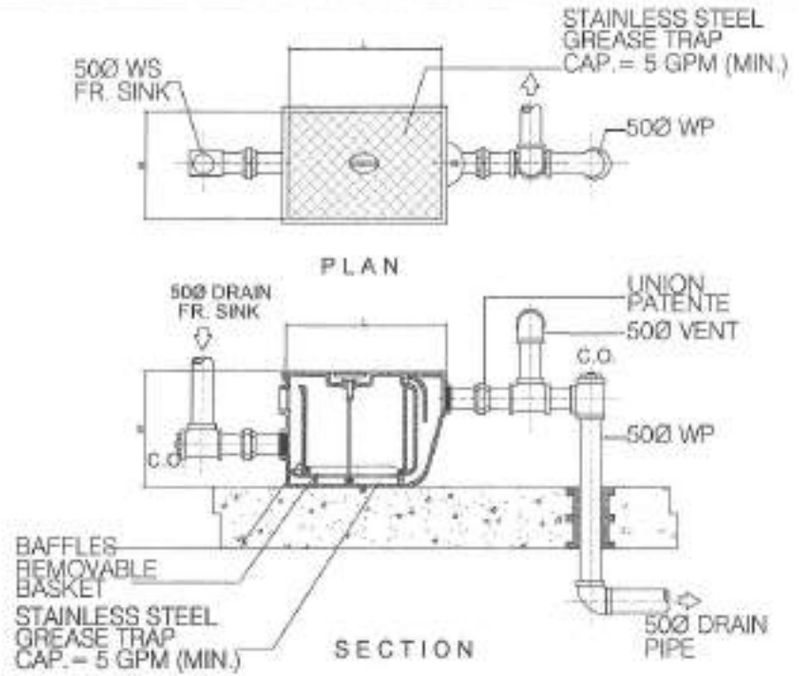
3 HOSE BIBB DETAIL

NTS



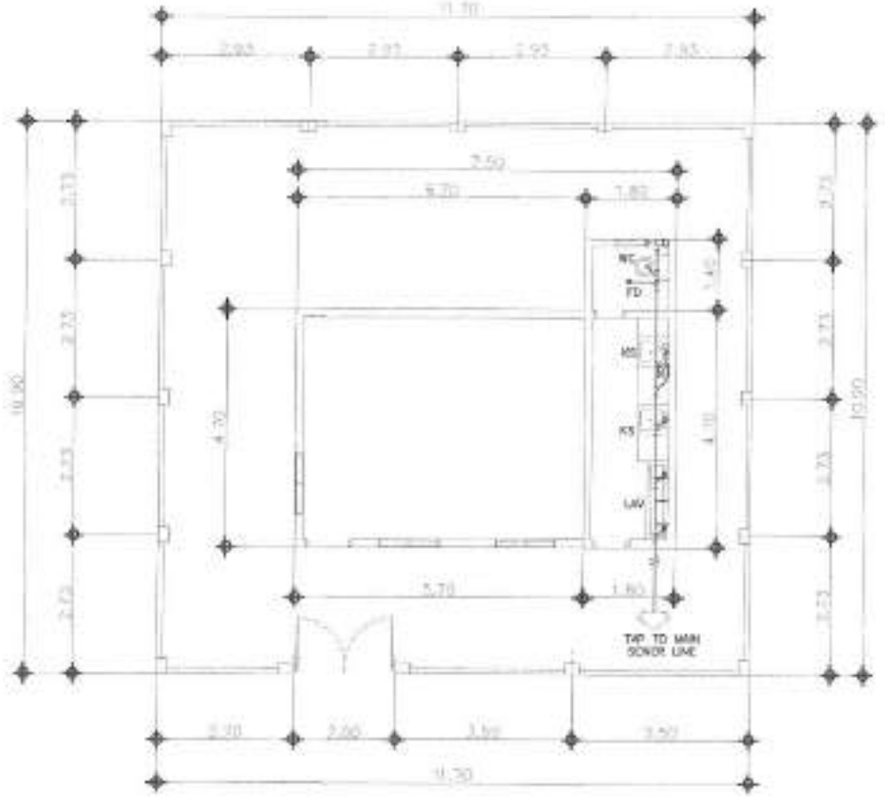
4 DETAIL OF GREASE TRAP

NTS



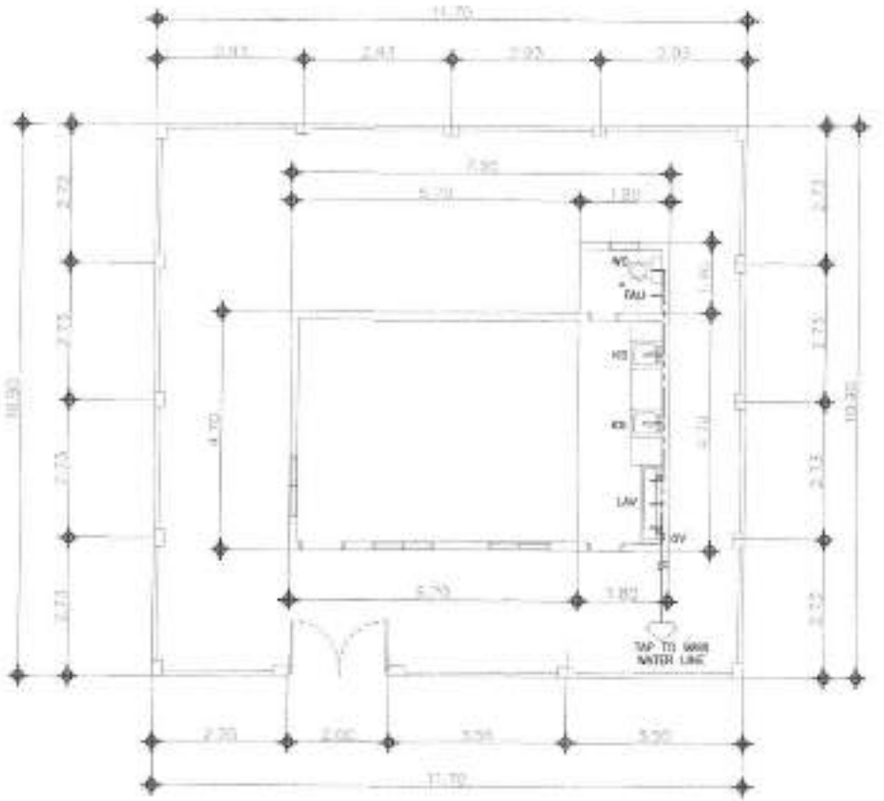
Republika ng Pilipinas
Lungsod ng Quezon
CITY ENGINEERING DEPARTMENT

PROJECT TITLE : PROPOSED CONSTRUCTION OF HAND WASHING AND REHABILITATION OF ASPRER DAY CARE CENTER LOCATION: BARANGAY BAGONG SILANGAN DISTRICT 1, QUEZON CITY	DRAWN BY: [illegible] DATE : AUG. 13, 2021 CHECKED BY: [illegible] REVISION NO.	SUBMITTED BY: ENGR. LEO S. DEL ROSARIO	RECOMMENDING APPROVAL : ENGR. ISAGANI R. VERZOSA, JR.	APPROVED BY : HON. MA. JOSEFINA G. BELMONTE	SHEET CONTENT: GENERAL NOTES LEGEND AND SYMBOLS HOSE BIBB DETAIL DETAIL OF GREASE TRAP	SHEET NO. PL-1 10/14



1 SANITARY LAYOUT PLAN

SCALE 1:100m.



2 WATER LINE LAYOUT PLAN

SCALE 1:100m.

Republika ng Pilipinas
Lungsod ng Quezon
CITY ENGINEERING DEPARTMENT

PROJECT TITLE :

PROPOSED CONSTRUCTION OF HAND WASHING AND REHABILITATION OF ASPRER DAY CARE CENTER

LOCATION:
BARANGAY BAGONG SILANGAN DISTRICT 1, QUEZON CITY

DRAWN BY :

DATE : AUG. 10, 2021

CHECKED BY :

REVISIONS :

SUBMITTED BY :

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

RECOMMENDING APPROVAL :

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

APPROVED BY :

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

SHEET CONTENT

SANITARY LAYOUT
WATERLINE LAYOUT

SHEET NO.

PL-2
1114

1. ALL ELECTRICAL WORKS SHALL BE DONE IN ACCORDANCE WITH THE PROVISIONS OF THE LATEST EDITION OF "THE PHILIPPINE ELECTRICAL CODE," NE LAWS AND ORDINANCES OF THE LOCAL CODE ENFORCING AUTHORITIES AND THE REQUIREMENTS OF THE LOCAL POWER AND TELEPHONE UTILITY COMPANY.
2. THE CONTRACTOR SHALL SECURE ALL PERMITS AND PAY ALL FEES REQUIRED FOR THE WORK AND SHALL FURNISH THE OWNER THROUGH THE ENGINEERS, FINAL CERTIFICATES OF ELECTRICAL INSPECTION AND APPROVAL FROM PROPER GOVERNMENT AUTHORITIES FOR COMPLETION OF WORK.
3. ALL EMBEDDED BRANCH CIRCUITS SHALL BE PVC CONDUITS AND FOR EXPOSED INSTALLATION SHALL BE MS SUPPORTED BY CONDUIT CLAMPS EVERY 700 MILIMETERS
4. PULL BOXES SHALL BE PROVIDED BY THE CONTRACTOR WHENEVER NECESSARY TO FACILITATE WIRE PULLING EVEN IF THESE ARE NOT INDICATED ON THE PLANS. SIZING OF ALL PULLBOXES SHALL BE COMPUTED BASED ON THE CODE REQUIREMENTS. SUBMIT SHOP DRAWINGS TO THE ENGINEER FOR APPROVAL PRIOR TO FABRICATION. LOCATION OF PULLBOXES SHALL BE APPROVED BY THE ARCHITECT/ENGINEER AND MUST BE REFLECTED ON THE "AS BUILT" PLAN.
5. ALL POWER OUTLETS AND SWITCHES SHALL BE GROUNDING TYPE WITH PARALLEL SLOTS FOR 220 V.
6. PROVIDE GROUND FAULT CURRENT INTERRUPTER CIRCUIT BREAKER FOR LOADS MARKED "GFCI" ON THE PLAN.
7. ALL METALLIC CONDUITS, CABINETS AND EQUIPMENT SHALL BE PROPERLY GROUNDED AND BONDED.
8. UNLESS OTHERWISE NOTED, MOUNTING HEIGHT FOR WALL MOUNTED DEVICES SHALL BE AS FOLLOWS:

   RECEPTACLE OUTLET - 300 MM AFF, 150MM ABOVE WORKING COUNTER
   TELEPHONE OUTLET - 300 MM AFF
   CATV OUTLET - 300 MM AFF
   LIGHTING SWITCH - 1400 MM AFF
   PANELBOARD - 1800 MM AFF

9. REFER TO MECHANICAL, PLUMBING AND FIRE PROTECTION DRAWINGS FOR RATINGS AND LOCATIONS OF EQUIPMENT AS WELL AS THEIR CONTROL SEQUENCES AS SPECIFIED AND OR SHOWN UNDER THEIR RESPECTIVE SECTIONS.
10. ALL MATERIALS TO BE USED SHALL BE OF THE BEST QUALITY, BRAND NEW AS SPECIFIED.
11. THE DRAWINGS AND SPECIFICATIONS ARE INTENDED TO PRESENT GENERAL LAYOUT AND BROAD OUTLINE/DESCRIPTION OF THE PROJECT BUT DO NOT NECESSARILY INDICATE/DESCRIBED ACTUAL LOCATIONS, LEVEL AND DISTANCES OF THE EQUIPMENT. THE CONTRACTOR IS HEREBY REQUIRED TO MAKE SUCH ADJUSTMENT AT THE JOBSITE AS LOCATION, DISTANCES AND LEVELS ARE GOVERNED BY ACTUAL FIELD CONDITIONS.
12. ANY DISCREPANCY BETWEEN THE PLANS AND SPECIFICATIONS SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER FOR CLARIFICATION/DECISION.
13. ALL LIGHTING AND CONVENIENCE OUTLET CIRCUITS SHALL BE 3.5 SQ. MM. THWN-2 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:

    LINE 1 - RED
    LINE 2 - YELLOW
    NEUTRAL - WHITE
    GROUND - GREEN

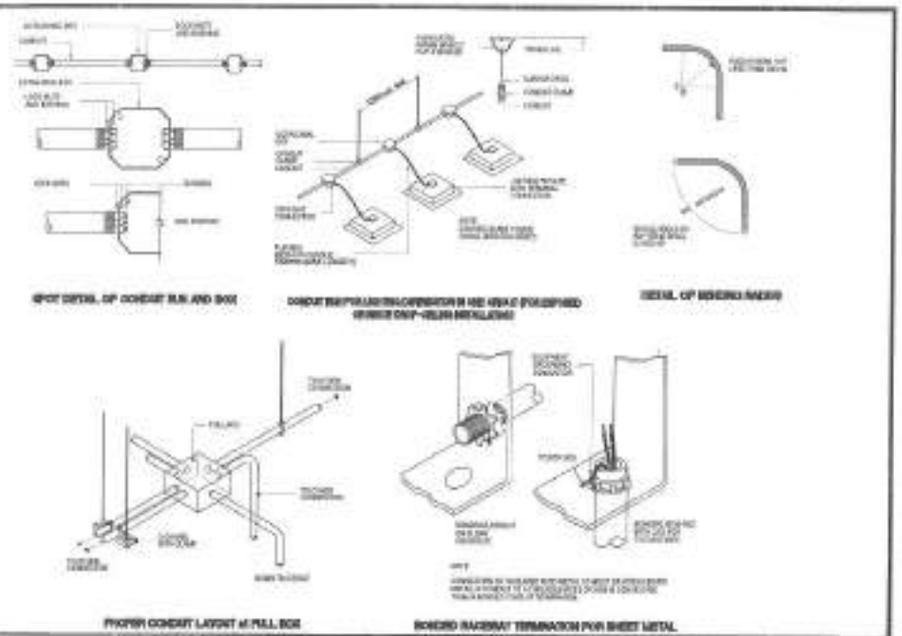
14. BOXES, WIRE, GUTTERS, ENCLOSURE SHALL BE FABRICATED FROM STEEL WITH THICKNESS AS FOLLOWS:

MAXIMUM WIDTH OF THE WIDEST SURFACE STEEL	
UP TO INCLUDING 152.40 MM	GA 14 PAINTED WITH METAL PRIMER EPOXY AND TOPCOAT
OVER 152.40 MM BUT NOT OVER 457.20	GA 14 PAINTED WITH METAL PRIMER EPOXY AND TOPCOAT
OVER 457.20 MM BUT NOT OVER 762 MM	GA 12 PAINTED WITH METAL PRIMER EPOXY AND TOPCOAT
OVER 762 MM	GA 10 PAINTED WITH METAL PRIMER EPOXY AND TOPCOAT

15. ALL ELECTRICAL WORKS HEREIN SHALL BE EXECUTED BY EXPERIENCED MEN UNDER THE DIRECT SUPERVISION OF A FULL-TIME LICENSED ELECTRICAL ENGINEER AND A DULY ACCREDITED ELECTRICAL CONTRACTOR BY PCAB. WORKS SHALL BE NEATLY PLACED, SECURELY FASTENED AND PROPERLY FINISHED.
16. TYPE OF SERVICE ENTRANCE SHALL BE SINGLE PHASE, TWO WIRE PLUS GROUND, 60 HERTZ, 230V AC NOMINAL.
17. CONDUITS IN NO CASE SHALL THERE 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.
18. UPON COMPLETION OF ELECTRICAL CONSTRUCTION WORK, INSULATION RESISTANCE TEST AND FUNCTIONALITY TEST SHALL BE PERFORMED BY THE CONTRACTOR INCLUSIVE OF THE INSTALLATION TO BE REPORTED IN DETAILS ON FORMS APPROVED BY THE QUEZON CITY ENGINEERING DEPARTMENT REPRESENTATIVE. THE GROUND RESISTANCE FOR ELECTRICAL SYSTEMS SHALL NOT BE MORE THAN 5 OHMS. COMMUNICATION GROUNDING RESISTANCE SHALL NOT EXCEED 2 OHMS.

1 GENERAL NOTES

NOT TO SCALE



2 MISCELLANEOUS DETAILS

NOT TO SCALE

———	CIRCUIT LINE	S	ONE GANG SWITCH
⊢—o—⊣	1 x 18W LED TUBE LIGHT, BOX TYPE	S3WAY	THREE GANG SWITCH
⊡	LED BULB w/ RECEPTACLE	UP-1H	CIRCUIT HOMERUN
	WALL FAN		PANELBOARD
⊕	DUPLEX OUTLET		

3 LEGENDS AND SYMBOLS

NOT TO SCALE

Republika ng Pilipinas
Lungsod ng Quezon
CITY ENGINEERING DEPARTMENT

PROJECT TITLE:	DRAWN BY:	SUBMITTED BY:	RECOMMENDING APPROVAL:	APPROVED BY:	SHEET CONTENT	SHEET NO.
PROPOSED CONSTRUCTION OF HAND WASHING AND REHABILITATION OF ASPRER DAY CARE CENTER	DATE: AUG. 13, 2021	ENGR. LEO S. DEL ROSARIO, HEAD, PLANNING & PROGRAMMING DIVISION	ENGR. ISAGANI R. VERZOSA, JR., CITY ENGINEERING DEPARTMENT	HON. MA. JOSEFINA G. BELMONTE, CITY MAYOR, QUEZON CITY	GENERAL NOTES, MISCELLANEOUS DET, LEGEND & SYMBOLS	EL-1 12/14
LOCATION: BARANGAY BAGONG SILANGAN DISTRICT II, QUEZON CITY	CHECKED BY:					
	REVISION NO:					

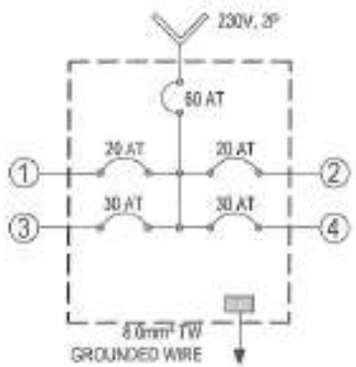
CKT. No.	LOAD DESCRIPTION	VOLTS	POWER WATTS	AMPS.	CKT. BREAKER AT	AF	POLE	SIZE OF WIRE AND CONDUIT
1	7 LIGHTING OUTLET	230	700	3.04	20	50	2	2-3.5mm² THHN IN 1-2.0mm² THW GRND. IN 20mmØ PVC PIPE
2	4 CONV. OUTLET 4-WALL FAN	230	1320	5.74	20	50	2	2-3.5mm² THHN IN 1-2.0mm² THW GRND. IN 20mmØ PVC PIPE
3	SPARE	230			30	50		
4	SPARE	230			30	50		
TOTAL			2020	8.78				

IT= 2020 Amperes
230 VOLTS
IT= 8.78 Amperes

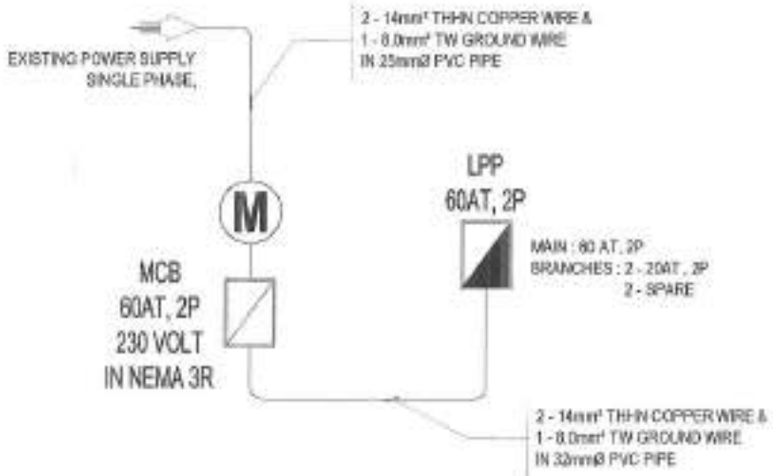
MAIN CIRCUIT BREAKER
USE: 60AT, 2P, 230VOLT CB
MAIN FEEDER LINE:
USE:2-14mm² THHN & 1-8.0mm² TW GRND. WIRE IN 25mmØ IMC PIPE

1 SCHEDULE OF LOADS AND COMPUTATION

NTS



PANEL BOARD DETAIL



2 PANEL BOARD DETAIL

NTS

3 SINGLE LINE DIAGRAM

NTS

Republika ng Pilipinas
Lungsod ng Quezon
CITY ENGINEERING DEPARTMENT

PROJECT TITLE:
PROPOSED CONSTRUCTION OF HAND WASHING AND REHABILITATION OF ASPRER DAY CARE CENTER

LOCATION:
BARANGAY BAGONG SILANGAN DISTRICT 5, QUEZON CITY

DRAWN BY:

DATE: AUG. 10, 2021

CHECKED BY:

AREA (SQM. INCL.

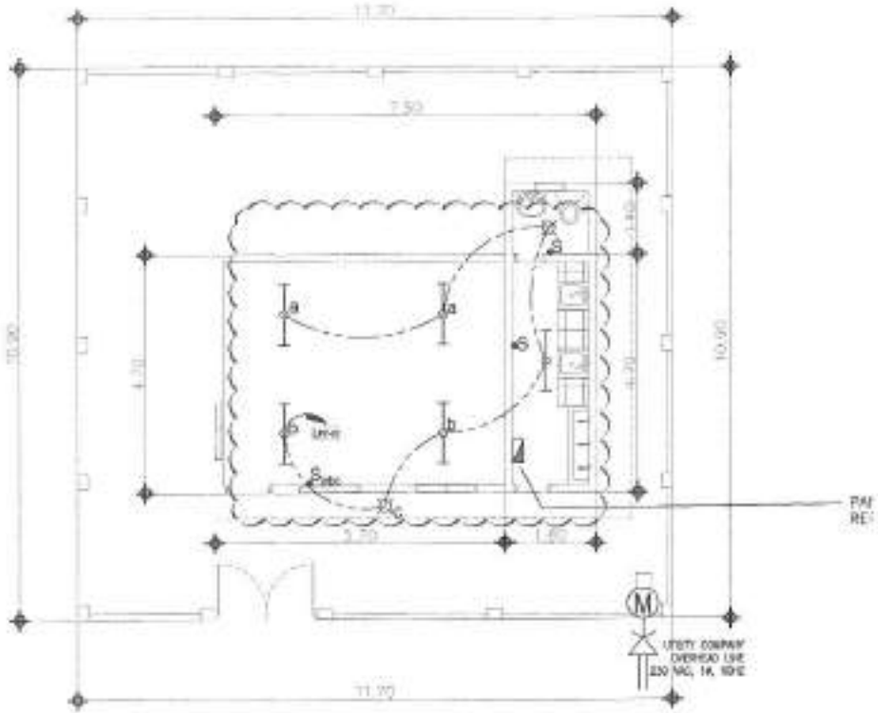
SUBMITTED BY:
ENGR. LEO S. DEL ROSARIO
HEAD, PLANNING PROGRAMMING EVALUATOR

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

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

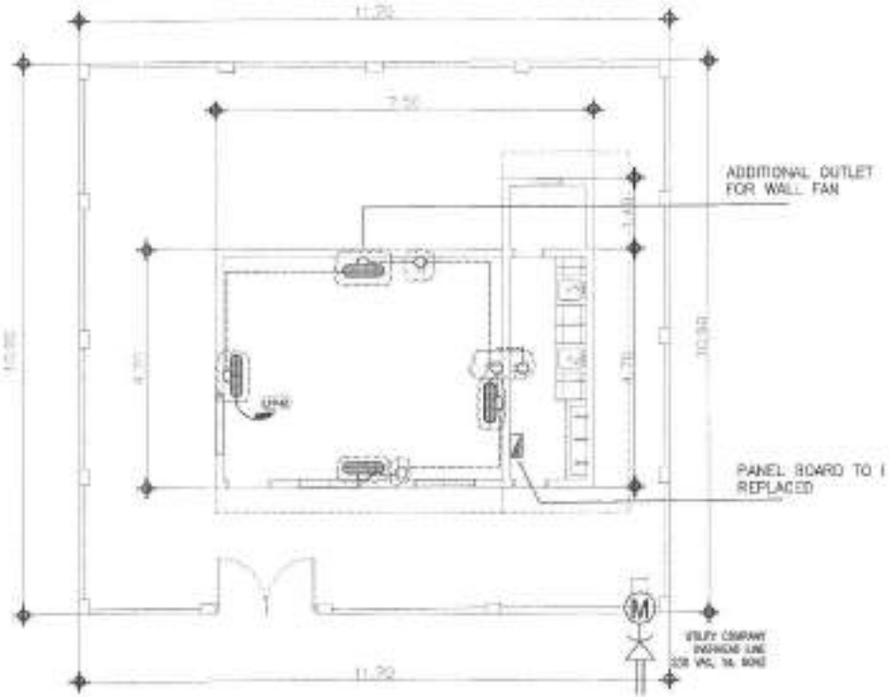
SHEET CONTENT:
SCHEDULE OF LOADS
PANEL BOARD DET.
SINGLE LINE DIAGRAM

SHEET NO.
EL-2
13/14



1 LIGHTING LAYOUT PLAN

SCALE 1:100m.



NOTE : ALL OUTLETS TO BE REPLACED

INSTALLATION OF (4) WALL FANS

2 POWER LAYOUT PLAN

SCALE 1:100m.

Republika ng Pilipinas
Lungsod ng Quezon
CITY ENGINEERING DEPARTMENT

PROJECT TITLE :

PROPOSED CONSTRUCTION OF HAND WASHING AND REHABILITATION OF ASPRER DAY CARE CENTER

LOCATION:
BARANGAY BAGONG SILANGAN DISTRICT 1, QUEZON CITY

DRAWN BY :

DATE : AUG. 13, 2021

CHECKED BY : JBV

REVISION NO.:

SUBMITTED BY:

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

RECOMMENDING APPROVAL :

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

APPROVED BY :

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

SHEET CONTENT

LIGHTING LAYOUT
POWER LAYOUT

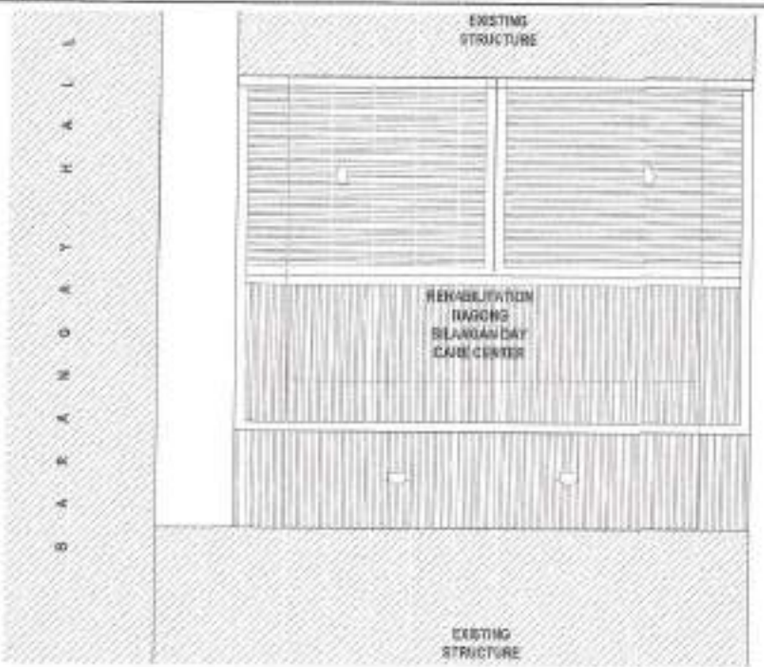
SHEET NO.

EL-3
14|14

1 LOCATION MAP SCALE: NTS

2 VICINITY MAP SCALE: NTS

1 PERSPECTIVE SCALE: NTS



3 SITE DEVELOPMENT PLAN SCALE: NTS

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Lungsod ng Quezon
CITY ENGINEERING DEPARTMENT

PROJECT TITLE:
PROPOSED CONSTRUCTION OF HAND WASHING FACILITY AND REHABILITATION OF BAGONG SILANGAN DAY CARE CENTER
LOCATION: BARANGAY BAGONG SILANGAN, DISTRICT 2, QUEZON CITY

DRAWN BY:
DATE: August 23, 2021
CHECKED BY:
PERMIT NO.:

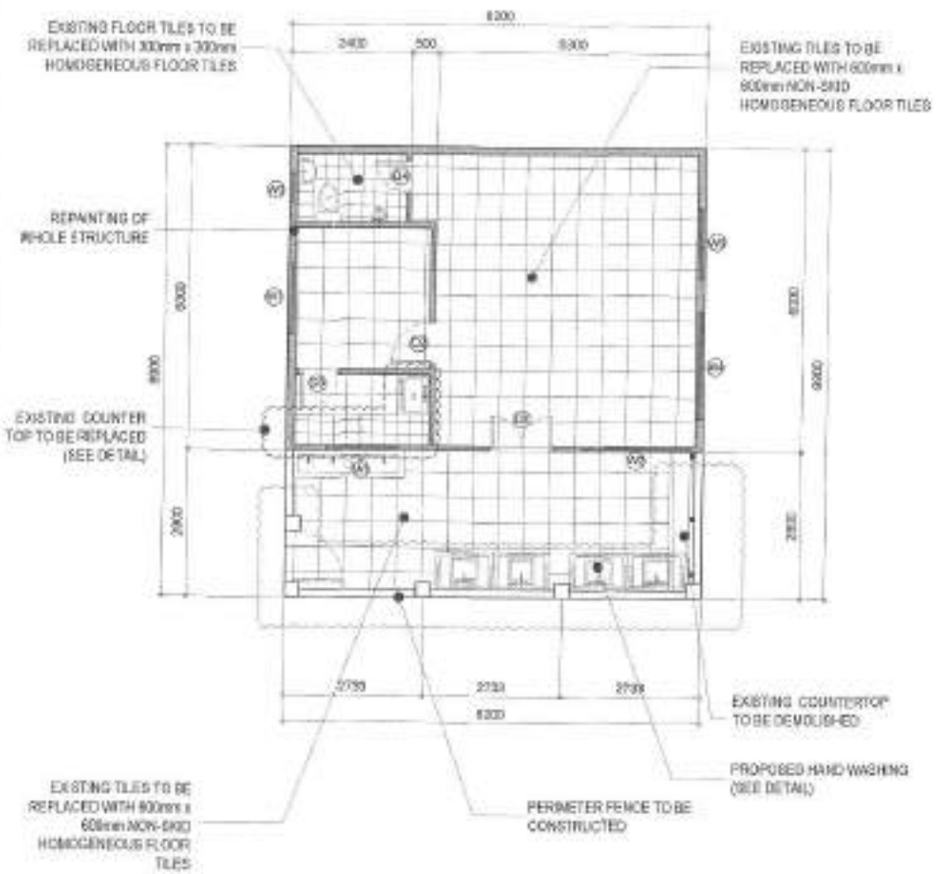
SUBMITTED BY:
ENGR. LEO S. DEL ROSARIO
HEAD, PLANNING & PROGRAMMING SECTION

RECOMMENDING APPROVAL:
ENGR. ISAGANI R. VERZOSA, JR.

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

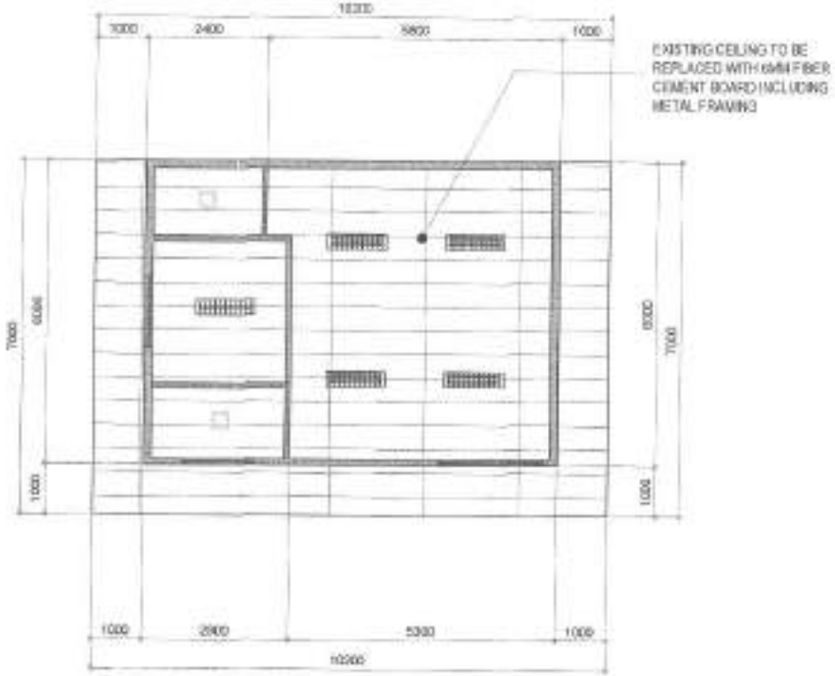
SHEET CONTENT: VICINITY MAP; LOCATION MAP; STRUCTURAL SPREAD PLAN

SHEET NO.: AR-01 / 1 13



NOTE:
1. INSTALLATION OF BAGONG SILANGAN DAY CARE SIGNAGE

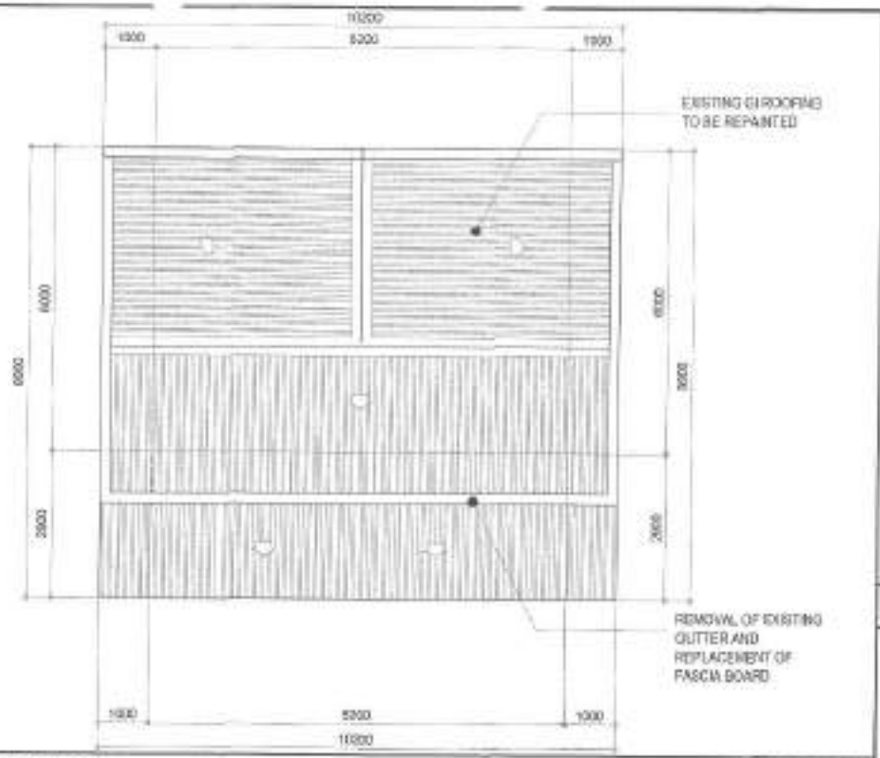
1 GROUND FLOOR PLAN SCALE : 1:100M



2 REFLECTED CEILING PLAN SCALE : 1:100M

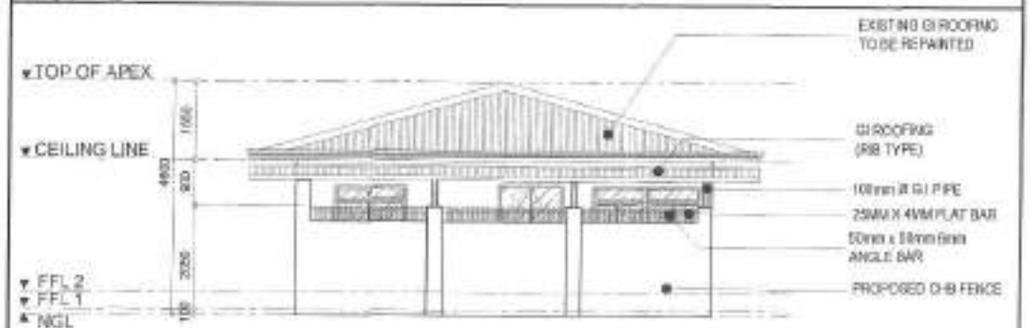
Republika ng Pilipinas
Lungsod ng Quezon
CITY ENGINEERING DEPARTMENT

PROJECT TITLE:	DRAWN BY: DAA	SUBMITTED BY:	RECOMMENDING APPROVAL:	APPROVED BY:	SHEET CONTENT	SHEET NO.
PROPOSED CONSTRUCTION OF HAND WASHING FACILITY AND REHABILITATION OF BAGONG SILANGAN DAY CARE CENTER	DATE: August 23, 2021	ENGR. LEO S. DEL ROSARIO	ENGR. ISAGANI R. VERZOSA , JR.	HON. MA. JOSEFINA G. BELMONTE	GROUND FLOOR PLAN / REFLECTED CEILING PLAN	AR-02 2 13
LOCATION: BARANGAY BAGONG SILANGAN, DISTRICT 2, QUEZON CITY	CHECKED BY: Engr.					
	REVISIONS:					



1 ROOFING PLAN

SCALE : 1:100M



2 FRONT ELEVATION PLAN

SCALE : 1:100M

3 LEFT SIDE ELEVATION

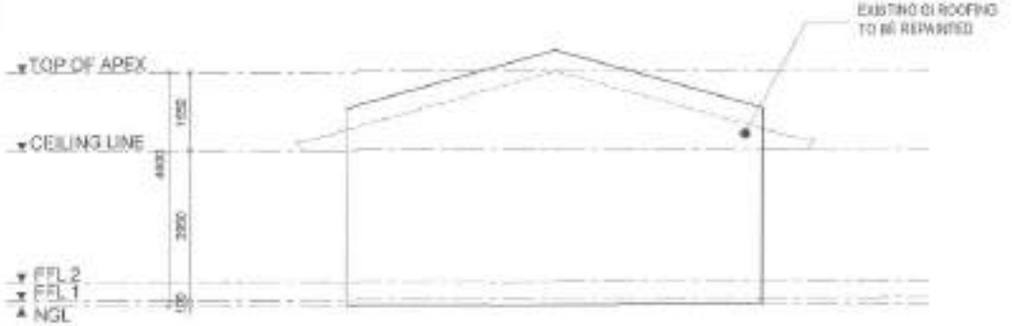
SCALE : 1:100M

4 RIGHT SIDE ELEVATION

SCALE : 1:100M

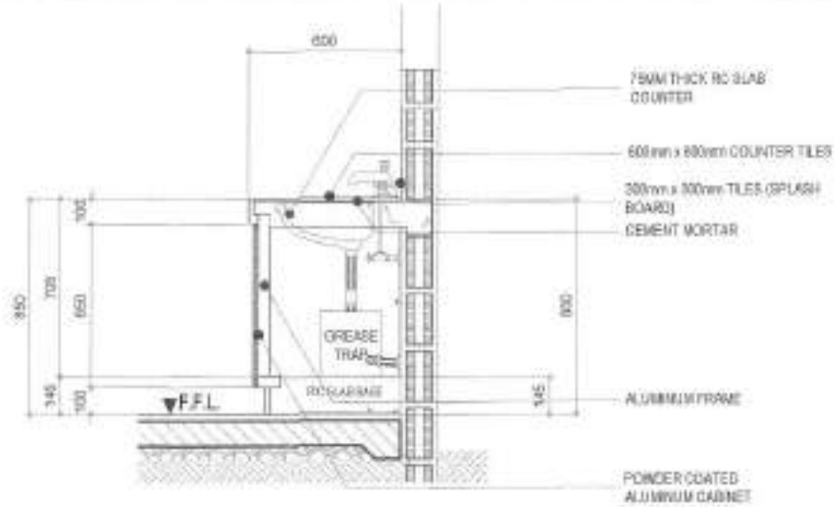
Republika ng Pilipinas
Lungsod ng Quezon
CITY ENGINEERING DEPARTMENT

PROJECT TITLE:	DRAWN BY:	SUBMITTED BY:	RECOMMENDING APPROVAL:	APPROVED BY:	SHEET CONTENT	SHEET NO.
PROPOSED CONSTRUCTION OF HAND WASHING FACILITY AND REHABILITATION OF BAGONG SILANGAN DAY CARE CENTER LOCATION: BARANGAY BAGONG SILANGAN, DISTRICT 2, QUEZON CITY	DATE: August 23, 2021 CHECKED BY: ENGR. L. DEL ROSARIO REVISION NO.:	ENGR. LEO S. DEL ROSARIO ADMIN. / PLANNING & DEVELOPMENT DIVISION	ENGR. ISAGANI R. VERZOSA, JR. CITY ENGINEERING COORDINATOR	HON. MA. JOSEFINA G. BELMONTE CITY MAYOR, QUEZON CITY	ROOF PLAN FRONT ELEVATION LEFT SIDE ELEVATION RIGHT SIDE ELEVATION	AR-03 3 13



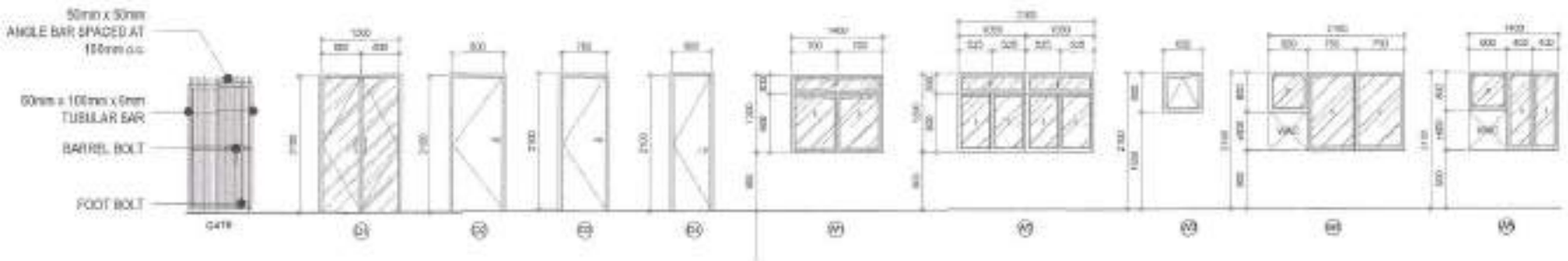
1 REAR ELEVATION

SCALE : 1:100M



2 COUNTER TOP DETAIL

SCALE : NTS



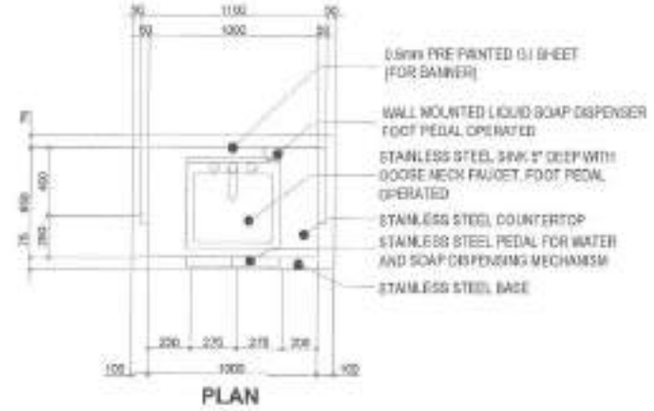
MARK	# OF UNITS	DESCRIPTION	REMARKS
D1	1-SET	ALUMINUM FRAMED/GLASS DOOR WITH COMPLETE ACCESSORIES	POWDER COATED
D2	1-SET	FLUSH DOOR WITH COMPLETE ACCESSORIES	PAINTED FINISH
D3	1-SET	FLUSH DOOR WITH COMPLETE ACCESSORIES	PAINTED FINISH
D4	1-SET	PVC DOOR WITH COMPLETE ACCESSORIES	PAINTED FINISH
W1	1-SETS	ALUMINUM FRAMED SLIDING WINDOW	POWDER COATED
W2	1-SET	ALUMINUM FRAMED SLIDING WINDOW	POWDER COATED
W3	1-SET	ALUMINUM FRAMED SLIDING WINDOW	POWDER COATED
W4	1-SET	ALUMINUM FRAMED SLIDING WINDOW	POWDER COATED
W5	1-SET	ALUMINUM FRAMED SLIDING WINDOW	POWDER COATED

2 SCHEDULE OF DOORS AND WINDOWS

SCALE : NTS

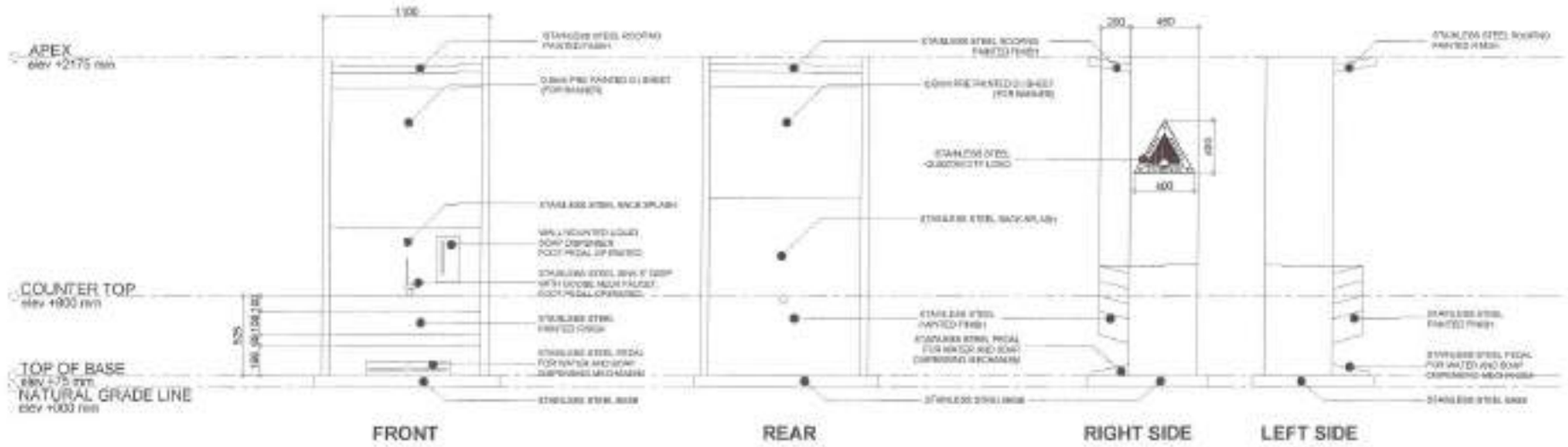
Republika ng Pilipinas
Lungsod ng Quezon
CITY ENGINEERING DEPARTMENT

PROJECT TITLE: PROPOSED CONSTRUCTION OF HAND WASHING FACILITY AND REHABILITATION OF BAGONG SILANGAN DAY CARE CENTER LOCATION: BARANGAY BAGONG SILANGAN, DISTRICT 2, QUEZON CITY	DRAWN: DAA DATE: August 23, 2021 CHECKED BY: REVISION NO:	SUBMITTED BY: ENGR. LEO S. DEL ROSARIO HEAD, PLANNING & PROGRAMMING DIVISION	RECOMMENDING APPROVAL: ENGR. ISAGANI R. VERZOSA, JR. OIC, CITY ENGINEERING DEPARTMENT	APPROVED BY: HON. MA. JOSEFINA G. BELMONTE CITY MAYOR, QUEZON CITY	SHEET CONTENT: REAR ELEVATION RESIDENT COUNTER TOP SCHEDULE OF DOORS AND WINDOWS	SHEET NO. AR-04 4 13



1 SINGLE SINK PORTABLE HAND WASHING STALL PLAN

SCALE: 1:30M



2 ELEVATIONS

SCALE: 1:30M

Republika ng Pilipinas
Lungsod ng Quezon
CITY ENGINEERING DEPARTMENT

PROJECT TITLE:	DRAWN BY: DAA	SUBMITTED BY:	RECOMMENDING APPROVAL:	APPROVED BY:	SHEET CONTENT	SHEET NO.
PROPOSED CONSTRUCTION OF HAND WASHING FACILITY AND REHABILITATION OF BAGONG SILANGAN DAY CARE CENTER LOCATION: BARANGAY BAGONG SILANGAN, DISTRICT 2, QUEZON CITY	DATE: August 20, 2021 CHECKED BY: REVISION NO.:	ENGR. LEO S. DEL ROSARIO HEAD, PLANNING & PROGRAMMING DIVISION	ENGR. ISAGANI R. VERZOSA, JR. OIC, CITY MAINTENANCE DEPARTMENT	HON. MA. JOSEFINA G. BELMONTE CITY MAYOR, QUEZON CITY	SINGLE SINK PORTABLE HAND WASHING STALL PLAN ELEVATIONS	AR-05 5 13

1. ALL WATER PLASTO WORKMANSHIP SHALL CONFORM WITH THE LATEST BUILDING CODE OF AMERICAN CONCRETE INSTITUTE (ACI 318).
2. ALL CONCRETE SHALL DEVELOP A MINIMUM COMPRESSIVE STRENGTH AT THE END OF TWENTY EIGHT (28) DAYS WITH GOOD DISPOND NO. MAXIMUM SIZE AGGREGATE AND SLUMP AS FOLLOWS:

LOCATION	STRENGTH	MAX SIZE OF AGGREGATES	MAX SLUMP
SLAB ON GRADE, PAVEMENTS, WALL FOOTING	3000 Psi (20.685 MPa)	1 in (25 mm)	4 in (100mm)
COLUMNS, COLUMNS, FOOTINGS REINFORCED SLAB	3000 Psi (20.685 MPa)	¾ in (19 mm)	4 in (100mm)

3. REINFORCING BARS SHALL CONFORM TO PNBAS GRADE 275 HOT ROMM AND SHALL BE BARS AND GRADE 415 FOR TIES, AND LAP SPLICE BARS.
4. IN GENERAL, THE LATEST EDITION OF ACI 318, MANUAL OF STANDARD PRACTICE DETAILING REINFORCED CONCRETE STRUCTURES SHALL BE ADHERED TO UNLESS OTHERWISE SHOWN OR NOTED.
5. MAINTAIN MINIMUM CONCRETE COVER FOR REINFORCING STEEL AS FOLLOWS:
   - CONCRETE DEPOSITED DIRECTLY AGAINST GROUND — 75mm
   - IN CONTACT WITH GROUND — 25mm
   - BAR OR LARGER — 40 mm
   - WALLS ABOVE GRADE — 25 mm
   - BEAMS & COLUMNS — 40mm
6. SPLICES SHALL BE SECURELY WIRED TOGETHER AND SHALL LAP OR BE WELDED IN ACCORDANCE WITH TABLE 7.5 TABLE OF LAP SPLICE AND ANCHORAGE LENGTH UNLESS OTHERWISE SHOWN ON DRAWINGS SPLICES SHALL BE STAGGERED WHENEVER POSSIBLE.
7. ALL ANCHOR BOLTS, DOWELS AND OTHER INSERTS SHALL BE PROPERLY POSITIONED AND SECURED IN PLACE PRIOR TO PLACING OF CONCRETE.
8. CONTRACTOR SHALL NOTE AND PROVIDE ALL MISCELLANEOUS CURBS, SILLS, POCKETS, RECESSES, KEYWAYS AND MECHANICAL SLEEVES
THAT ARE REQUIRED BY THE ARCHITECTURAL, ELECTRICAL, AND MECHANICAL DRAWINGS.
9. ALL CONCRETE SHALL BE KEPT MOIST FOR A PERIOD OF SEVEN (7) CONSECUTIVE DAYS IMMEDIATELY AFTER PLACING BY THE USE OF WET BURLAP POLYTHENE SPRAYED CURING COMPOUNDS OR OTHER APPROVED METHODS.
10. STRIPPING OF FORMS AND SHORES
   - FOUNDATION — 24HRS
   - SUSPENDED SLAB (EXCEPT WHEN ADDITIONAL LOADS ARE IMPOSED) — 4 DAYS
   - WALL — 21 DAYS
   - BEAMS — 15 DAYS
   - COLUMNS — 21 DAYS
11. DEVELOPMENT LENGTH FOR ALL BARS SHALL BE A MINIMUM OF 50 BAR DIAMETER UNLESS OTHERWISE NOTED
STRUCTURAL STEEL AND PLATES
12. ALL STRUCTURAL STEEL SHALL CONFORM TO ASTM (A36) SPECIFICATIONS WITH MINIMUM YIELD STRENGTH, fy= 250 MPa
13. ANCHOR BOLT/FOUNDATION BOLTS: ALL BOLTS SHALL CONFORM TO ASTM (A307) SPECIFICATIONS
14. WELDING RODS: ALL WELDING RODS SHALL BE SHIELDED ELECTRODE: LOW HYDROGEN (E70 SERIES WITH MINIMUM YIELD STRENGTH F 427 MPa

FOUNDATION

11. FOUNDATION IS DESIGNED BASED ON NATIONAL BUILDING CODE OF THE PHILIPPINES FOR AN ALLOWABLE SOIL BEARING CAPACITY OF 240KPa
12. FOUNDATION SHALL REST ON NATURAL SOIL, UNLESS OTHERWISE NOTED BY THE ENGINEER. NO PART OF THE FOUNDATION SHALL RESTS ON FILL
13. THE CONTRACTOR SHALL NOTIFY THE ENGINEER UPON COMPLETION OF FOUNDATION EXCAVATION TO EVALUATE SOIL CONDITIONS WHICH DO NOT CONFORM TO THE SOIL BEARING CAPACITY FOR PROPER REVISION.

NOTES ON MASONRY WALLS

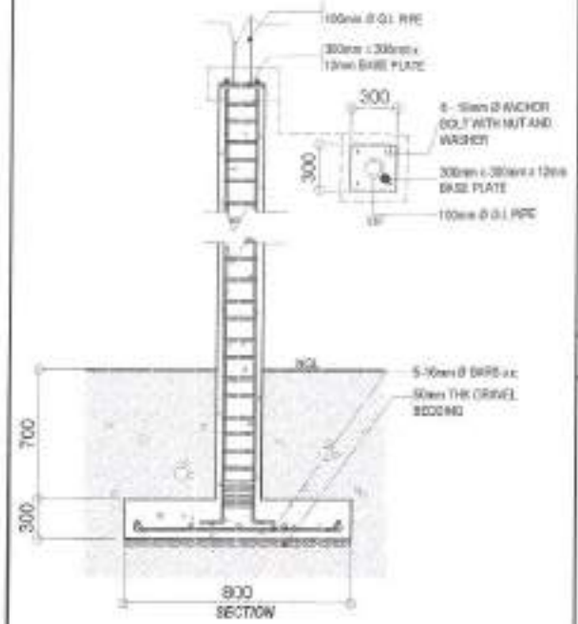
1. ALL MATERIALS WORKMANSHIP SHALL BE IN ACCORDANCE W/ THE APPLICABLE STANDARD & SPECIFICATIONS OF THE STRUCTURAL CODE OF THE PHILIPPINES & UNIFORM BUILDING CODE.
2. MORTAR & GROUT FOR ALL CONCRETE MASONRY SHALL CONFORM TO ASTM C 270 - TYPE M & SHALL HAVE A MINIMUM OF 28 DAYS STRENGTH BY CYLINDER COMPRESSIVE STRENGTH OF IT 5MPa (2500 PSI)
3. ALL CMU SHALL BE LAID OUT WITH CELLS IN UNIDIRECTED TO VERTICAL CONTINUITY
4. ALL CELLS ESPECIALLY THOSE WITH REINFORCEMENT SHALL BE FILLED WITH MORTAR
REINFORCEMENT, AS TABULATED HEREON SHALL BE PROVIDED UNLESS OTHERWISE SPECIFIED IN THE PLANS
5. ALL MASONRY WALLS SHALL BE PROVIDED W STIFFENED BEAM BLOCK & STIFFENER AS REQUIRED:
   5a. FOR HIGH WALLS (EVERY 3000mm) & COLUMN (BOLT) AT 3000mm ON CENTER
   5b. FOR OPENINGS & WINDOWS OPENING PROVIDE LINTEL BEAM (SAME AS STIFFENER) BEAM BLOCK
6. UNLESS OTHERWISE SHOWN IN PLANS, ALL CONCRETE HOLLOW BLOCK AND CEMENT BRICK BLOCKS SHALL BE REINFORCED AS SHOWN IN THE SCHEDULE OF CONCRETE HOLLOW BLOCKS AND CERAMIC BLOCK REINFORCEMENT

SCHEDULE OF CONCRETE HOLLOW BLOCK AND CERAMIC BLOCK REINFORCEMENT			
BLOCK THICKNESS	REINFORCEMENT		NOTES
	HORIZONTAL	VERTICAL	
110 mm	10mm Ø @ 400mm O.C.	10mm Ø @ 400mm O.C.	A. MINIMUM LAP SPLICE = 470m B. PROVIDE RIGHT ANGLED REINFORCEMENT AT CORNERS (USED LONG) C. WHERE CMU OR CERAMIC W.A. WALL DOWELS FOR COL. R.C. BEAMS & NICHES, DOWELS WITH THE SAME SIZE AS VERT. OR HOR. REINFORCEMENTS SHALL BE PROVIDED.
150 mm	10mm Ø @ 400mm O.C.	10mm Ø @ 400mm O.C.	

TESTING & COMMISSIONING WORKS

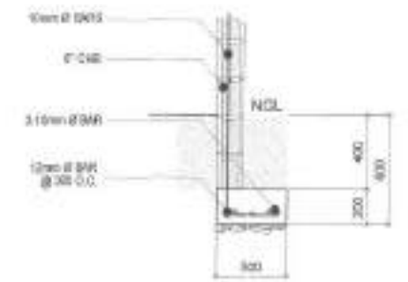
1. ALL NECESSARY TESTING OF MATERIALS AND COMMISSIONING WORKS MUST BE PERFORMED AS PER STANDARD PROCEDURE.

1 GENERAL NOTES — SCALE: NTS

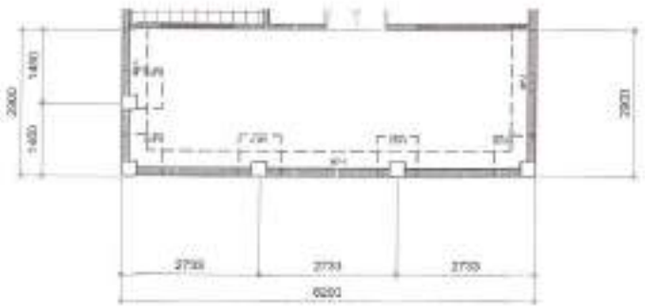


MARK	DIMENSION (mm)			REINFORCEMENTS		Q	REMARKS
	B	L	t	ALONG B	ALONG L	pcs	
F1	800	800	300	5 - 10mm Ø	5 - 10mm Ø	1000	SQUARE FOOTING

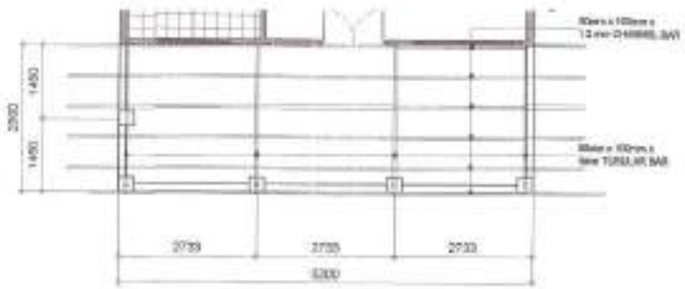
2 COLUMN AND COLUMN FOOTING DETAIL — SCALE: NTS



3 WALL FOOTING DETAIL — SCALE: NTS



4 FOUNDATION PLAN — SCALE: NTS



5 ROOF FRAMING DETAIL — SCALE: NTS

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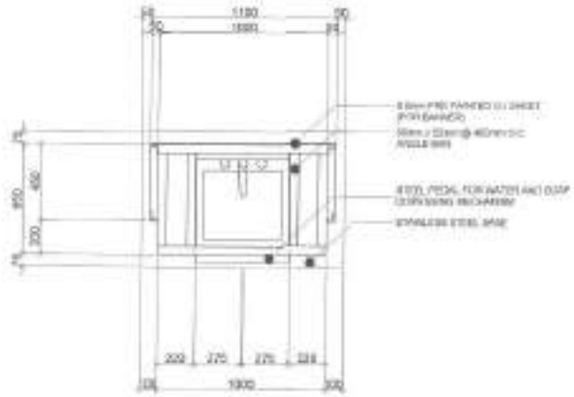
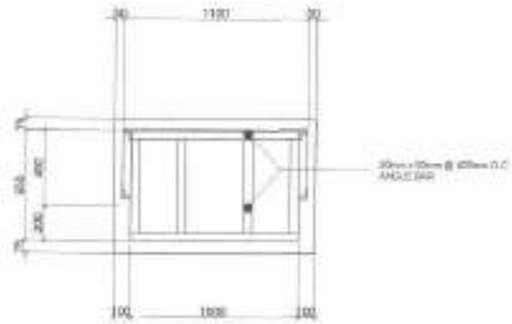
CITY ENGINEERING DEPARTMENT

PROJECT TITLE:	DRAWN BY: CAA	SUBMITTED BY:	RECOMMENDING APPROVAL:	APPROVED BY:	SHEET CONTENT	SHEET NO.
PROPOSED CONSTRUCTION OF HAND WASHING FACILITY AND REHABILITATION OF BAGONG SILANGAN DAY CARE CENTER LOCATION: BARANGAY BAGONG SILANGAN, DISTRICT 2, QUEZON CITY	DATE: August 23, 2021 CHECKED BY: [illegible] REVISION NO.:	ENGR. LEO S. DEL ROSARIO HEAD, PLANNING & PROGRAMMING DIVISION	ENGR. BIENVENIDO R. VERZOSA, JR. OIC, CITY ENGINEERING DEPARTMENT	HON. MA. JOSEFINA G. BELMONTE CITY MAYOR, QUEZON CITY	GENERAL NOTES, COLUMN AND COLUMN FOOTING DETAIL, WALL FOOTING DETAIL, FOUNDATION PLAN, ROOF FRAMING DETAIL	ST-01 6 13



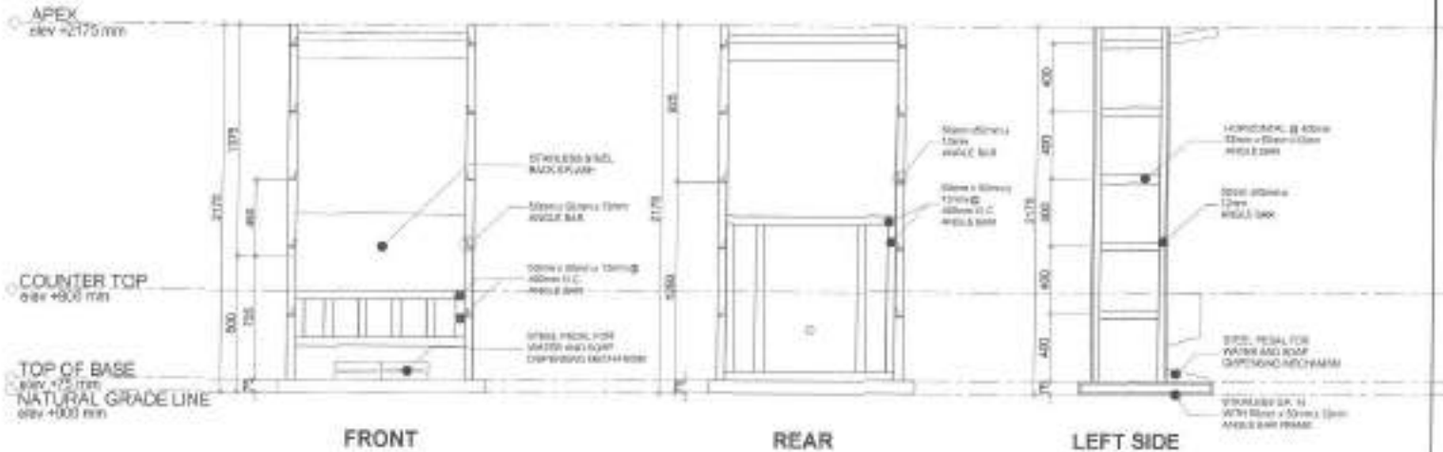
PLAN



ROOF PLAN

1 SINGLE SINK PORTABLE HAND WASHING STALL PLAN

SCALE: 1:30M



FRONT REAR LEFT SIDE

2 ELEVATIONS

SCALE: 1:30M

3 TYPICAL SECTION

SCALE: 1:30M

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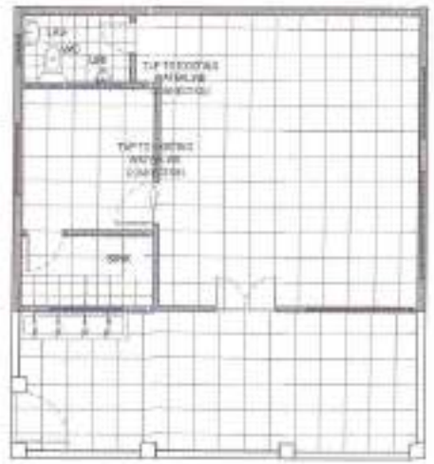
CITY ENGINEERING DEPARTMENT

PROJECT TITLE:	DRAWN BY:	SUBMITTED BY:	RECOMMENDING APPROVAL:	APPROVED BY:	SHEET CONTENT	SHEET NO.
PROPOSED CONSTRUCTION OF HAND WASHING FACILITY AND REHABILITATION OF BAGONG SILANGAN DAY CARE CENTER LOCATION: BARANGAY BAGONG SILANGAN, DISTRICT 2, QUEZON CITY	DATE: August 20, 2021 CHECKED BY: Engr. DENR NO.:	ENGR. LEO S. DEL ROSARIO HEAD, PLANNING & PROGRAMMING DIVISION	ENGR. IBRAHIM R. VERZOSA , JR. OIC, CITY ENGINEERING DEPARTMENT	HON. MA. JOSEFINA G. BELMONTE CITY MAYOR, QUEZON CITY	SINGLE SINK PORTABLE HAND WASHING STALL PLAN ELEVATIONS TYPICAL SECTIONS	ST-02 7 13

1. ALL THE PLUMBING/SANITARY WORKS INCLUDED HEREIN SHALL BE EXECUTED ACCORDING TO THE PROVISION OF THE PHILIPPINE PLUMBING CODE , THE NATIONAL BUILDING CODE, RULES AND REGULATION OF QUEZON CITY.
2. COORDINATE THE DRAWINGS WITH OTHER RELATED DRAWINGS AND SPECIFICATION REQUIRED. THE ENGR./ ARCH. SHALL BE NOTIFIED IMMEDIATELY OF ANY DISCREPANCY FOUND THEREIN.
3. ALL PIPES SHALL BE INSTALLED AS INDICATED ON PLANS. ANY RELOCATION REQUIRED FOR PROPER EXECUTION OF OTHER TRADES SHALL BE WITH PRIOR APPROVAL OF THE ENGINEER OR ARCHITECT.
4. PROPOSED SANITARY UTILITIES SHALL BE CONFORM TO THE ACTUAL LOCATION, DEPTH, AND INVERT ELEVATION OF ALL EXISTING STRUCTURES AND PIPES AS VERIFIED BY THE CONTRACTOR.
5. ALL SLOPES FOR HORIZONTAL DRAINAGE SHALL MAINTAIN 1% MIN. UNLESS OTHERWISE SPECIFIED.
6. SIZES OF WATER SUPPLY PIPES TO FIXTURES SHALL BE IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTION.
7. THE CONTRACTOR SHALL VERIFY ALL EXISTING UTILITIES AT SITE AND COORDINATE THE WORKS WITH THE SEWER LINE EFFLUENT DISPOSAL POINT AND WATER LINE SERVICE CONNECTING POINT.
8. ALL WATER PIPE AND WATER TANKS SHALL BE THOROUGHLY FLUSHED AND DISINFECTED WITH LIQUID CHOLORINE OR HYDROCHLORIDE SOLUTION.
9. ALL WATER PIPES SHALL BE HYDROSTATICALLY TESTED TO A PRESSURE 1-1/2 THE DESIGNED WORKING PRESSURE OF THE SYSTEM.
10. ALL SANITARY AND STORM DRAINAGE PIPES SHALL BE HYDROSTATICALLY TESTED AT LEAST 3.0 MTS. HEAD TO ENSURE THAT THE SYSTEM ARE WATER TIGHT.
11. ALL DIMENSIONS ARE IN METERS AND ALL PIPES SIZES ARE IN MILLIMETER UNLESS OTHERWISE SPECIFIED.
12. ALL PIPES INDICATED ON PLANS REFER TO PIPES INSIDE DIAMETER.

1 GENERAL NOTES

SCALE :NTS



NOTE:
ALL PLUMBING FIXTURE TO BE REPLACED

3 WATERLINE LAYOUT

SCALE :NTS

CWL	COLD WATER LINE
GV	GATE VALVE
SP / WP	SOIL PIPE / WASTE PIPE
CO	CLEANOUT
URI	URINAL
WC	WATERCLOSET
F	FAUCET
	SINK

2 LEGEND AND SYMBOLS

SCALE :NTS

NOTE:
ALL PLUMBING FIXTURE TO BE REPLACED

4 SEWER LINE LAYOUT

SCALE :NTS

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Lungsod ng Quezon
CITY ENGINEERING DEPARTMENT

PROJECT TITLE:	DRAWN BY:	SUBMITTED BY:	RECOMMENDING APPROVAL:	APPROVED BY:	SHEET CONTENT	SHEET NO.
PROPOSED CONSTRUCTION OF HAND WASHING FACILITY AND REHABILITATION OF BAGONG SILANGAN DAY CARE CENTER LOCATION: BARANGAY BAGONG SILANGAN, DISTRICT 2, QUEZON CITY	DATE: August 23, 2021 CHECKED BY: REVISIONS:	ENGR. LEO S. DEL ROSARIO HEAD, PLANNING AND PROGRAMMING DIVISION	ENGR. IBRAHIM R. VERZOSA , JR. OIC-CITY ENGINEERING DEPARTMENT	HON. MA. JOSEFINA G. BELMONTE CITY MAYOR, QUEZON CITY	GENERAL NOTES LEGEND AND SYMBOLS WATERLINE LAYOUT SEWER LINE LAYOUT	PL-01 8 13

1. ALL THE PLUMBING/SANITARY WORKS INCLUDED HEREIN SHALL BE EXECUTED ACCORDING TO THE PROVISION OF THE PHILIPPINE PLUMBING CODE , THE NATIONAL BUILDING CODE, RULES AND REGULATION OF QUEZON CITY.
2. COORDINATE THE DRAWINGS WITH OTHER RELATED DRAWINGS AND SPECIFICATION REQUIRED. THE ENGR'G/ ARCH. SHALL BE NOTIFIED IMMEDIATELY OF ANY DISCREPANCY FOUND THEREIN.
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9. ALL WATER PIPES SHALL BE HYDROSTATICALLY TESTED TO A PRESSURE 1-1/2 THE DESIGNED WORKING PRESSURE OF THE SYSTEM.
10. ALL SANITARY AND STORM DRAINAGE PIPES SHALL BE HYDROSTATICALLY TESTED AT LEAST 3.0 MTS. HEAD TO ENSURE THAT THE SYSTEM ARE WATER TIGHT.
11. ALL DIMENSIONS ARE IN METERS AND ALL PIPES SIZES ARE IN MILLIMETER UNLESS OTHERWISE SPECIFIED.
12. ALL PIPES INDICATED ON PLANS REFER TO PIPES INSIDE DIAMETER.

1 GENERAL NOTES

SCALE: NTS

I. SEWER/ WASTE AND VENT SYSTEM

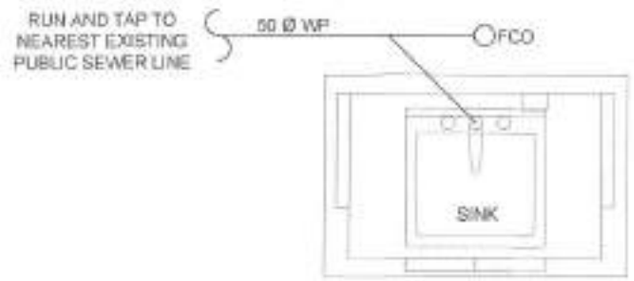
SP / WP	-	SOIL PIPE / WASTE PIPE
VP / VAC	-	VENT PIPE / VENT AT CEILING
DP	-	STORM DRAIN PIPE
FCO/ GCO	-	FLOOR CLEANOUT / GROUND CLEANOUT
CCO	-	CEILING CLEAN-OUT
DS	-	DRAINAGE STACK / DOWNSPOUT
VSTR	-	VENT STACK/EXTENDED THROUGH ROOF
SS	-	SOIL STACK
FD	-	FLOOR DRAIN
CB	-	CATCH BASIN
AD	-	AREA DRAIN
	-	STALL TYPE URINAL
GT	-	GREASE TRAP

II. WATER DISTRIBUTION SYSTEM

CWL	-	COLD WATER LINE
CWR	-	COLD WATER RISER
GV	-	GATE VALVE
CV	-	CHECK VALVE
WM	-	WATER METER
BD	-	BALCONY DRAIN

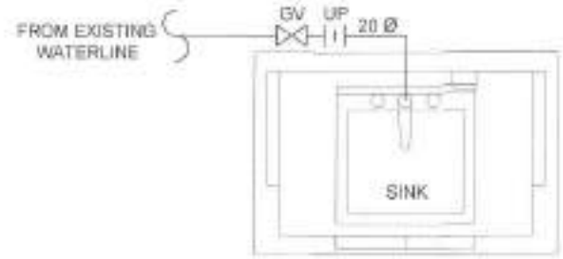
2 LEGENDS AND SYMBOLS

SCALE: NTS



3 SINGLE SINK PORTABLE HAND WASHING SANITARY LINE

SCALE: 1:25M



4 SINGLE SINK PORTABLE HAND WASHING WATERLINE

SCALE: 1:25M

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PROJECT TITLE: PROPOSED CONSTRUCTION OF HAND WASHING FACILITY AND REHABILITATION OF BAGONG SILANGAN DAY CARE CENTER LOCATION: BARANGAY BAGONG SILANGAN, DISTRICT 2, QUEZON CITY	DRAWN BY: E.A.A. DATE: August 23, 2021 CHECKED BY: J.A.M. REVISION NO.:	SUBMITTED BY: ENGR. LEO S. DEL ROSARIO	RECOMMENDING APPROVAL: ENGR. SAGANI R. VERZOSA , JR.	APPROVED BY: HON. MA. JOSEFINA G. BELMONTE	SHEET CONTENT: GENERAL NOTES, LEGENDS AND SYMBOLS, SINGLE SINK PORTABLE HAND WASHING SANITARY AND WATERLINE LAYOUT	SHEET NO.: PL-02, 9 | 13

GENERAL NOTES:

1. ALL ELECTRICAL WORKS SHALL BE DONE IN ACCORDANCE WITH THE PROVISIONS OF THE LATEST EDITION OF THE PHILIPPINE ELECTRICAL CODE, THE LAWS AND ORDINANCES OF THE LOCAL CODE ENFORCING AUTHORITIES AND THE REQUIREMENTS OF THE LOCAL POWER AND TELEPHONE UTILITY COMPANY.
2. THE CONTRACTOR SHALL SECURE ALL PERMITS AND PAY ALL FEES REQUIRED FOR THE WORK AND SHALL FURNISH THE OWNER THROUGH THE ENGINEERS, FINAL CERTIFICATES OF ELECTRICAL INSPECTION AND APPROVAL FROM PROPER GOVERNMENT AUTHORITIES FOR COMPLETION OF WORK.
3. ALL EMBEDDED BRANCH CIRCUITS SHALL BE PVC CONDUITS AND FOR EXPOSED INSTALLATION SHALL BE TWO SUPPORTED BY CONDUIT CLAMPS EVERY 700 MILLIMETER.
4. PULL BOXES SHALL BE PROVIDED BY THE CONTRACTOR WHENEVER NECESSARY TO FACILITATE WIRE PULLING EVEN IF THESE ARE NOT INDICATED ON THE PLANS. SIZING OF ALL PULLBOXES SHALL BE COMPUTED BASED ON THE CODE REQUIREMENTS. SUBMIT SHOP DRAWINGS TO THE ENGINEER FOR APPROVAL PRIOR TO FABRICATION. LOCATION OF PULLBOXES SHALL BE APPROVED BY THE ARCHITECT/ENGINEER AND MUST BE REFLECTED ON THE "AS-BUILT" PLAN.
5. ALL POWER OUTLETS AND SWITCHES SHALL BE GROUNDING TYPE WITH PARALLEL SLOTS FOR 220 V.
6. PROVIDE GROUND FAULT CURRENT INTERRUPTER CIRCUIT BREAKER FOR LOADS MARKED "GFCI" ON THE PLAN.
7. ALL METALLIC CONDUITS, CABINETS AND EQUIPMENT SHALL BE PROPERLY GROUNDED AND BONDED.
8. UNLESS OTHERWISE NOTED, MOUNTING HEIGHT FOR WALL MOUNTED DEVICES SHALL BE AS FOLLOWS:

RECEPTACLE OUTLET	300 MM AFF (150MM ABOVE WORKING COUNTER)
TELEPHONE OUTLET	300 MM AFF
CATV OUTLET	300 MM AFF
LIGHTING SWITCH	1400 MM AFF
PANELBOARD	1800 MM AFF

9. REFER TO MECHANICAL, PLUMBING AND FIRE PROTECTION DRAWINGS FOR RATINGS AND LOCATIONS OF EQUIPMENT AS WELL AS THEIR CONTROL SEQUENCES AS SPECIFIED AND OR SHOWN UNDER THEIR RESPECTIVE SECTIONS.
10. ALL MATERIALS TO BE USED SHALL BE OF THE BEST QUALITY, BRAND NEW AS SPECIFIED.
11. THE DRAWINGS AND SPECIFICATIONS ARE INTENDED TO PRESENT GENERAL LAYOUT AND BROAD OUTLINE/DESCRIPTION OF THE PROJECT BUT DO NOT NECESSARILY INDICATE/DESCRIBE ACTUAL LOCATIONS, LEVEL AND DISTANCES OF THE EQUIPMENT. THE CONTRACTOR IS HEREBY REQUIRED TO MAKE SUCH ADJUSTMENT AT THE JOBSITE AS LOCATION, DISTANCES AND LEVELS ARE GOVERNED BY ACTUAL FIELD CONDITIONS.
12. ANY DISCREPANCY BETWEEN THE PLANS AND SPECIFICATIONS SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER FOR CLARIFICATION DECISION.
13. ALL LIGHTING AND CONVENIENCE OUTLET CIRCUITS SHALL BE 3.5 SQ. MM. THWN-2 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:

LINE 1	RED
LINE 2	YELLOW
NEUTRAL	WHITE
GROUND	GREEN

14. BOXES, WIRE GUTTERS, ENCLOSURE SHALL BE FABRICATED FROM STEEL WITH THICKNESS AS FOLLOWS:
MAXIMUM WIDTH OF THE WIDEST SURFACE IN STEEL

UP TO INCLUDING 150 MM	GA 16 PAINTED WITH METAL PRIMER EPOXY AND TOPCOAT
OVER 150 MM BUT NOT OVER 457.20	GA 14 PAINTED WITH METAL PRIMER EPOXY AND TOPCOAT
OVER 457.20 MM BUT NOT OVER 762 MM	GA 12 PAINTED WITH METAL PRIMER EPOXY AND TOPCOAT
OVER 762 MM	GA 10 PAINTED WITH METAL PRIMER EPOXY AND TOPCOAT

15. ALL ELECTRICAL WORKS HEREIN SHALL BE EXECUTED BY EXPERIENCED MEN UNDER THE DIRECT SUPERVISION OF A FULL-TIME LICENSED ELECTRICAL ENGINEER AND A DULY ACCREDITED ELECTRICAL CONTRACTOR BY WHOM WORKS SHALL BE NEATLY PLACED, SECURELY FASTENED AND PROPERLY FINISHED.
16. TYPE OF SERVICE ENTRANCE SHALL BE SINGLE PHASE, TWO WIRE PLUS GROUND, 60 HERTZ, 230V AC NOMINAL.
17. CONDUITS IN NO CASE SHALL THERE 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.
18. UPON COMPLETION OF ELECTRICAL CONSTRUCTION WORK, INSULATION RESISTANCE TEST AND FUNCTIONALITY TEST SHALL BE PERFORMED BY THE CONTRACTOR INCLUSIVE OF THE INSTALLATION TO BE REPORTED IN DETAILS CONFORMS APPROVED BY THE QUEZON CITY ENGINEERING DEPARTMENT REPRESENTATIVE. THE GROUND RESISTANCE FOR ELECTRICAL SYSTEMS SHALL NOT BE MORE THAN 5 OHMS. COMMUNICATION GROUNDING RESISTANCE SHALL NOT EXCEED 3 OHMS.

1 GENERAL NOTES

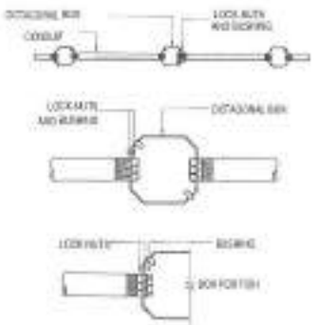
SCALE: NTS

	RECEPTACLE WITH 10W LED BULB	Sc / S	ONE GANG SWITCH
	1x18W, LED TUBE LIGHT TROFFER TYPE	Sobc	THREE GANG SWITCH
	2x18W, LED TUBE LIGHT TROFFER TYPE	Ss	SELECTOR SWITCH
	1x18W, LED TUBE LIGHT BOX TYPE	LPP	PANEL BOARD
	CEILING FAN		CIRCUIT HOMERUN
	CONVENIENCE OUTLET, TWO GANG		

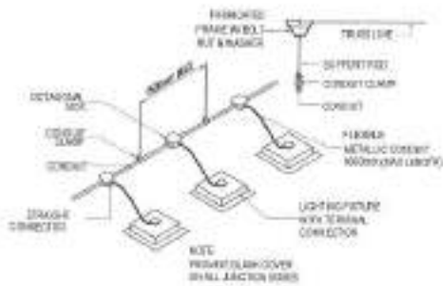
2 LEGEND & SYMBOLS

SCALE: NTS

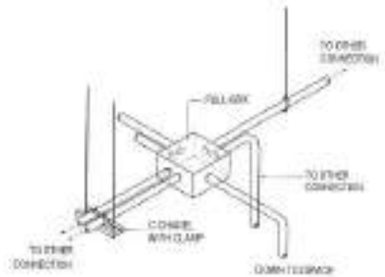
BENDING RADIUS DETAIL



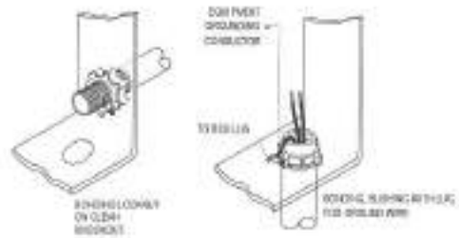
SPOT DETAIL OF CONDUIT RUN AND BOX



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



PROPER CONDUIT LAYOUT at PULL BOX



BONDED RACEWAY TERMINATION FOR SHEET METAL

3 MISCELLANEOUS DETAILS

SCALE: NTS

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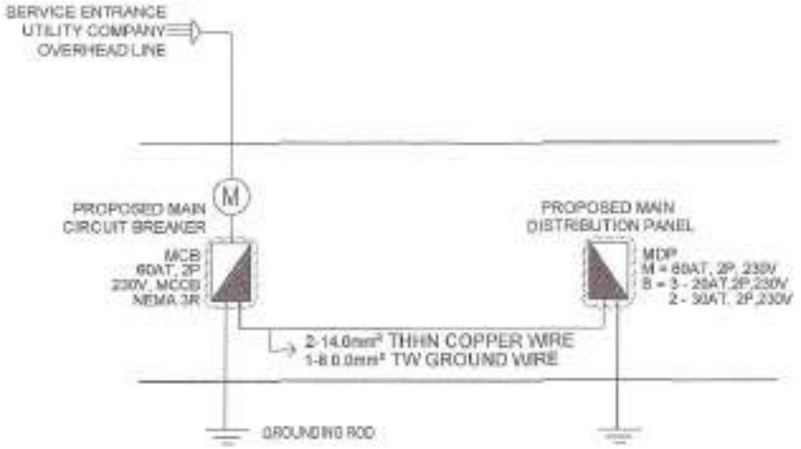
PROJECT TITLE: PROPOSED CONSTRUCTION OF HAND WASHING FACILITY AND REHABILITATION OF BAGONG SILANGAN DAY CARE CENTER LOCATION: BARANGAY BAGONG SILANGAN, DISTRICT 2, QUEZON CITY	DRAWN BY:	SUBMITTED BY: ENGR. LEO S. DEL ROSARIO	RECOMMENDING APPROVAL: ENGR. [illegible] R. VERZOSA, JR.	APPROVED BY: HON. MA. JOSEFINA G. BELMONTE	SHEET CONTENT: GENERAL NOTES, LEGENDS AND SYMBOLS, MISCELLANEOUS DETAILS	SHEET NO. EL-01 10 13
	DATE: August 13, 2021					
	CHECKED BY:					
	REVISIONS:					



1 SINGLE LINE DIAGRAM

SCALE :NTS

PROPOSED LIGHTING POWER PANEL
(FOR REPLACEMENT)

MOUNTING: NEMA1, RECESSED WITH GRAY POWDERED COATED FINISH WITH MULTI-TERMINAL BLOCK FOR SOLID GROUND BUS

CKT. NO.	LOAD DESCRIPTION	VOLTS	VA	AMP.	AT	SIZE OF WIRES	SIZE OF CONDUITS
1	7–LIGHTING LAYOUT (EXISTING) 3–LIGHTING LAYOUT (ADDITIONAL)	230	1000	4.35	20	2–3.5mm² THHN COPPER WIRE 1–3.0mm² TW GROUND WIRE	IN 20mmø PVC PIPE
2	6–CONVENIENCE OUTLET	230	720	3.13	20	2–3.5mm² THHN COPPER WIRE 1–3.0mm² TW GROUND WIRE	IN 20mmø PVC PIPE
3	3 – CEILING FAN 1 – WALL FAN	230	600	2.61	20	2–3.5mm² THHN COPPER WIRE 1–3.0mm² TW GROUND WIRE	IN 20mmø PVC PIPE
4	1–1.5 HP ACU	230	2300	10	30	2–5.5mm² THHN COPPER WIRE 1–3.5mm² TW GROUND WIRE	IN 25mmø PVC PIPE
5	1–1.5 HP ACU	230	2300	10	30	2–5.5mm² THHN COPPER WIRE 1–3.5mm² TW GROUND WIRE	IN 25mmø PVC PIPE
			6920	30.09			

COMPUTATION :

IT = 30.09 + (10 x 0.25)

IT = 32.59 AMPS

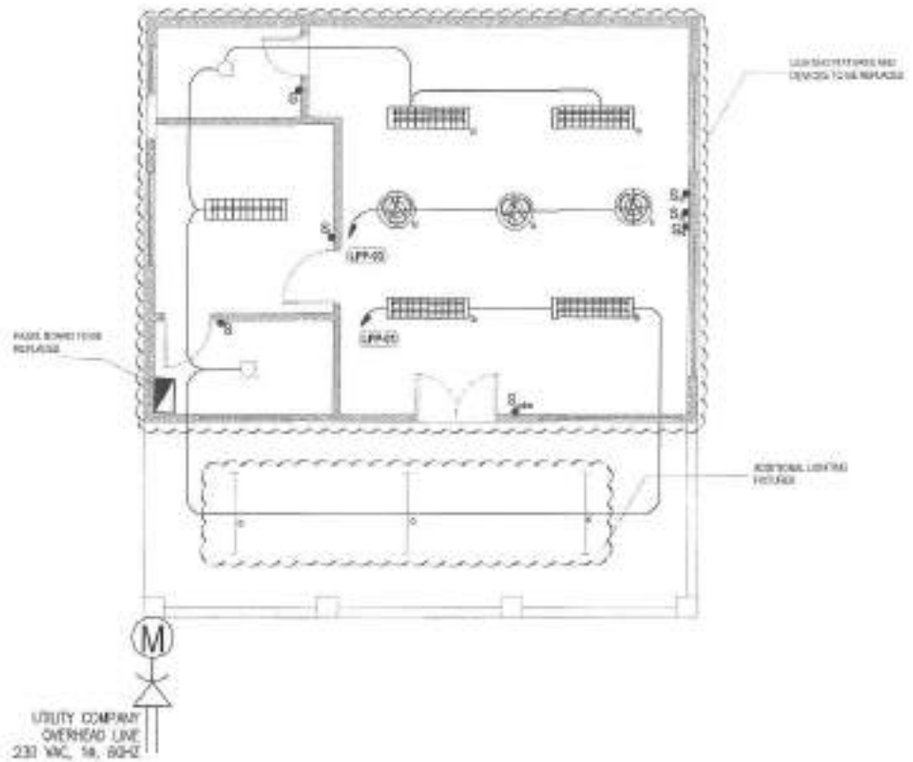
OVER CURRENT PROTECTION:
USE : 60AT, 2P, 230V MCCB

MAIN FEEDER :
USE : 2 - 14.0mm² THHN COPPER WIRE & 1-8.0mm² TW GROUND WIRE
IN 25mmØ PVC PIPE

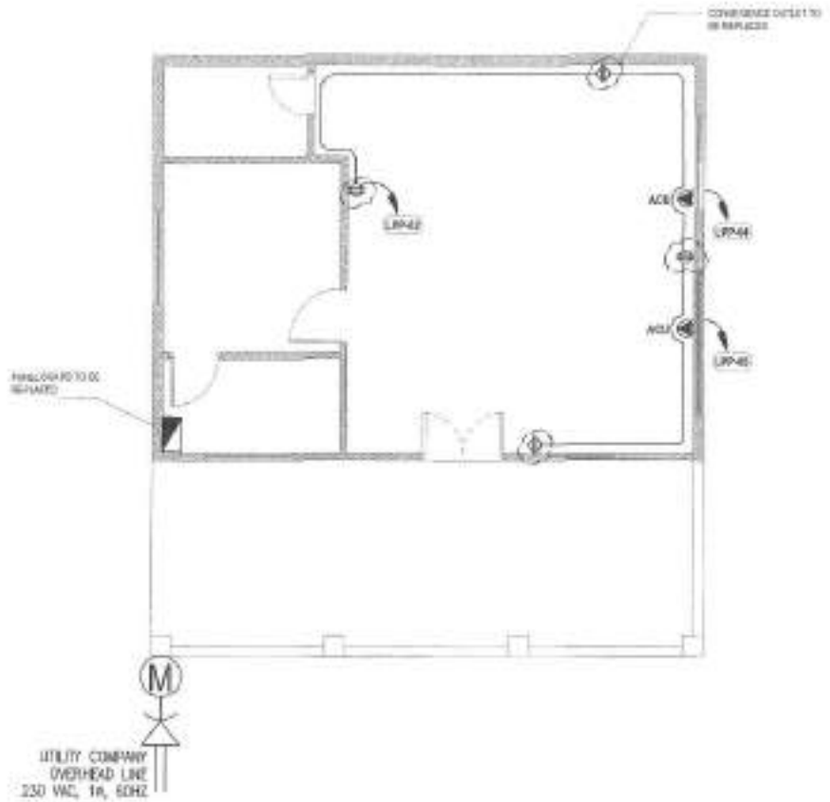
2 SCHEDULE OF LOAD

SCALE :NTS

Republika ng Pilipinas Lungsod ng Quezon **CITY ENGINEERING DEPARTMENT**	PROJECT TITLE : PROPOSED CONSTRUCTION OF HAND WASHING FACILITY AND REHABILITATION OF BAGONG SILANGAN DAY CARE CENTER LOCATION : BARANGAY BAGONG SILANGAN, DISTRICT 2, QUEZON CITY	DRAWN BY: S.A.A. DATE: August 23, 2021 DECODED BY: REVISION NO.	SUBMITTED BY: ENGR. LEO S. DEL ROSARIO HEAD, PLANNING & PROGRAMMING DIVISION	RECOMMENDING APPROVAL: ENGR. ISAGANI R. VERZOSA , JR. OIC - ASST. DEPARTMENT HEAD	APPROVED BY: HON. MA. JOSEFINA G. BELMONTE CITY MAYOR, QUEZON CITY	SHEET CONTENT SINGLE LINE DIAGRAM SCHEDULE OF LOAD	SHEET NO. EL-02 11|13



1 **LIGHTING LAYOUT** SCALE: NTS



2 **POWER LAYOUT** SCALE: NTS

Republika ng Pilipinas
Lungsod ng Quezon
CITY ENGINEERING DEPARTMENT

PROJECT TITLE: PROPOSED CONSTRUCTION OF HAND WASHING FACILITY AND REHABILITATION OF BAGONG SILANGAN DAY CARE CENTER	DRAWN BY: DAR	SUBMITTED BY: ENGR. LEO S. DEL ROSARIO, HEAD, PLANNING & PROGRAMMING DIVISION	RECOMMENDING APPROVAL: ENGR. ISABELO R. VERZOSA, JR., CITY ENGINEER (OIC)	APPROVED BY: HON. MA. JOSEFINA G. BELMONTE, CITY MAYOR, QUEZON CITY	SHEET CONTENT: LIGHTING LAYOUT, POWER LAYOUT	SHEET NO. EL-03 12 13
LOCATION: BARANGAY BAGONG SILANGAN, DISTRICT 2, QUEZON CITY	DATE: August 20, 2021					
	CHECKED BY:					
	REVISION NO.:					

1. ALL MECHANICAL WORKS SHALL BE DONE IN ACCORDANCE WITH THE LATEST REQUIREMENTS OF THE NATIONAL BUILDING CODE, PSME CODE AND THE RULES AND REGULATIONS OF QUEZON CITY.
2. THE SCOPE OF WORK SHALL INCLUDE ALL WORKS DESCRIBED IN PLANS.
3. THE WORKS SHALL BE EXECUTED IN CLOSE COORDINATION WITH ALL OTHER TRADES.
4. ALL AIRCONDITIONED SPACES SHALL BE MAINTAINED AT 24°C DB AND 50% RH.
5. CONTRACTOR SHALL SUBMIT SHOP DRAWINGS, MANUFACTURERS CATALOGUE, SPECIFICATIONS, SAMPLES, INCLUDING VIBRATION ISOLATORS BEFORE EXECUTION OF WORK.
6. ALL FLOOR SLAB MOUNTED VIBRATING EQUIPMENT SHALL BE PROVIDED WITH VIBRATION ISOLATORS TO PREVENT VIBRATIONS AND NOISE TRANSMISSION.
7. EXHAUST FAN SHALL BE PROVIDED WITH SUITABLE FLEXIBLE CONNECTIONS TO DISCHARGE DUCT.
8. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL TESTING AND COMMISSIONING OF THE WHOLE VENTILATION AND AIRCONDITIONING SYSTEM AND INSTALLATION.
9. ALL POWER WIRING SHALL BE ELECTRICAL AND TERMINATION TO EQUIPMENT SHALL BE MECHANICAL.
10. PROVIDE CONTROL WIRING FOR AIRCONDITIONING EQUIPMENT.
11. PROVIDE THERMOSTAT FOR ALL INDOOR UNITS / FAN COIL UNITS.
12. VERIFY LOCATION OF CONTROLLERS AND SWITCHES ON ELECTRICAL PLANS.
13. ALL PIPE EQUIPMENT CONDENSATE DRAIN SHALL BE CONNECTED TO THE NEAREST FLOOR DRAIN / AD /CB
14. PROVIDE GUIDES, HANGERS, AND SUPPLEMENTAL STEEL SUPPORT FOR ALL PIPING, DUCTING AND EQUIPMENTS.
15. PROVIDE PIPE SLEEVES FOR ALL PIPING PASSING THRU BUILDING STRUCTURE.
16. ALL PIPE DIMENSIONS ARE IN MILLIMETER UNLESS OTHERWISE NOTED.

1 GENERAL NOTES

SCALE: NTS

2 LEGENDS AND SYMBOLS

SCALE :NTS

- EQUIPMENT DESIGNATION
- WINDOW TYPE AIR CONDITIONER

3 GROUND FLOOR AIRCONDITION SYSTEM LAYOUT

SCALE :NTS

4 EQUIPMENT SCHEDULE

SCALE :NTS

DESIGNATION	LOCATION	QUANTITY	COOLING CAPACITY KJ/HR	HORSEPOWER RATING	AIR CIRCULATION CMM	POWER INPUT WATTS	ELECTRICAL SUPPLY			REMARKS
OUTDOOR							VOLTS	PHASE	HERTZ	
WC 1	GROUND FLOOR PLAN	2 SETS	13,000	1.5	7.2	3.5-4.8	220	1	60	REMOVAL INTAKE GRILLE EASY TO CLEAN ANTI-BACTERIAL FILTER, MECHANICAL ON/OFF TIMER WITH WIRELESS REMOTE CONTROL

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Lungsod ng Quezon
CITY ENGINEERING DEPARTMENT

PROJECT TITLE:
PROPOSED CONSTRUCTION OF HAND WASHING FACILITY AND REHABILITATION OF BAGONG SILANGAN DAY CARE CENTER
LOCATION:
BARANGAY BAGONG SILANGAN, DISTRICT 2, QUEZON CITY

DRAWN BY: S.A.A.
DATE: August 23, 2021
CHECKED BY:
REVISION NO:

SUBMITTED BY:
ENGR. LEO S. DEL ROSARIO

RECOMMENDING APPROVAL:
ENGR. ISAAC R. VERZOSA, JR.

APPROVED BY:
HON. MA. JOSEFINA G. BELMONTE

SHEET CONTENT:
GENERAL NOTES
LEGEND AND SYMBOLS
FLEXIBLE CONNECTIONS DETAIL
PIPE SLEEVES DETAIL
DUCT CAPS DETAIL
REFRIGERATION PIPING DETAIL
MECHANICAL VENTILATION EQUIPMENT SCHEDULE

SHEET NO.
ME-01
1313

DED2021_0669

1 VICINITY MAP SCALE: NTS

2 LOCATION MAP SCALE: NTS

3 PERSPECTIVE SCALE: NTS

TABLE OF CONTENTS

Republika ng Pilipinas
Lungsod ng Quezon
CITY ENGINEERING DEPARTMENT

PROJECT TITLE:
PROPOSED CONSTRUCTION OF HAND WASHING FACILITY AND REHABILITATION OF SITIO VETERANS DAY CARE CENTER

LOCATION:
BARANGAY BAGONG SILANGAN DISTRICT 2, QUEZON CITY

DRAWN BY:
DATE: 8/13/2021
CHECKED BY:
REVISION NO.:

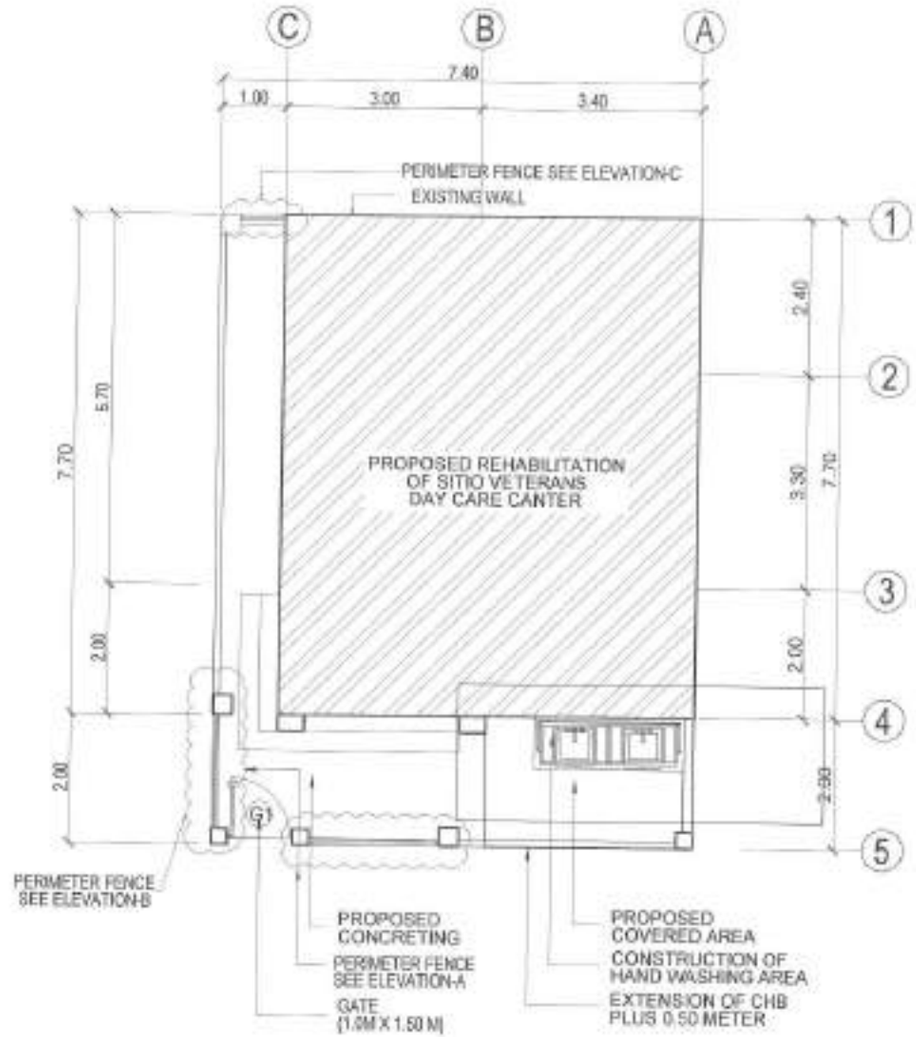
SUBMITTED BY:
ENGR. LEO S. DEL ROSARIO
HEAD, PLANNING & PROGRAMMING DIVISION

RECOMMENDING APPROVAL:
ENGR. BAGANI R. VERZOSA, JR.
OIC, [illegible] SERVICES

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

SHEET CONTENT:
VICINITY MAP
LOCATION MAP
PERSPECTIVE

SHEET NO.
AR-01
01 | 18



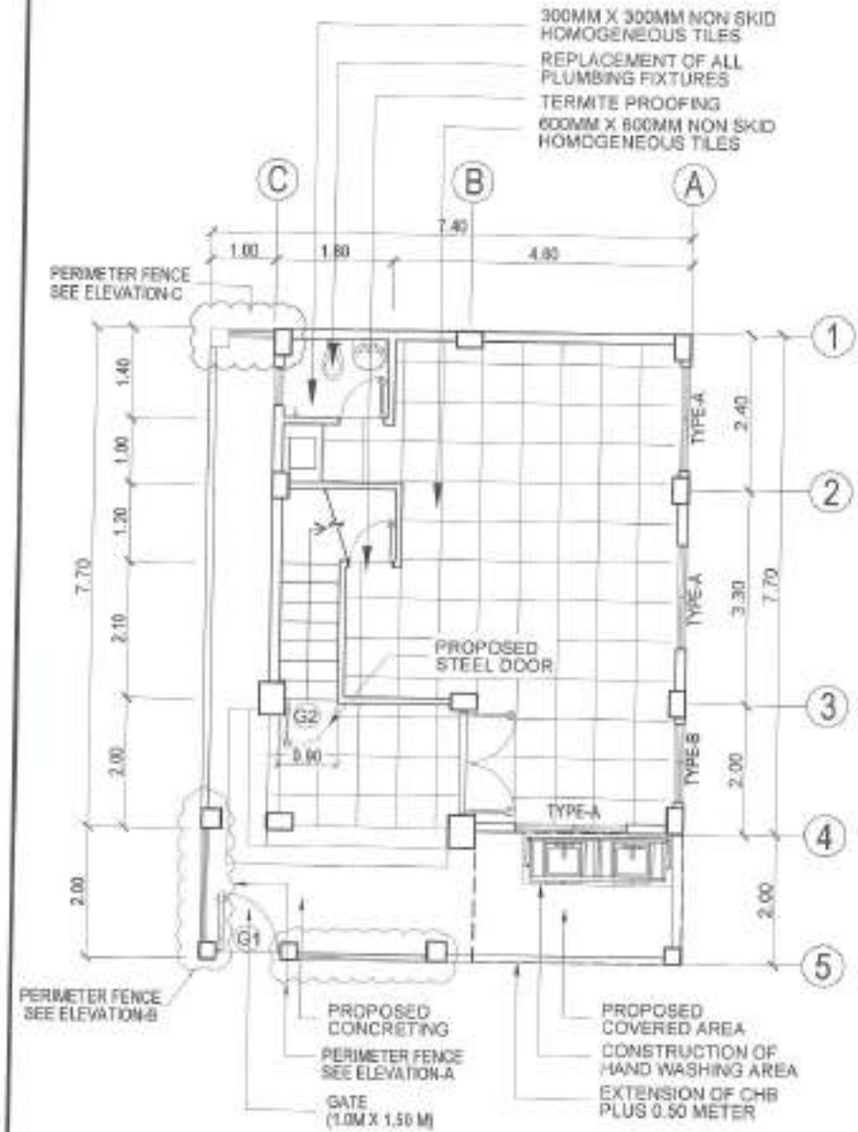
1 SITE DEVELOPMENT PLAN

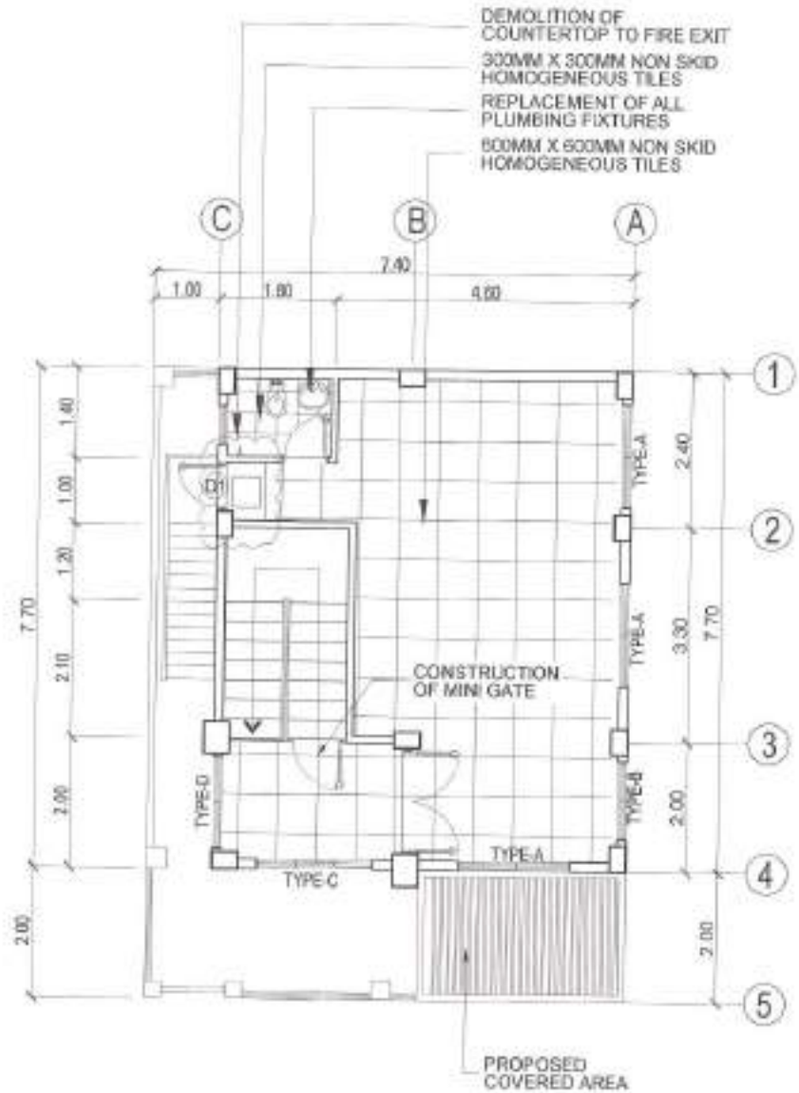
SCALE: 1:80M

Republika ng Pilipinas
Lungsod ng Quezon
CITY ENGINEERING DEPARTMENT

PROJECT TITLE :	DRAWN BY :	SUBMITTED BY:	RECOMMENDING APPROVAL :	APPROVED BY :	SHEET CONTENT	SHEET NO.
PROPOSED CONSTRUCTION OF HAND WASHING FACILITY AND REHABILITATION OF SITIO VETERANS DAY CARE CENTER	DATE : 8/13/2021	ENGR. LEO S. DEL ROSARIO HEAD , PLANNING & PROGRAMMING DIVISION	ENGR. ISAGANI R. VERZOSA, JR. OIC, CITY ENGINEERING DEPARTMENT	HON. MA. JOSEFINA G. BELMONTE CITY MAYOR	SITE DEVELOPMENT PLAN	AR-02 02 18
LOCATION: BARANGAY BAGONG SILANGAN DISTRICT II, QUEZON CITY	CHECKED BY: REVISION NO.:					

DED2021_0000





1 GROUND FLOOR PLAN

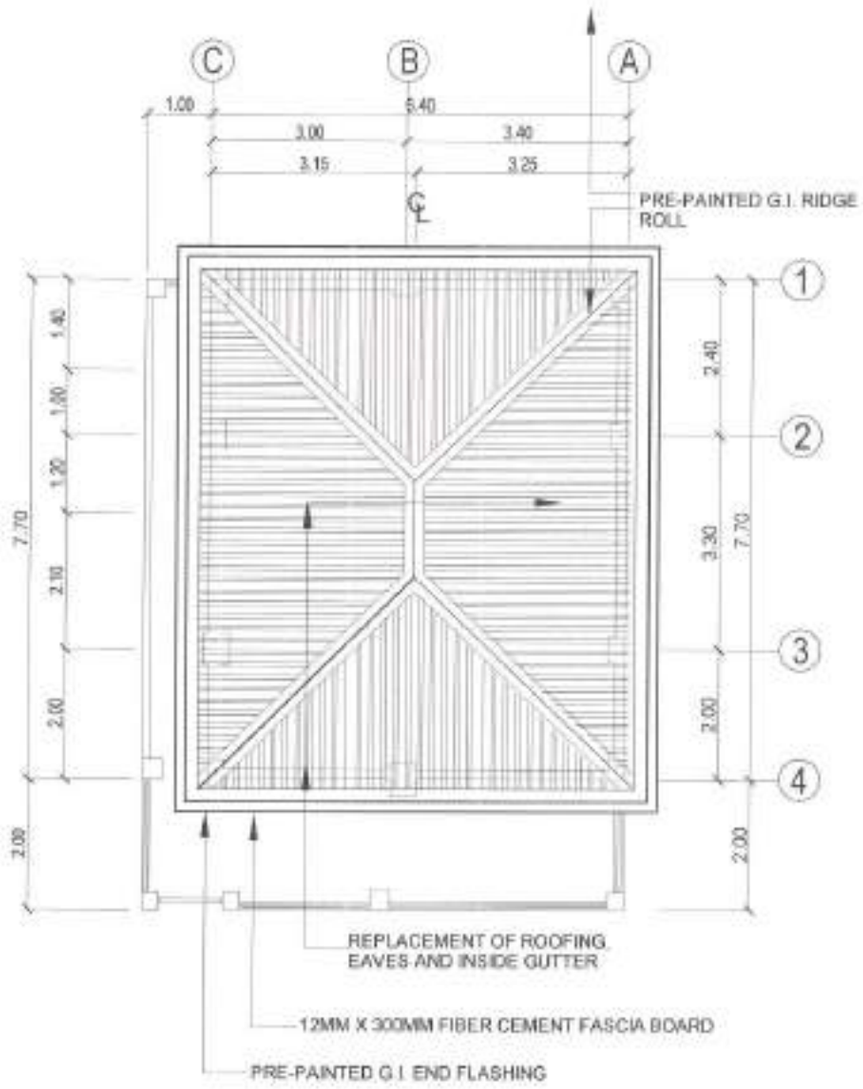
SCALE: 1:100M

2 SECOND FLOOR PLAN

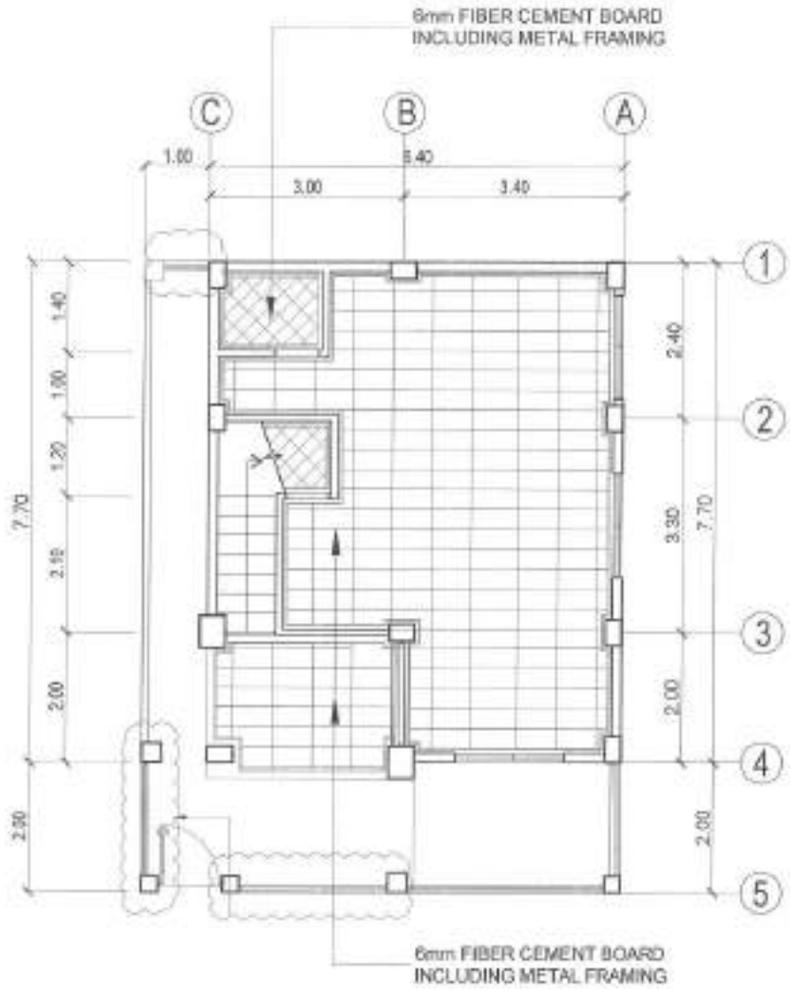
SCALE: 1: 80M

Republika ng Pilipinas
Lungsod ng Quezon
CITY ENGINEERING DEPARTMENT

PROJECT TITLE: PROPOSED CONSTRUCTION OF HAND WASHING FACILITY AND REHABILITATION OF SITIO VETERANS DAY CARE CENTER	DRAWN BY:	SUBMITTED BY: ENGR. LEO S. DEL ROSARIO, HEAD, PLANNING & PROGRAMMING DIVISION	RECOMMENDING APPROVAL: ENGR. [illegible] R. VERZOSA, JR., OIC, CITY ENGINEERING DEPARTMENT	APPROVED BY: HON. MA. JOSEFINA G. BELMONTE, CITY MAYOR	SHEET CONTENT: GROUND FLOOR PLAN, SECOND FLOOR PLAN	SHEET NO.: AR-03, 03 | 18
	DATE: 8/13/2021					
LOCATION: BARANGAY BAGONG SILANGAN DISTRICT 2, QUEZON CITY	CHECKED BY:					
	REVISION NO.:					



1 **ROOF PLAN** SCALE: 1: 80M



2 **GROUND FLOOR CEILING PLAN** SCALE: 1: 80M

Republika ng Pilipinas
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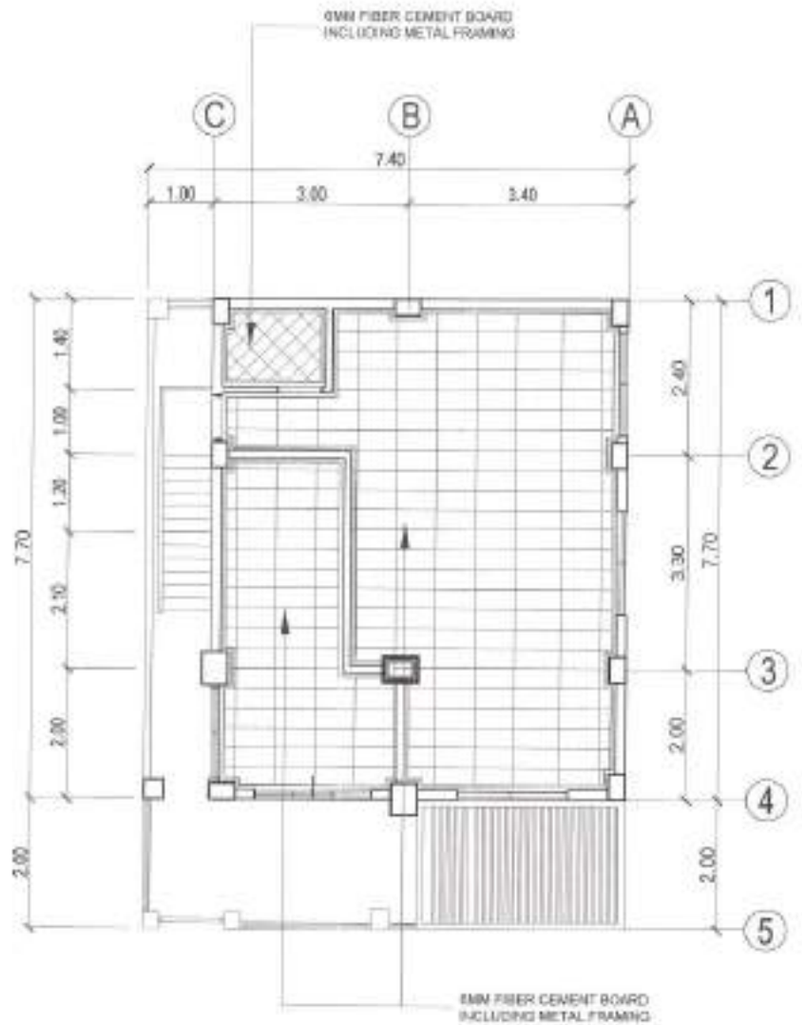
CITY ENGINEERING DEPARTMENT

PROJECT TITLE: PROPOSED CONSTRUCTION OF HAND WASHING FACILITY AND REHABILITATION OF SITIO VETERANS DAY CARE CENTER LOCATION: BARANGAY BAGONG SILANGAN DISTRICT 2, QUEZON CITY	DRAWN BY: [illegible] DATE: 8/13/2021 CHECKED BY: [illegible] REVISION NO.:	SUBMITTED BY: ENGR. LEO S. DEL ROSARIO HEAD, PLANNING & PROGRAMMING DIVISION	RECOMMENDING APPROVAL: ENGR. ISAGANI R. VERZOSA, JR. OIC, CITY ENGINEERING DEPARTMENT	APPROVED BY: HON. MA. JOSEFINA G. BELMONTE CITY MAYOR	SHEET CONTENT: ROOF PLAN / GROUND FLOOR CEILING PLAN	SHEET NO.: AR-04 / 04/18

DED2021_0689

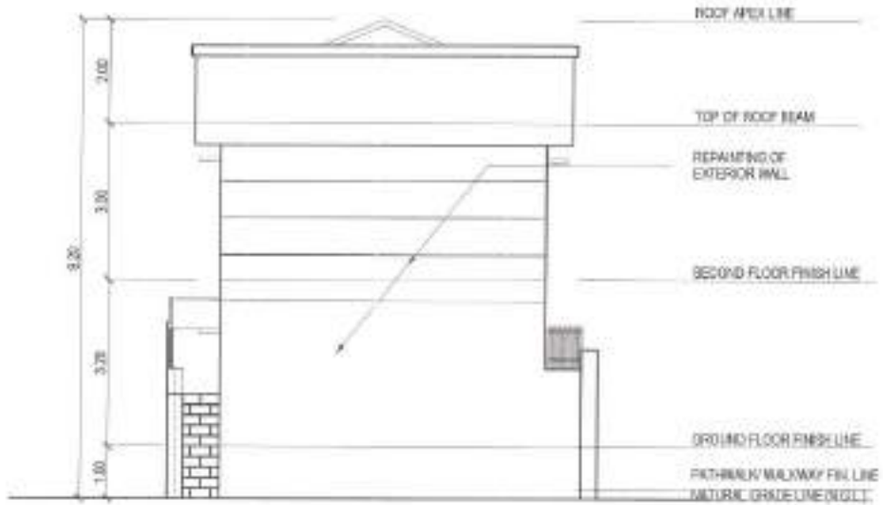


1 SECOND FLOOR REFLECTED CEILING PLAN

SCALE: 1:100M

2 FRONT ELEVATION

SCALE: 1:100M



3 REAR ELEVATION

SCALE: 1:100M

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CITY ENGINEERING DEPARTMENT

PROJECT TITLE :

PROPOSED CONSTRUCTION OF HAND WASHING FACILITY AND REHABILITATION OF SITIO VETERANS DAY CARE CENTER

LOCATION:
BARANGAY BAGONG SILANGAN DISTRICT 2, QUEZON CITY

DRAWN BY: CX
DATE : 8/10/2021
CHECKED BY:
REVISION NO.:

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

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

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

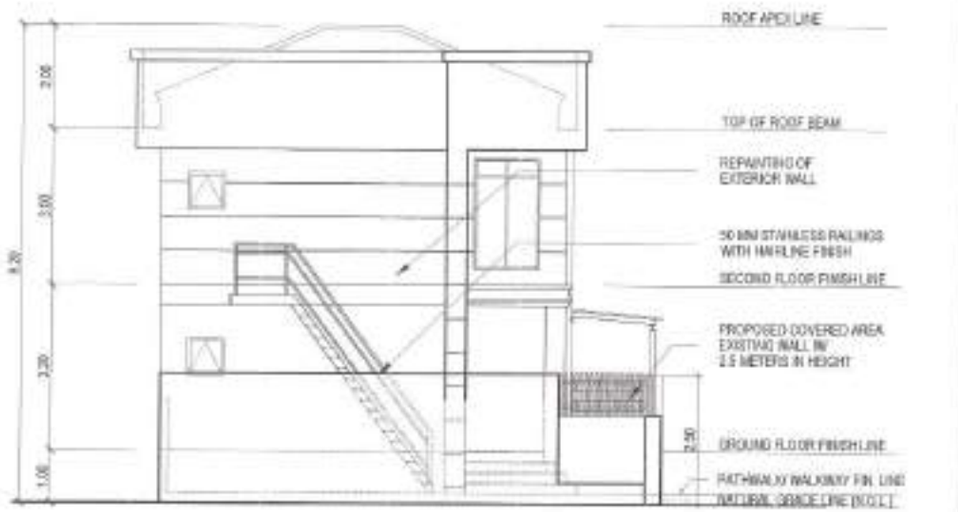
SHEET CONTENT:
SECOND FLOOR CEILING PLAN
FRONT ELEVATION
REAR ELEVATION

SHEET NO.
AR-05
05 18

DED2021_0660

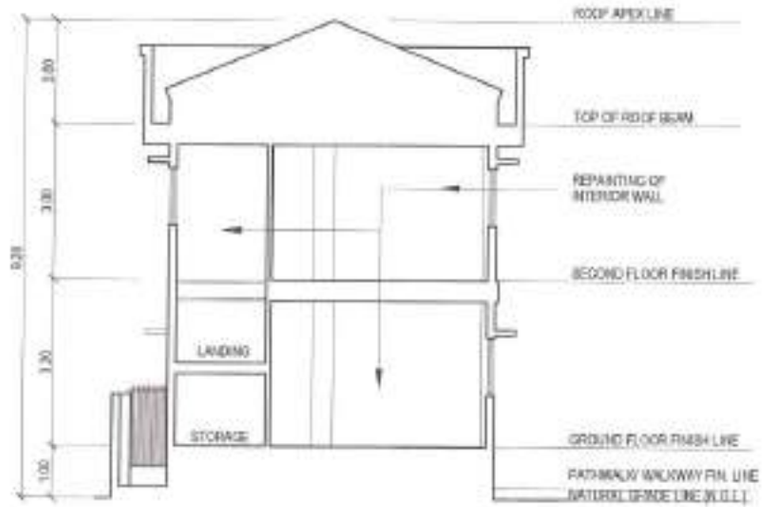
1 RIGHT SIDE ELEVATION

SCALE: 1:100M



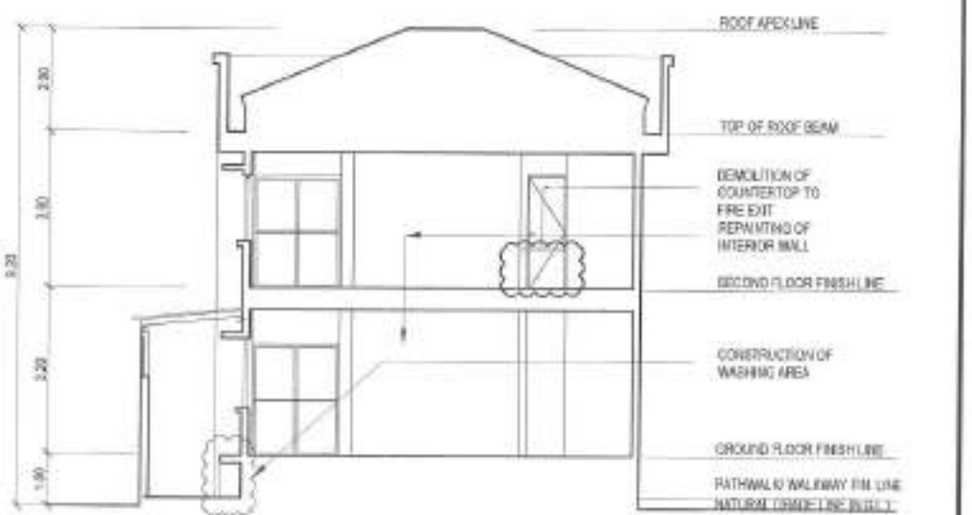
2 LEFT SIDE ELEVATION

SCALE: 1: 80M



3 CROSS SECTION

SCALE: 1:100M



4 LONGITUDINAL SECTION

SCALE: 1: 80M

Republika ng Pilipinas
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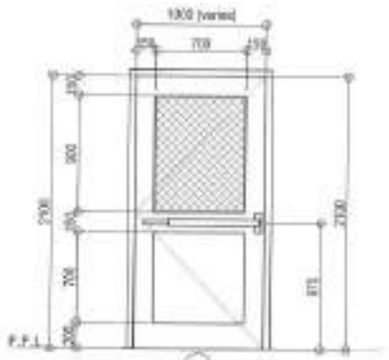
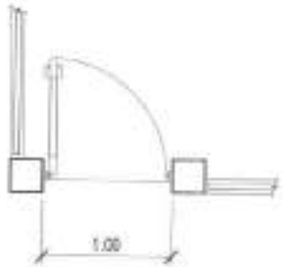
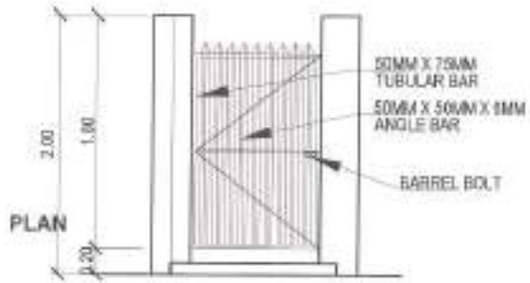
CITY ENGINEERING DEPARTMENT

PROJECT TITLE: PROPOSED CONSTRUCTION OF HAND WASHING FACILITY AND REHABILITATION OF SITIO VETERANS DAY CARE CENTER LOCATION: BARANGAY BAGONG SILANGAN DISTRICT 2, QUEZON CITY	DRAWN BY: LBX DATE: 6/13/2021 CHECKED BY: REVISION NO.:	SUBMITTED BY: ENGR. LEO S. DEL ROSARIO, HEAD, PLANNING & PROGRAMMING DIVISION	RECOMMENDING APPROVAL: ENGR. ISAGANI R. VERZOSA, JR., OIC, CITY ENGINEERING DEPARTMENT	APPROVED BY: HON. MA. JOSEFINA G. BELMONTE, CITY MAYOR	SHEET CONTENT: RIGHT SIDE ELEVATION, LEFT SIDE ELEVATION, CROSS SECTION, LONGITUDINAL SECTION	SHEET NO.: AR-06, 06/18



METAL FIRE DOOR WITH PANIC HARDWARE AND TEMPERED FIXED GLASS WITH WIRE MESH

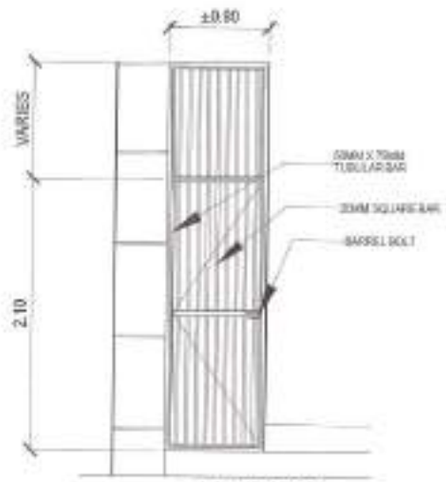




PLAN

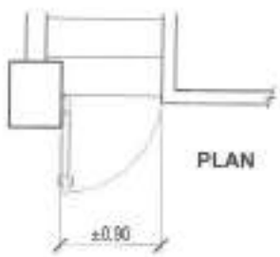
ELEVATION

GATE 1

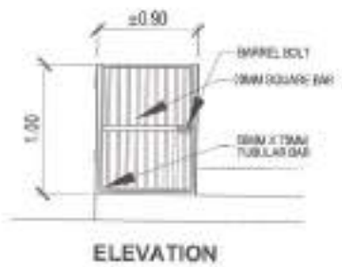


ELEVATION

GATE 2



PLAN



ELEVATION

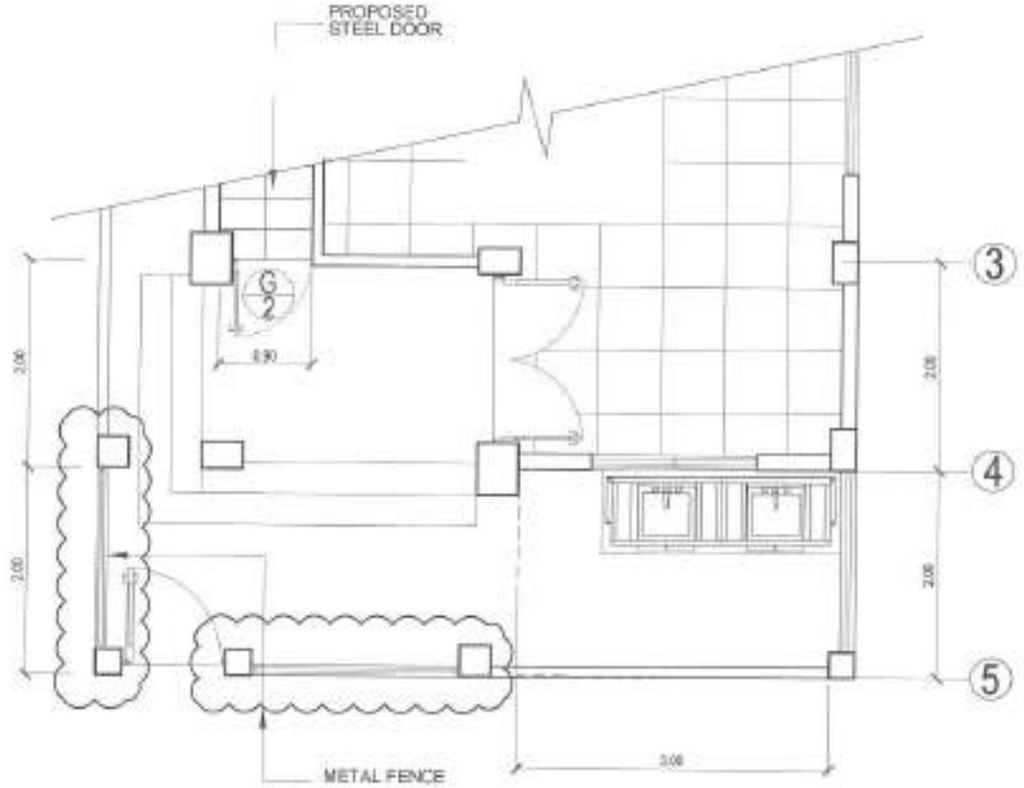
GATE 3

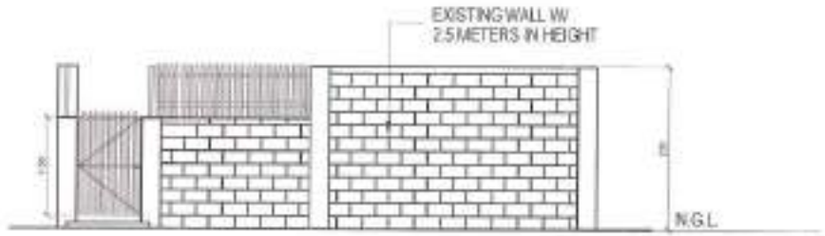
1 SCHEDULE OF DOOR AND GATES

SCALE: 1:50M

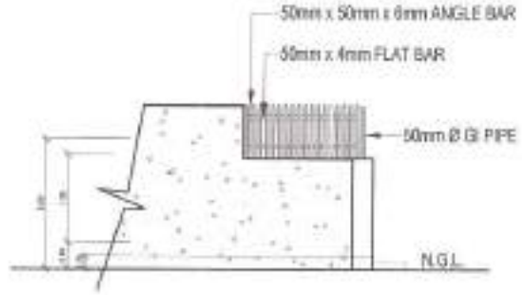
Republika ng Pilipinas
Lungsod ng Quezon
CITY ENGINEERING DEPARTMENT

PROJECT TITLE :	DRAWN BY:	SUBMITTED BY:	RECOMMENDING APPROVAL :	APPROVED BY :	SHEET CONTENT	SHEET NO.
PROPOSED CONSTRUCTION OF HAND WASHING FACILITY AND REHABILITATION OF SITIO VETERANS DAY CARE CENTER	DATE : 8/13/2021	ENGR. LEO S. DEL ROSARIO HEAD, PLANNING & PROGRAMMING DIVISION	ENGR. ISAGANI R. VERZOSA, JR. OIC, CITY ENGINEERING DEPARTMENT	HON. MA. JOSEFINA G. BELMONTE CITY MAYOR	BLOW UP PLAN OF GATE (G-1, G-2) DETAILS OF G-1 AND G-2	AR-07 07 18
LOCATION: BARANGAY BAGONG SILANGAN DISTRICT 2, QUEZON CITY	CHECKED BY:					
	REVISION NO.:					

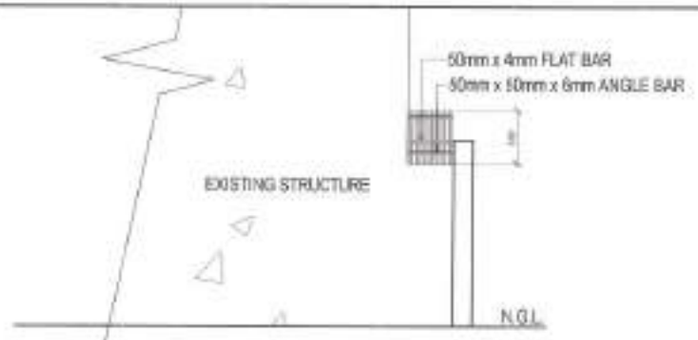




ELEVATION-A



ELEVATION-B



ELEVATION-C

1 BLOW UP PLAN OF PROPOSED METAL FENCE

SCALE: 1:50M

2 ELEVATION/ DETAIL OF METAL FENCE

SCALE: 1:50M

Republika ng Pilipinas
Lungsod ng Quezon
CITY ENGINEERING DEPARTMENT

PROJECT TITLE:	DRAWN BY:	SUBMITTED BY:	RECOMMENDING APPROVAL:	APPROVED BY:	SHEET CONTENT	SHEET NO.
PROPOSED CONSTRUCTION OF HAND WASHING FACILITY AND REHABILITATION OF SITIO VETERANS DAY CARE CENTER	DATE: 8/13/2021	ENGR. LEO S. DEL ROSARIO, HEAD, PLANNING & PROGRAMMING DIVISION	ENGR. GARANI R. VERZOSA, JR., OIC, CITY ENGINEERING DEPARTMENT	HON. MA. JOSEFINA G. BELMONTE, CITY MAYOR	BLOW UP PLAN OF PROPOSED METAL FENCE; ELEVATION/ DETAIL OF METAL FENCE	AR-08 08 18
LOCATION: BARANGAY BAGONG SILANGAN DISTRICT 2, QUEZON CITY	CHECKED BY:					
	REVISION NO.:					

GENERAL NOTES

1. CONSTRUCTION NOTES AND TYPICAL DETAILS APPLY TO ALL DRAWINGS UNLESS OTHERWISE SHOWN OR NOTED. MODIFY TYPICAL DETAILS INCORRECTED TO MEET SPECIAL CONDITIONS.
2. SHOP DRAWINGS WITH A COMPLETE SHOP PLACING DRAWING OF ALL STRUCTURAL FOR ENGINEER'S APPROVAL BEFORE FABRICATION.
3. CONTRACTOR SHALL VERIFY ALL DIMENSIONS BEFORE ALL WORK IS TO BEGIN. CHECK WITH MECHANICAL AND ELECTRICAL CONTRACTORS FOR CONDUITS, PIPE SLEEVES, ETC. TO BE EMBEDDED IN CONCRETE.
4. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO PROVIDE ADEQUATE BRACINGS AND BRACINGS OF THE STRUCTURE FOR ALL LOADS THAT MAYBE IMPOSED DURING CONSTRUCTION.
5. SHOULD ANY QUESTION ARISE FROM THE INTERPRETATION OF ITS CONFLICT WITH OTHER DOCUMENTS, THE ATTENTION OF THE OWNER/ENGINEER SHALL BE CALLED IN WRITING.

CONCRETE & REINFORCEMENT

1. ALL BAR BENDS AND REINFORCEMENT SHALL CONFORM WITH THE LATEST BUILDING CODE OF AMERICAN CONCRETE INSTITUTE (ACI 318).
2. ALL CONCRETE SHALL DEVELOP A MINIMUM COMPRESSIVE STRENGTH AT THE END OF TWENTY EIGHT (28) DAYS WITH CORRESPONDING MAXIMUM SIZE AGGREGATE AND SLUMP AS FOLLOWS:

LOCATION	STRENGTH	MAX. SIZE OF AGGREGATES	MAX. SLUMP
a. SLAB ON GRADE, CURBS, PAVEMENTS, FOOTING, WALL FOOTING	3000 PSI (20.685 MPa)	1½" (38mm)	4 in. (100mm)
b. BEAMS, COLUMNS, RAISED SLAB	4000 PSI (28.685 MPa)	¾ in. (19mm)	4 in. (100mm)
c. LEAN CONCRETE	2500 PSI (17.24 MPa)	1 in. (25mm)	4 in. (100mm)

3. ALL REINFORCING BARS SHALL CONFORM TO PNS OR ASTM.
4. IN GENERAL, THE LATEST EDITION OF ACI 318, MANUAL OF STANDARD PRACTICE DETAILING REINFORCED CONCRETE STRUCTURES SHALL BE ADHERED TO UNLESS OTHERWISE SHOWN SPECIFIED.
5. MINIMUM CONCRETE COVER FOR REINFORCING STEEL AS FOLLOWS:

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

6. SPLICES SHALL BE SECURELY WIRED TOGETHER AND SHALL LAP OR EXTEND IN ACCORDANCE WITH TABLE 1 (TABLE OF LAP SPLICE AND ANCHORAGE LENGTH) UNLESS OTHERWISE SHOWN ON DRAWINGS. SPLICES SHALL BE STAGGERED WHENEVER POSSIBLE.
7. ALL ANCHOR BOLTS, SCREWS, AND OTHER INSERTS SHALL BE PROPERLY POSITIONED AND SECURED IN PLACE PRIOR TO PLACING OF CONCRETE.
8. CONTRACTOR SHALL NOTE AND PROVIDE ALL MISCELLANEOUS CURBS, NAILS, STEELS, EQUIPMENTS, AND RECESSES, SHOWN THAT ARE SO SHOWN BY THE ARCHITECTURAL, ELECTRICAL, AND MECHANICAL DRAWINGS.
9. ALL CONCRETE SHALL BE KEPT MOIST FOR A MINIMUM OF SEVEN (7) CONSECUTIVE DAYS IMMEDIATELY AFTER PLACING BY THE USE OF WET BURLAP, PONDERING, CURING COMPOUNDS OR OTHER APPROVED METHODS.
10. STRIPPING OF FORMS AND SHORES:

CONCRETE	21 DAYS
FOUNDATION	28 DAYS
BEAM SIDES (CLR. HEIGHT WHEN NO STRUCTURAL LOADS ARE IMPOSED)	3 DAYS
PEDESTAL, COLUMNS, WALLS	7 DAYS
BEAMS	21 DAYS

11. DEVELOPMENT LENGTH FOR ALL BARS SHALL BE A MINIMUM OF 30 BAR DIAMETER, UNLESS OTHERWISE NOTED.

STRUCTURAL STEEL AND PLATES

1. ALL STRUCTURAL STEEL SHALL CONFORM TO ASTM A-36 SPECIFICATION WITH A MINIMUM YIELD STRENGTH OF 36,000 PSI.
2. ANCHOR & FASTENER BOLTS: ALL BOLTS SHALL CONFORM TO ASTM A-307 SPECIFICATION.
3. WELDING RODS: ALL WELDING RODS SHALL BE MILD STEEL ELECTRODE, LOW HYDROGEN TYPE (NOT) MINIMUM YIELD STRENGTH = 43MPa.

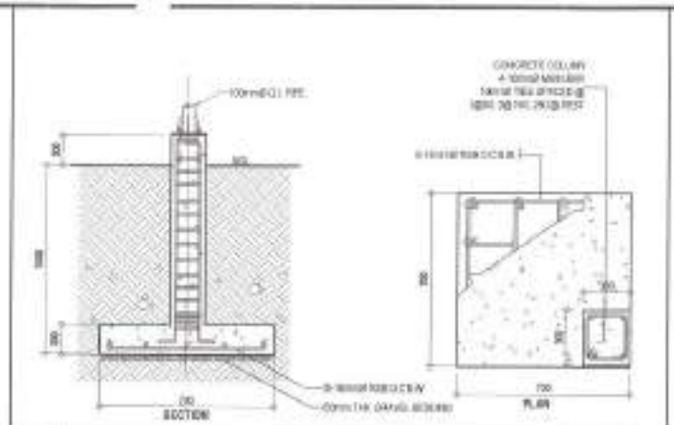
FOUNDATION

1. FOUNDATION IS DESIGNED BASED ON NATIONAL BUILDING CODE OF THE PHILIPPINES FOR AVAILABLE SOIL BEARING CAPACITY OF 200 kPa.
2. FOUNDATION SHALL REST ON NATURAL SOIL, UNLESS OTHERWISE NOTED OR THE EXCAVATED PART OF THE FOUNDATION SHALL REST ON FILL.
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.

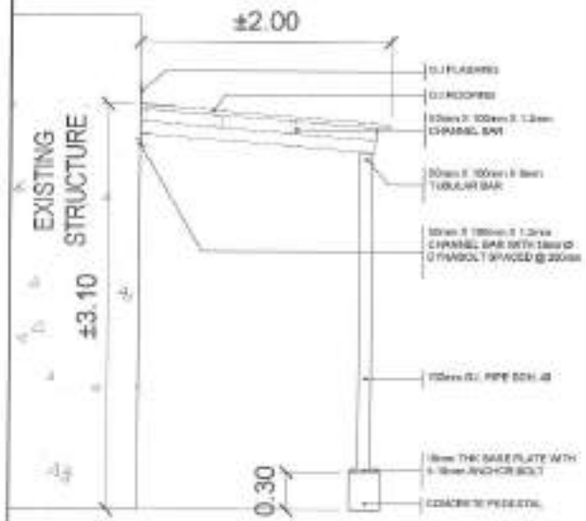
MASONRY WALLS

1. ALL MATERIALS & WORKMANSHIP SHALL BE IN ACCORDANCE W/ THE APPLICABLE STANDARD & SPECIFICATIONS OF THE STRUCTURAL CODE OF THE PHILIPPINES & UNIFORM BUILDING CODE.
2. MORTAR & GROUT FOR ALL CONCRETE MASONRY SHALL CONFORM TO ASTM C270 - TYPE M.
3. ALL CHB SHALL BE LAID OUT WITH THE CELLS IN CONSECUTIVE VERTICAL CONTINUITY. ALL CELLS SHALL DAILY TWICE WITH WATER BEFORE SHALL BE FILLED WITH MORTAR.
4. REINFORCEMENT AS TABULATED BELOW SHALL BE PROVIDED UNLESS OTHERWISE SPECIFIED ON THE PLAN.
5. ALL MASONRY WALLS SHALL BE PROVIDED W/ STIFFENER BEAM BLOCK & STIFFENER AS REQUIRED:
   a. FOR HIGH WALLS & EVERY 3000 mm & COLLAR JOINT AT 900 mm SHOULDER.
   b. FOR DOORS & WINDOWS OPENING PROVIDE LINTEL REINFORCED W/ STIFFENER BEAM BLOCK.

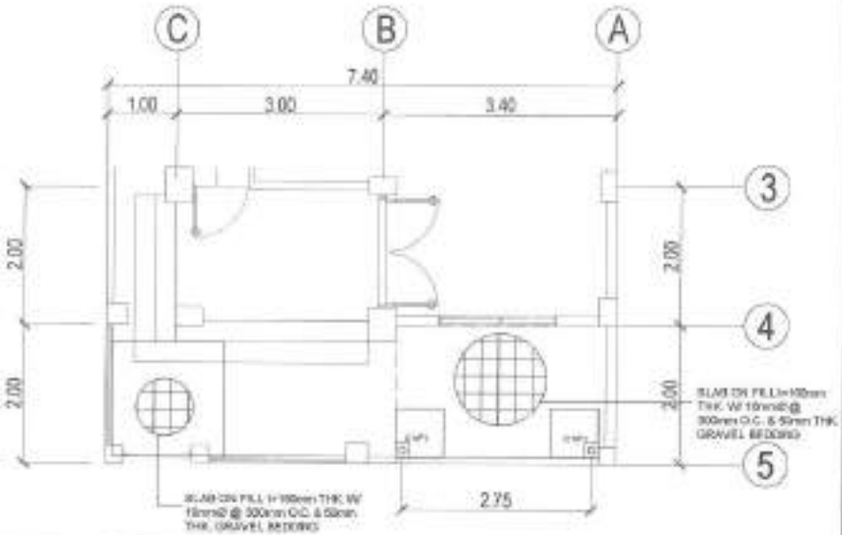
1 GENERAL NOTES — SCALE: NTS



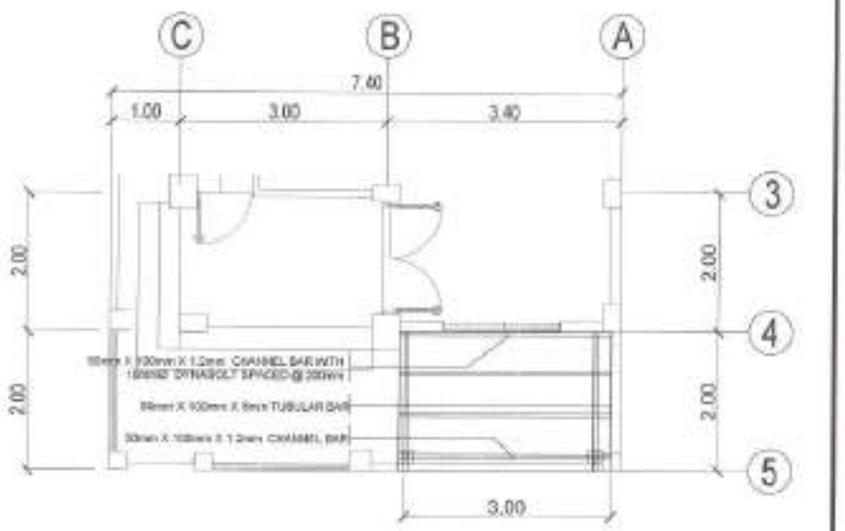
2 COLUMN AND FOOTING DETAIL — SCALE: NTS



3 CANOPY SECTION VIEW — SCALE: NTS



4 CANOPY FOUNDATION PLAN — SCALE: 1:75M



5 CANOPY FRAMING PLAN — SCALE: 1:75M

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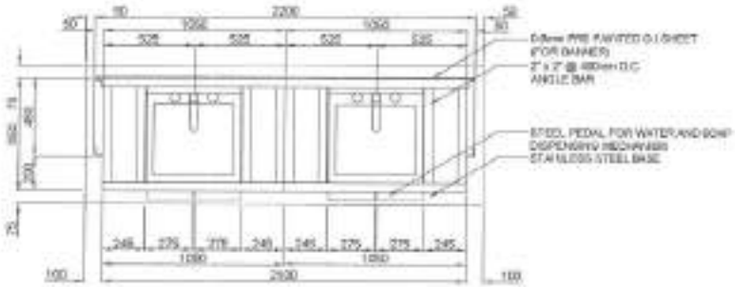
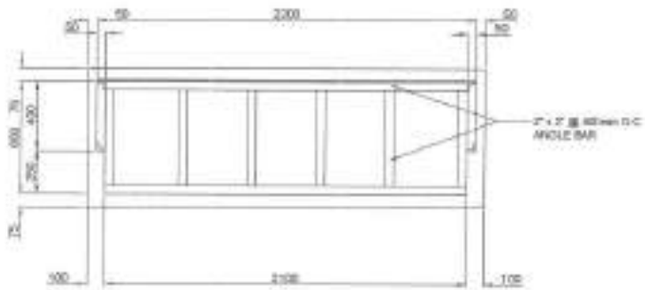
CITY ENGINEERING DEPARTMENT

PROJECT TITLE: PROPOSED CONSTRUCTION OF HAND WASHING FACILITY AND REHABILITATION OF SITIO VETERANS DAY CARE CENTER	DRAWN BY: JTK	SUBMITTED BY: ENGR. LEO S. DEL ROSARIO, HEAD, PLANNING & PROGRAMMING DIVISION	RECOMMENDING APPROVAL: ENGR. ISAGANI R. VERZOSA, JR., OIC, CITY ENGINEERING DEPARTMENT	APPROVED BY: HON. MA. JOSEFINA G. BELMONTE, CITY MAYOR	SHEET CONTENT: GENERAL NOTES CANOPY DETAIL	SHEET NO.: ST-01 0918
LOCATION: BARANGAY BAGONG SILANGAN DISTRICT 2, QUEZON CITY	DATE: 8/13/2021					
	CHECKED BY:					
	REVISION NO.:					



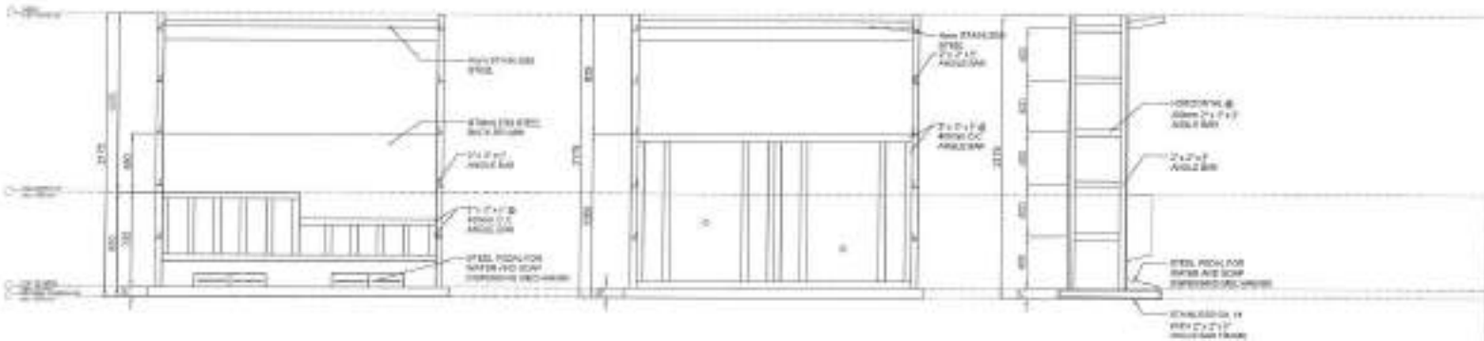
PLAN



ROOF PLAN

1 DOUBLE SINK PORTABLE HAND WASHING STALL PLAN

SCALE: 1:30M



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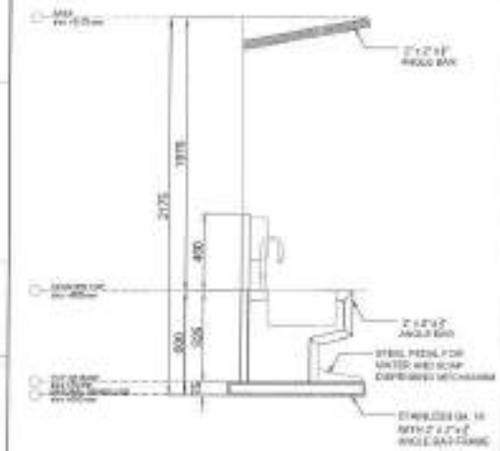

2 ELEVATIONS

SCALE: 1:30M

3 TYPICAL SECTION

SCALE: 1:30M

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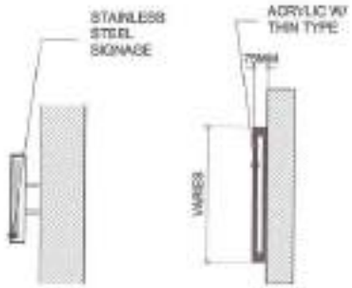
PROJECT TITLE: PROPOSED CONSTRUCTION OF HAND WASHING FACILITY AND REHABILITATION OF SITIO VETERANS DAY CARE CENTER	DRAWN BY:	SUBMITTED BY:	RECOMMENDING APPROVAL:	APPROVED BY:	SHEET CONTENT	SHEET NO.
LOCATION: BARANGAY BAGONG SILANGAN DISTRICT 2, QUEZON CITY	DATE: 8/13/2021	ENGR. LEO S. DEL ROSARIO, REMO - PLANNING & PROGRAMMING DIVISION	ENGR. ISKRANI R. VERZOSA, JR., OIC-CITY ENGINEERING DEPARTMENT	HON. MA. JOSEFINA G. BELMONTE, CITY MAYOR	SINGLE & W/ PORTABLE HAND WASHING STALL PLAN ELEVATIONS TYPICAL SECTIONS	ST-03 10/18
	CHECKED BY:					
	REVISION NO.:					

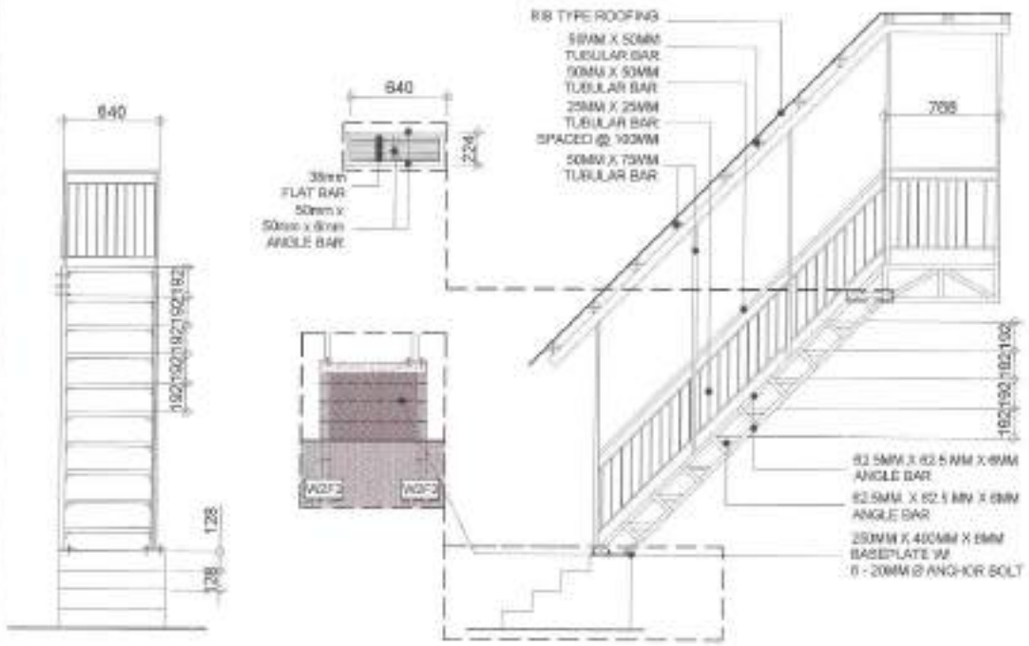
ISOMETRIC OF SIGNAGE



LETTERING

1 SIGNAGE DETAIL

SCALE: NTS



2 FIRE EXIT DETAIL

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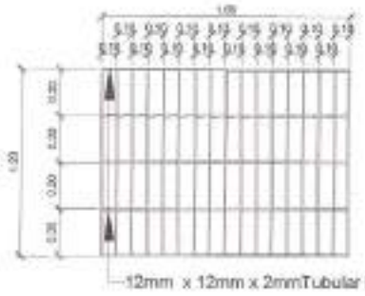
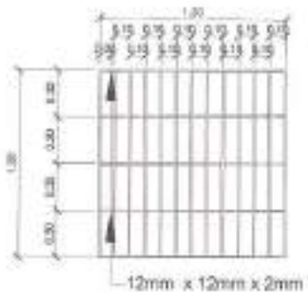
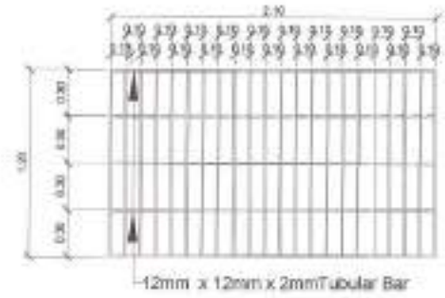


TYPE-A



TYPE-B



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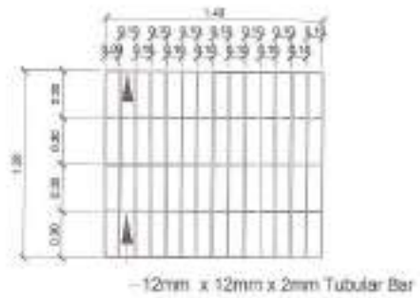

TYPE-D

3 WINDOW GRILLS DETAILS

SCALE: NTS

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CITY ENGINEERING DEPARTMENT

PROJECT TITLE :	DRAWN BY : CX RR	SUBMITTED BY :	RECOMMENDING APPROVAL :	APPROVED BY :	SHEET CONTENT	SHEET NO.
PROPOSED CONSTRUCTION OF HAND WASHING FACILITY AND REHABILITATION OF SITIO VETERANS DAY CARE CENTER	DATE : 8/13/2021	ENGR. LEO S. DEL ROSARIO HEAD - PLANNING & PROGRAMMING DIVISION	ENGR. ISAGANI R. VERZOSA, JR. OIC, CITY ENGINEERING DEPARTMENT	HON. MA. JOSEFINA G. BELMONTE CITY MAYOR	SIGNAGE DETAIL FIRE EXIT DETAIL WINDOW GRILLS DETAILS	ST-02 11 18
LOCATION: BARANGAY BAGONG SILANGAN DISTRICT 2, QUEZON CITY	CHECKED BY :					
	REVISION NO. :					

1. ALL THE PLUMBING/SANITA... ...ORKS INCLUDED HEREIN SHALL BE EXECUTED... ...ORDING TO THE PROVISION OF THE PHILIPPINE PLUMBING CODE , THE NATIONAL BUILDING CODE, RULES AND REGULATION OF THE CITY.
2. COORDINATE THE DRAWINGS WITH OTHER RELATED DRAWINGS AND SPECIFICATION REQUIRED, THE ENGINEER AND ARCHITECT SHALL BE NOTIFIED IMMEDIATELY OF ANY DISCREPANCY FOUND THEREIN.
3. ALL PIPES SHALL BE INSTALLED AS INDICATED ON PLANS. ANY RELOCATION REQUIRED FOR PROPER EXECUTION OF OTHER TRADES SHALL BE WITH PRIOR APPROVAL OF THE ENGINEER OR ARCHITECT.
4. PROPOSED SANITARY UTILITIES SHALL BE CONFORM TO THE ACTUAL LOCATION, DEPTH, AND INVERT ELEVATION OF ALL EXISTING STRUCTURES AND PIPES AS VERIFIED BY THE CONTRACTOR.
5. ALL SLOPES FOR HORIZONTAL DRAINAGE SHALL MAINTAIN 1% MIN. UNLESS OTHERWISE SPECIFIED.
6. SIZES OF WATER SUPPLY PIPES TO FIXTURES SHALL BE IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTION.
7. THE CONTRACTOR SHALL VERIFY ALL EXISTING UTILITIES AT SITE AND COORDINATE THE WORKS WITH THE SEWER LINE EFFLUENT DISPOSAL POINT AND WATER LINE SERVICE CONNECTING POINT.
8. ALL WATER PIPE AND WATER TANKS SHALL BE THOROUGHLY FLUSHED AND DISINFECTED WITH LIQUID CHLORINE OR HYDROCHLORIDE SOLUTION.
9. ALL WATER PIPES SHALL BE HYDROSTATICALLY TESTED TO A PRESSURE 1-1/2 THE DESIGNED WORKING PRESSURE OF THE SYSTEM.
10. ALL SANITARY AND STORM DRAINAGE PIPES SHALL BE HYDROSTATICALLY TESTED AT LEAST 3.0 MTS. HEAD TO ENSURE THAT THE SYSTEM IF IT IS WATER TIGHT.
11. ALL DIMENSIONS ARE IN METERS AND ALL PIPES SIZES ARE IN MILLIMETER UNLESS OTHERWISE SPECIFIED.
12. EVERY PLUMBING FIXTURES INDICATED ON PLANS SHOULD BE PROPERLY VENTILATED.

1 GENERAL NOTES

I. WATER DISTRIBUTION SYSTEM :

———	CWL	COLD WATERLINE
	CWR/WSP	COLD WATER RISER/SANITEE
⋈	GV	GATE VALVE
	CV	CHECK VALVE
	FC	FLEXIBLE CONNECTION
	SP	SANITARY TEE
	FLV	FLOAT VALVE
	SP	SUMP PUMP
	PG	PRESSURE GAUGE
	WM	WATER METER

II. SEWER/ WASTE AND VENT SYSTEM :

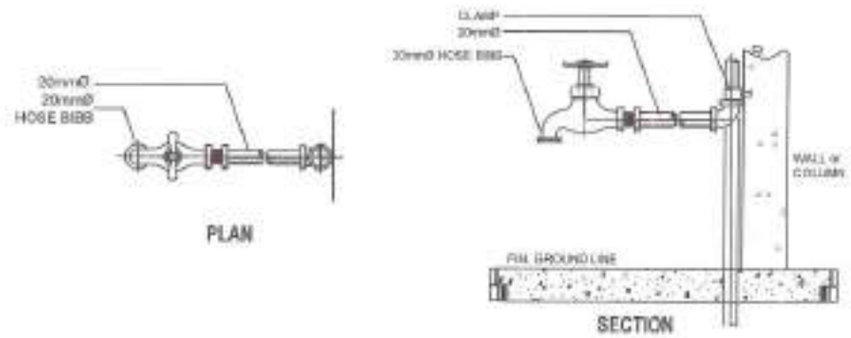
———	SP / WP	SOIL PIPE / WASTE PIPE
— — — —	VS / WPC	VENT STACK / VENT AT CEILING
- - - - - -	DP	STORM DRAIN PIPE
	CB	DRAINAGE STOCK / DESIMPOST
	SVTR	STACK VENT/EXTENSION / CHECK VENT ROOF
	SS	SOIL STACK
———	FCO / GCO	FLOOR CLEANOUT / GROUND CLEANOUT
———	CCO	CEILING CLEANOUT
	SPDR	SUMP PIT DISCHARGE RISER
	SPDP	SUMP PIT DISCHARGE PIPE
	4DCB	4X4 CATCH BASIN

III. FIXTURES AND OTHER LEGEND

FD	FLOOR DRAIN
RD	ROOF DRAIN
SHD	SHOWER
WC	WATER CLOSET
LAV	LAVATORY
UR	URINAL
KS	KITCHEN SINK
BS	BUILDING SEWER
DD	DECK DRAIN
CCO	CEILING CLEANOUT
FCO	FLOOR/GROUND CLEANOUT
DC	DOWNSPOUT
BR	BIDET
D	AIR DIRECTION
SHO	SHOWER DRAIN
GB	GREASE TRAP
MH	MANHOLE
	DIRECTION OF FLOW

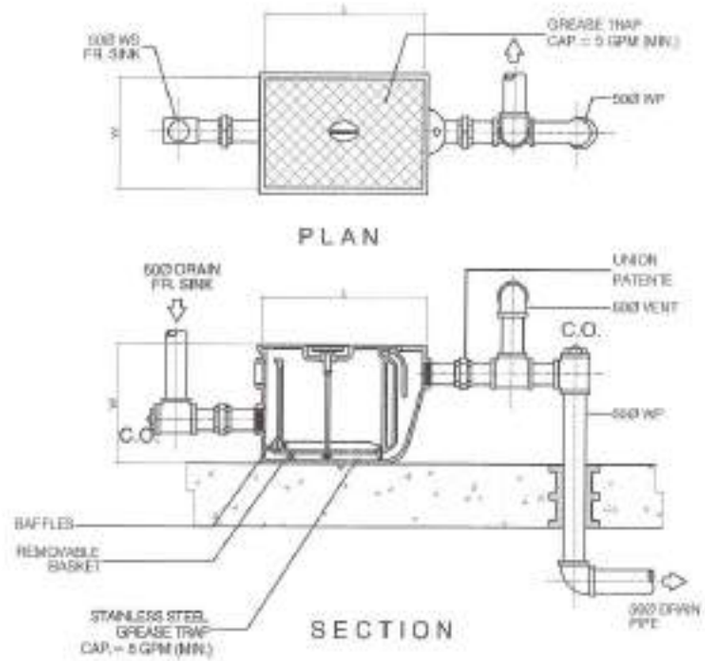
2 LEGEND AND SYMBOLS

SCALE: NTS



3 HOSE BIBB DETAIL

SCALE: NTS



4 DETAIL OF GREASE TRAP

SCALE: NTS

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CITY ENGINEERING DEPARTMENT

PROJECT TITLE : PROPOSED CONSTRUCTION OF HAND WASHING FACILITY AND REHABILITATION OF SITIO VETERANS DAY CARE CENTER	DRAWN BY: MDX	SUBMITTED BY: ENGR. LEO S. DEL ROSARIO, HEAD, PLANNING & PROGRAMMING DIVISION	RECOMMENDING APPROVAL : ENGR. ISAGANI R. VERZOSA, JR., OIC, CITY ENGINEERING DEPARTMENT	APPROVED BY : HON. MA. JOSEFINA G. BELMONTE, CITY MAYOR	SHEET CONTENT: GENERAL NOTES, LEGEND AND SYMBOLS, HOSE BIBB DETAIL, DETAIL OF GREASE TRAP	SHEET NO. PL-01
LOCATION: BARANGAY BAGONG SILANGAN DISTRICT 2, QUEZON CITY	DATE : 9/13/2021					12 | 18
	CHECKED BY:					
	REVISION NO.:					

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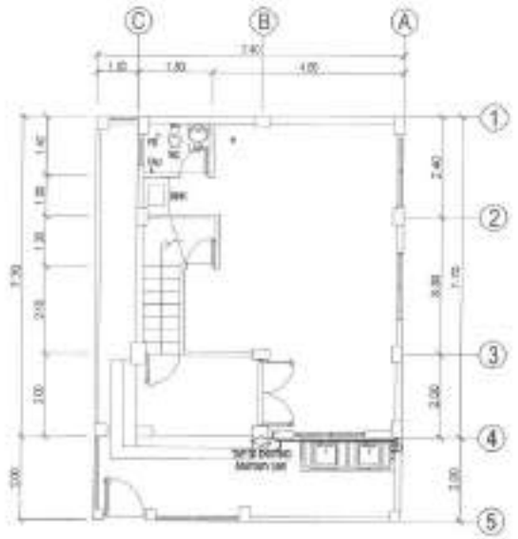
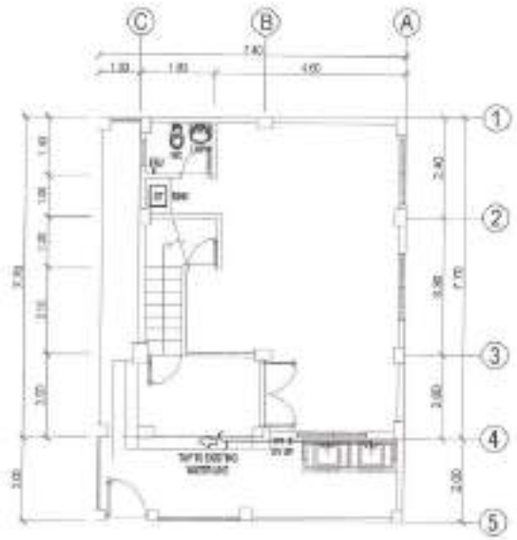
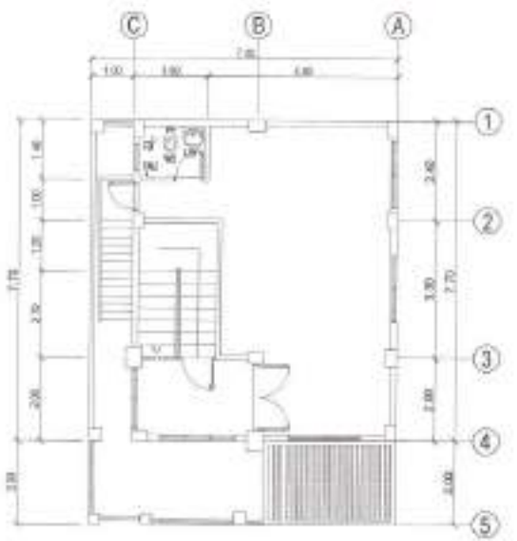


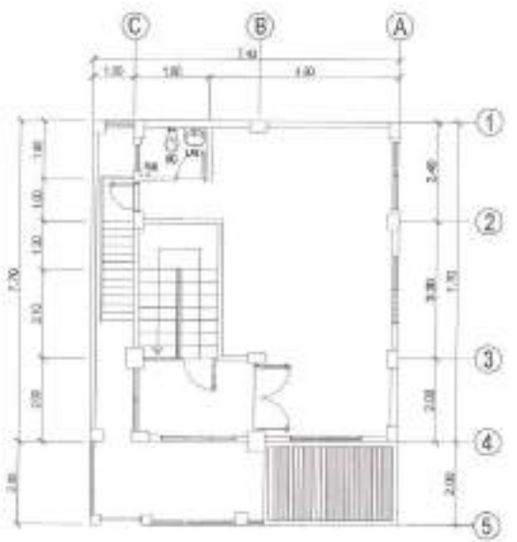
1 GROUND FLOOR SANITARY LINE LAYOUT SCALE : 1:125M



2 GROUND FLOOR WATER LINE LAYOUT SCALE : 1:125M



3 SECOND FLOOR SANITARY LINE LAYOUT SCALE : 1:125M



4 SECOND FLOOR WATER LINE LAYOUT SCALE : 1:125M

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PROJECT TITLE:	DRAWN BY:	SUBMITTED BY:	RECOMMENDING APPROVAL:	APPROVED BY:	SHEET CONTENT	SHEET NO.
PROPOSED CONSTRUCTION OF HAND WASHING FACILITY AND REHABILITATION OF SITIO VETERANS DAY CARE CENTER	DATE : 8/13/2021	ENGR. LEO S. DEL ROSARIO HEAD, PLANNING & PROGRAMMING DIVISION	ENGR. ISAGANI R. VERZOSA, JR. OIC, CITY ENGINEERING DEPARTMENT	HON. MA. JOSEFINA G. BELMONTE CITY MAYOR	GROUND FLOOR SANITARY LINE LAYOUT GROUND FLOOR WATER LINE LAYOUT SECOND FLOOR SANITARY LINE LAYOUT SECOND FLOOR WATER LINE LAYOUT	PL-02 13 18
LOCATION: BARANGAY BAGONG SILANGAN DISTRICT 2, QUEZON CITY	CHECKED BY:	REVISION NO.:				

GENERAL NOTES:

1. ALL ELECTRICAL WORKS SHALL BE DONE IN ACCORDANCE WITH THE PROVISIONS OF THE LATEST EDITION OF THE PHILIPPINE ELECTRICAL CODE, THE LAWS AND ORDINANCES OF THE LOCAL CODE ENFORCING AUTHORITIES AND THE REQUIREMENTS OF THE LOCAL POWER AND TELEPHONE UTILITY COMPANY.
2. THE CONTRACTOR SHALL SECURE ALL PERMITS AND PAY ALL FEES REQUIRED FOR THIS WORK AND SHALL FURNISH THE OWNER THROUGH THE ENGINEERS, FINAL CERTIFICATES OF ELECTRICAL INSPECTION AND APPROVAL FROM PROPER GOVERNMENT AUTHORITIES FOR COMPLETION OF WORK.
3. ALL CONCEALED BRANCH CIRCUITS SHALL BE PVC CONDUITS AND FOR EXPOSED INSTALLATION SHALL BE IMC SUPPORTED BY CONDUIT CLAMPS EVERY 700 MILLIMETER.
4. PULL BOXES SHALL BE PROVIDED BY THE CONTRACTOR WHENEVER NECESSARY TO FACILITATE WIRE PULLING EVEN IF THESE ARE NOT INDICATED ON THE PLANS. SIZING OF ALL PULLBOXES SHALL BE COMPUTED BASED ON THE CODE REQUIREMENTS. SUBMIT SHOP DRAWINGS TO THE ENGINEER FOR APPROVAL PRIOR TO FABRICATION. LOCATION OF PULLBOXES SHALL BE APPROVED BY THE ARCHITECT/ENGINEER AND MUST BE REFLECTED ON THE "AS-BUILT" PLAN.
5. ALL POWER OUTLETS AND SWITCHES SHALL BE GROUNDING TYPE WITH PARALLEL SLOTS FOR 220 V.
6. PROVIDE GROUND FAULT CURRENT INTERRUPTER CIRCUIT BREAKER FOR LOADS MARKED "GFCI" ON THE PLAN.
7. ALL METALLIC CONDUITS, CABINETS AND EQUIPMENT SHALL BE PROPERLY GROUNDED AND BONDED.
8. UNLESS OTHERWISE NOTED, MOUNTING HEIGHT FOR WALL MOUNTED DEVICES SHALL BE AS FOLLOWS:

RECEPTACLE OUTLET - 300 MM AFF , (150MM ABOVE WORKING COUNTER)
TELEPHONE OUTLET - 300 MM AFF
CATV OUTLET - 300 MM AFF
LIGHTING SWITCH - 1200 MM AFF
PANELBOARD - 1800 MM AFF

9. 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 THESE RESPECTIVE SECTIONS.
10. ALL MATERIALS TO BE USED SHALL BE OF THE BEST QUALITY , BRAND NEW AS SPECIFIED.
11. THE DRAWINGS AND SPECIFICATIONS ARE INTENDED TO PRESENT GENERAL LAYOUT AND BROAD OUTLINE/DESCRIPTION OF THE PROJECT BUT DO NOT NECESSARILY INDICATE/DESCRIBED ACTUAL LOCATIONS, LEVEL AND DISTANCES OF THE EQUIPMENT. THE CONTRACTOR IS HEREBY REQUIRED TO MAKE SUCH ADJUSTMENT AT THE JOBSITE AS LOCATION, DISTANCES AND LEVELS ARE GOVERNED BY ACTUAL FIELD CONDITIONS.
12. ANY DISCREPANCY BETWEEN THE PLANS AND SPECIFICATIONS SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER FOR CLARIFICATION DECISION.
13. ALL LIGHTING AND CONVENIENCE OUTLET CIRCUITS SHALL BE 3.5 SQ. MM. THWN-2 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:

LINE 1 - RED
LINE 2 - YELLOW
NEUTRAL - WHITE
GROUND - GREEN

14. BOXES, WIRE, GUTTERS, ENCLOSURE SHALL BE FABRICATED FROM STEEL WITH THICKNESS AS FOLLOWS:

MAXIMUM WIDTH OF THE WIDEST SURFACE STEEL	
UP TO INCLUDING 152.40 MM	GA 16 PAINTED WITH METAL PRIMER EPOXY AND TOPCOAT
OVER 152.40 MM BUT NOT OVER 457.30	GA 14 PAINTED WITH METAL PRIMER EPOXY AND TOPCOAT
OVER 457.00 MM BUT NOT OVER 762 MM	GA 12 PAINTED WITH METAL PRIMER EPOXY AND TOPCOAT
OVER 762 MM	GA 10 PAINTED WITH METAL PRIMER EPOXY AND TOPCOAT

15. ALL ELECTRICAL WORKS HEREIN SHALL BE EXECUTED BY EXPERIENCED MEN UNDER THE DIRECT SUPERVISION OF A FULL-TIME LICENSED ELECTRICAL ENGINEER AND A DULY ACCREDITED ELECTRICAL CONTRACTOR BY PCAB. WORKS SHALL BE NEATLY PLACED, SECURELY FASTENED AND PROPERLY FINISHED.
16. TYPE OF SERVICE ENTRANCE SHALL BE SINGLE-PHASE, TWO-WIRE PLUS GROUND, , 60 HERTZ, 230V AC NOMINAL.
17. CONDUITS IN NO CASE SHALL THERE 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.
18. UPON COMPLETION OF ELECTRICAL CONSTRUCTION WORK, INSULATION RESISTANCE TEST AND FUNCTIONALITY TEST SHALL BE PERFORMED BY THE CONTRACTOR INCLUSIVE OF THE INSTALLATION TO BE REPORTED IN DETAILS ON FORMS APPROVED BY THE QUEZON CITY ENGINEERING DEPARTMENT REPRESENTATIVE. THE GROUND RESISTANCE FOR ELECTRICAL SYSTEM SHALL NOT BE MORE THAN 5 OHMS. COMMUNICATION GROUNDING RESISTANCE SHALL NOT EXCEED 2 OHMS.

1 GENERAL NOTES

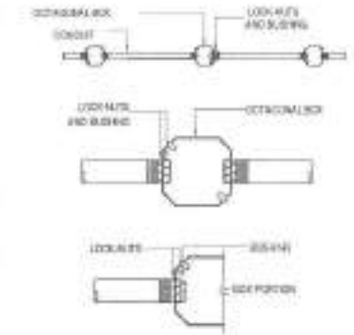
SCALE: NTS

○	PINLIGHT	Sa/S	ONE GANG SWITCH
▬	300MM X 1200MM W/ 2x18W LED TUBE LIGHT TROFFER TYPE	Sabc	THREE GANG SWITCH
⟝	1x18W, LED TUBE LIGHT BOX TYPE	Ss	SELECTOR SWITCH
✲	CEILING FAN	LPP	PANEL BOARD
⊕	CONVENIENCE OUTLET, TWO GANG	LPP-01	CIRCUIT HOMERUN
EXIT	FIRE EXIT SIGNAGE		

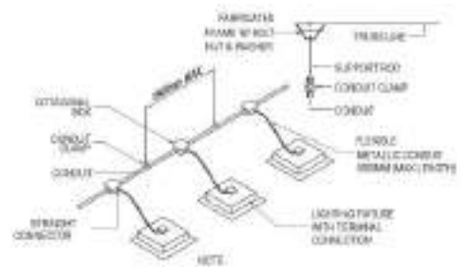
2 LEGEND & SYMBOLS

SCALE: NTS

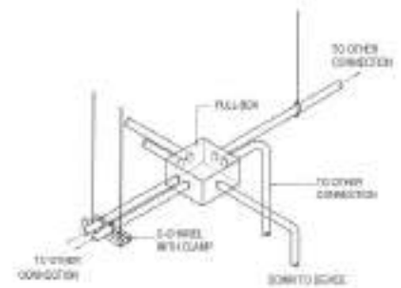
BENDING RADIUS DETAIL



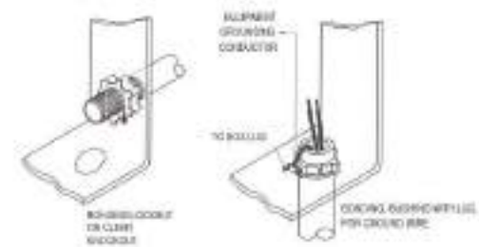
SPOT DETAIL OF CONDUIT RUN AND BOX



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



PROPER CONDUIT LAYOUT at PULL BOX



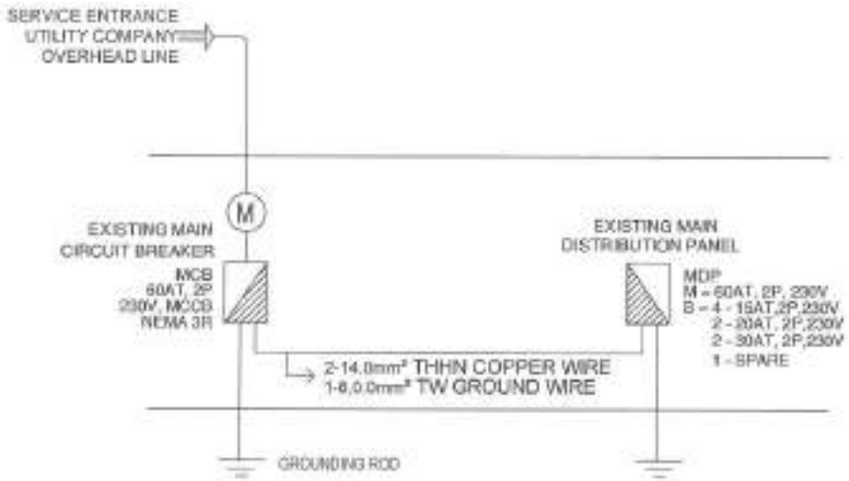
BONDED RACEWAY TERMINATION FOR SHEET METAL

3 MISCELLANEOUS

SCALE: NTS

Republika ng Pilipinas
Lungsod ng Quezon
CITY ENGINEERING DEPARTMENT

PROJECT TITLE:	PROPOSED CONSTRUCTION OF HAND WASHING FACILITY AND REHABILITATION OF SITIO VETERANS DAY CARE CENTER
LOCATION:	BARANGAY BAGONG SILANGAN DISTRICT 2, QUEZON CITY
DRAWN BY:	CDX
DATE:	8/13/2021
CHECKED BY:	
REVISION NO.:	
SUBMITTED BY:	ENGR. LEO S. DEL ROSARIO, HEAD, PLANNING & PROGRAMMING DIVISION
RECOMMENDING APPROVAL:	ENGR. ISAGANI R. VERZOSA, JR., OIC, CITY ENGINEERING DEPARTMENT
APPROVED BY:	HON. MA. JOSEFINA G. BELMONTE, CITY MAYOR
SHEET CONTENT:	GENERAL NOTES, LEGEND AND SYMBOLS, MISCELLANEOUS
SHEET NO.	EL-01, 14/18



1 SINGLE LINE DIAGRAM

SCALE: NTS

PROPOSED LIGHTING POWER PANEL

CKT. NO.	LOAD DESCRIPTION	VOLTS	VA	AMT.	AT	SIZE OF WIRES	SIZE OF CONDUITS
1	6-LIGHTING LAYOUT 2-WALL FAN 2-CEILING FAN (ADDITIONAL)	230	1380	8.62	15	2-3.5mm² THHN COPPER WIRE 1-2.0mm² TW GROUND WIRE	IN 25mmØ PVC PIPE
2	5-LIGHTING LAYOUT 5-LIGHTING LAYOUT	230	700	5.04	15	2-3.5mm² THHN COPPER WIRE 1-2.0mm² TW GROUND WIRE	IN 25mmØ PVC PIPE
3	9-LIGHTING LAYOUT 3-CEILING FAN (ADDITIONAL)	230	1160	6.76	15	2-3.5mm² THHN COPPER WIRE 1-2.0mm² TW GROUND WIRE	IN 25mmØ PVC PIPE
4	7-LIGHTING LAYOUT 1-CEILING FAN (ADDITIONAL)	230	850	5.78	15	2-3.5mm² THHN COPPER WIRE 1-2.0mm² TW GROUND WIRE	IN 25mmØ PVC PIPE
5	8-CONVENIENCE OUTLET 1-CONVENIENCE OUTLET (ADDITIONAL)	230	1080	4.70	20	2-3.5mm² THHN COPPER WIRE 1-2.0mm² TW GROUND WIRE	IN 25mmØ PVC PIPE
6	4-CONVENIENCE OUTLET	230	720	3.13	20	2-3.5mm² THHN COPPER WIRE 1-2.0mm² TW GROUND WIRE	IN 25mmØ PVC PIPE
7	1-2.0 HP ACU	230	2150	12	30	2-5.5mm² THHN COPPER WIRE 1-5.5mm² TW GROUND WIRE	IN 25mmØ PVC PIPE
8	1-2.0 HP ACU	230	2150	12	30	2-5.5mm² THHN COPPER WIRE 1-5.5mm² TW GROUND WIRE	IN 25mmØ PVC PIPE
9	SPARE	230			30		
	TOTAL		11,430	69.67			

COMPUTATION :

IT = 49.67 +(12 x 0.25)

IT = 52.67 AMPS.

OVER CURRENT PROTECTION
USE : 60AT, 2P, 230V MCCB

MAIN FEEDER :
USE : 2 - 14.0mm² THHN COPPER WIRE & 1-8.0mm² TW GROUND WIRE
IN 25mmØ IMC PIPE

ADDITIONAL BRANCHES

2 SCHEDULE OF LOADS

SCALE: NTS

Republika ng Pilipinas
Lungsod ng Quezon
CITY ENGINEERING DEPARTMENT

PROJECT TITLE :
PROPOSED CONSTRUCTION OF HAND WASHING FACILITY AND REHABILITATION OF SITIO VETERANS DAY CARE CENTER
LOCATION: BARANGAY BAGONG SILANGAN DISTRICT 2, QUEZON CITY

DRAWN BY: CX
DATE : 8/13/2021
CHECKED BY:
REVISION NO.:

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

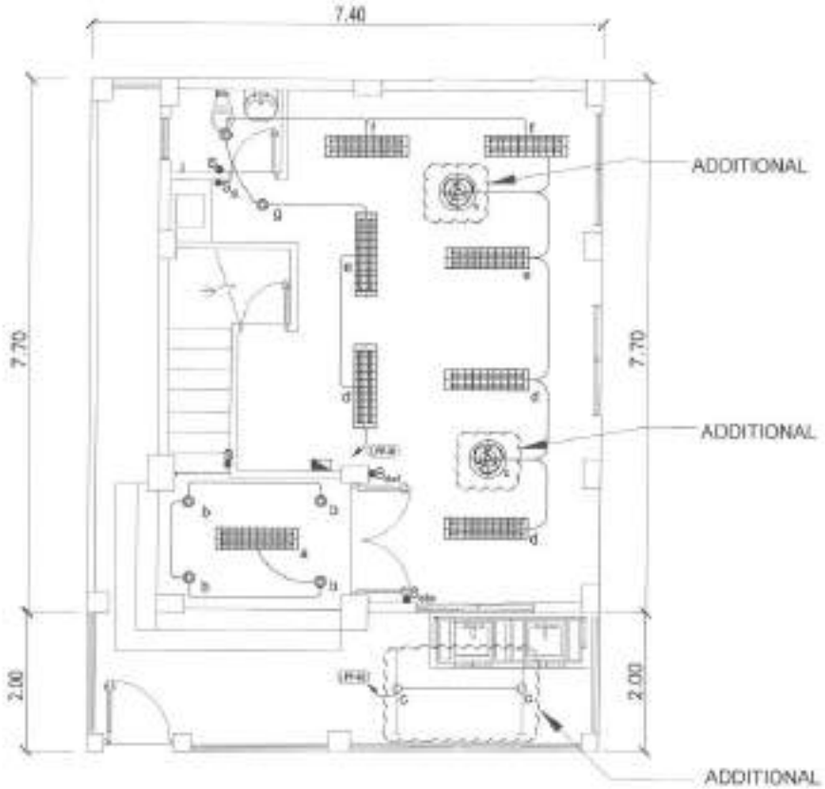
RECOMMENDING APPROVAL :
ENGR. ISAGANI R. VERZOSA, JR.
OIC, CITY ENGINEERING DEPARTMENT

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

SHEET CONTENT: SINGLE LINE DIAGRAM SCHEDULE OF LOADS

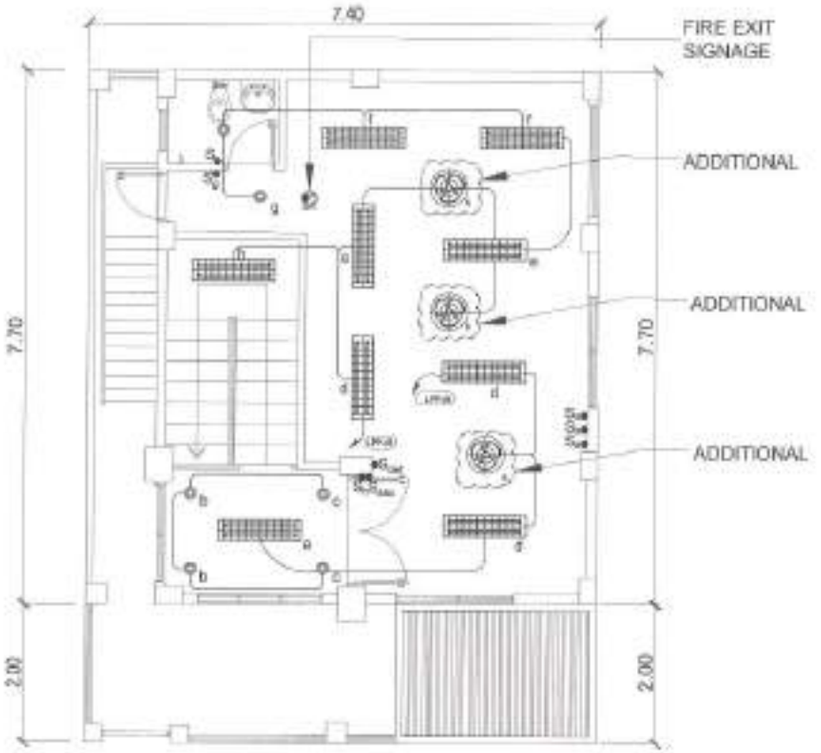
SHEET NO.: EL-02 15 18

DED2021_0869



1 GROUND FLOOR LIGHTING LAYOUT

SCALE: 1:75M

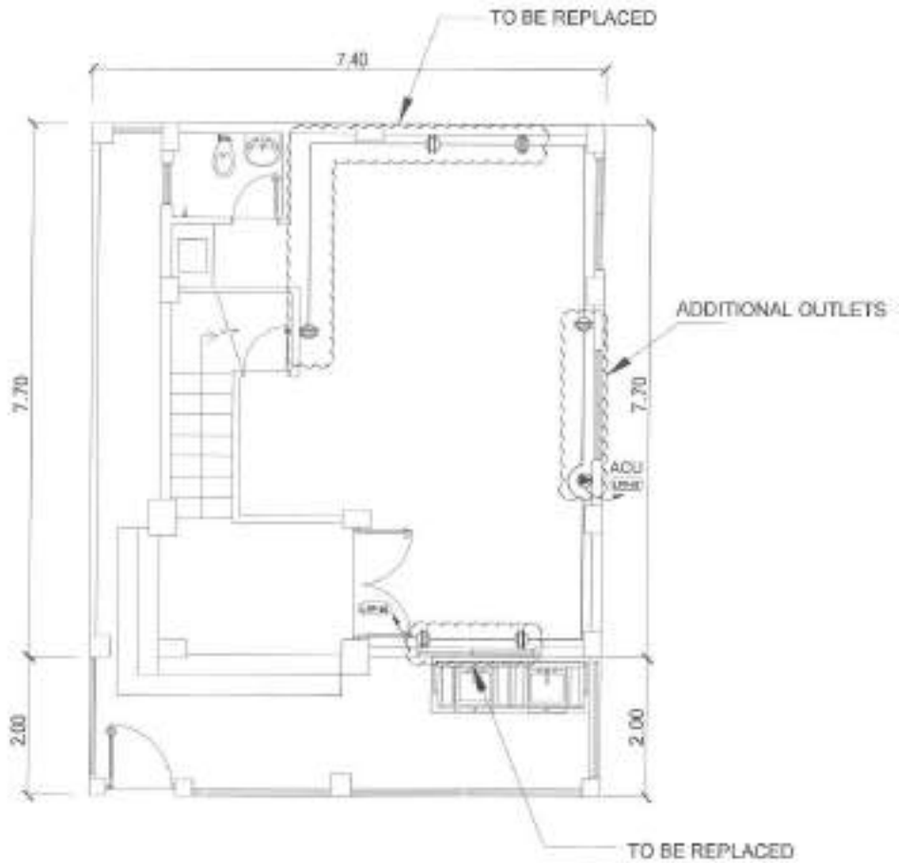


2 SECOND FLOOR LIGHTING LAYOUT

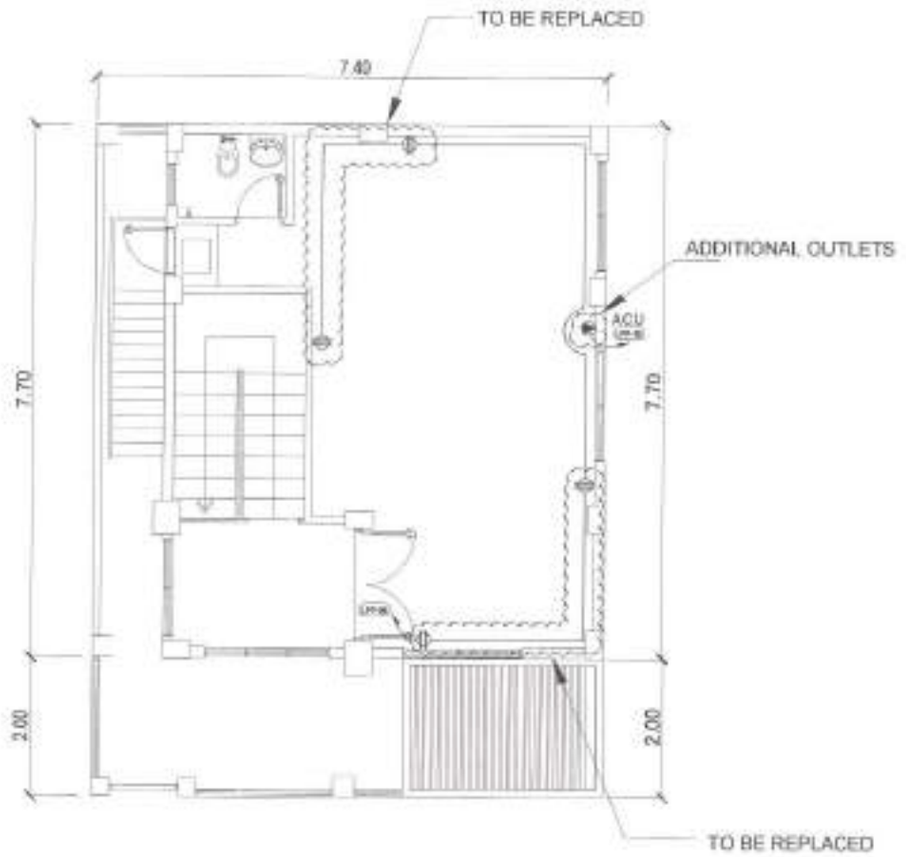
SCALE: 1:75M

Republika ng Pilipinas
Lungsod ng Quezon
CITY ENGINEERING DEPARTMENT

PROJECT TITLE: PROPOSED CONSTRUCTION OF HAND WASHING FACILITY AND REHABILITATION OF SITIO VETERANS DAY CARE CENTER LOCATION: BARANGAY BAGONG SILANGAN DISTRICT II, QUEZON CITY	DRAWN BY: JDX DATE: 8/13/2021 CHECKED BY: REVISION NO.:	SUBMITTED BY: ENGR. LEO S. DEL ROSARIO HEAD, PLANNING & PROGRAMMING DIVISION	RECOMMENDING APPROVAL: ENGR. LIBERANI R. VERZOSA, JR. OIC, CITY ENGINEERING DEPARTMENT	APPROVED BY: HON. MA. JOSEFINA G. BELMONTE CITY MAYOR	SHEET CONTENT: GROUND FLOOR LIGHTING LAYOUT SECOND FLOOR LIGHTING LAYOUT	SHEET NO. EL-03 16 18



1 **GROUND FLOOR POWER LAYOUT** SCALE: 1:75 M



2 **SECOND FLOOR POWER LAYOUT** SCALE: 1: 75 M

Republika ng Pilipinas
Lungsod ng Quezon
CITY ENGINEERING DEPARTMENT

PROJECT TITLE: PROPOSED CONSTRUCTION OF HAND WASHING FACILITY AND REHABILITATION OF SITIO VETERANS DAY CARE CENTER LOCATION: BARANGAY BAGONG SILANGAN DISTRICT 2, QUEZON CITY	DRAWN BY: LBK DATE: 8/13/2021 CHECKED BY: REVISION NO.:	SUBMITTED BY: ENGR. LEO S. DEL ROSARIO, HEAD, PLANNING & PROGRAMMING DIVISION	RECOMMENDING APPROVAL: ENGR. ISAGANI R. VERZOSA, JR., OIC, CITY ENGINEERING DEPARTMENT	APPROVED BY: HON. MA. JOSEFINA G. BELMONTE, CITY MAYOR	SHEET CONTENT: GROUND FLOOR LIGHTING LAYOUT; SECOND FLOOR LIGHTING LAYOUT	SHEET NO.: EL-04, 17 18

1. ALL MECHANICAL WORKS SHALL be DONE IN ACCORDANCE WITH THE LATEST REQUIREMENTS OF THE NATIONAL BUILDING CODE, PSME CODE AND THE RULES AND REGULATIONS OF QUEZON CITY.
2. THE SCOPE OF WORK SHALL INCLUDE ALL WORKS DESCRIBED IN PLANS.
3. THE WORKS SHALL BE EXECUTED IN CLOSE COORDINATION WITH ALL OTHER TRADES.
4. ALL AIRCONDITIONED SPACES SHALL BE MAINTAINED AT 24°C DB AND 50% RH.
5. CONTRACTOR SHALL SUBMIT SHOP DRAWINGS, MANUFACTURERS CATALOGUE, SPECIFICATIONS, SAMPLES, INCLUDING VIBRATION ISOLATORS BEFORE EXECUTION OF WORK.
6. ALL FLOOR SLAB MOUNTED VIBRATING EQUIPMENT SHALL BE PROVIDED WITH VIBRATION ISOLATORS TO PREVENT VIBRATIONS AND NOISE TRANSMISSION.
7. EXHAUST FAN SHALL BE PROVIDED WITH SUITABLE FLEXIBLE CONNECTIONS TO DISCHARGE DUCT.
8. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL TESTING AND COMMISSIONING OF THE WHOLE VENTILATION AND AIRCONDITIONING SYSTEM AND INSTALLATION.
9. ALL POWER WIRING SHALL BE ELECTRICAL AND TERMINATION TO EQUIPMENT SHALL BE MECHANICAL.
10. PROVIDE CONTROL WIRING FOR AIRCONDITIONING EQUIPMENT.
11. PROVIDE THERMOSTAT FOR ALL INDOOR UNITS / FAN COIL UNITS.
12. VERIFY LOCATION OF CONTROLLERS AND SWITCHES ON ELECTRICAL PLANS.
13. ALL PIPE EQUIPMENT CONDENSATE DRAIN SHALL BE CONNECTED TO THE NEAREST FLOOR DRAIN / AD /CB
14. PROVIDE GUIDES, HANGERS, AND SUPPLEMENTAL STEEL SUPPORT FOR ALL PIPING, DUCTING AND EQUIPMENTS.
15. PROVIDE PIPE SLEEVES FOR ALL PIPING PASSING THRU BUILDING STRUCTURE.
16. ALL PIPE DIMENSIONS ARE IN MILLIMETER UNLESS OTHERWISE NOTED.

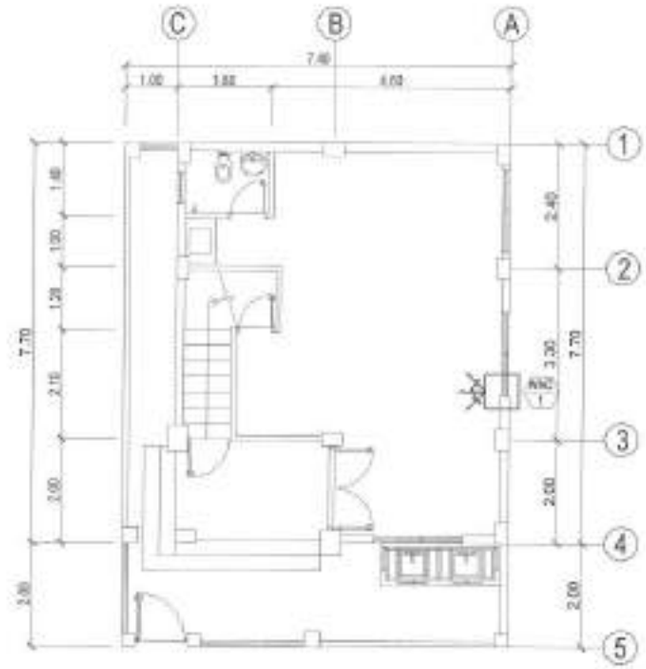
1 GENERAL NOTES

SCALE: NTS

2 LEGENDS

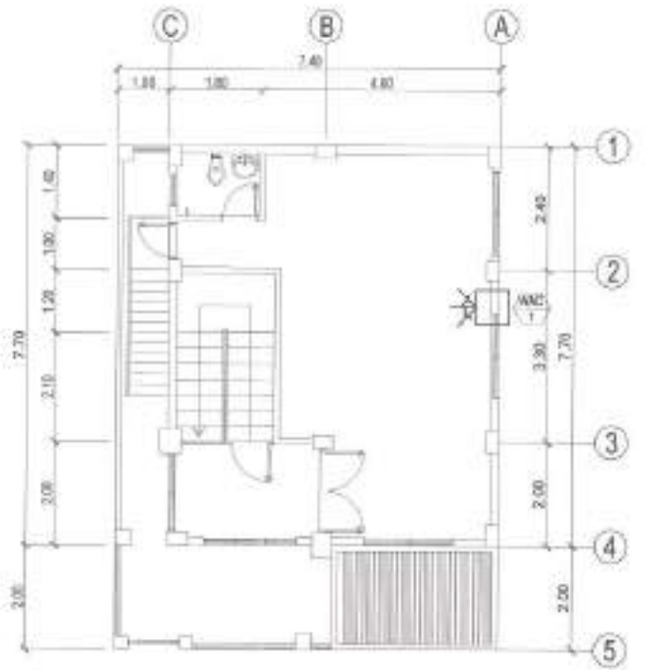
SCALE: NTS

- EQUIPMENT DESIGNATION
- WINDOW TYPE AIR CONDITIONER



3 G/F AIRCONDITION SYSTEM LAYOUT

SCALE: 1:100M



4 2/F AIRCONDITION SYSTEM LAYOUT

SCALE: 1:100M

5 AIRCONDITION SYSTEM SCHEDULE

SCALE: NTS

WINDOW TYPE AIR-CONDITIONER
AIR-COOLED CONDENSING UNITS

DESIGNATION	LOCATION	QUANTITY	COOLING CAPACITY		AIR CIRCULATION	POWER INPUT WATTS	ELECTRICAL SUPPLY			REMARKS
			HP	KJ/HR			VOLTS	PHASE	HERTZ	
WAC 4	AS SHOWN ON PLANS	2 SET	2.0 HP	19,100	450 CFM	1730	220.0	1Ø	60.0	REMOVABLE INTAKE GRILLE, EASY TO CLEAN ANTI-BAC FILTER, W/ MECHANICAL ON/OFF TIMER

Republika ng Pilipinas
Lungsod ng Quezon
CITY ENGINEERING DEPARTMENT

PROJECT TITLE:
PROPOSED CONSTRUCTION OF HAND WASHING FACILITY AND REHABILITATION OF SITIO VETERANS DAY CARE CENTER

LOCATION:
BARANGAY BAGONG SILANGAN DISTRICT 2, QUEZON CITY

DRAWN BY: JDX
DATE: 8/13/2021
CHECKED BY:
REVISION NO.:

SUBMITTED BY:
ENGR. LEGS. DEL ROSARIO
HEAD, PLANNING & PROGRAMMING DIVISION

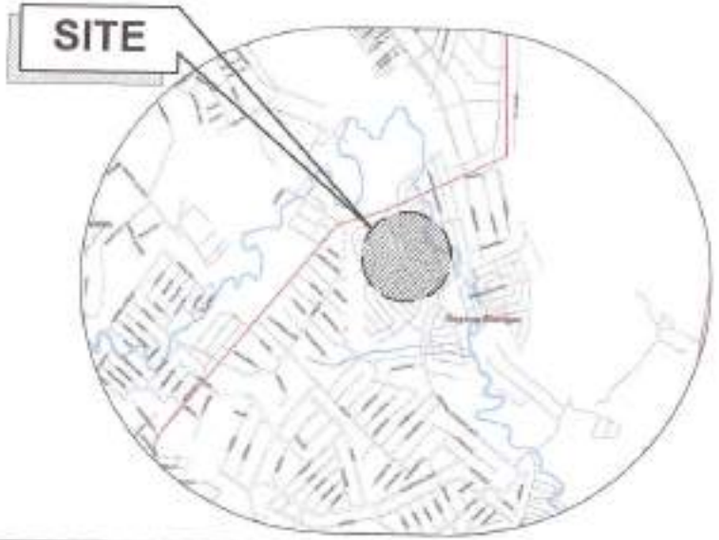
RECOMMENDING APPROVAL:
ENGR. MAGNI R. VERZOSA, JR.
OIC, CITY ENGINEERING DEPARTMENT

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

SHEET CONTENT:
GENERAL NOTES
LEGENDS
GROUND FLOOR AIRCONDITION SYSTEM LAYOUT
SECOND FLOOR AIRCONDITION SYSTEM LAYOUT
AIRCONDITION SYSTEM SCHEDULE

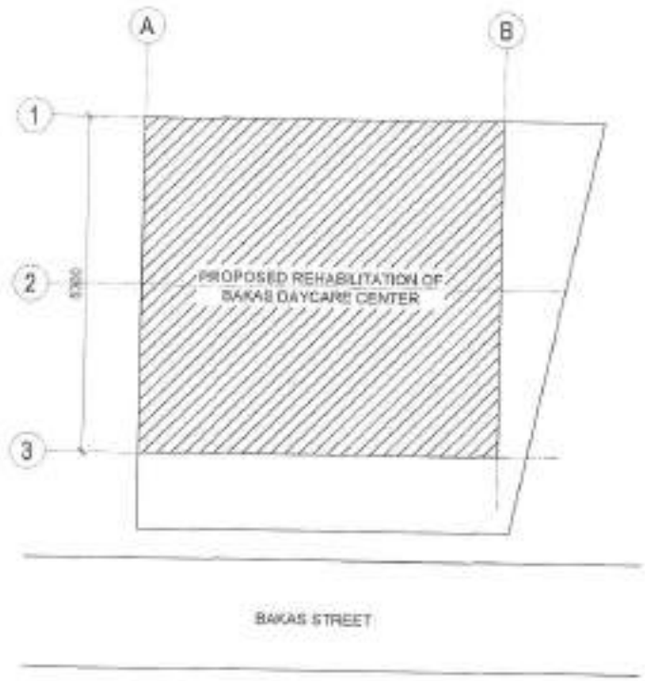
SHEET NO.
ME-01
18 | 18

DED2021 _ 0672



1 VICINITY MAP SCALE: NTS

2 LOCATION PLAN SCALE: NTS



3 SITE DEVELOPMENT PLAN SCALE: NTS

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Republika ng Pilipinas
Lungsod ng Quezon
CITY ENGINEERING DEPARTMENT

PROJECT TITLE:
PROPOSED REHABILITATION OF BAKAS DAYCARE CENTER

LOCATION:
BARANGAY BAGONG SILANGAN DISTRICT 2, QUEZON CITY

DRAWN BY: EME
DATE: AUG. 13, 2021
CHECKED BY:
REVISION NO.: 1

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

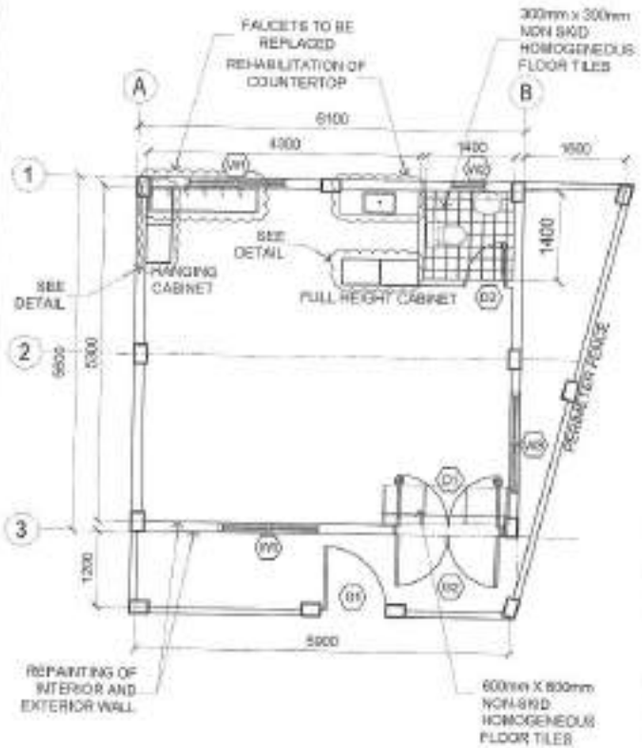
RECOMMENDING APPROVAL:
ENGR. ISAGANI R. VERZOSA, JR.
OIC, ENGINEER'S DEPARTMENT

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

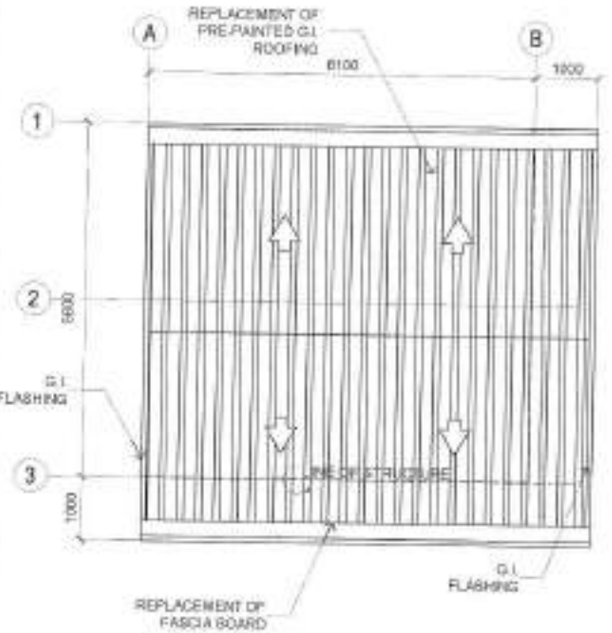
SHEET CONTENT:
VICINITY MAP
LOCATION PLAN
PERSPECTIVE

SHEET NO.
AR-01
01 09

DED2021 _ 0572

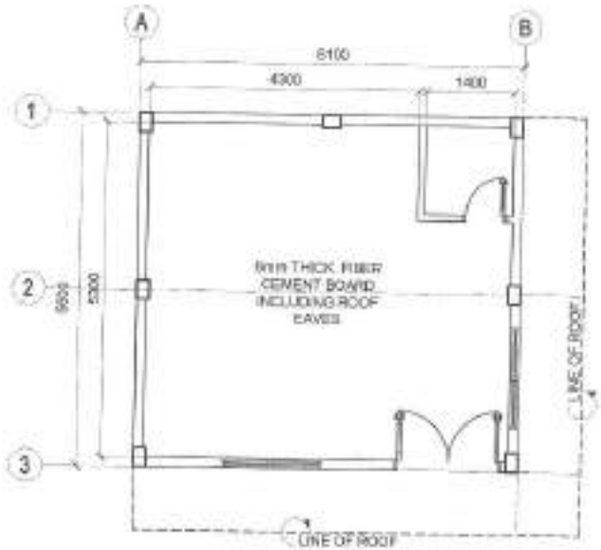


1 **PROPOSED G/F PLAN** SCALE: 1:100 METERS



NOTE:
INSTALLATION OF 6mm THICK ONE-SIDED ALUMINUM FOIL THERMAL INSULATION

2 **ROOF PLAN** SCALE: 1:100 METERS



3 **REFLECTED CEILING PLAN** SCALE: 1:100 METERS

Republika ng Pilipinas
Lungsod ng Quezon
CITY ENGINEERING DEPARTMENT

PROJECT TITLE:
PROPOSED REHABILITATION OF BAKAS DAYCARE CENTER
LOCATION: BARANGAY PASONG SILANGAN, DISTRICT 2, QUEZON CITY

DRAWN BY : EMC
DATE : AUG. 13 2021
CHECKED BY :
PERSON NO. : 1

SUBMITTED BY:
ENGR. LEO S. DEL ROSARIO
HEAD - PLANNING AND PROGRAMMING DIVISION

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

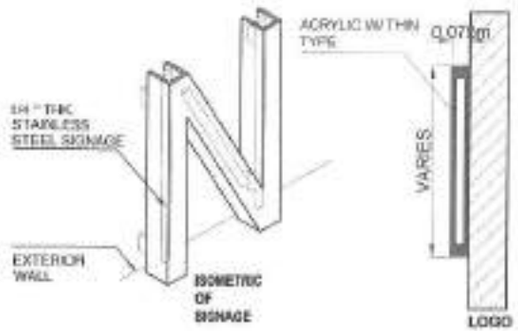
APPROVED BY:
HON. MA. JOSEFINA G. BELMONTE
CITY MAYOR, QUEZON CITY

SHEET CONTENT:
PROPOSED GROUND FLOOR
ROOF FRAMING PLAN
REFLECTED CEILING PLAN

SHEET NO.
AR-02
02 09

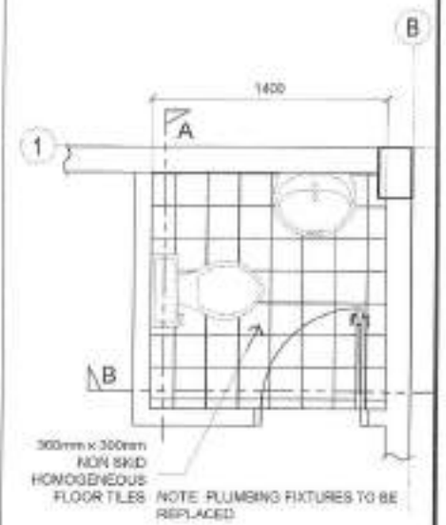
1 FRONT ELEVATION

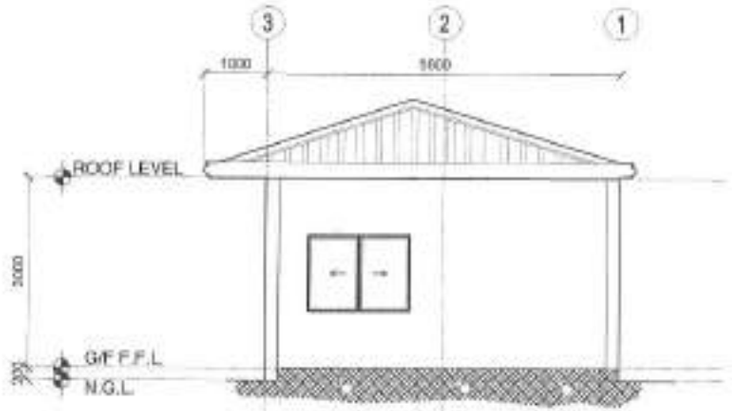
SCALE: 1:100 METERS



3 STANDARD LOGO DETAILS

SCALE: 1:20mts





2 LEFT SIDE ELEVATION

SCALE: 1:100 METERS

SECTION - A

SECTION - B

4 TOILET DETAIL

SCALE: 1:100 METERS

Republika ng Pilipinas
Lungsod ng Quezon
CITY ENGINEERING DEPARTMENT

PROJECT TITLE:
PROPOSED REHABILITATION OF BAKAS DAYCARE CENTER
LOCATION: BARANGAY BAGONG SILANGAN DISTRICT 2, QUEZON CITY

DRAWN BY: GMB
DATE: AUG. 15, 2021
CHECKED BY:
REVISION NO.: 1

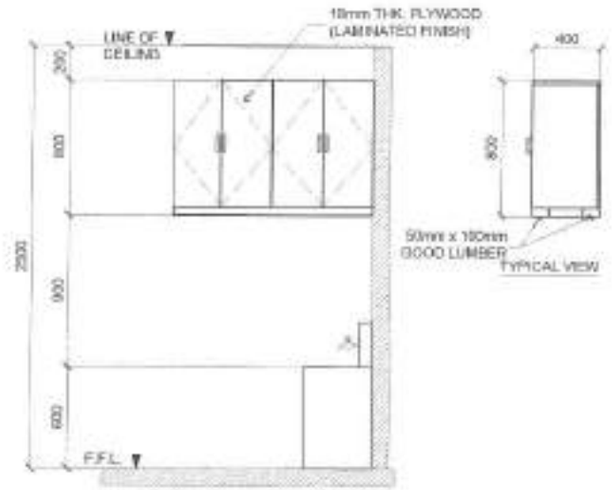
SUBMITTED BY:
ENGR. LEO S. DEL ROSARIO
HEAD - PLANNING & PROGRAMMING DIVISION

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

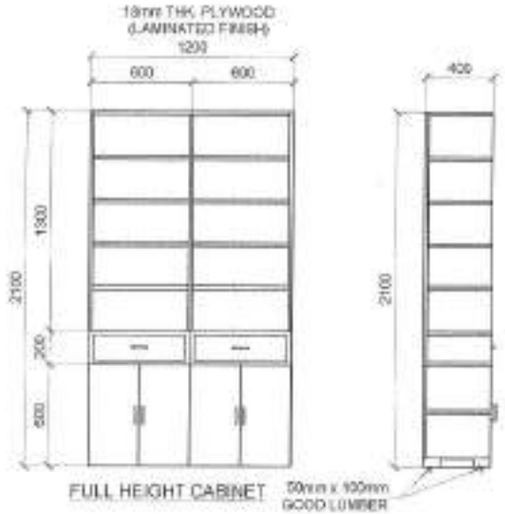
APPROVED BY:
HON. MA. JOSEFINA G. BELMONTE
CITY MAYOR, QUEZON CITY

SHEET CONTENT:
FRONT ELEVATION
LEFT SIDE ELEVATION
STANDARD LOGO DETAILS
TOILET DETAIL

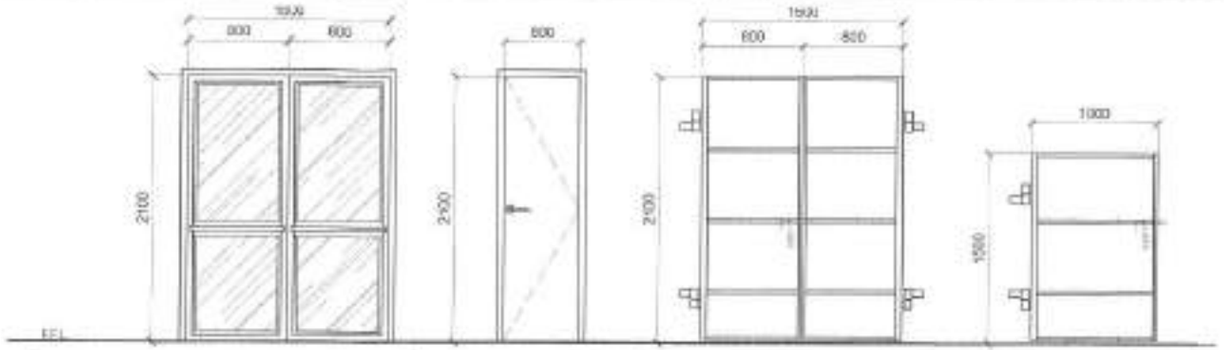
SHEET NO.
AR-03
03 09



HANGING CABINET DETAIL



FULL HEIGHT CABINET



NAME	(01)	(02)	(03)	(04)
NO. OF SETS	1	1	1	1
DESCRIPTION	TEMPERED GLASS DOOR ON ANALOK FINISH ALUMINUM FRAME	PVC FLUSH DOOR	50mmØ PIPE / 25mm x 4mmTHK FLAT BAR / G.I. PLAIN SHEET STEEL DOOR	50mmØ PIPE / 25mm x 4mmTHK FLAT BAR / G.I. PLAIN SHEET STEEL DOOR
LOCATION		GROUND FLOOR	GROUND FLOOR	GROUND FLOOR

NAME	(W)	(X)	(W)	(X)
NO. OF SETS	2	1	1	2
DESCRIPTION	ALUMINUM FRAME POWDER COATED SLIDING WINDOW / GRILLES WITH 6mm THK CLEAR GLASS	ALUMINUM FRAME POWDER COATED AWNING WINDOW WITH 6mm THK CLEAR GLASS	ALUMINUM FRAME POWDER COATED SLIDING WINDOW / GRILLES WITH 6mm THK CLEAR GLASS	12mm VERTICAL AND HORIZONTAL SQUARE BAR
LOCATION	GROUND FLOOR	GROUND FLOOR	GROUND FLOOR	GROUND FLOOR

1 CABINET DETAIL

SCALE: 1:50 METERS

2 DOORS AND WINDOWS SCHEDULE

SCALE: 1:50 METERS

Republika ng Pilipinas
Lungsod ng Quezon
CITY ENGINEERING DEPARTMENT

PROJECT TITLE :

PROPOSED REHABILITATION OF BAKAS DAYCARE CENTER

LOCATION: BARANGAY BAGONG SILANGAN DISTRICT 2, QUEZON CITY

DRAWN BY : CMC

DATE : AUG. 13, 2021

CHECKED BY : JAH

REVISION NO. : 1

SUBMITTED BY:

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

RECOMMENDING APPROVAL:

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

APPROVED BY :

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

SHEET CONTENT

DOORS AND WINDOWS SCHEDULE
WINDOW ACCESSORIES DETAIL
HANGING CABINET DETAIL
COUNTERTOP W/SINK

SHEET NO.

AR-04
04 09

GENERAL NOTES:

1. [illegible] (ACI-318)
2. ALL CONCRETE SHALL DEVELOP A MINIMUM COMPRESSIVE STRENGTH AT THE END OF TWENTY EIGHT (28) DAYS WITH CORRESPONDING MAXIMUM SIZE AGGREGATE AND SLUMP AS FOLLOWS:

LOCATION	STRENGTH	MAX. SIZE OF AGGREGATES	MAX. SLUMP
SLAB ON GRADE, CURBS, PAVEMENT & WALL FOOTING	3000 Psi (20.68 MPa)	1 1/2 (38mm)	4 IN. (100mm)
BEAMS, COLUMN & FOOTING SUSPENDED SLAB	3000 Psi (20.68 MPa)	3/4 IN. (19mm)	4 IN. (100mm)

3. ALL REINFORCING BARS SHALL CONFORM TO PNS GRADE [illegible] AND LARGER BARS
4. IN GENERAL THE LATEST EDITION OF ACI'S MANUAL OF STANDARD PRACTICE DETAILING REINFORCED CONCRETE STRUCTURES SHALL BE ADHERED TO UNLESS OTHERWISE SHOWN OR NOTED.
5. MAINTAIN MINIMUM CONCRETE COVER FOR REINFORCING STEEL AS FOLLOWS:

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

6. SPLICES SHALL BE SECURELY WIRED TOGETHER AND SHALL LAP OR EXTEND IN ACCORDANCE WITH TABLE [illegible] WHENEVER POSSIBLE.
7. ALL ANCHOR BOLTS, DOWELS AND OTHER INSERTS SHALL BE PROPERLY POSITIONED AND SECURED IN PLACE PRIOR TO PLACING OF CONCRETE.
8. CONTRACTOR SHALL [illegible]
9. ALL CONCRETE SHALL BE KEPT MOIST FOR A MINIMUM OF SEVEN (7) CONSECUTIVE DAYS IMMEDIATELY AFTER POURING [illegible] OR OTHER APPROVED METHODS.
10. STRIPPING OF FORMS AND SHORES:

FOUNDATION	24 HOURS
SUSPENDED SLAB EXCEPT WHEN ADDITIONAL LOADS ARE IMPOSED	8 DAYS
WALLS	21 DAYS
BEAMS	14 DAYS
COLUMNS	21 DAYS

11. DEVELOPMENT LENGTH FOR ALL BARS SHALL BE A MINIMUM OF 40 BAR DIAMETER UNLESS OTHERWISE NOTED. STRUCTURAL STEEL AND PLATES
12. ALL STRUCTURAL STEEL SHALL CONFORM TO ASTM [illegible] SPECIFICATIONS WITH MINIMUM YIELD STRENGTH [illegible]
13. ANCHOR & FASTENER BOLTS: ALL BOLTS SHALL CONFORM TO ASTM [illegible] SPECIFICATIONS.
14. WELDING RODS: ALL WELDING RODS SHALL BE [illegible] WITH MINIMUM YIELD STRENGTH [illegible]

FOUNDATION PLAN

1. FOUNDATION IS DESIGNED BASED ON NATIONAL BUILDING CODE OF THE PHILIPPINES FOR AN ALLOWABLE SOIL BEARING CAPACITY OF [illegible]
2. FOUNDATION SHALL REST ON NATURAL SOIL, UNLESS OTHERWISE NOTED BY THE ENGINEER. NO PART OF THE FOUNDATION SHALL REST ON FILL.
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.

NOTES ON MASONRY WALLS

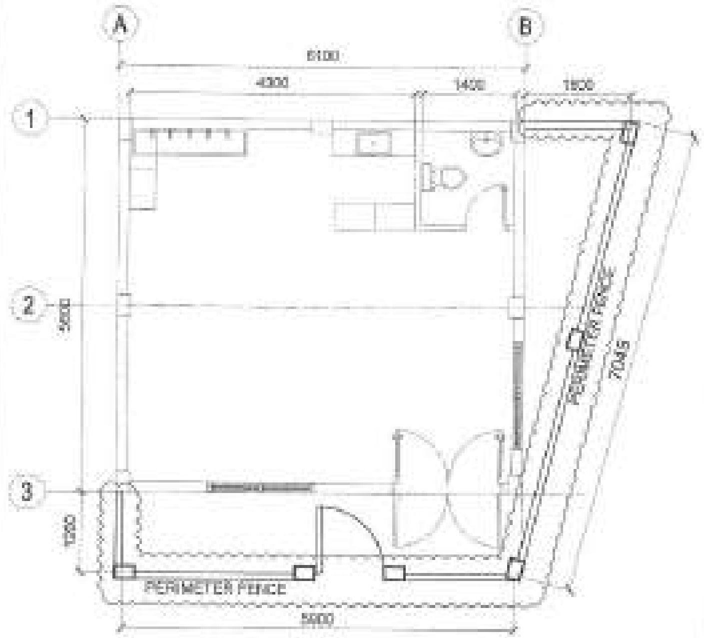
1. ALL MATERIALS WORKMANSHIP SHALL BE IN ACCORDANCE WITH THE APPLICABLE STANDARD & SPECIFICATIONS OF THE STRUCTURAL CODE OF THE PHILIPPINES & UNIFORM BUILDING CODE.
2. MORTAR & GROUT FOR ALL CONCRETE MASONRY SHALL CONFORM TO ASTM [illegible] - TYPE S & SHALL HAVE A MINIMUM OF 28 DAYS STANDARD CYLINDER COMPRESSIVE STRENGTH OF 17.5MPA (2500PSI).
3. ALL CHB SHALL BE LAID OUT WITH CELLS IN UNOBSTRUCTED VERTICAL CONTINUITY.
4. ALL CELLS ESPECIALLY THOSE WITH REINFORCEMENT SHALL BE FILLED WITH MORTAR. REINFORCEMENT AS TABULATED BELOW SHALL BE PROVIDED UNLESS OTHERWISE SPECIFIED IN THE PLAN.
5. ALL MASONRY WALLS SHALL BE PROVIDED W/ STIFFENER BEAM BLOCK & STIFFENER AS REQUIRED.
   5a. FOR HIGH WALLS [illegible]
   5b. FOR DOORS & WINDOWS OPENING PROVIDE [illegible]
6. UNLESS OTHERWISE SHOWN IN PLANS, ALL CONCRETE HOLLOW BLOCK AND CERAMIC BLOCKS SHALL BE REINFORCED AS SHOWN IN THE SCHEDULE OF CONCRETE HOLLOW BLOCKS AND CERAMIC BLOCK REINFORCEMENT.

SCHEDULE OF CONCRETE HOLLOW BLOCK AND CERAMIC BLOCK REINFORCEMENT			
BLOCK THICKNESS	REINFORCEMENT		NOTES
	HORIZONTAL	VERTICAL	
100 mm	10mmØ @ 600mm O.C.	10mmØ @ 600mm O.C.	A. MINIMUM LAP SPLICE = 0.30m B. PROVIDE RIGHT ANGLED REINFORCEMENT AT CORNERS [illegible] C. WHERE CHB OR CER. BLK. WALL [illegible] SHALL BE PROVIDED
150 mm	10mmØ @ 600mm O.C.	10mmØ @ 600mm O.C.	

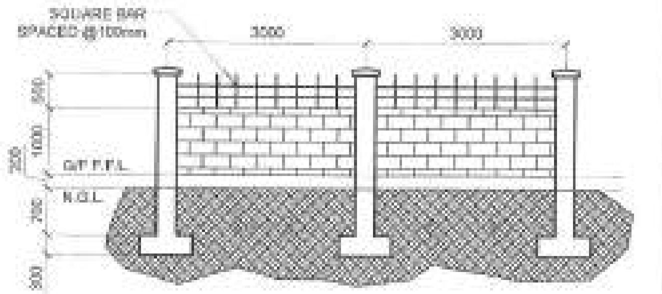
TESTING & COMMISSIONING WORKS:

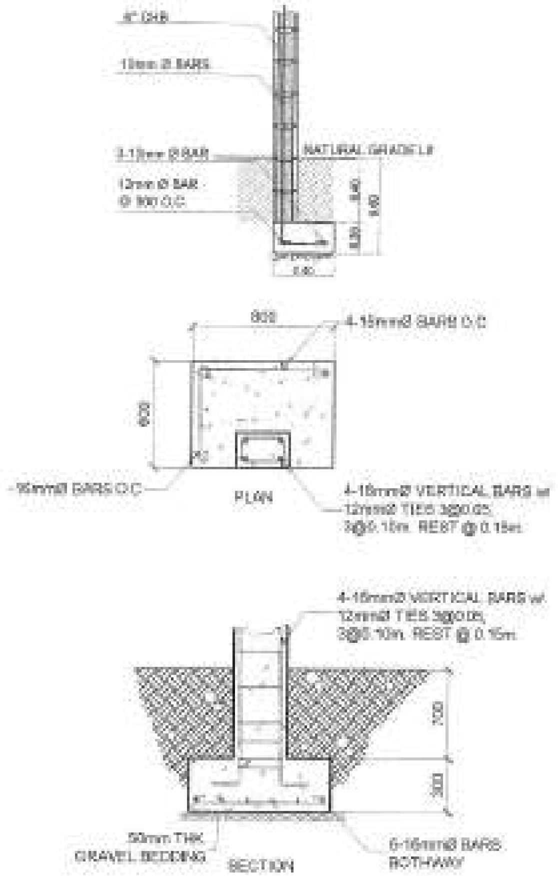
1. ALL NECESSARY TESTING OF MATERIALS AND COMMISSIONING [illegible] PROCEDURE.

1 GENERAL NOTES SCALE NTS



2 PERIMETER FENCE SCALE: 1:100M.





3 PERIMETER FENCE DETAIL SCALE: 1:100M

Republika ng Pilipinas
Lungsod ng Quezon
CITY ENGINEERING DEPARTMENT

PROJECT TITLE: **PROPOSED REHABILITATION OF BAKAS DAYCARE CENTER**

LOCATION: BARANGAY BAGONG SILANGAN DISTRICT 2, QUEZON CITY

DRAWN BY: CHB
DATE: AUG. 13, 2021
CHECKED BY: [illegible]
REVISION NO.: 1

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

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

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

SHEET CONTENT: GENERAL NOTES, PERIMETER FENCE, PERIMETER FENCE DETAIL

SHEET NO. ST-01, 05 | 09

GENERAL NOTES:

1. ALL THE PLUMBING/SANITARY WORKS INCLUDED HEREIN SHALL BE EXECUTED ACCORDING TO THE PROVISION OF THE PHILIPPINE PLUMBING CODE , THE NATIONAL BUILDING CODE, RULES AND REGULATION OF QUEZON CITY.
2. IN CONFORMITY THE DRAWINGS, BOTH OTHER RELATED DRAWINGS AND SPECIFICATION REQUIRED THE WORK UNDER SHALL BE NOTIFIED IMMEDIATELY OF ANY DISCREPANCY FOUND THEREIN.
3. ALL PIPES SHALL BE INSTALLED AS INDICATED ON PLANS. ANY RELOCATION REQUIRED FOR PROPER LOCATION OF FIXTURES SHALL BE WITH PRIOR APPROVAL OF THE ENGINEER OR ARCHITECT.
4. PROPOSED SANITARY OUTLETS SHALL BE CONFORM TO THE ACTUAL LOCATION, DEPTH AND INVERT ELEVATION OF ALL EXISTING STRUCTURES AND PIPELINES VERIFIED BY THE CONTRACTOR.
5. ALL ALL PIPES FOR HORIZONTAL DRAINAGE SHALL MAINTAIN 1% SLOPE UNLESS OTHERWISE SPECIFIED.
6. SIZES OF WATER SUPPLY PIPING TO FIXTURES SHALL BE IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS.
7. THE CONTRACTOR SHALL VERIFY ALL EXISTING UTILITIES AT SITE AND COORDINATE THE WORKS WITH THE AGENCIES INVOLVED (MERALCO, PLDT AND WATER LINE BRANCH CONNECTING POINT).
8. ALL WATER PIPE AND WATER TANKS SHALL BE CLEANED, FLUSHED AND DISINFECTED WITH LIQUID CHLORINE OR HYPERCHLORIDE SOLUTION.
9. ALL WATER PIPES SHALL BE HYDROSTATICALLY TESTED TO A PRESSURE NOT EXCEEDING WORKING PRESSURE OF THE SYSTEM.
10. ALL SANITARY AND STORM DRAINAGE PIPES SHALL BE HYDROSTATICALLY TESTED AT LEAST 3 M (10 FT.) HEAD TO ENSURE THAT THE SYSTEM ARE WATER TIGHT.
11. ALL EXPANSION JOINTS, WATER AND ALL PIPES INSIDE WALLS OR SLABS SHALL BE SLEEVED AS DIRECTED OTHERWISE SPECIFIED.
12. ALL PIPES INDICATED ON PLANS REFER TO PIPES EXISTING.

1 GENERAL NOTES

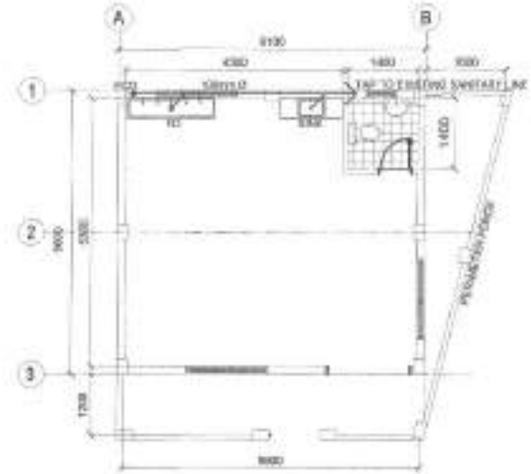
1. SANITARY SYSTEM AND VENT SYSTEM

SP/SVP	SOIL PIPE/SANITARY PIPE	ST	SOIL STACK
VP/VPC	VENT PIPE/VENT STACK	FD	FLOOR DRAIN
SP	STORM DRAIN PIPE	CB	CATCH BASIN
FCO/CO	FLOOR CLEANOUT/GROUND CLEANOUT	AD	AREA DRAIN
CCO	CEILING CLEAN OUT		WALL TYPE URINAL
DS	DRAINAGE SYSTEM DOWNSPOUT		SERVICE SINK
VSTR	VENT STACK/STRAND THROUGH ROOF		

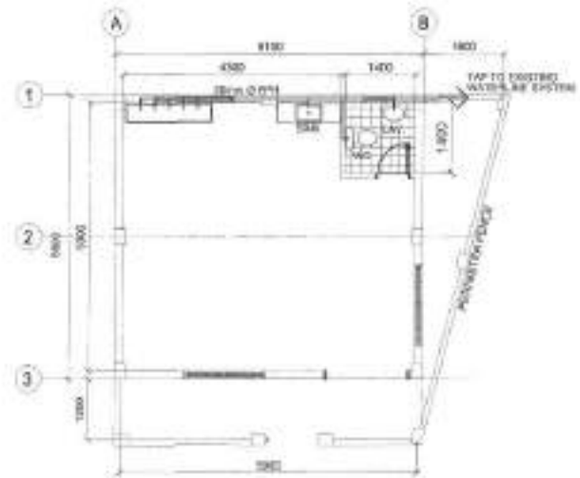
2. WATER DISTRIBUTION SYSTEM

CWL	COLD WATER LINE
CWR	COLD WATER RISER
GV	GATE VALVE
CV	CHECK VALVE
WM	WATER METER
ID	BALCONY DRAIN

2 LEGEND AND SYMBOLS



3 SANITARY LAYOUT



4 WATERLINE LAYOUT

SCALE: 1:100 METERS

Republika ng Pilipinas
Lungsod ng Quezon
CITY ENGINEERING DEPARTMENT

PROJECT TITLE: PROPOSED REHABILITATION OF BAKAS DAYCARE CENTER	DRAWN BY : CMC	SUBMITTED BY: ENGR. LEO S. DEL ROSARIO, HEAD - PLANNING AND PROGRAMMING DIVISION	RECOMMENDING APPROVAL: ENGR. BENJAMIN R. VERZOSA, JR., OIC, CITY ENGINEER'S DEPARTMENT	APPROVED BY: HON. MA. JOSEFINA G. BELMONTE, CITY MAYOR, QUEZON CITY	SHEET CONTENT: GENERAL NOTES / LEGEND AND SYMBOLS / WASTE/ SEWER LAYOUT / WATERLINE LAYOUT	SHEET NO. PL-01 06 09
LOCATION: BARANGAY BAGONG SILANGAN DISTRICT 2, QUEZON CITY	DATE: AUG. 13, 2021					
	CHECKED BY: JMA					
	REVISION NO. : 1					

GENERAL NOTES:

1. ALL ELECTRICAL WORKS SHALL BE DONE IN ACCORDANCE WITH THE PROVISIONS OF THE LATEST EDITION OF THE PHILIPPINE ELECTRICAL CODE, THE LAWS AND ORDINANCES OF THE LOCAL CODE ENFORCING AUTHORITIES AND THE REQUIREMENTS OF THE LOCAL POWER AND TELEPHONE UTILITY COMPANY.
2. THE CONTRACTOR SHALL SECURE ALL PERMITS AND PAY ALL FEES REQUIRED FOR THE WORK AND SHALL FURNISH THE OWNER THROUGH THE ENGINEERS, FINAL CERTIFICATES OF ELECTRICAL INSPECTION AND APPROVAL FROM PROPER GOVERNMENT AUTHORITIES FOR COMPLETION OF WORK.
3. ALL EMBEDDED BRANCH CIRCUITS SHALL BE PVC CONDUITS AND FOR EXPOSED INSTALLATION SHALL BE RIGID SUPPORTED BY CONDUIT CLAMPS EVERY 700 MILLIMETER.
4. PULL BOXES SHALL BE PROVIDED BY THE CONTRACTOR WHENEVER NECESSARY TO FACILITATE WIRE PULLING EVEN IF THESE ARE NOT INDICATED ON THE PLANS. SIZING OF ALL PULLBOXES SHALL BE COMPUTED BASED ON THE CODE REQUIREMENTS. SUBMIT SHOP DRAWINGS TO THE ENGINEER FOR APPROVAL PRIOR TO FABRICATION. LOCATION OF PULLBOXES SHALL BE APPROVED BY THE ARCHITECT/ENGINEER AND MUST BE REFLECTED ON THE "AS-BUILT" PLAN.
5. ALL POWER OUTLETS AND SWITCHES SHALL BE GROUNDING TYPE WITH PARALLEL SLOTS FOR 220 V.
6. PROVIDE GROUND FAULT CURRENT INTERRUPTER CIRCUIT BREAKER FOR LOADS MARKED "GFCI" ON THE PLAN.
7. ALL METALLIC CONDUITS, CABINETS AND EQUIPMENT SHALL BE PROPERLY GROUNDED AND BONDED.
8. UNLESS OTHERWISE NOTED, MOUNTING HEIGHT FOR WALL MOUNTED DEVICES SHALL BE AS FOLLOWS:

RECEPTACLE OUTLET	- 300 MM AFF. (150MM ABOVE WORKING COUNTER)
TELEPHONE OUTLET	- 300 MM AFF
CATV OUTLET	- 300 MM AFF
LIGHTING SWITCH	- 1400 MM AFF
PANELBOARD	- 1800 MM AFF

9. REFER TO MECHANICAL, PLUMBING AND FIRE PROTECTION DRAWINGS FOR RATINGS AND LOCATIONS OF EQUIPMENT AS WELL AS THEIR CONTROL SOURCES AS SPECIFIED AND OR SHOWN UNDER THEIR RESPECTIVE SECTIONS.
10. ALL MATERIALS TO BE USED SHALL BE OF THE BEST QUALITY, BRAND NEW AS SPECIFIED.
11. THE DRAWINGS AND SPECIFICATIONS ARE INTENDED TO PRESENT GENERAL LAYOUT AND BROAD OUTLINE DESCRIPTION OF THE PROJECT BUT DO NOT NECESSARILY INDICATE/SHOW/INDICATE ACTUAL LOCATIONS, LEVEL AND DISTANCES OF THE EQUIPMENT. THE CONTRACTOR IS HEREBY REQUIRED TO MAKE SUCH ADJUSTMENT AT THE JOBSITE AS LOCATION, DISTANCES AND LEVELS ARE GOVERNED BY ACTUAL FIELD CONDITIONS.
12. ANY DISCREPANCY BETWEEN THE PLANS AND SPECIFICATIONS SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER FOR CLARIFICATION/DECISION.
13. ALL LIGHTING AND CONVENIENCE OUTLET CIRCUITS SHALL BE 3.5 SQ. MM. THWN-2 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:

LINE 1 -	RED
LINE 2 -	YELLOW
NEUTRAL -	WHITE
GROUND -	GREEN

14. BOXES, WIRE, GUTTERS, ENCLOSURE SHALL BE FABRICATED FROM STEEL WITH THICKNESS AS FOLLOWS:
MAXIMUM WIDTH OF THE WIDEST SURFACE (mm).

UP TO INCLUDING 152.40 MM	GA 16 PAINTED WITH METAL PRIMER EPOXY AND TOPCOAT
OVER 152.40 MM BUT NOT OVER 457.20	GA 14 PAINTED WITH METAL PRIMER EPOXY AND TOPCOAT
OVER 457.20 MM BUT NOT OVER 762 MM	GA 12 PAINTED WITH METAL PRIMER EPOXY AND TOPCOAT
OVER 762 MM	GA 10 PAINTED WITH METAL PRIMER EPOXY AND TOPCOAT

15. ALL ELECTRICAL WORKS HEREIN SHALL BE EXECUTED BY EXPERIENCED MEN UNDER THE DIRECT SUPERVISION OF A FULL-TIME LICENSED ELECTRICAL ENGINEER AND A DULY ACCREDITED ELECTRICAL CONTRACTOR BY PCAB. WORKS SHALL BE NEATLY PLACED, SECURELY FASTENED AND PROPERLY FINISHED.
16. TYPE OF SERVICE ENTRANCE SHALL BE SINGLE-PHASE, TWO-WIRE PLUS GROUND, 60 HERTZ, 230V ACI/2WIRAL.
17. CONDUIT RUN AND CASE SHALL THERE 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.
18. UPON COMPLETION OF ELECTRICAL CONSTRUCTION WORK, INSULATION RESISTANCE TEST AND FUNCTIONALITY TEST SHALL BE PERFORMED BY THE CONTRACTOR INCLUSIVE OF THE INSTALLATION TO BE REPORTED IN DETAILS ON FORMS APPROVED BY THE QUEZON CITY ENGINEERING DEPARTMENT REPRESENTATIVE. THE GROUND RESISTANCE FOR ELECTRICAL SYSTEMS SHALL NOT BE MORE THAN 5 OHMS. COMMUNICATION GROUNDING RESISTANCE SHALL NOT EXCEED 3 OHMS.

1 GENERAL NOTES

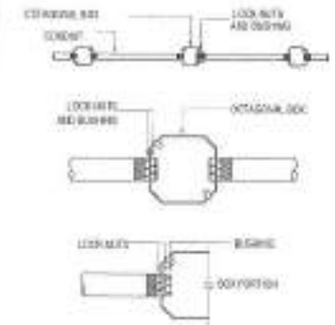
SCALE: NTS

⊕	CONVENIENCE OUTLET, TWO GANG	SS	SELECTOR SWITCH
⊕	CONVENIENCE OUTLET, ONE GANG	LPP	PANEL BOARD
	ADDITIONAL ORBIT FAN		PIN LIGHT
	WALL FAN		1x18W, LED TUBE LIGHT TROFFER TYPE
Sabc	THREE GANG SWITCH		2x18W, LED TUBE LIGHT TROFFER TYPE
Sa	ONE GANG SWITCH		

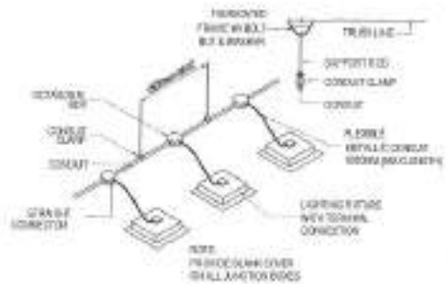
2 LEGEND & SYMBOLS

SCALE: NTS

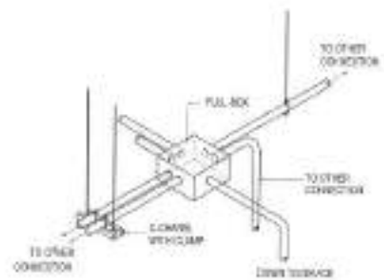
BENDING RADIUS DETAIL



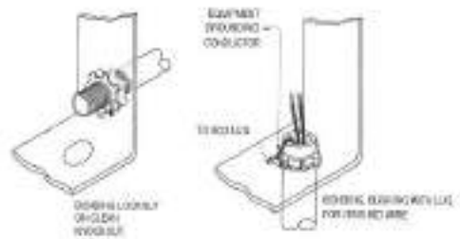
SPOT DETAIL OF CONDUIT RUN AND BOX



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



PROPER CONDUIT LAYOUT at PULL BOX



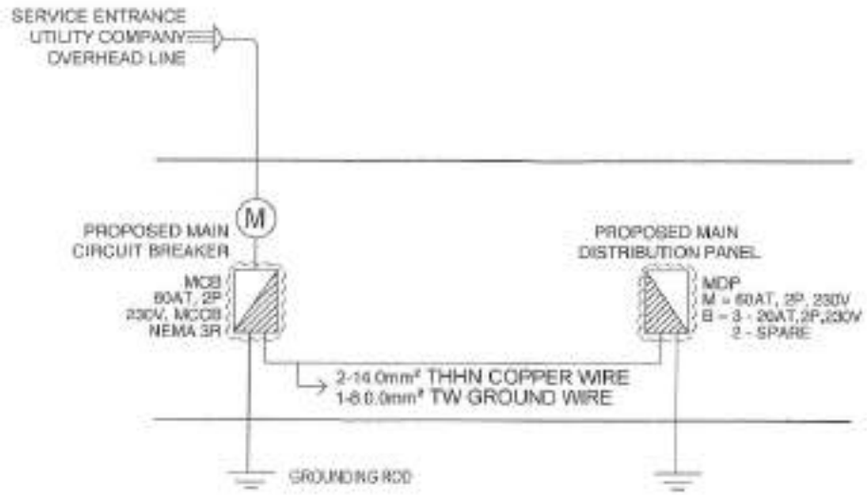
BONDED RACEWAY TERMINATION FOR SHEET METAL

3 MISCELLANEOUS DETAILS

SCALE: NTS

Republika ng Pilipinas
Lungsod ng Quezon
CITY ENGINEERING DEPARTMENT

PROJECT TITLE: PROPOSED REHABILITATION OF BAKAS DAYCARE CENTER	DRAWN BY: EMC	SUBMITTED BY: ENGR. LEO S. DEL ROSARIO, HEAD, PLANNING & PROGRAMMING DIVISION	RECOMMENDING APPROVAL: ENGR. ROMANI R. VERZOSA, JR., OIC, CITY ENGINEERING DEPARTMENT	APPROVED BY: HON. MA. JOSEFINA G. BELMONTE, CITY MAYOR, QUEZON CITY	SHEET CONTENT: GENERAL NOTES, LEGENDS AND SYMBOLS, MISCELLANEOUS DETAILS	SHEET NO. EL-01
LOCATION: BARANGAY BAGONG SILANGAN, DISTRICT 2, QUEZON CITY	DATE: AUG. 13, 2021					07 09
	DRAWING NO.:					
	REVISION NO.: 1					



1 SINGLE LINE DIAGRAM

SCALE: NTS

PROPOSED LIGHTING POWER PANEL
(FOR REPLACEMENT)

MOUNTING: NEMA1, RECESSED WITH GRAY POWDERED COATED FINISH WITH MULTI-TERMINAL BLOCK FOR SOLID GROUND BUS

CKT. NO.	LOAD DESCRIPTION	VOLTS	VA	AMP.	AT	SIZE OF	
						WIRES	CONDUITS
1	9-LIGHTING LAYOUT	230	900	3.91	20	2-3.5mm² THHN COPPER WIRE 1-2.0mm² TW GROUND WIRE	IN 20mmØ PVC PIPE
2	2-CONVENIENCE OUTLET (EXISTING) 3-CONVENIENCE OUTLET (ADDITIONAL)	230	1260	5.48	20	2-3.5mm² THHN COPPER WIRE 1-2.0mm² TW GROUND WIRE	IN 20mmØ PVC PIPE
3	1-WALL FAN (EXISTING) 1-CEILING FAN (ADDITIONAL)	230	600	2.61	20	2-3.5mm² THHN COPPER WIRE 1-2.0mm² TW GROUND WIRE	IN 20mmØ PVC PIPE
4	SPARE	230	-	-	30	-	-
5	SPARE	230	-	-	30	-	-
			2760	12.00			

COMPUTATION :

$IT = \frac{2760\ VA}{230V}$

IT = 12.00 AMPS

OVER CURRENT PROTECTION
USE : 60AT, 2P, 230V MCCB

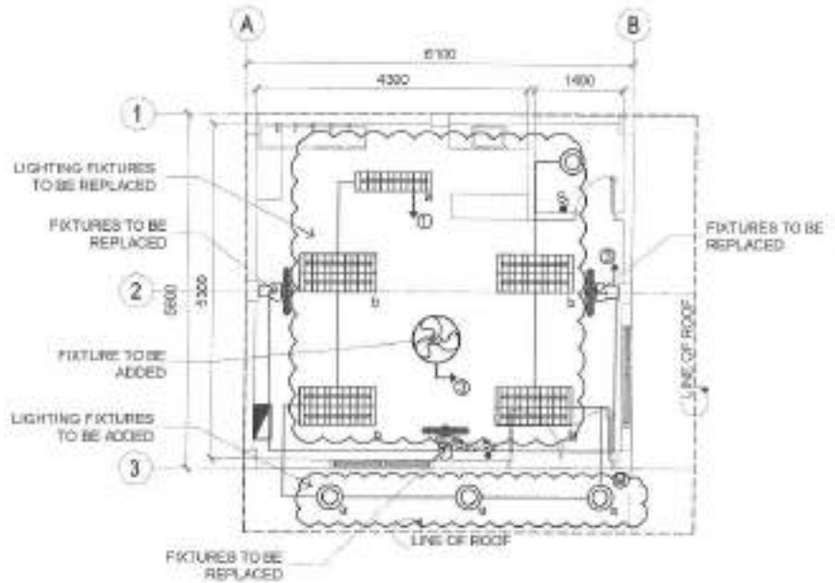
MAIN FEEDER
USE : 2 - 14.0mm² THHN COPPER WIRE & 1-8.0mm² TW GROUND WIRE IN 25mmØ IMC PIPE

2 SCHEDULE OF LOAD

SCALE: NTS

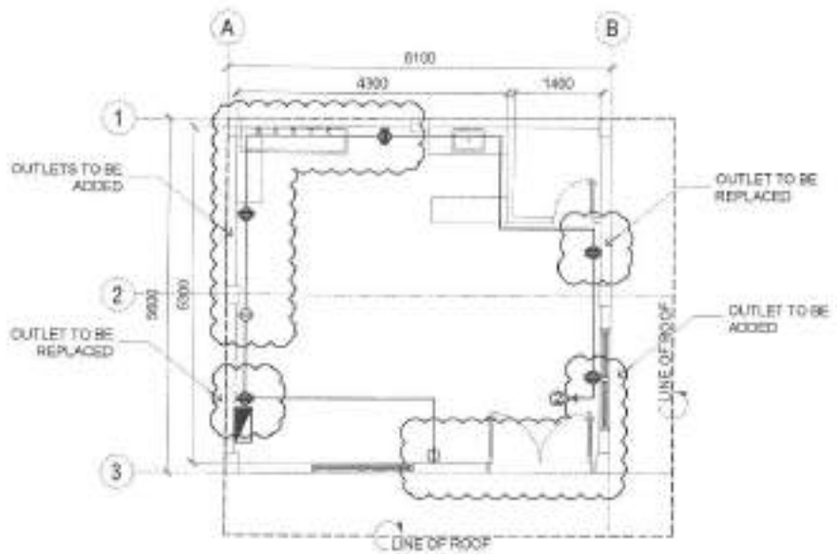
Republika ng Pilipinas
Lungsod ng Quezon
CITY ENGINEERING DEPARTMENT

PROJECT TITLE:	DRAWN BY : EME	SUBMITTED BY:	RECOMMENDING APPROVAL:	APPROVED BY:	SHEET CONTENT	SHEET NO.
PROPOSED REHABILITATION OF BAKAS DAYCARE CENTER	DATE : AUG. 13, 2021	ENGR. LEO S. DEL ROSARIO, HEAD - PLANNING & PROGRAMMING DIVISION	ENGR. ISAGANI R. VERZOSA, JR. CHIEF, CITY BUILDING ENFORCEMENT	HON. MA. JOSEFINA G. BELMONTE CITY MAYOR, QUEZON CITY	SINGLE LINE DIAGRAM AND SCHEDULE OF LOAD	EL-02 08 09
LOCATION: BARANGAY BAGONG SILANGAN, DISTRICT II, QUEZON CITY	CHECKED BY: JMN					
	REVISION NO.: 1					



1 LIGHTING LAYOUT

SCALE: 1:100 METERS



2 POWER LAYOUT

SCALE: 1:100 METERS

Republika ng Pilipinas
Lungsod ng Quezon
CITY ENGINEERING DEPARTMENT

PROJECT TITLE:

PROPOSED REHABILITATION OF BAKAS DAYCARE CENTER

LOCATION:
BARANGAY SINGSING SILANGAN, DISTRICT 2, QUEZON CITY

DRAWN BY: KME
DATE: AUG. 15, 2021
CHECKED BY: JMH
REVISION NO.: 1

SUBMITTED BY:

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

RECOMMENDING APPROVAL:

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

APPROVED BY:

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

SHEET CONTENT:
LIGHTING LAYOUT
POWER LAYOUT

SHEET NO.:
EL-03
09 09

1 VICINITY MAP SCALE : NTS

2 LOCATION MAP SCALE : NTS

TABLE OF CONTENT

Republika ng Pilipinas
Lungsod ng Quezon
CITY ENGINEERING DEPARTMENT

PROJECT TITLE:
PROPOSED REHABILITATION OF COVENANT DAY CARE CENTER
LOCATION:
BARANGAY BAGONG SILANGAN, DISTRICT 2, QUEZON CITY

DRAWN BY:
DATE: August 11, 2021
CHECKED BY: JM
REVISION NO.: 03

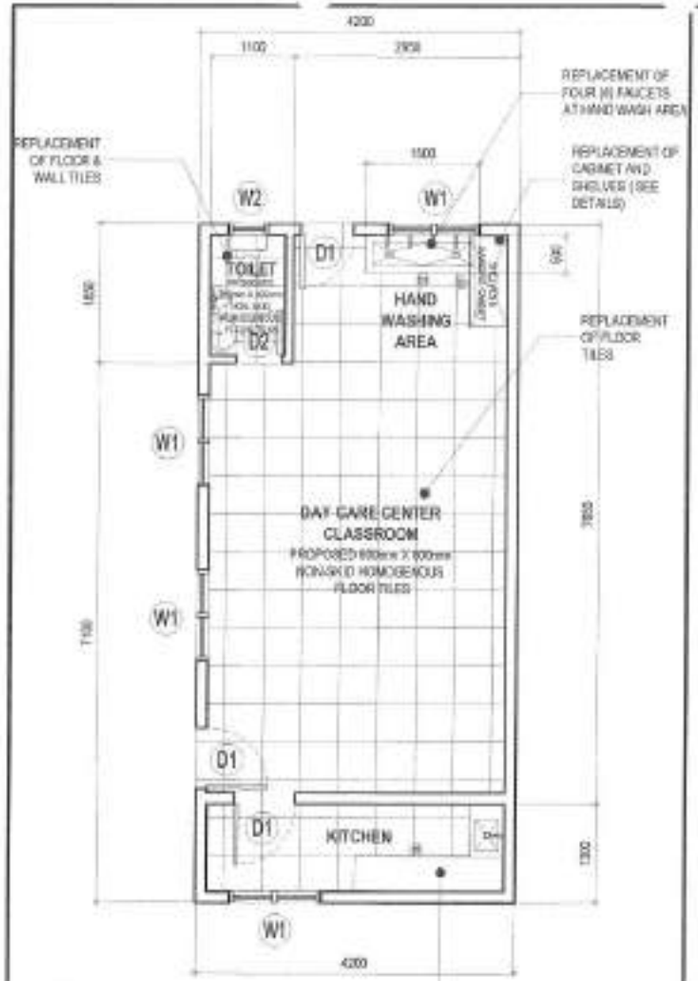
SUBMITTED BY:
ENGR. LEO S. DEL ROSARIO
HEAD, PLANNING & PROGRAMMING DIVISION

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

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

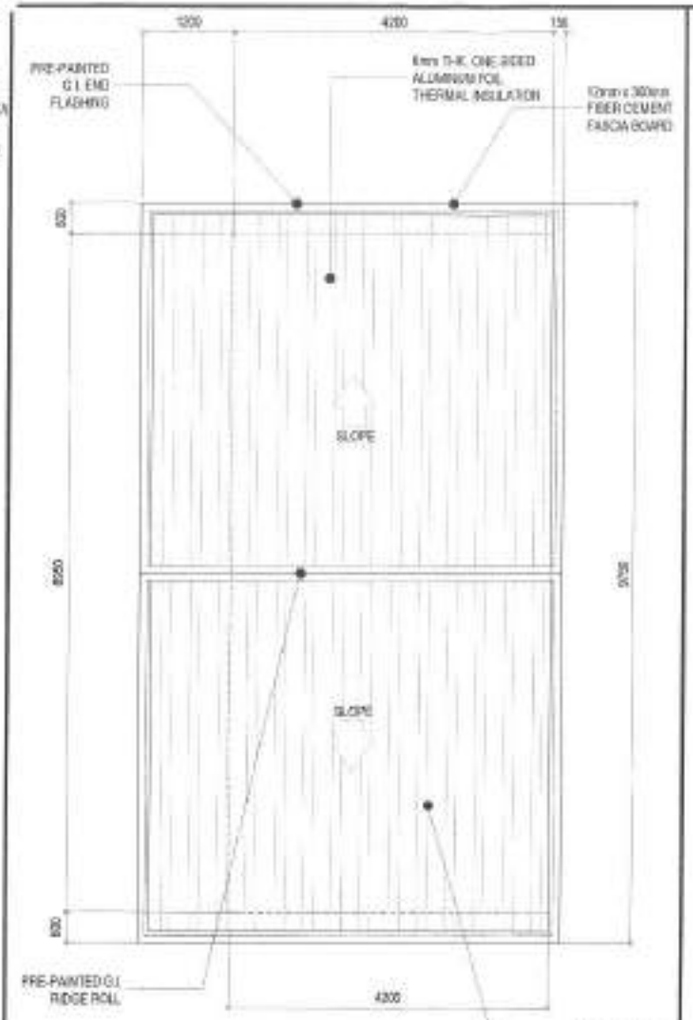
SHEET CONTENT: VICINITY MAP, LOCATION MAP

SHEET NO.: AR-01 / 01 / 08



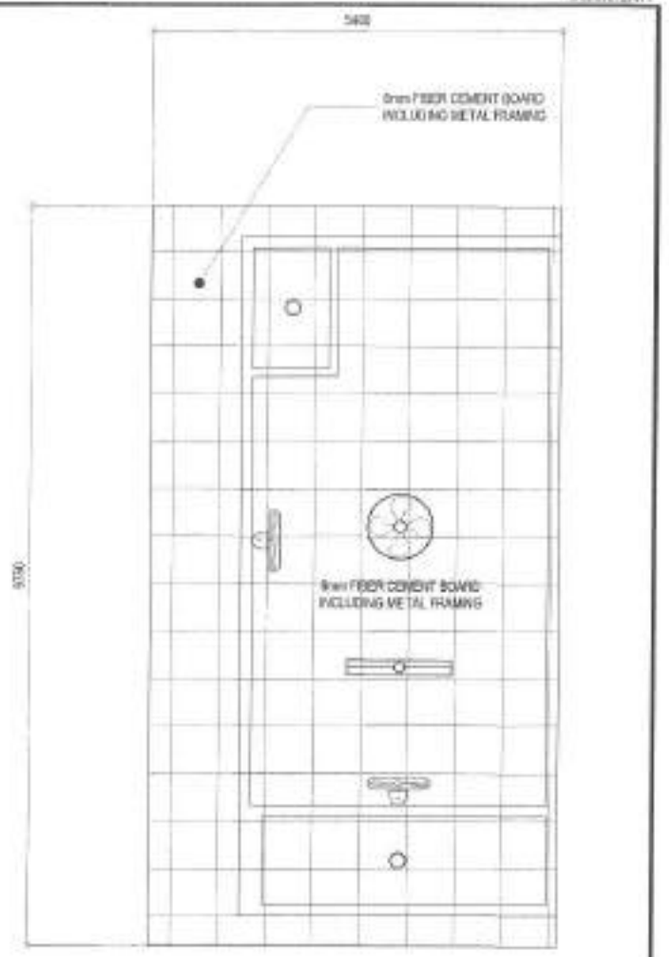
NOTE :
1. REPLACEMENT OF ALL DOORS AND WINDOWS (SEE DETAILS @ SCHEDULE OF DOORS AND WINDOWS)
2. REPLACEMENT OF TOILET FIXTURES (WATER CLOSET , URINAL , AND LAVATORY)
3. REPAINTING OF WHOLE STRUCTURE
4. REPLACEMENT OF COUNTERTOP

1 FLOOR PLAN SCALE : 1:75 MTS.



NOTE :
1. G.I. ROOFING TO BE REPLACED

2 ROOF PLAN SCALE : 1:75 MTS.



NOTE
1. DILAPIDATED CEILING TO BE REPLACED
2. LIGHTING FIXTURES TO BE REPLACED

3 REFLECTED CEILING PLAN SCALE : 1:75 MTS.

Republika ng Pilipinas
Lungsod ng Quezon
CITY ENGINEERING DEPARTMENT

PROJECT TITLE:
PROPOSED REHABILITATION OF COVENANT DAY CARE CENTER
LOCATION:
BARANGAY BAGONG SILANGAN, DISTRICT 2, QUEZON CITY

DRAWN BY:
DATE: August 17, 2021
CHECKED BY: JM
REVISION NO. : 0

SUBMITTED BY:
ENGR. LEO S. DEL ROSARIO
HEAD, PLANNING AND PROGRAMMING DIVISION

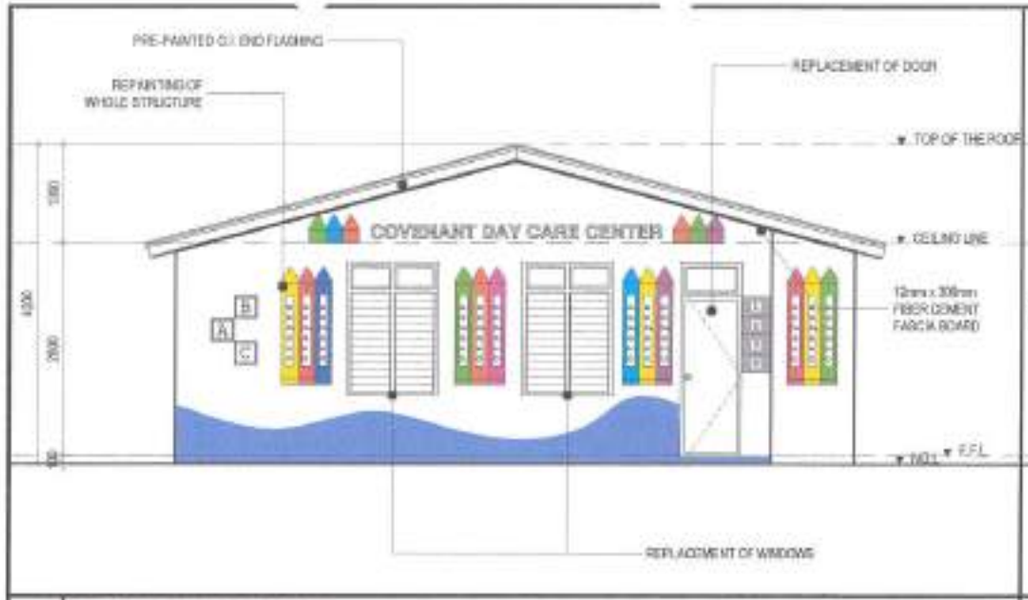
RECOMMENDING APPROVAL:
ENGR. ISAGANI R. VERZOSA , JR.
OIC, CITY ENGINEERING DEPARTMENT

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

SHEET CONTENT:
FLOOR PLAN
ROOF PLAN
REFLECTED CEILING PLAN

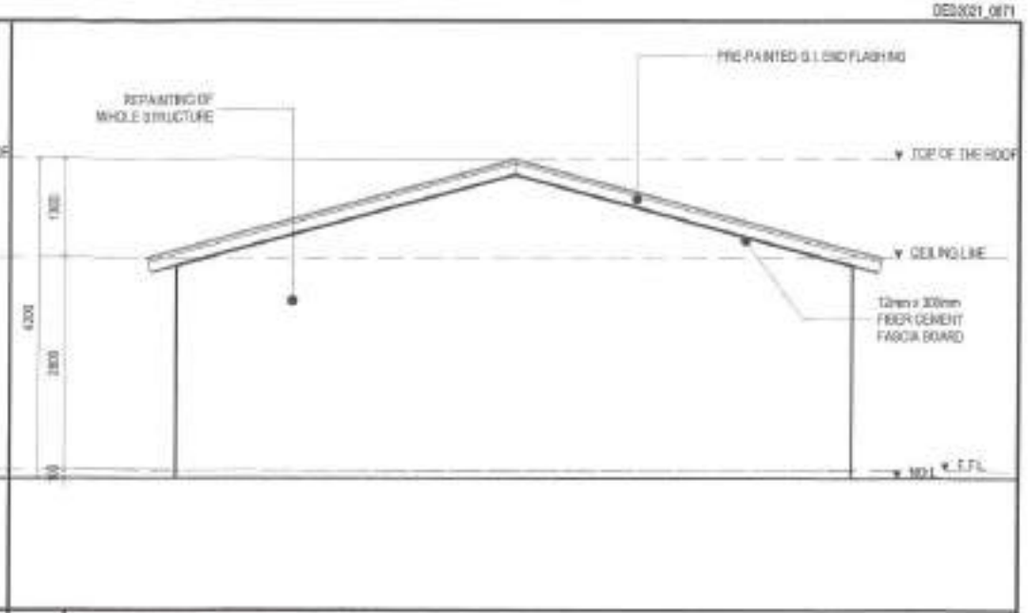
SHEET NO.
AR-02
02 08

DES2021_0871



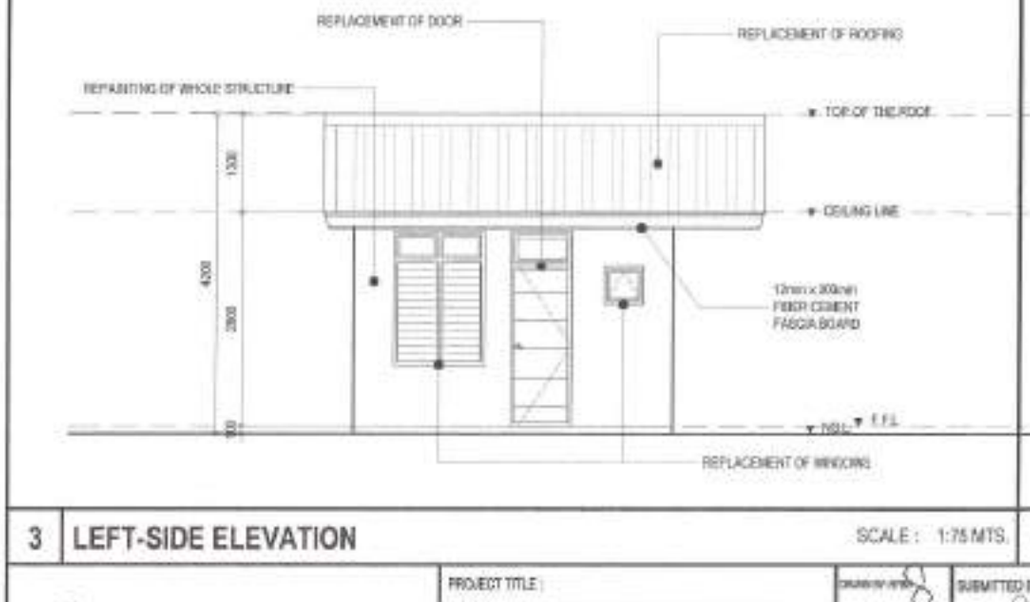
1 FRONT ELEVATION

SCALE : 1:75 MTS.



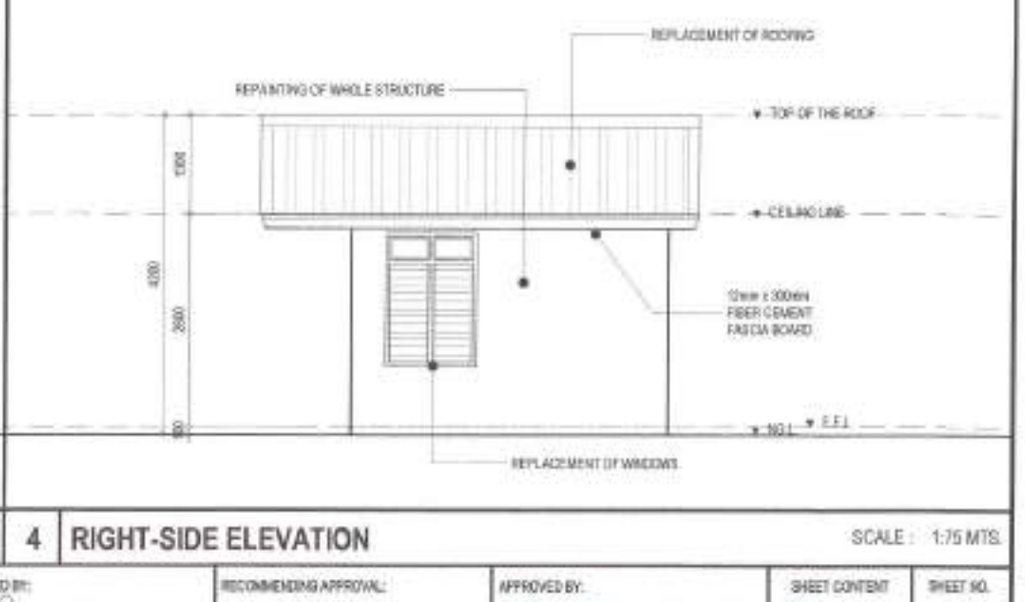
2 REAR ELEVATION

SCALE : 1:75 MTS.



3 LEFT-SIDE ELEVATION

SCALE : 1:75 MTS.



4 RIGHT-SIDE ELEVATION

SCALE : 1:75 MTS.

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Lungsod ng Quezon
CITY ENGINEERING DEPARTMENT

PROJECT TITLE :

PROPOSED REHABILITATION OF COVENANT DAY CARE CENTER

LOCATION :
BARANGAY BAGONG SILANGAN, DISTRICT 2, QUEZON CITY

DRAWN BY :
DATE : August 9, 2021
CHECKED BY :
REVISIONS :

SUBMITTED BY:
ENGR. LEO S. DEL ROSARIO

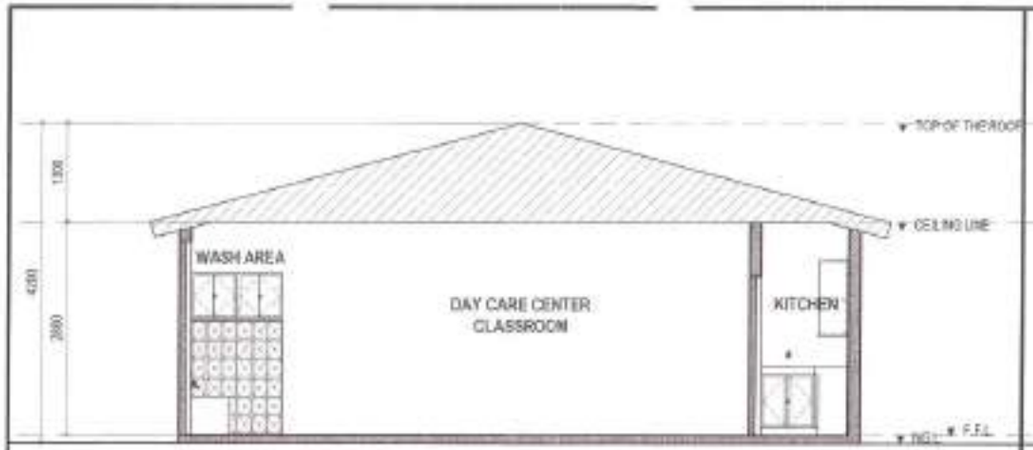
RECOMMENDING APPROVAL:
ENGR. ISAGANI R. VERZOSA , JR.

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

SHEET CONTENT :
FRONT ELEVATION
REAR ELEVATION
RIGHT SIDE ELEVATION
LEFT SIDE ELEVATION

SHEET NO.
AR-03
03 08

DED2021_8671

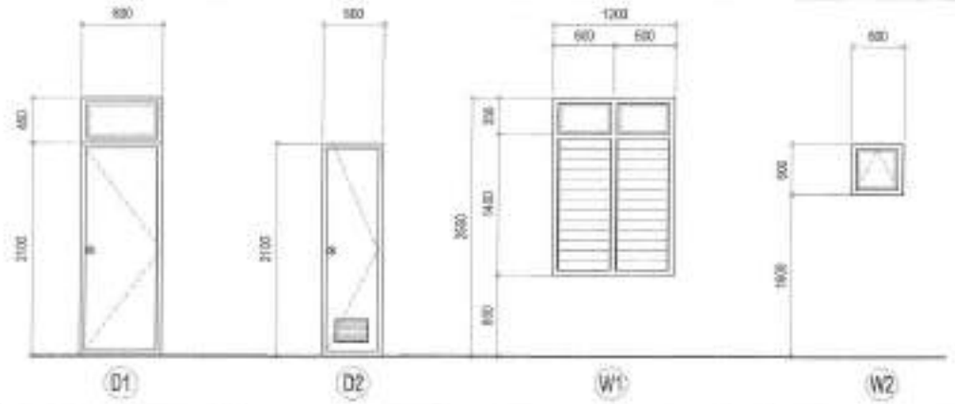


1 CROSS SECTION

SCALE : 1:75 MTS.

2 LONGITUDINAL SECTION

SCALE : 1:75 MTS.



D1	D2	W1	W2
DESCRIPTION: PANEL DOOR W/ FIXED GLASS ON TOP LOCATION: KITCHEN, DAYCARE CLASSROOM & FIRE EXIT DOOR UNITS: THREE (3) UNITS	DESCRIPTION: PVC DOOR W/ LOUVER LOCATION: TOILET UNITS: ONE (1) UNIT	DESCRIPTION: STEEL JALOUSIE WINDOW WITH FIXED GLASS ON TOP LOCATION: EXTERIOR WINDOWS UNITS: FOUR (4) UNIT	DESCRIPTION: STEEL CASEMENT AWNING WINDOW LOCATION: EXTERIOR WINDOWS UNITS: ONE (1) UNIT

3 SCHEDULE OF DOORS AND WINDOWS

SCALE : 1:50 MTS.

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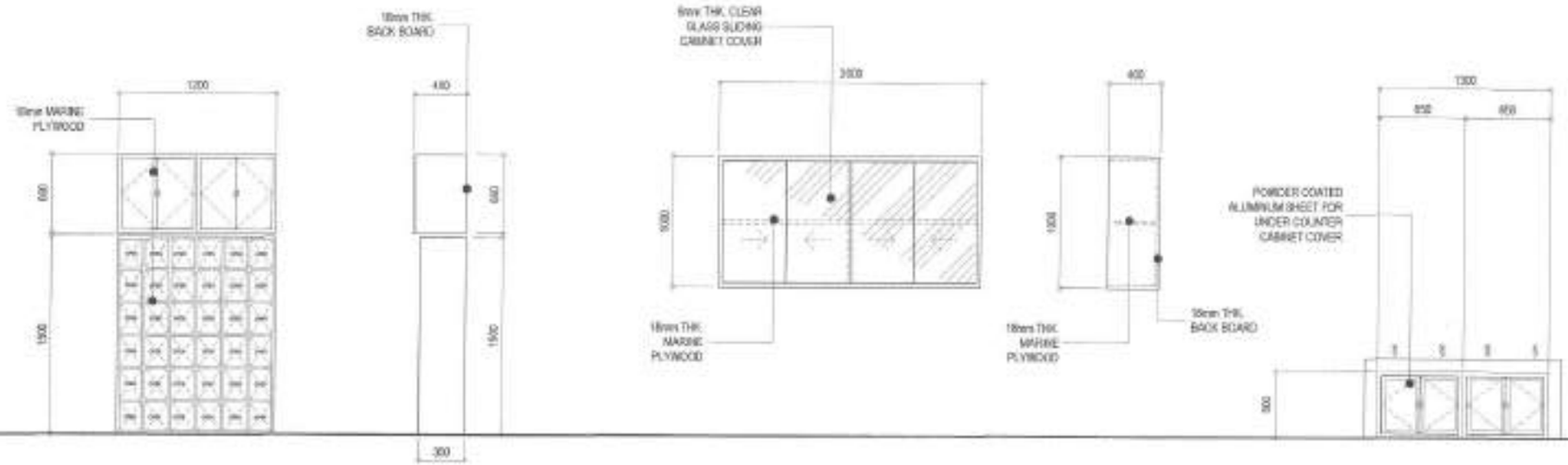
Lungsod ng Quezon
CITY ENGINEERING DEPARTMENT

PROJECT TITLE:	DRAWN BY: RVM	SUBMITTED BY:	RECOMMENDING APPROVAL:	APPROVED BY:	SHEET CONTENT	SHEET NO.
PROPOSED REHABILITATION OF COVENANT DAY CARE CENTER LOCATION: BARANGAY BAGONG SILANGAN, DISTRICT 2, QUEZON CITY	DATE: August 24, 2021 CHECKED BY: JS REVISION NO.: 02	ENGR. LEO V. DEL ROSARIO HEAD, PLANNING & PROGRAMMING DIVISION	ENGR. ISAGANI R. VERZOSA, JR. OIC, CITY ENGINEERING DEPARTMENT	HON. MA. JOSEFINA G. BELMONTE CITY MAYOR	CROSS SECTION, LONGITUDINAL SECTION, SCHEDULE OF DOORS & WINDOWS	AR-04 04 08

1 LETTERING DETAILS

SCALE : NTS



FRONT (C1) **SIDE** (C1) **FRONT** (C2) **SIDE** (C2) **FRONT** (C3)

2 CABINET DETAILS

SCALE : 1:50 MTS.

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Lungsod ng Quezon
CITY ENGINEERING DEPARTMENT

PROJECT TITLE :	DRAWN BY:	SUBMITTED BY:	RECOMMENDING APPROVAL:	APPROVED BY:	SHEET CONTENT	SHEET NO.
PROPOSED REHABILITATION OF COVENANT DAY CARE CENTER	DATE: August 14, 2021	ENGR. LEO S. DEL ROSARIO HEAD, PLANNING & PROGRAMMING DIVISION	ENGR. RAGANI R. VERZOSA , JR. OIC, CITY ENGINEERING DEPARTMENT	HON. MA. JOSEFINA G. BELMONTE CITY MAYOR	LETTERING DETAILS CABINET DETAILS	AR-05 05 08
LOCATION: BARANGAY BAGONG SILANGAN, DISTRICT 2, QUEZON CITY	CHECKED BY: JJM					
	REVISION NO. : 00					

GENERAL NOTES:

1. ALL WORKS SHALL BE DONE IN ACCORDANCE WITH THE PLANS AND SPECIFICATION
2. THE WORKS SHALL COMPLY WITH THE PROVISION OF THE LATEST EDITION OF THE PHILIPPINE ELECTRICAL CODE, LAWS, ORDINANCES, RULES AND REGULATIONS OF THE LOCALITY HAVING JURISDICTION OVER THE PROJECT REQUIREMENTS OF LOCAL POWER COMPANY.
3. ALL THE JOB SHALL BE EXECUTED IN THE MOST THOROUGH PROMPT AND WORKMANLIKE MANNER EMPLOYING STANDARD TOOLS, EQUIPMENT, METHOD AND GOOD ENGINEERING PRACTICES. THE JOB SHALL BE DONE COMPLETE IN ALL ASPECTS AS REQUIRED PER PLANS AND SPECIFICATIONS AND READY FOR OPERATIONS.
4. ALL MATERIALS TO BE USED SHALL BE OF THE BEST QUALITY , BRAND NEW AS SPECIFIED.
5. THE DRAWINGS AND SPECIFICATIONS ARE INTENDED TO PRESENT GENERAL LAYOUT AND BROAD OUTLINE/DESCRIPTION OF THE PROJECT BUT DO NOT NECESSARILY INDICATE/DESCRIBED ACTUAL LOCATIONS, LEVEL AND DISTANCES OF THE EQUIPMENT. THE CONTRACTOR IS HEREBY REQUIRED TO MAKE SUCH ADJUSTMENT AT THE JOBSITE AS LOCATION, DISTANCES AND LEVELS ARE GOVERNED BY ACTUAL FIELD CONDITIONS.
6. ANY DISCREPANCY BETWEEN THE PLANS AND SPECIFICATIONS SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER FOR CLARIFICATION /DECISION.
7. ALL LIGHTING AND CONVENIENCE OUTLET CIRCUITS SHALL BE 3.5 SQ. MM. THW COPPER WIRE UNLESS OTHERWISE NOTED. MINIMUM SIZE OF WIRE SHALL BE 3.5 SQ. MM. COPPER WIRE
8. ALL DUPLEX RECEPTACLE OUTLETS SHALL BE GROUNDING TYPE WITH PARALLEL SLOTS FOR 220V.
9. UNLESS NOTED OTHERWISE IN THE DRAWING, WIRING DEVICES SHALL BE INSTALLED AS FOLLOWS.

   LIGHTING CONTROL OUTLET – 1.40 M. ABOVE FLOOR FINISH
   CONVENIENCE OUTLET – 0.30 M. ABOVE FLOOR FINISH
10. BOXES, WIRE, GUTTERS, ENCLOSURE SHALL BE FABRICATED FROM STEEL WITH THICKNESS AS FOLLOWS:

MAXIMUM WIDTH OF THE WIDEST SURFACE STEEL	GA.
UP TO INCLUDING 152.40mm	GA 16
OVER 152.40 mm BUT NOT OVER 457.20 mm	GA 14
OVER 457.20 mm BUT NOT OVER 762 mm	GA 12
OVER 762 mm	GA 10

11. REFER TO NOTES AND SPECIFICATION FOR MORE INFORMATION.

SWITCH SYMBOLS

SINGLE POLE TOGGLE SWITCH, NOMENCLATURE

S DENOTES THE CIRCUIT OR PORTION OF CIRCUIT CONTROLLED BY SWITCH

NOMENCLATURE:
3W – THREE WAY SWITCH
2sb – TWO GANG SWITCH
3sbc – THREE GANG SWITCH

1 GENERAL NOTES SCALE : NTS

PROPOSED LIGHTING AND POWER PANEL (FOR REPLACEMENT)

CKT. NO.	LOAD DESCRIPTION	VOLTS	WATTS	AMP.	AT	SIZE OF WIRES	SIZE OF CONDUITS
1	3–LIGHTING LAYOUT (EXISTING) 2–LIGHTING LAYOUT (ADDITIONAL)	230	500	2.17	20	2–3.5mm2 THHN COPPER WIRE 1–2.0mm2 THHN GROUND WIRE	IN 20mmØ PVC PIPE
2	2–CONVENIENCE OUTLET (EXISTING) 4–CONVENIENCE OUTLET (ADDITIONAL)		1080	4.70	20	2–3.5mm2 THHN COPPER WIRE 1–2.0mm2 THHN GROUND WIRE	
3	4–ORBIT FAN		600	2.61	20	2–3.5mm2 THHN COPPER WIRE 1–2.0mm2 THHN GROUND WIRE	
4	SPARE		–	–	30	–	–
	TOTAL		2180	9.48			

COMPUTATION :

$$IT = \frac{2180 \text{ WATTS}}{230 \text{ VOLTS}}$$

$$= 9.48 \text{ AMP.}$$

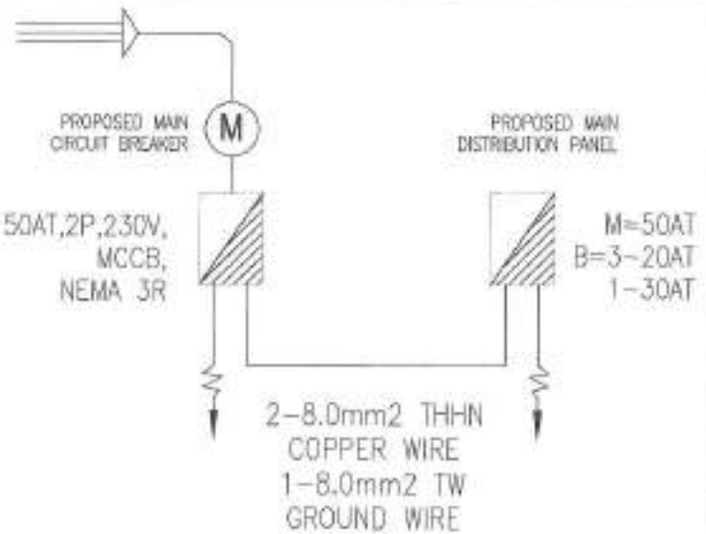
OVER CURRENT PROTECTION
USE : 50AT, 2P, 230V MCCB

MAIN FEEDER :
USE : 2 - 8.0mm2 THW COPPER WIRE & 1-8.0mm2 TW GROUND WIRE IN 25mmØ IMC PIPE

2 SCHEDULE OF LOADS SCALE : NTS

3 LEGEND AND SYMBOLS SCALE : NTS

- 600mm X 1200mm, 2x18W LED, TROFFER FIXTURE
- RECEPTACLE W/ 10W LED BULB
- 1x18W , LED TUBE LIGHT BOX TYPE
- CONVENIENCE OUTLET , TWO GANG
- CONVENIENCE OUTLET , ONE GANG
- ORBIT FAN
- SELECTOR SWITCH
- SWITCH , ONE GANG
- SWITCH , TWO GANG
- SWITCH , THREE GANG
- WALL FAN
- LPP — PANEL BOARD



4 SERVICE ENTRANCE DETAILS SCALE : NTS

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Lungsod ng Quezon
CITY ENGINEERING DEPARTMENT

PROJECT TITLE:
PROPOSED REHABILITATION OF COVENANT DAY CARE CENTER
LOCATION: BARANGAY BAGONG SILANGAN, DISTRICT 2, QUEZON CITY

DRAWN BY: JDR
DATE: August 31, 2023
CHECKED BY: JDR
REVISION NO. : 0

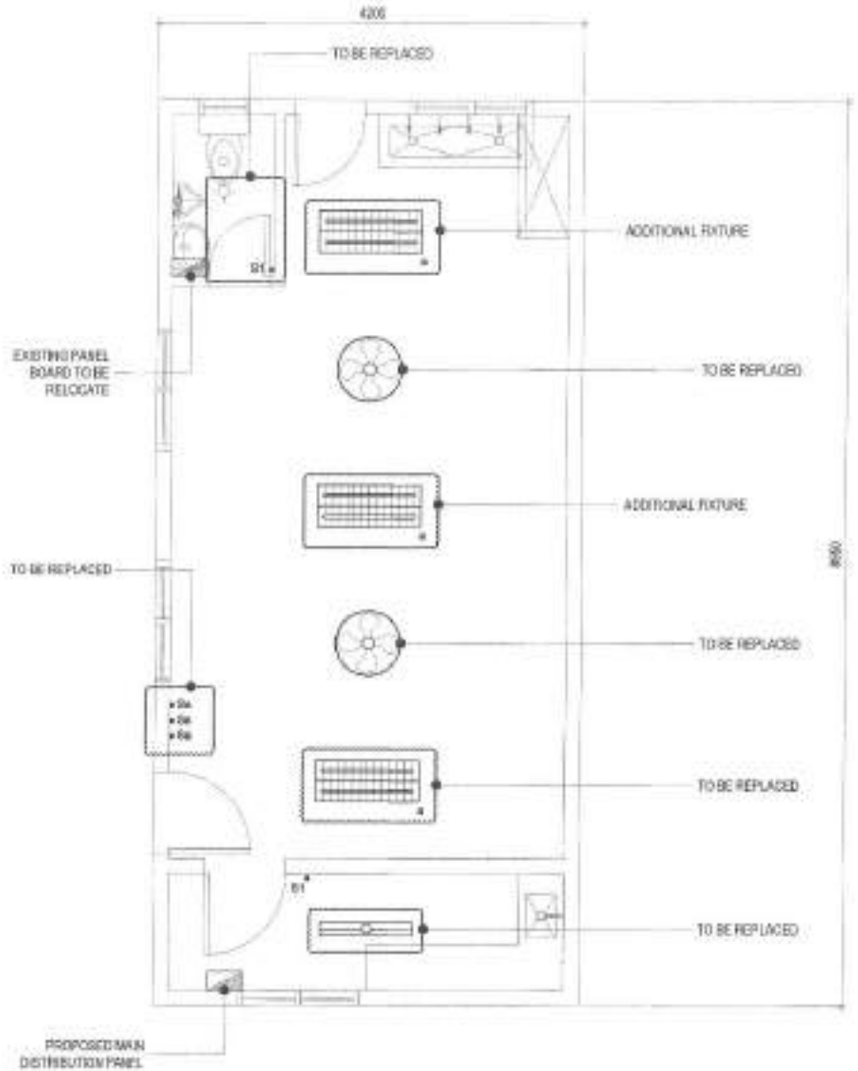
SUBMITTED BY:
ENGR. LEO S. DEL ROSARIO
HEAD, PLANNING & PROGRAMMING DIVISION

RECOMMENDING APPROVAL:
ENGR. BAGANI R. VERZOSA , JR.
OIC-CITY ENGINEERING DEPARTMENT

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

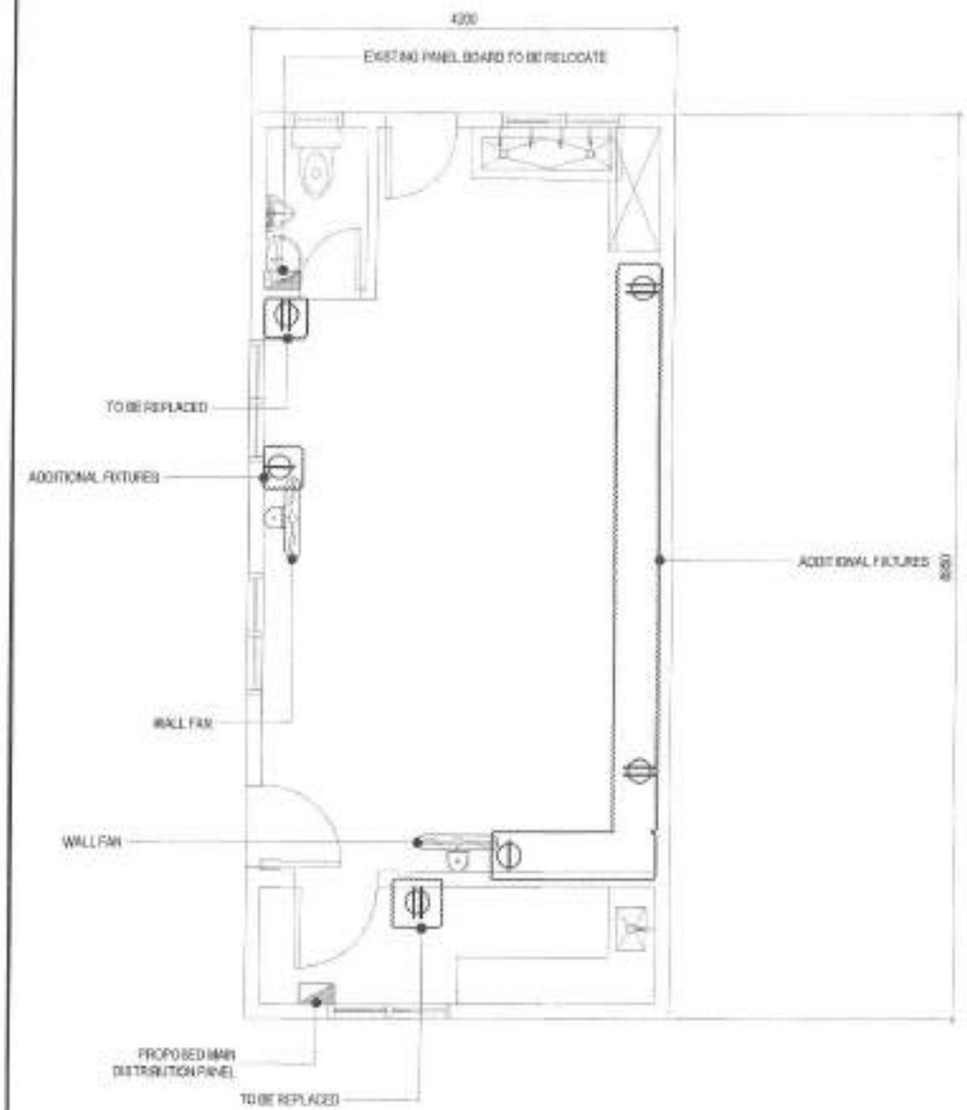
SHEET CONTENT: GENERAL NOTES, SCHEDULE OF LOADS, LEGEND AND SYMBOLS, SERVICE ENTRANCE DETAILS

SHEET NO.: EL-01, 06 08



1 LIGHTING OUTLET LAYOUT

SCALE : 1 : 50 MTS.



2 CONVENIENCE OUTLET LAYOUT

SCALE : 1 : 50 MTS.

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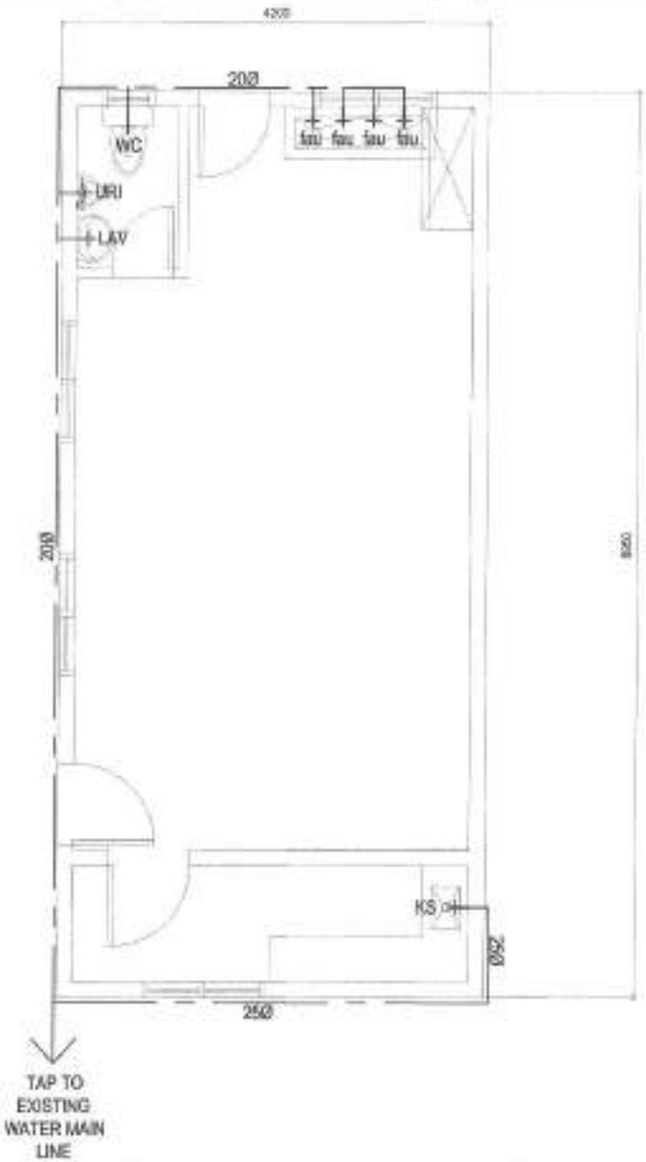
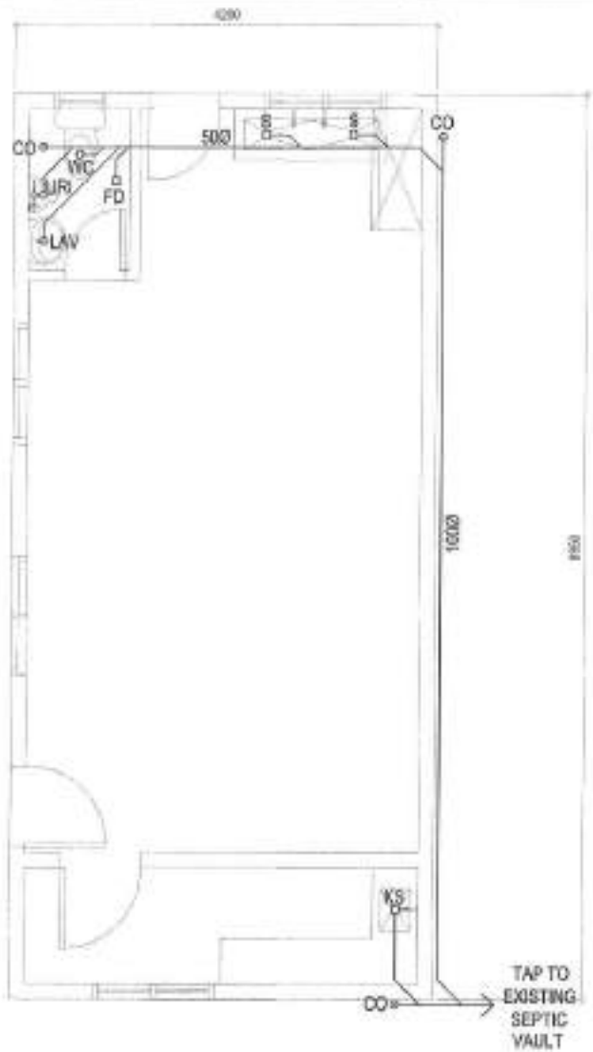
Lungsod ng Quezon
CITY ENGINEERING DEPARTMENT

PROJECT TITLE:	DRAWN BY:	SUBMITTED BY:	RECOMMENDING APPROVAL:	APPROVED BY:	SHEET CONTENT	SHEET NO.
PROPOSED REHABILITATION OF COVENANT DAY CARE CENTER	DATE: August 30, 2021	ENGR. LEO S. DEL ROSARIO	ENGR. ISAGANI R. VERZOSA , JR.	HON. MA. JOSEFINA G. BELMONTE	LIGHTING OUTLET LAYOUT CONVENIENCE OUTLET LAYOUT	EL-02
LOCATION: BARANGAY BAGONG SILANGAN, DISTRICT 2, QUEZON CITY	CHECKED BY:			CITY MAYOR		07 08
	SERIES NO.: 02					



1 **WATER LINE LAYOUT** SCALE : 1 : 50 MTS.



2 **SEWER LINE LAYOUT** SCALE : 1 : 50 MTS.

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Lungsod ng Quezon
CITY ENGINEERING DEPARTMENT

PROJECT TITLE:
PROPOSED REHABILITATION OF COVENANT DAY CARE CENTER
LOCATION: BARANGAY BAGONG SILANGAN, DISTRICT 2, QUEZON CITY

DRAWING NO.:
DATE: August 9, 2021
DESIGNED BY: JM
REVISION NO.: 00

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

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

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

SHEET CONTENT:
WATER LINE LAYOUT
& SEWER LINE LAYOUT

SHEET NO.:
PL-01
08 08

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 CONSTRUCTION OF HAND WASHING FACILITY AND REHABILITATION OF DAY CARE CENTER AT DISTRICT II / AREA VII (CLUSTER 1)**

LOCATION : **BARANGAY BAGONG SILANGAN, DISTRICT 2, QUEZON CITY**

PROJECT NO. : **21 - 00172**

DURATION : **Ninety (90) Calendar Days**

BREAKDOWN OF COST

ITEM NO.	ITEM OF WORK (DESCRIPTION)	MATERIALS COST	LABOR COST	INDIRECT COST	AGGREGATE COST
	BAGONG SILANGAN DAY CARE CENTER				
I	GENERAL REQUIREMENTS				
II	CONSTRUCTION OF HAND WASHING FACILITY				
III	REHABILITATION OF DAY CARE CENTER				
	SITIO VETERANS DAY CARE CENTER				
I	GENERAL REQUIREMENTS				
II	CONSTRUCTION OF HAND WASHING FACILITY				
III	REHABILITATION OF DAY CARE CENTER				
	BAKAS DAY CARE CENTER				
I	GENERAL REQUIREMENTS				
II	SITE WORKS				
III	CIVIL / STRUCTURAL WORKS				
IV	ARCHITECTURAL WORKS				
V	SANITARY / PLUMBING WORKS				
VI	ELECTRICAL WORKS				
	ASPRER DAY CARE CENTER				
I	GENERAL REQUIREMENTS				
II	SITE WORKS				
III	CIVIL / STRUCTURAL WORKS				
IV	ARCHITECTURAL WORKS				
V	SANITARY / PLUMBING WORKS				
VI	ELECTRICAL WORKS				
	COVENANT DAY CARE CENTER				
I	GENERAL REQUIREMENTS				

II	SITE WORKS				
III	CIVIL / STRUCTURAL WORKS				
IV	ARCHITECTURAL WORKS				
V	SANITARY / PLUMBING WORKS				
VI	ELECTRICAL WORKS				

TOTAL COST ₱ _____

LUMP SUM BID IN WORDS : _____

_____

Contractor : _____

BILL OF QUANTITIES
(Building Construction/Rehabilitation Project)

PROJECT TITLE : PROPOSED CONSTRUCTION OF HAND WASHING FACILITY AND REHABILITATION OF BAGONG SILANGAN DAY CARE CENTER

LOCATION : BARANGAY BAGONG SILANGAN, DISTRICT 2, QUEZON CITY

PROJECT NO. : 21 - 00172

SCOPE OF WORK :

I GENERAL REQUIREMENTS

1. General Requirements include temporary enclosure, billboard, scaffolding, construction safety and health, and clearing, hauling and disposal of construction materials and debris.

II CONSTRUCTION OF HAND WASHING FACILITY

1. Construction of foot-operated, portable single sink handwashing facility
2. Sanitary / Plumbing Works include installation of roughing-ins,equipment,fixtures and accessories.

III REHABILITATION OF DAY CARE CENTER

1. Site Works include demolition/removal works, cleaning and clearing for painting preparation and earthworks.
2. Civil / Structural Works include concrete works,masonry works, moisture protection, metal works and roofing works.
3. Architectural Works include floor, wall, and ceiling finishes, painting works,installation of doors and windows, fabricated materials, and letterings.
4. Sanitary / Plumbing Works include installation of roughing-ins, equipment, fixtures and accessories.
5. Electrical Works include installation of roughing-ins, wirings, devices, fixtures, panelboard and accessories.
6. Mechanical Works include equipment, pipe hangers and support, and accessories.

IV TESTING AND COMMISSIONING

1. All necessary testing and commissioning shall be performed in accordance to standards.

ITEM NO.	GENERAL REQUIREMENTS	QTY.	UNIT	UNIT COST	TOTAL COST
I	**GENERAL REQUIREMENTS**				
	Billboard	1	unit	₱	₱
	Clearing, Hauling and Disposal of Construction Materials and Debris	3	t.l.		
	Construction Safety and Health	1	unit		
	Scaffolding (Rental)	52	sq.m.		
	Temporary Enclosure Around the Construction Area	26	l.m.		
				DIRECT COST I	₱
II	**CONSTRUCTION OF HAND WASHING FACILITY**				
A	Single Sink Portable Hand Washing Stall	4	unit	₱	₱
				Direct Cost A	₱
B	SANITARY / PLUMBING WORKS				
	Sewer Line System				
	50mmØ PVC Pipe with Hub	1	piece	₱	₱
	100mmØ PVC Pipe with Hub	4	piece		
	50mmØ x 100mmØ Wye	2	piece		
	100mmØ x 100mmØ Wye	2	piece		
	50mmØ x 50mmØ Tee	2	piece		

ITEM NO.	GENERAL REQUIREMENTS	QTY.	UNIT	UNIT COST	TOTAL COST
	100mmØ x 50mmØ Tee	2	piece		
	50mmØ 1/4 Bend	4	piece		

ITEM NO.	GENERAL REQUIREMENTS	QTY.	UNIT	UNIT COST	TOTAL COST
	50mmØ 1/8 Bend	2	piece		
	100mmØ 1/4 Bend	2	piece		
	100mmØ 1/8 Bend	2	piece		
	100mmØ Cleanout	1	piece		
	50mmØ P-Trap	2	piece		
	Waterline System				
	20mmØ PPR Pipe	3	piece		
	20mmØ x 20mmØ Tee Equal	2	piece		
	20mmØ 90° Elbow	4	piece		
	20mmØ x 12mm Ø Female Threaded Tee	1	piece		
	20mmØ End Cap	2	piece		
	20mmØ Union Patent	1	piece		
	20mmØ Coupling	4	piece		
	20mmØ Male Adaptor	1	piece		
	Valve and Appurtenances				
	20mmØ Gate Valve PPR	1	piece		
	Miscellaneous				
	400cc Solvent Cement	1	can		
	Hacksaw Blade	1	piece		
	Teflon Tape	3	roll		
	Waste Cloth	1	kg		
				Materials Cost B	₱
				Labor Cost B	
				Direct Cost B	₱
				Material Cost II	₱
				Labor Cost II	
				Direct Cost II	₱
III	**REHABILITATION OF DAY CARE CENTER**				
A	SITE WORKS				
	Removal / Demolition Works				
	Removal of Doors	4	set	₱	₱
	Removal of Windows	11	sq.m.		
	Removal of Water Closet	1	set		
	Removal of Lavatory	1	set		
	Removal of Urinal	1	set		
	Removal of Floor Drain	1	set		
	Removal of Dilapidated Tiles	93	sq.m.		
	Removal of Canopy and Accessories	8	sq.m.		
	Removal of Gutter	24	l.m.		
	Removal of Ceiling	121	sq.m.		
	Demolition of Countertop	1	sq.m.		
	Demolition of Hand Washing	2	sq.m.		
	Chipping of Concrete Wall (For Electrical Works)	4	sq.m.		
	Cleaning and Clearing for Painting Preparation	277	sq.m.		

ITEM NO.	GENERAL REQUIREMENTS	QTY.	UNIT	UNIT COST	TOTAL COST
	Site Clearing and Preparation	73	sq.m.		
	Layout and Staking	73	sq.m.		
	Excavation for Structures				
	Footing	4	cu.m.		
	Wall Footing	5	cu.m.		
				Subtotal	₱
	Gravel Bedding	1	cu.m.	₱	₱
				Materials Cost	₱
				Labor Cost	
				Subtotal	₱

ITEM NO.	GENERAL REQUIREMENTS	QTY.	UNIT	UNIT COST	TOTAL COST
	Backfill and Compaction	5	cu.m.	₱	₱
				Subtotal	₱
				Material Cost A	₱
				Labor Cost A	
				Direct Cost A	₱
B	CIVIL / STRUCTURAL WORKS				
	Concrete Works				
	On Site Mix Concrete, 21 Mpa, 3/4" Gravel @ 28days				
	Footing	2	cu.m.	₱	₱
	Wall Footing	2	cu.m.		
	Column	2	cu.m.		
	Reinforcing Steel Bar				
	Grade 40 Reinforcing Steel Bar include G.I. Tie				
	10mm Ø Wall Footing	51	kg		
	10mm Ø Column	109	kg		
	12mm Ø Wall Footing	79	kg		
	Grade 60 Reinforcing Steel Bar include G.I. Tie				
	16mm Ø Footing	100	kg		
	16mm Ø Column	131	kg		
	Formworks				
	Footing	3	sq.m.		
	Column	11	sq.m.		
	Wall Footing	4	sq.m.		
	Scaffolding and Shoring				
	Column	16	l.m.		
	Masonry Works				
	150mm CHB Wall Laying include Mortar,	27	sq.m.		
	Restoration of Concrete (Electrical Works)	4	sq.m.		
	Moisture Protection				
	Waterproofing Works				
	Cementitious Capillary Type Waterproofing (CR)	8	sq.m.		
	Metal Works				
	Steel Gate				
	50mm x 50mm x 6mm Angle Bar	104	kg		
	50mm x 100mm x 6mm Tubular Bar	164	kg		
	38mmØ Foot Bolt	1	set		
	38mmØ Barrel Bolt	1	set		
	Cylindrical Hinge, Heavy Duty	3	set		
	Fence				
	50mm x 50mm x 6mm Angle Bar	253	kg		
	50mm x 4mm Flat Bar	21	kg		
	Canopy				
	12mm Base Plate	63	kg		
	100mmØ G.I. Pipe	14	kg		

ITEM NO.	GENERAL REQUIREMENTS	QTY.	UNIT	UNIT COST	TOTAL COST
	50mm x 100mm x 1.2mm Channel Bar	112	kg		
	50mm x 100mm x 6mm Tubular Bar	164	kg		
	18mmØ Anchor Bolt	32	piece		
	Miscellaneous and Consumables				
	Acetylene Tank Refill	2	tank		
	Assorted Metal Drill Bit	6	piece		
	Cut Off Blade	6	piece		
	Grinding Disc Metal	6	piece		
	Oxygen Tank Refill	3	tank		
	Welding Rod	2	box		
	Roofing Works				
	Pre-painted Rib Type G.I. Roofing	26	sq.m.		
	Pre-painted G.I. Flashing	10	l.m.		
	12mm x 300mm Fiber Cement Fascia Board	25	l.m.		
	Silicon Sealant	3	tube		
	Tekscrew	145	piece		
	Blind Rivets	75	piece		
				Materials Cost B	₱
				Labor Cost B	
				Direct Cost B	₱

ITEM NO.	GENERAL REQUIREMENTS	QTY.	UNIT	UNIT COST	TOTAL COST
C	ARCHITECTURAL WORKS				
	Floor Finishes				
	600mm x 600mm Non-Skid Homogeneous Tiles	81	sq.m.	₱	₱
	300mm x 300mm Non-Skid Homogeneous Tiles	5	sq.m.		
	Floor Topping Preparation for Tile Works	86	sq.m.		
	Wall Finishes				
	300mm x 300mm Homogeneous Tiles	12	sq.m.		
	Ceiling Finishes				
	6mm Fiber Cement Board including Metal Framing	75	sq.m.		
	Fabricated Materials				
	Countertop with Cabinet	4	l.m.		
				Materials Cost	₱
				Labor Cost	
				Subtotal	₱
	Installation of Doors				
	D1- (1.2m x 2.1m) Double Swing Panel Door	1	set	₱	₱
	D2- (0.8m x 2.1m) Flush Door	1	set		
	D3- (0.7m x 2.1m) Flush Door	1	set		
	D4- (0.6m x 2.1m) PVC Door with Louver	1	set		
	Wooden Door Jamb				
	D1- (1.2m x 2.1m) Double Swing Panel Door	1	set		
	D2- (0.8m x 2.1m) Flush Door	1	set		
	D3- (0.7m x 2.1m) Flush Door	1	set		
	Hardware and Accessories				
	Door Knob, Lever Type, Stainless	5	set		
	Door Hinge, Heavy Duty, Stainless	15	set		
	Installation of Windows				
	W1- (1.4m x 1.2m) Sliding Window on Aluminum Powder Coated Framing with Complete Accessories	2	set		
	W2- (2.1m x 1.2m) Sliding Window on Aluminum Powder Coated Framing with Complete Accessories	1	set		
	W3- (0.6m x 0.6m) Awning Window on Aluminum Powder Coated Framing with Complete Accessories	1	set		
	W4- (2.1m x 1.2m) Sliding Window on Aluminum Powder Coated Framing with Complete Accessories with Provision for Aircondition Unit	1	set		
	W5- (1.4m x 1.2m) Sliding Window on Aluminum Powder Coated Framing with Complete Accessories with Provision for Aircondition Unit	1	set		
				Materials Cost	₱
				Labor Cost	
				Subtotal	₱
	Painting Works				
	Elastomeric Paint Finish (Exterior Walls)	75	sq.m.	₱	₱
	Flat Latex Paint Finish				

ITEM NO.	GENERAL REQUIREMENTS	QTY.	UNIT	UNIT COST	TOTAL COST
	Ceiling	75	sq.m.		
	Interior Wall	136	sq.m.		
	Quick Dry Enamel Paint Finish (Cabinet)	8	sq.m.		
	Epoxy Enamel Paint Finish (Steel Members)	193	sq.m.		
				Materials Cost	₱
				Labor Cost	
				Subtotal	₱
	Exterior Painting with Simple Design	44	sq.m.	₱	₱
				Subtotal	₱

ITEM NO.	GENERAL REQUIREMENTS	QTY.	UNIT	UNIT COST	TOTAL COST
	Letterings				
	Stainless Steel Signage "BAGONG SILANGAN DAY CARE CENTER" (150mm x 150mm)	27	set	₱	₱
				Materials Cost	₱
				Labor Cost	
				Subtotal	₱
				Materials Cost C	₱
				Labor Cost C	
				Direct Cost C	₱
D	SANITARY / PLUMBING WORKS				
	Sewer Line System				
	50mmØ PVC Pipe with Hub	3	piece	₱	₱
	100mmØ PVC Pipe with Hub	4	piece		
	50mmØ x 100mmØ Wye	5	piece		
	100mmØ x 100mmØ Wye	2	piece		
	50mmØ x 50mmØ Tee	5	piece		
	100mmØ x 50mmØ Tee	5	piece		
	50mmØ 1/4 Bend	5	piece		
	50mmØ 1/8 Bend	10	piece		
	100mmØ 1/4 Bend	3	piece		
	100mmØ 1/8 Bend	6	piece		
	100mmØ Cleanout	2	piece		
	50mmØ P-Trap	4	piece		
	Waterline System				
	20mmØ PPR Pipe	4	piece		
	20mmØ x 20mmØ Tee Equal	4	piece		
	20mmØ 90° Elbow	4	piece		
	20mmØ x 12mm Ø Female Threaded Tee	4	piece		
	20mmØ End Cap	4	piece		
	20mmØ Union Patent	1	piece		
	20mmØ Male Adaptor	1	piece		
	Valve and Appurtenances				
	20mmØ Gate Valve PPR	1	piece		
	Fixtures				
	Bidet, Heavy-Duty, Stainless Steel (Water Efficient)	1	set		
	Floor Drain, 100mm x 100mm Stainless Steel	3	piece		
	Grease Trap, 5GPM, Stainless	1	set		
	Hose Bibb, Lever Type, Stainless, Heavy Duty (Water Efficient)	6	set		
	Kitchen Sink Faucet, Lever Type Stainless, Heavy Duty (Water Efficient)	1	set		
	Kitchen Sink, Single Tub, Stainless	1	set		
	Lavatory Faucet, Lever Type, Stainless Heavy Duty (Water Efficient)	1	set		

ITEM NO.	GENERAL REQUIREMENTS	QTY.	UNIT	UNIT COST	TOTAL COST
	Lavatory, (Kiddy) Wall Hung	1	set		
	Urinal, (Kiddy) Flush Valve Type (Water Efficient)	1	set		
	Water Closet, (Kiddy)Tank Type (Water Efficient)	1	set		
	Hardware and Accessories				
	Angle Valve, Single-Way Stainless Steel	2	piece		
	Angle Valve, Two-Way Stainless Steel	1	piece		
	Metal Door Hook	1	piece		
	Flexible Hose	3	piece		
	Miscellaneous				
	400cc Solvent Cement	2	can		
	All around Sealant	3	tube		
	Hacksaw Blade	2	piece		
	Teflon Tape	3	roll		
	Waste Cloth	1	kg		
				Materials Cost D	₱
				Labor Cost D	
				Direct Cost D	₱
E	ELECTRICAL WORKS				
	Roughing-ins				
	20mmØ PVC Pipe	52	piece	₱	₱
	25mmØ PVC Pipe	27	piece		
	25mmØ IMC Pipe	3	piece		

ITEM NO.	GENERAL REQUIREMENTS	QTY.	UNIT	UNIT COST	TOTAL COST
	Fittings and Accessories				
	20mmØ PVC Adaptor	50	piece		
	20mmØ PVC Locknut and Bushing	50	pair		
	25mmØ PVC Adaptor	4	piece		
	25mmØ PVC Locknut and Bushing	4	pair		
	25mmØ IMC Coupling	2	piece		
	25mmØ IMC Elbow	2	piece		
	25mmØ Weatherproof Entrance Cap	1	piece		
	50mm x 100mm PVC Utility Box	14	piece		
	100mm x 100mm PVC Junction Box with Cover	10	piece		
	Oval Eyebolt	1	piece		
	16mm Ø x 3000mm Grounding Rod (Copper Clad)	1	piece		
	Wires and Cables				
	3.5mm² THHN Wire	2	roll		
	5.5mm² THHN Wire	122	l.m.		
	14.0mm² THHN Wire	30	l.m.		
	2.0mm² TW Wire	100	l.m.		
	3.5mm² TW Wire	61	l.m.		
	8.0mm² TW Wire	15	l.m.		
	8.0mm² Bare Copper Wire	6	l.m.		
	Lighting Fixtures (Energy Efficient)				
	300mm x 1200mm, 2 x 18w LED, Troffer Type, with Complete Accessories, Recessed Type	4	piece		
	300mm x 1200mm, 1 x 18w LED, Troffer Type, with Complete Accessories, Recessed Type	1	piece		
	1 x 18W LED, Tube Light, Box Type	3	piece		
	10W LED Bulb	2	piece		
	100mmØ Receptacle	2	piece		
	Wiring Devices & Appliances				
	Aircon Outlet, Multipurpose Outlet	2	piece		
	Convenience Outlet with Ground, Two-Gang	4	piece		
	Orbit Fan, Heavy Duty with Selector Switch	3	piece		
	Switch with Plate & Cover, One Gang	3	piece		
	Switch with Plate & Cover, Three Gang	1	piece		
	Panelboard				
	MCB Main: 60AT, 2P, 230V, MCCB Enclosure: NEMA 3R with Ground Terminals	1	assy		
	MDP Main: 60AT, 2P, 230V, MCCB Branches : 3 - 20AT, 2P, 230V 2 - 30AT, 2P, 230V Enclosure: NEMA 1 with Ground Terminals	1	assy		
	Pipe Hangers & Supports				
	Horizontal layout of pipe	10	l.m.		

ITEM NO.	GENERAL REQUIREMENTS	QTY.	UNIT	UNIT COST	TOTAL COST
	Vertical layout of pipe	5	l.m.		
	Miscellaneous & Consumables				
	400cc Solvent Cement	1	can		
	All around Sealant	2	can		
	Electrical Tape	10	roll		
	G.I Tie Wire	2	kg		
	Hacksaw Blade	3	piece		
	Masking Tape	5	roll		
	Pulling Lubricant	1	gal		
	Rubber Tape	5	roll		
				Materials Cost E	₱
				Labor Cost E	
				Subtotal E	₱
F	MECHANICAL WORKS				
	Equipment and Accessories				
	WAC 1 - Window type Airconditioning Unit, 1.5hp, 1.0TR, 300cfm, 1152W, 230V / 1ϕ / 60Hz	2	unit	₱	₱
				Equipment Cost	₱
				Labor Cost	
				Subtotal	₱

ITEM NO.	GENERAL REQUIREMENTS	QTY.	UNIT	UNIT COST	TOTAL COST
	Pipe Hangers and Supports				
	ACCU Support	2	unit	₱	₱
	Vibration Isolator	8	piece		
				Materials Cost	₱
				Labor Cost	
				Subtotal	₱
				Materials Cost F	₱
				Labor Cost F	
				Direct Cost F	₱
				Material Cost III	₱
				Material Cost III	
				Material Cost III	₱

SUMMARY

ITEM NO	WORK DESCRIPTION AND SCOPE OF WORKS	TOTAL COST
I	GENERAL REQUIREMENTS	₱
II	CONSTRUCTION OF HAND WASHING FACILITY	
III	REHABILITATION OF DAY CARE CENTER	

NOTE:

- Strictly enforce health protocols relative to the latest applicable DPWH memorandum

TOTAL DIRECT COST	₱
Overhead, Contingencies and Miscellaneous and Consumables Expenses (OCM)	
Profit	
VAT	
TOTAL ESTIMATED COST	₱

BILL OF QUANTITIES
(Building Construction/Rehabilitation Project)

PROJECT TITLE : PROPOSED CONSTRUCTION OF HAND WASHING FACILITY AND REHABILITATION OF SITIO VETERANS DAY CARE CENTER

LOCATION : BARANGAY BAGONG SILANGAN, DISTRICT 2, QUEZON CITY

PROJECT NO. : 21 - 00172

SCOPE OF WORK :

I GENERAL REQUIREMENTS

1. General Requirements include temporary enclosure, billboard, scaffolding, construction safety and health, and clearing, hauling and disposal of construction materials and debris.

II CONSTRUCTION OF HAND WASHING FACILITY

1. Construction of foot-operated, portable double sink handwashing facility
2. Sanitary / Plumbing Works include installation of roughing-ins,equipment,fixtures and accessories.

III REHABILITATION OF DAY CARE CENTER

1. Site Works include demolition/removal works, clearing and cleaning for painting preparation, termite treatment, and earthworks.
2. Civil / Structural Works include concrete works,masonry works, moisture protection, metal works and roofing works.
3. Architectural Works include floor finishes, wall finishes, ceiling finishes, painting works,installation of doors and windows, fabricated materials, and lettering.
4. Sanitary / Plumbing Works include installation of roughing-ins, equipment, fixtures and accessories.
5. Electrical Works include installation of roughing-ins, wirings, devices, fixtures, panelboard and accessories.
6. Mechanical Works include equipment, pipe hangers and support, and accessories.

IV TESTING AND COMMISSIONING

1. All necessary testing and commissioning shall be performed in accordance to standards.

ITEM NO.	GENERAL REQUIREMENTS	QTY.	UNIT	UNIT COST	TOTAL COST
I	**GENERAL REQUIREMENTS**				
	Billboard	1	unit	₱	₱
	Clearing, Hauling and Disposal of Construction Materials and Debris	4	t.l.		
	Construction Safety and Health	1	unit		
	Scaffolding (Rental)	54	sq.m.		
	Temporary Enclosure Around the Construction Area (h=2.4)	36	l.m.		
				DIRECT COST I	₱
II	**CONSTRUCTION OF HAND WASHING FACILITY**				
A	Hand Washing Facility				
	Double Sink Portable Hand Washing Stall	1	unit	₱	₱
				Direct Cost A	₱
B	Sanitary / Plumbing Works				
	Sewer Line System				
	50mmØ PVC Pipe with Hub	1	piece	₱	₱
	100mmØ PVC Pipe with Hub	5	piece		
	50mmØ x 100mmØ Wye	1	piece		
	100mmØ x 100mmØ Wye	1	piece		

ITEM NO.	GENERAL REQUIREMENTS	QTY.	UNIT	UNIT COST	TOTAL COST
	50mmØ 1/4 Bend	1	piece		
	50mmØ 1/8 Bend	2	piece		
	100mmØ 1/4 Bend	4	piece		
	100mmØ 1/8 Bend	4	piece		
	100mmØ Cleanout	1	piece		
	50mmØ P-Trap	1	piece		
	Waterline System				
	20mmØ PPR Pipe	3	piece		
	20mmØ x 20mmØ Tee Equal	2	piece		
	20mmØ 90° Elbow	6	piece		

ITEM NO.	GENERAL REQUIREMENTS	QTY.	UNIT	UNIT COST	TOTAL COST
	20mmØ x 12mm Ø Female Threaded Tee	2	piece		
	20mmØ End Cap	1	piece		
	20mmØ Union Patent	1	piece		
	20mmØ Male Adaptor	1	piece		
	Valve and Appurtenances				
	20mmØ Gate Valve	1	piece		
	Miscellaneous				
	400cc Solvent Cement	2	can		
	Hacksaw Blade	2	piece		
	Teflon Tape	2	roll		
	Waste Cloth	1	kg		
				Materials Cost D	₱
				Labor Cost D	
				Direct Cost D	₱
				MATERIALS COST II	₱
				LABOR COST II	
				DIRECT COST II	₱
III	**REHABILITATION OF DAY CARE CENTER**				
A	SITE WORKS				
	Removal / Demolition Works				
	Removal of Water Closet	2	set	₱	₱
	Removal of Lavatory	1	set		
	Removal of Floor Drain	3	set		
	Removal of Dilapidated Tiles	119	sq.m.		
	Removal of Roofing and Accessories	68	sq.m.		
	Removal of Handwashing Facility	2	sq.m.		
	Removal of Ceiling	99	sq.m.		
	Chipping of Concrete Wall (For Electrical Works)	4	sq.m.		
	Chipping of Concrete Wall (For Mechanical Works)	1	sq.m.		
	Demolition of Countertop	1	sq.m.		
	Demolition of Wall	3	sq.m.		
	Cleaning and Clearing for Painting Preparation	311	sq.m.		
	Cleaning of Aluminum Cladding	23	sq.m.		
				Subtotal	₱
	Termite Treatment	12	gal		
				Materials Cost	₱
				Labor Cost	
				Subtotal	₱
	Excavation for Structures				
	Footing	2	cu.m.	₱	₱
	Slab on Grade	2	sq.m.		
	Wall Footing	1	sq.m.		
				Subtotal	₱

ITEM NO.	GENERAL REQUIREMENTS	QTY.	UNIT	UNIT COST	TOTAL COST
	Soil Treatment	10	sq.m.	₱	₱
	Gravel Bedding	2	cu.m.		
				Materials Cost	₱
				Labor Cost	
				Subtotal	₱
	Backfill and Compaction	3	cu.m.	₱	₱
				Subtotal	₱
				Materials Cost A	₱
				Labor Cost A	
				Direct Cost A	₱

ITEM NO.	GENERAL REQUIREMENTS	QTY.	UNIT	UNIT COST	TOTAL COST
B	CIVIL / STRUCTURAL WORKS				
	Concrete Works				
	On Site Mix Concrete, 21 Mpa, 3/4" Gravel @ 28days				
	Footing	2	cu.m.	₱	₱
	Slab on Grade	1	cu.m.		
	Wall Footing	1	cu.m.		
	Steps	1	cu.m.		
	Column Pedestal	2	cu.m.		
	Reinforcing Steel Bar				
	Grade 40 Reinforcing Steel Bar include G.I. Tie Wire				
	10mm Ø Wall Footing	8	kg		
	10mm Ø Column Pedestal Ties	19	kg		
	10mm Ø Slab on Grade	60	kg		
	10mm Ø Steps	8	kg		
	Grade 60 Reinforcing Steel Bar include G.I. Tie Wire				
	16mm Ø Footing	30	kg		
	16mm Ø Column Pedestal	20	kg		
	Formworks				
	Footing	2	sq.m.		
	Column Pedestal	3	sq.m.		
	Slab on Grade	4	sq.m.		
	Scaffolding and Shoring				
	Pedestal	3	l.m.		
	Masonry Works				
	150mm CHB Laying include Mortar, Reinforcement and Two-Face Plastering	8	sq.m.		
	Concrete Topping (Electrical Works)	4	sq.m		
	Concrete Bonding Agent (For Hairline Cracks)	9	sq.m.		
	Plastering (For Hairline Cracks)	9	sq.m.		
	Moisture Protection				
	Waterproofing Works				
	Cementitious Capillary Type Waterproofing (CR)	7	sq.m.		
	Metal Works				
	Fence				
	50mm x 50mm x 6mm Angle Bar	229	kg		
	50mm x 4mm Flat Bar	15	kg		
	Gate 1				
	50mm x 50mm x 6mm Angle Bar	72	kg		
	50mm x 75mm x 6mm Tubular Bar	76	kg		
	38mmØ Barrel Bolt	1	piece		
	Cylindrical Hinge, Heavy Duty	2	piece		
	Gate 2				
	20mm x 20mm Square Bar	75	kg		
	50mm x 75mm x 6mm Tubular Bar	105	kg		
	38mmØ Barrel Bolt	1	piece		
	Cylindrical Hinge, Heavy Duty	2	piece		

ITEM NO.	GENERAL REQUIREMENTS	QTY.	UNIT	UNIT COST	TOTAL COST
	Gate 3				
	20mm x 20mm Square Bar	30	kg		
	50mm x 75mm x 6mm Tubular Bar	47	kg		
	38mmØ Barrel Bolt	1	piece		
	Cylindrical Hinge, Heavy Duty	2	piece		
	Canopy				
	50mm x 100mm x 1.2mm Channel Bar	25	kg		
	100mm Ø G.I. Pipe	47	kg		
	50mm x 100mm x 6mm Tubular Bar	57	kg		
	18mm Base Plate	27	kg		
	Accessories				
	18mm Ø Anchor Bolt	8	piece		
	18mm Ø Dyna Bolt	32	piece		
	Window Grilles				
	12mm x 12mm x 2mm Tubular Bar	259	kg		
	Fire Exit				
	50mm x 50mm x 6mm Angle Bar	113	kg		
	62.5mm x 62.5mm x 6mm Angle Bar	123	kg		
	38mm x 6mm Flat Bar	80	kg		
	50mm x 75mm x 6mm Tubular Bar	264	kg		
	50mm x 50mm x 6mm Tubular Bar	36	kg		
	25mm x 25mm x 6mm Tubular Bar	86	kg		
	250mm x 400mm x 6mm Steel Plate	20	kg		
	20mm Ø Anchor Bolt	24	piece		

ITEM NO.	GENERAL REQUIREMENTS	QTY.	UNIT	UNIT COST	TOTAL COST
	Miscellaneous and Consumables				
	Acetylene Tank Refill	3	tank		
	Assorted Metal Drill Bit	9	piece		
	Cut Off Blade	9	piece		
	Grinding Disc Metal	9	piece		
	Oxygen Tank Refill	6	tank		
	Welding Rod	3	box		
	Roofing Works				
	Pre-painted Rib Type G.I. Roofing	96	sq.m.		
	Pre-painted G.I. Gutter	29	l.m.		
	Pre-painted G.I. Ridge Roll	26	l.m.		
	Pre-painted G.I. Flashing	62	l.m.		
	12mm x 300mm Fiber Cement Fascia Board	29	l.m.		
	6mm thk. One Sided Aluminum Foil Thermal Insulation	87	sq.m.		
	Tekscrew	866	piece		
	Blind Rivets	600	piece		
	Silicon Sealant	19	tube		
				Materials Cost B	₱
				Labor Cost B	
				Direct Cost B	₱
C	ARCHITECTURAL WORKS				
	Floor Finishes				
	600mm x 600mm Non-Skid Homogeneous Tiles	105	sq.m.	₱	₱
	300mm x 300mm Non-Skid Homogeneous Tiles	7	sq.m.		
	Floor Topping Preparation for Tile Works	112	sq.m.		
	Rubber Nosing	15	l.m.		
	Wall Finishes and Partitions				
	300mm x 300mm Homogeneous Tiles	18	sq.m.		
	Ceiling Finishes				
	6mm Fiber Cement Board including Metal Framing	105	sq.m.		
	Fabricated Materials				
	Undercounter Cabinet	1	sq.m.		
				Materials Cost	₱
				Labor Cost	
				Subtotal	₱
	Installation of Doors				
	D1 - 1.0m x 2.1m Power Coated Metal Fire Door	1	set	₱	₱
	Metal Door Jamb				
	D1 - 1.0m x 2.1m Power Coated Metal Fire Door	1	set		
	Hardware and Accessories				
	Door Hinge, Heavy Duty, Stainless	3	set		
	Panic Hardware	1	set		
	Installation of Windows				
	Accessories				
	Glass Film for Window	25	sq.m.		

ITEM NO.	GENERAL REQUIREMENTS	QTY.	UNIT	UNIT COST	TOTAL COST
				Materials Cost	₱
				Labor Cost	
				Subtotal	₱
	Painting Works				
	Elastomeric Paint Finish (Exterior Wall)	178	sq.m.	₱	₱
	Epoxy Enamel Paint Finish (Steel Surface)	52	sq.m.		
	Flat Latex Paint Finish				
	Ceiling	104	sq.m.		
	Interior Wall	149	sq.m.		
				Materials Cost	₱
				Labor Cost	
				Subtotal	₱
	Exterior Painting (Simple Design)	101	sq.m.	₱	₱
				Subtotal	₱

ITEM NO.	GENERAL REQUIREMENTS	QTY.	UNIT	UNIT COST	TOTAL COST
	Letterings				
	200mm Stainless Steel Lettering "SITIO VETERANS DAY CARE CENTER"	26	set	₱	₱
				Materials Cost	₱
				Labor Cost	
				Subtotal	₱
				Materials Cost C	₱
				Labor Cost C	
				Direct Cost C	₱
D	SANITARY / PLUMBING WORKS				
	Sewer Line System / Storm Drainage System				
	50mmØ PVC Pipe with Hub	2	piece	₱	₱
	100mmØ PVC Pipe with Hub	2	piece		
	50mmØ x 100mmØ Wye	3	piece		
	100mmØ x 100mmØ Wye	2	piece		
	50mmØ x 50mmØ Tee	3	piece		
	100mmØ x 50mmØ Tee	3	piece		
	50mmØ 1/4 Bend	2	piece		
	50mmØ 1/8 Bend	3	piece		
	100mmØ 1/4 Bend	3	piece		
	100mmØ 1/8 Bend	2	piece		
	100mmØ Cleanout	2	piece		
	50mmØ P-Trap	7	piece		
	Waterline System				
	20mmØ PPR Pipe	1	piece		
	25mmØ PPR Pipe	1	piece		
	20mmØ x 20mmØ Tee Equal	1	piece		
	25mmØ x 25mmØ Tee Equal	2	piece		
	20mmØ 90° Elbow	2	piece		
	25mmØ 90° Elbow	2	piece		
	20mmØ x 12mm Ø Female Threaded Tee	7	piece		
	20mmØ End Cap	2	piece		
	25mmØ End Cap	1	piece		
	20mmØ Union Patent	1	piece		
	20mmØ Male Adaptor	1	piece		
	Valve and Appurtenances				
	20mmØ Gate Valve	1	piece		
	Fixtures				
	Bidet, Heavy-Duty, Stainless Steel (Water Efficient)	2	set		
	Floor Drain, 100mm x 100mm Stainless Steel	2	piece		
	Grease Trap, 5GPM, Stainless	1	set		
	Hose Bibb, Lever Type, Stainless Heavy Duty (Water Efficient)	7	set		
	Lavatory Faucet, Lever Type, Stainless Heavy Duty	2	unit		

ITEM NO.	GENERAL REQUIREMENTS	QTY.	UNIT	UNIT COST	TOTAL COST
	Lavatory, Wall Hung (Kiddy)	2	set		
	Water Closet, Kiddy, Tank Type (Water Efficient)	2	set		
	Kitchen Sink Faucet Lever Type, Heavy Duty (Water Efficient)	1	set		
	Kitchen Sink, Stainless Single	1	set		
	Hardware and Accessories				
	Angle Valve, Single-Way Stainless Steel	3	piece		
	Angle Valve, Two-Way Stainless Steel	2	piece		
	Flexible Hose	5	piece		
	Miscellaneous				
	400cc Solvent Cement	2	can		
	Hacksaw Blade	1	piece		
	Teflon Tape	1	roll		
	Waste Cloth	1	kg		
				Materials Cost D	₱
				Labor Cost D	
				Direct Cost D	₱
E	ELECTRICAL WORKS				
	Roughing-ins, Pipes and Fittings				
	20mmØ PVC Pipe	95	piece	₱	₱
	25mmØ PVC Pipe	17	piece		
	Fittings and Accessories				
	20mmØ PVC Adaptor	130	piece		
	20mmØ PVC Locknut and Bushing	130	pair		
	25mmØ PVC Adaptor	4	piece		

ITEM NO.	GENERAL REQUIREMENTS	QTY.	UNIT	UNIT COST	TOTAL COST
	25mmØ PVC Locknut and Bushing	4	pair		
	50mm x 100mm PVC Utility Box	30	piece		
	100mm x 100mm PVC Junction Box with Cover	35	piece		
	Wires and Cables				
	3.5mm² THHN Wire	4	roll		
	5.5mm² THHN Wire	100	l.m.		
	2.0mm² TW Wire	1	roll		
	3.5mm² TW Wire	50	l.m.		
	Lighting Fixtures (Energy Efficient)				
	300mm x 1200mm, 2 x 18w LED, Troffer Type, with Complete Accessories, Recessed Type	17	piece		
	1 x 18W LED, Tube Light, Box Type	2	piece		
	100mmØ Round Recessed Pinlight with 10W LED Bulb	12	piece		
	LED Exit Sign w/ Left and Right Arrow, Alum Alloy Frame 2.4V 800mAH	1	piece		
	Wiring Devices & Appliances				
	Aircon Outlet, Multipurpose Outlet	2	piece		
	Convenience Outlet with Ground, Two-gang	10	piece		
	Orbit Fan, Heavy Duty with Selector Switch	5	piece		
	Switch with Plate & Cover, One Gang	6	piece		
	Switch with Plate & Cover, Three Gang	4	piece		
	Panelboard				
	LPP Additional Branch: 30AT, 2P, 230V, BOLT-ON	3	piece		
	Pipe Hangers & Supports				
	Horizontal Layout of Pipe	10	l.m.		
	Vertical Layout of Pipe	5	l.m.		
	Miscellaneous & Consumables				
	400cc Solvent Cement	1	can		
	All around Sealant	2	can		
	Electrical Tape	10	roll		
	G.I Tie Wire (for Wire/Cable Pulling)	3	kg		
	Hacksaw Blade	4	piece		
	Masking Tape	5	roll		
	Pulling Lubricant	1	gal		
	Rubber Tape	10	roll		
				Materials Cost E	₱
				Labor Cost E	
				Direct Cost E	₱
F	MECHANICAL WORKS				
	Equipment and Accessories				
	WAC 1 - Window Type Airconditioning Unit, 2.0hp, 1.5TR, 450cfm,1730W, 230V / 1ϕ / 60Hz	2	unit	₱	₱
				Equipment Cost	₱
				Labor Cost	
				Subtotal	₱

ITEM NO.	GENERAL REQUIREMENTS	QTY.	UNIT	UNIT COST	TOTAL COST
	Pipe Hangers and Supports				
	ACCU Support	2	unit	₱	
	Vibration Isolator	8	piece		
				Materials Cost	₱
				Labor Cost	
				Subtotal	₱
				Materials Cost F	₱
				Labor Cost F	
				Direct Cost F	₱
				MATERIALS COST III	₱
				LABOR COST III	
				DIRECT COST III	₱

ITEM NO.	GENERAL REQUIREMENTS	QTY.	UNIT	UNIT COST	TOTAL COST

SUMMARY

ITEM NO	WORK DESCRIPTION AND SCOPE OF WORKS	TOTAL COST
I	GENERAL REQUIREMENTS	₱
II	CONSTRUCTION OF HAND WASHING FACILITY	
III	REHABILITATION OF DAY CARE CENTER	

NOTE:

- Strictly enforce health protocols relative to the latest applicable DPWH memorandum

TOTAL DIRECT COST	₱
Overhead, Contingencies and Miscellaneous and Consumables Expenses (OCM)	
Profit	
VAT	
TOTAL ESTIMATED COST	₱

BILL OF QUANTITIES
(Building Construction/Rehabilitation Project)

PROJECT TITLE : PROPOSED CONSTRUCTION OF HAND WASHING FACILITY AND REHABILITATION OF ASPRER DAY CARE CENTER

LOCATION : BARANGAY BAGONG SILANGAN, DISTRICT 2, QUEZON CITY

PROJECT NO. : 21 - 00172

SCOPE OF WORK :

I General Requirements include Temporary Enclosure, billboard, Scaffolding, construction safety & health, and clearing, hauling and disposal of construction materials and debris,

II Site Works include earthworks and removal of roofing, ceiling, tiles, doors, plumbing fixtures, chipping of wall for plumbing and electrical roughing-ins, cleaning/clearing for painting preparation.

III Civil Works include concreting, masonry works, metal works and roofing works

IV Architectural Works include, Ceiling finishes, painting works, installation of doors, fabricated materials and lettering

V Sanitary/Plumbing Works include installation of waterline, sewer line, valves and appurtenances, fixtures, hardware and accessories

VI Electrical Works include installation of roughing-ins, wirings, devices, fixtures, panel board and accessories

VII All necessary testing and commissioning shall be performed in accordance to standards.

ITEM NO	WORK DESCRIPTION & SCOPE OF WORKS	QTY	UNIT	UNIT COST	TOTAL COST
I.	**GENERAL REQUIREMENTS**				
	Billboard	1	unit	₱	₱
	Clearing, Hauling and Disposal of Demolished Materials and Debris	3	t.l		
	Construction Safety and Health	1	unit		
	Scaffolding (Rental)	68	sq.m		
	Temporary Enclosure around the area (H=2.4m)	27	lm		
				Direct Cost I	₱
II.	**SITE WORKS**				
	Site Clearing and Preparation	128	sq.m	₱	₱
	Layout and staking	128	sq.m		
	Excavation for structures				
	Footing	17	cu.m		
	Wall Footing	11	cu.m		
				Subtotal	₱
	Soil Treatment	17	sq.m	₱	₱
	Gravel Bedding	2	cu.m		
				Materials Cost	₱
				Labor Cost	
				Subtotal	₱
	Backfill and Compaction	13	cu.m	₱	₱
				Subtotal	₱
	Demolition Works				
	Removal of Roofing and Accessories	18	sq.m	₱	₱

ITEM NO	WORK DESCRIPTION & SCOPE OF WORKS	QTY	UNIT	UNIT COST	TOTAL COST
	Removal of Ceiling	18	sq.m		
	Chipping of Tiles	4	sq.m		
	Removal of Water Closet	1	piece		
	Chipping of Wall (Plumbing Works)	1	sq.m		
	Chipping of Wall (Electrical Works)	1	sq.m		
	Removal of Doors	1	piece		
	Cleaning/Clearing for Painting Preparation	169	sq.m		
				Subtotal	₱
				Material Cost II	**₱**
				Labor Cost II	
				Direct Cost II	**₱**

ITEM NO	WORK DESCRIPTION & SCOPE OF WORKS	QTY	UNIT	UNIT COST	TOTAL COST
III.	**CIVIL WORKS/STRUCTURAL WORKS**				
	Concreting				
	On Site Mix Concrete, 21 Mpa, 3/4" Gravel@ 28 days				
	Column Footing	6	cu.m	₱	₱
	Wall Footing	7	cu.m		
	Column	3	cu.m		
	Reinforcing Steel Bars				
	Grade 40 Reinforcing Steel Bars including G.I. Tie Wire # 16				
	10mmØ Reinforcing Steel Bars				
	Column Ties	245	kg		
	Wall Footing	78	kg		
	12mmØ Reinforcing Steel Bars				
	Wall Footing	140	kg		
	Grade 60 Reinforcing Steel Bars including G.I. Tie Wire # 16				
	16mmØ Reinforcing Steel Bars				
	Column Footing	538	kg		
	Column	409	kg		
	Formworks				
	Column Footing	11	sq.m		
	Column	19	sq.m		
	Scaffolding and Shoring				
	Column	36	l.m		
	Masonry Works				
	150mm CHB Wall Laying, including mortar, reinforcement and two-face plastering	48	sq.m		
	Restoration of Concrete (Electrical)	1	sq.m		
	Plastering of Door and Window Openings	6	l.m		
	Metal Works				
	Fence				
	50mmX50mmX2mm Tubular Bar	717	kg		
	50mmX100mmX2mm Tubular Bar	436	kg		
	Gate				
	25mmX75mmX2mm Tubular Bar	38	kg		
	25mmX25mmX2mm Tubular Bar	23	kg		
	2mm thick Steel Plate	32	kg		
	Accessories				
	Pillow Block Hinge, Heavy Duty	6	piece		
	Barrel Bolt, Heavy Duty	1	set		
	Foot Bolt, Heavy Duty	2	set		
	Miscellaneous and Consumables				
	Acetylene Tank Refill	3	tank		
	Assorted Metal Drill Bit	3	piece		
	Cut Off Blade	3	piece		
	Grinding Disc Metal	3	piece		
	Oxygen Tank Refill	6	tank		

ITEM NO	WORK DESCRIPTION & SCOPE OF WORKS	QTY	UNIT	UNIT COST	TOTAL COST
	Welding Rod	3	box		
	Roofing Works				
	Pre-Painted Rib-type G.I. Roofing	19	sq.m		
	6mm thick One-Sided Aluminum Foil Thermal Insulation	19	sq.m		
	Pre-Painted G.I. End Flashing	21	lm		
	12mm x 300mm Fascia Board	13	lm		
	Tekscrew	110	piece		
	Blind Rivets	101	piece		
	Silicon Sealant	10	tube		
				Material Cost III	**₱**
				Labor Cost III	
				Direct Cost III	**₱**
IV	**ARCHITECTURAL WORKS**				
	Ceiling Finishes				
	6mm thick Fiber Cement Board with Framing and Accessories	19	sq.m	₱	₱
	Painting Works				
	Flat Latex Paint Finish (Interior Wall and Partitions)	107	sq.m		
	Flat Latex Paint Finish (Ceiling)	18	sq.m		
	Elastomeric Paint Finish (Exterior Wall and Perimeter Fence)	77	sq.m		
	Epoxy Enamel Paint Finish (Steel Surface)	88	sq.m		
				Materials Cost	₱
				Labor Cost	
				Subtotal	₱
	Installation of Doors				
	D1 -(0.70m x 2.10m) Swing Type Metal Door, Painted Finish	1	set	₱	₱
	Door Jambs				
	D1 -(0.70m x 2.10m) Metal Jamb	1	set		
	Hardware Accessories				
	Door Hinges, Heavy Duty Stainless	3	set		
	Door Knob, Lever Type, Stainless	1	set		
				Materials Cost	₱
				Labor Cost	
				Subtotal	₱

ITEM NO	WORK DESCRIPTION & SCOPE OF WORKS	QTY	UNIT	UNIT COST	TOTAL COST
	Fabricated Materials				
	Countertop Aluminum Cover	3	l.m	₱	₱
	Hanging Cabinet	2	sq.m		
	Handwashing Lavatory, Kiddy	2	l.m		
	Bulletin Board	2	sq.m		
	Lettering				
	Stainless Steel Signage (150mm x 150mm)	19	set		
	"ASPRER DAY CARE CENTER"				
				Materials Cost	₱
				Labor Cost	
				Subtotal	₱
				Material Cost IV	**₱**
				Labor Cost IV	
				Direct Cost IV	**₱**
V	**PLUMBING/SANITARY WORKS**				
	Sewer Line / Storm Drainage System				
	Roughing-Ins				
	50 mm Ø, Pipe PVC	1	piece	₱	₱
	75 mm Ø, Pipe PVC	3	piece		
	100mm Ø, Pipe PVC	4	piece		
	50mm Ø, P-Trap	4	piece		
	75mm Ø, P-Trap	2	piece		
	50mm Ø, 1/8 Bend	6	piece		
	75mm Ø, 1/8 Bend	2	piece		
	100mm Ø, 1/8 Bend	4	piece		
	75mm Ø, 1/4 Bend	2	piece		
	100mm Ø, 1/4 Bend	4	piece		
	100mm Ø x 75mm Ø, Tee Reducer	2	piece		
	100mm Ø x 50mm Ø, Wye	4	piece		
	100mm Ø x 75mm Ø, Wye	2	piece		
	100mm Ø x 100mm Ø, Wye	3	piece		
	100mm Ø, Cleanout with Adapter	1	piece		
	Waterline System				
	Roughing-Ins				
	20mm Ø, Pipe PPR	5	piece		
	20mm Ø, Tee Equal	6	piece		
	20mm Ø, Elbow	3	piece		
	20mm Ø, Coupling	6	piece		
	20mm Ø, Female Tee, Threaded	7	piece		
	Valves and Appurtenances				
	20mm Ø Gate Valve, PPR	1	piece		
	Fixtures				
	Bidet with Accessories, Stainless (Water Efficient)	1	piece		
	Floor Drain, 100mm x 100mm, Stainless Steel	1	piece		

ITEM NO	WORK DESCRIPTION & SCOPE OF WORKS	QTY	UNIT	UNIT COST	TOTAL COST
	Grease Trap, 5 GPM, Heavy Duty	1	piece		
	Hose Bibb, Lever-Type Heavy Duty, Stainless Steel (Water Efficient)	4	piece		
	Kitchen Sink Faucet Lever Type, Heavy Duty (Water Efficient)	2	piece		
	Kitchen Sink, Stainless Single	2	piece		
	Water Closet, Kiddy, Tank Type w/ Accessories (Water Efficient)	1	piece		
	Accessories				
	Flexible Hose, Stainless Steel	3	piece		
	Angle Valve, Single Way,Stainless Steel	2	piece		
	Angle Valve, Two Way, Stainless Steel	1	piece		
	Miscellaneous & Consumables				
	400cc Solvent Cement	2	can		
	Hacksaw Blade	1	piece		
	Teflon Tape	1	roll		
	Waste Cloth	1	kg		
				Material Cost V	**₱**
				Labor Cost V	
				Direct Cost V	**₱**
VI	**ELECTRICAL WORKS**				
	Roughing-ins, Pipes and Fittings				
	20mmØ PVC Pipe	30	piece	₱	₱
	32mmØ PVC Pipe	5	piece		
	25mmØ IMC Pipe	3	piece		
	Fittings and Accessories				
	20mmØ PVC Adaptor	44	piece		
	20mmØ PVC Locknut and Bushing	44	pair		
	32mmØ PVC Adaptor	4	piece		
	32mmØ PVC Locknut and Bushing	4	pair		
	25mmØ IMC Coupling	2	piece		
	25mmØ IMC Elbow	2	piece		
	25mmØ Weatherproof Entrance Cap	1	piece		
	50mm x 100mm PVC Utility Box	12	piece		
	100mm x 100mm PVC Junction Box with cover	10	piece		

ITEM NO	WORK DESCRIPTION & SCOPE OF WORKS	QTY	UNIT	UNIT COST	TOTAL COST
	Wires and Cables				
	3.5mm² THHN Wire	2	roll		
	14.0mm² THHN Wire	30	l.m.		
	2.0mm² TW Wire	1	roll		
	8.0mm² TW Wire	15	l.m.		
	Lighting Fixtures (Energy Efficient)				
	1 x 18W LED, Tube Light, Box Type	5	piece		
	10W LED Bulb	2	piece		
	100mmØ Receptacle	2	piece		
	Wiring Devices & Appliances				
	Wall Fan, Heavy Duty with Selector Switch	4	piece		
	Convenience Outlet with ground, One-gang	4	piece		
	Convenience Outlet with ground, Two-gang	4	piece		
	Switch with Plate & Cover, One Gang	2	piece		
	Switch with Plate & Cover, Three Gang	1	piece		
	Panelboard				
	MCB				
	Main: 60AT, 2P, 230V, MCCB	1	assy		
	Enclosure: NEMA 3R with Ground Terminals				
	MDP				
	Main: 60AT, 2P, 230V, MCCB	1	assy		
	Branches : 2 - 20AT, 2P, 230V				
	2 - Spare				
	Enclosure: NEMA 1 with Ground Terminals				
	Pipe Hangers & Supports				
	Horizontal layout of pipe	10	l.m.		
	Vertical layout of pipe	5	l.m.		
	Miscellaneous & Consumables				
	400cc Solvent Cement	3	can		
	All around Sealant	3	can		
	Electrical Tape	10	roll		
	G.I Tie Wire	5	kg		
	Hacksaw Blade	5	piece		
	Masking Tape	5	roll		
	Pulling Lubricant	1	gal		
	Rubber Tape	5	roll		
				Material Cost VI	**₱**
				Labor Cost VI	
				Direct Cost VI	**₱**

SUMMARY

ITEM NO.	WORK DESCRIPTION & SCOPE OF WORKS	TOTAL COST

ITEM NO	WORK DESCRIPTION & SCOPE OF WORKS	QTY	UNIT	UNIT COST	TOTAL COST
I.	GENERAL REQUIREMENTS				₱
II.	SITE WORKS				
III.	CIVIL WORKS/STRUCTURAL WORKS				
IV.	ARCHITECTURAL WORKS				
V.	PLUMBING/SANITARY WORKS				
VI.	ELECTRICAL WORKS				

	TOTAL DIRECT COST	₱
Note: Overhead,	Contingencies and Miscellaneous Expenses (OCM)	
Strictly enforce Health Protocols relative to the	Profit	
latest applicable DPWH Memorandum	VAT	
	TOTAL ESTIMATED COST	₱

BILL OF QUANTITIES

(Building Construction/Rehabilitation Project)

PROJECT TITLE : PROPOSED REHABILITATION OF COVENANT DAY CARE CENTER

LOCATION : BARANGAY BAGONG SILANGAN, DISTRICT 2, QUEZON CITY

PROJECT NO. : 21 - 00172

DURATION : Ninety (90) Calendar Days

SCOPE OF WORKS:

1. General Requirements include temporary enclosure, scaffolding, billboard, construction safety and health, and clearing, hauling & disposal of construction materials and debris.
2. Site Works include demolition/removal works, and cleaning and clearing for painting preparation.
3. Civil/Structural Works include moisture protection, masonry and roofing works.
4. Architectural Works include floor finishes, wall finishes, ceiling, painting works, installation of doors, windows, fabricated materials, and letterings.
5. Sanitary/Plumbing Works include installation of roughing-ins, fixtures and accessories.
6. Electrical Works include installation of roughing-ins, devices, wiring, fixtures, panel board and accessories.
7. All necessary testing and commissioning shall be performed in accordance to standards.

ITEM NO	WORK DESCRIPTION AND SCOPE OF WORKS	QTY	UNIT	UNIT COST	TOTAL COST
I	**GENERAL REQUIREMENTS**				
	Billboard	1	unit	₱	₱
	Clearing, Hauling and Disposal of Construction Materials and Debris	3	t.l.		
	Construction Safety and Health	1	unit		
	Scaffolding (Rental)	40	sq.m.		
	Temporary Enclosure Around the Construction Area (h=2.40m)	16	l.m.		
				Direct Cost I	₱
II	**SITE WORKS**				
	Demolition/Removal Works				
	Chipping (Electrical Works)	3	sq.m	₱	₱
	Demolition of Countertop	2	sq.m.		
	Removal of Doors	3	set		
	Removal of Ceiling	53	sq.m.		
	Removal of Cabinet	4	sq.m.		
	Removal of Water Closet	1	set		
	Removal of Wall - Hung Sink	1	set		
	Removal of Windows	9	sq.m.		
	Removal of Tiles	52	sq.m.		
	Removal of Urinal	1	set		
	Cleaning and Clearing for Painting Preparation	201	sq.m.		
				Direct Cost II	₱
III	**CIVIL WORKS / STRUCTURAL WORKS**				
	Masonry Works				

ITEM NO	WORK DESCRIPTION AND SCOPE OF WORKS	QTY	UNIT	UNIT COST	TOTAL COST
	Restoration of Concrete (Electrical Works)	3	sq.m	₱	₱
	Moisture Protection				
	Cementitious Capillary Type Waterproofing	3	sq.m.		
	Roofing Works				
	Pre-painted Rib Type G.I. Roofing	60	sq.m.		
	Pre-painted G.I. Ridge Roll	6	lm		
	Pre-painted G.I. Flashing	33	lm		
	12mm x 300mm Fiber Cement Fascia Board	33	lm		
	6mm thk. One Sided Aluminum Foil Thermal Insulation	60	sq.m.		
	Tekscrew	340	piece		
	Blind Rivets	222	piece		
	Silicon Sealant	7	tube		
				Materials Cost III	₱
				Labor Cost III	
				Direct Cost III	₱

ITEM NO	WORK DESCRIPTION AND SCOPE OF WORKS	QTY	UNIT	UNIT COST	TOTAL COST
IV	**ARCHITECTURAL WORKS**				
	Floor Finishes				
	400mm x 400mm Non - Skid Homogeneous Floor Tiles	3	sq.m.	₱	₱
	600mm x 600mm Non - Skid Homogeneous Floor Tiles	40	sq.m.		
	Floor Topping Preparation for Tile works	43	sq.m.		
	Wall Finishes				
	400mm x 400mm Homogeneous Wall Tiles	13	sq.m.		
	Ceiling Finishes				
	6mm Fiber Cement Board including Metal Framing	56	sq.m.		
				Materials Cost	₱
				Labor Cost	
				Subtotal	₱
	Installation of Doors				
	D1 - (2.1m x 0.8m) Wooden Panel Door with Transom	3	set	₱	₱
	D2 - (2.1m x 0.6m) PVC Door with Louver	1	set		
	Door Jambs				
	Door Jamb D1 - (2.1m x 0.8m) Wooden Panel Door	3	set		
	Hardware and Accessories				
	Door Hinge, Heavy Duty, Stainless	12	set		
	Door Knob, Stainless Lever Type	4	set		
	Installation of Windows				
	W1 - (1.40m x 1.2m) Aluminum Framed Jalousie Window with Transom	4	set		
	W2 - (0.6m x 0.6m) Aluminum Framed Awning Window	1	set		
				Materials Cost	₱
				Labor Cost	
				Subtotal	₱
	Painting Works				
	Elastomeric Paint Finish (Exterior Walls)	83	sq.m.	₱	₱
	Epoxy Enamel Paint Finish (Steel Members)	12	sq.m.		
	Latex Paint Finish				
	Interior Walls	119	sq.m.		
	Ceiling	56	sq.m.		
				Materials Cost	₱
				Labor Cost	
				Subtotal	₱
	Exterior Painting with Simple Design	25	sq.m.	₱	₱
				Subtotal	₱
	Fabricated Materials				
	Countertop with Aluminum Cover	2	l.m.	₱	₱
	Countertop with Aluminum Cover (no CHB)	2	l.m.		
	Shelves	2	sq.m.		
	Hanging Cabinet	1	sq.m.		
	Hanging Cabinet with Sliding Glass Door	2	sq.m.		
				Materials Cost	₱

ITEM NO	WORK DESCRIPTION AND SCOPE OF WORKS	QTY	UNIT	UNIT COST	TOTAL COST
				Labor Cost	
				Subtotal	₱
	Letterings				
	200mm Stainless Steel Lettering "COVENANT DAY CARE CENTER"	21	set	₱	₱
				Materials Cost	₱
				Labor Cost	
				Subtotal	₱
				Materials Cost IV	**₱**
				Labor Cost IV	
				Direct Cost IV	**₱**

ITEM NO	WORK DESCRIPTION AND SCOPE OF WORKS	QTY	UNIT	UNIT COST	TOTAL COST
V	**SANITARY / PLUMBING WORKS**				
	Sewer Line / Storm Drainage System				
	PVC Roughing-Ins				
	50mm Ø PVC Pipe with Hub	2	piece	₱	₱
	100mm Ø PVC Pipe with Hub	6	piece		
	50mm Ø x 50mm Ø Wye	5	piece		
	50mm Ø x 50mm Ø Tee	5	piece		
	50mm Ø x 50mm Ø PVC 1/4 Bend	3	piece		
	50mm Ø x 50mm Ø PVC 1/8 Bend	5	piece		
	50mm Ø PVC Cleanout	2	piece		
	50mm Ø PVC P-Trap	6	piece		
	Waterline System				
	PPR Roughing-Ins				
	20mm Ø PPR Pipe	5	piece		
	20mm Ø x 20mm Ø Equal Tee	7	piece		
	20mm Ø x 12mm Ø Female Threaded Tee	8	piece		
	20mm Ø End Cap	4	piece		
	20mm Ø x 20mm Ø PPR 90° Elbow	5	piece		
	20mm Ø PPR Coupling	7	piece		
	Valves and Appurtenances				
	20mm Ø PPR Gate Valve	2	piece		
	Plumbing Fixtures				
	Bidet, Heavy-Duty, Stainless Steel (Water Efficient)	1	piece		
	Floor Drain, 100mm x 100mm, Stainless	3	piece		
	Hose Bibb Lever Type, Stainless Steel Heavy Duty (Water Efficient)	4	piece		
	Grease Trap, 5GPM, Stainless	1	piece		
	Kitchen Sink, Single, Stainless	1	set		
	Kitchen Sink Faucet, Lever Type, Stainless Heavy Duty (Water Efficient)	1	piece		
	Lavatory, Wall Hung (Kiddy)	1	set		
	Lavatory Faucet, Lever-type, Heavy Duty, Stainless Steel (Water Efficient)	1	piece		
	Soap Holder, Ceramic	1	piece		
	Water Closet, Tank Type (Kiddy)	1	set		
	Accessories & Hardwares				
	Angle Valve,Single Way, Stainless Steel	2	piece		
	Angle Valve, Two Way, Stainless Steel	1	piece		
	Flexible Hose, Stainless Steel	3	piece		
	Wall Metal Door Hook Hanger	1	piece		
	Miscellaneous & Consumables				
	400cc Solvent Cement	3	can		
	All-Around Sealant	3	can		
	Fixture Sealant	3	tube		
	Hacksaw Blade	3	piece		
	Teflon Tape	5	roll		
	Waste Cloth	1	kg		

ITEM NO	WORK DESCRIPTION AND SCOPE OF WORKS	QTY	UNIT	UNIT COST	TOTAL COST
				Materials Cost V	**₱**
				Labor Cost V	
				Direct Cost V	**₱**
VI	**ELECTRICAL WORKS**				
	Roughing-ins, Pipes and Fittings				
	20mmØ PVC Pipe	47	piece	₱	₱
	25mmØ PVC Pipe	4	piece		
	25mmØ IMC Pipe	2	piece		
	Fittings and Accessories				
	20mmØ PVC Adaptor	44	piece		
	20mmØ PVC Locknut and Bushing	44	pair		
	25mmØ PVC Adaptor	4	piece		
	25mmØ PVC Locknut and Bushing	4	pair		
	25mmØ IMC Coupling	4	piece		
	25mmØ IMC Elbow	2	piece		
	25mmØ Weatherproof Entrance Cap	1	piece		
	50mm x 100mm PVC Utility Box	15	piece		
	100mm x 100mm PVC Junction Box with Cover	7	piece		
	Wires and Cables				
	3.5mm² THHN Wire	2	roll		
	8.0mm² THHN Wire	16	l.m.		
	2.0mm² TW Wire	1	roll		
	8.0mm² TW Wire	8	l.m.		
	Lighting Fixtures (Energy Efficient)				
	Accessories, Recessed Type	3	piece		
	1 x 18W LED, Tube Light, Box Type	1	piece		
	10W LED Bulb	1	piece		
	100mmØ Receptacle	1	piece		

ITEM NO	WORK DESCRIPTION AND SCOPE OF WORKS	QTY	UNIT	UNIT COST	TOTAL COST
	Wiring Devices & Appliances				
	Ceiling Fan, Heavy Duty with Selector Switch	2	piece		
	Wall Fan, Heavy Duty with Selector Switch	2	piece		
	Convenience Outlet with Ground, One-gang	2	piece		
	Convenience Outlet with Ground, Two-gang	4	piece		
	Switch with Plate and Cover, One Gang	3	piece		
	Panelboard				
	MCB Main: 50AT, 2P, 230V, MCCB Enclosure: NEMA 3R with Ground Terminals	1	assy		
	MDP Main: 50AT, 2P, 230V, MCCB Branches : 3 - 20AT, 2P, 230V 1 - SPARE Enclosure: NEMA 1 with Ground Terminals	1	assy		
	Pipe Hangers & Supports				
	Horizontal layout of pipe	10	l.m.		
	Vertical layout of pipe	5	l.m.		
	Miscellaneous & Consumables				
	400cc Solvent Cement	1	can		
	All around Sealant	1	can		
	Electrical Tape	5	roll		
	G.I Tie Wire	2	kg		
	Hacksaw Blade	3	piece		
	Masking Tape	5	roll		
	Pulling Lubricant	1	gal		
	Rubber Tape	5	roll		
				Materials Cost VI	**₱**
				Labor Cost VI	
				Direct Cost VI	**₱**

ITEM NO	WORK DESCRIPTION AND SCOPE OF WORKS	QTY	UNIT	UNIT COST	TOTAL COST

SUMMARY

ITEM NO	WORK DESCRIPTION & SCOPE OF WORKS	TOTAL COST
I	GENERAL REQUIREMENTS	₱
II	SITE WORKS	
III	CIVIL WORKS / STRUCTURAL WORKS	
IV	ARCHITECTURAL WORKS	
V	SANITARY / PLUMBING WORKS	
VI	ELECTRICAL WORKS	
Note: ● Strictly enforce health protocol relative to the latest applicable DPWH Memorandum.	**TOTAL DIRECT COST** Overhead, Contingencies and Miscellaneous Expenses (OCM) Profit VAT	₱
	TOTAL ESTIMATED COST	₱

BILL OF QUANTITIES

(Building Construction/Rehabilitation Project)

PROJECT TITLE : PROPOSED REHABILITATION OF BAKAS DAY CARE CENTER

LOCATION : BARANGAY BAGONG SILANGAN, DISTRICT 2, QUEZON CITY

PROJECT NO. : 21 - 00172

SCOPE OF WORK :

I General Requirements include billboard, clearing, hauling and disposal of construction materials and debris, construction safety & health, Temporary Enclosure and Scaffolding.

II Site Works include earthworks, removal of roof, ceiling, tiles, doors and windows, plumbing fixtures, chipping of wall for plumbing and electrical roughing-ins, cleaning/clearing for painting preparation, soil treatment and backfill and compaction.

III Civil Works include concreting, masonry works, thermal and moisture protection, metal works and roofing works

IV Architectural Works include floor finishes, wall finishes, ceiling finishes, painting works, installation of doors and windows, fabricated materials and lettering.

V Sanitary/Plumbing Works include installation of waterline, sewer line, valves and appurtenances, fixtures, hardware and accessories.

VI Electrical Works include installation of roughing-ins, wirings, devices, fixtures, panel board and accessories

VII All necessary testing and commissioning shall be performed in accordance to standards.

ITEM NO	WORK DESCRIPTION & SCOPE OF WORKS	QTY	UNIT	UNIT COST	TOTAL COST
I.	**GENERAL REQUIREMENTS**				
	Billboard	1	unit	₱	₱
	Clearing, Hauling and Disposal of Demolished Materials and Debris	2	t.l		
	Construction Safety and Health	1	unit		
	Scaffolding (Rental)	29	sq.m		
	Temporary Enclosure around the area (H=2.4m)	29	lm		
				DIRECT COST I	₱
II	**SITE WORKS**				
	Demolition Works				
	Removal of Roofing and accessories	49	sq.m	₱	₱
	Removal of Ceiling	47	sq.m		
	Chipping of Tiles	9	sq.m		
	Removal of Doors	2	set		
	Removal of Windows	8	sq.m		
	Removal of Water Closet	1	set		
	Removal of Lavatory	1	set		
	Chipping of Wall (Plumbing)	1	sq.m		
	Chipping of Wall (Electrical)	3	sq.m		
	Cleaning/Clearing for Paint Preparation	130	sq.m		
				Subtotal	₱
	Site Clearing and Preparation	42	sq.m	₱	₱
	Layout and staking	42	sq.m		
	Excavation for structures				
	Footing	4	cu.m		
	Wall Footing	4	cu.m		
				Subtotal	₱

ITEM NO	WORK DESCRIPTION & SCOPE OF WORKS	QTY	UNIT	UNIT COST	TOTAL COST
	Soil Treatment	4	sq.m	₱	₱
	Gravel Bedding	1	cu.m		
				Materials Cost	₱
				Labor Cost	
				Subtotal	₱
	Backfill and Compaction	5	cu.m	₱	₱
				Subtotal	₱
				MATERIAL COST II	₱
				LABOR COST II	
				DIRECT COST II	₱

ITEM NO	WORK DESCRIPTION & SCOPE OF WORKS	QTY	UNIT	UNIT COST	TOTAL COST
III	**CIVIL WORKS/STRUCTURAL WORKS**				
	Concreting				
	On-Site Mix Concrete, 21MPa, 3/4" Gravel @ 28 days				
	Column Footing	1	cu.m	₱	₱
	Wall Footing	2	cu.m		
	Column	2	cu.m		
	Reinforcing Steel Bars				
	Grade 40 Reinforcing Steel Bars including G.I. Tie Wire # 16				
	10mmØ Reinforcing Steel Bars				
	Column Ties	121	kg		
	Wall Footing	63	kg		
	Grade 60 Reinforcing Steel Bars including G.I. Tie Wire # 16				
	16mmØ Reinforcing Steel Bars				
	Column Footing	110	kg		
	Column	110	kg		
	Formworks				
	Column Footing	3	sq.m		
	Column	10	sq.m		
	Scaffolding and Shoring				
	Column	15	l.m		
	Masonry Works				
	150mm CHB Wall Laying, including mortar, reinforcement and two-face plastering	25	sq.m		
	Restoration of Concrete (Electrical)	3	sq.m		
	Plastering of Door and Window Openings	28	l.m		
	Moisture Protection				
	Cementitious Capillary Type Waterproofing (Toilet)	8	sq.m		
	Metal Works				
	Window Grilles				
	12mm Square Bar	93	kg		
	Fence				
	12mm Square Bar	133	kg		
	Gate 1				
	50mm Ø G.I Pipe	79	kg		
	Steel plate	34	kg		
	Gate 2				
	50mm Ø G.I Pipe	24	kg		
	12mm Square Bar	41	kg		
	Accessories				
	Cylindrical Hinge, Heavy Duty	6	set		
	12mm Ø Barrel Bolt, Heavy Duty	2	set		
	12mm Ø Foot Bolt, Heavy duty	1	set		
	Miscellaneous and Consumables				
	Acetylene Tank Refill	1	tank		
	Assorted Metal Drill Bit	5	piece		
	Cut Off Blade	5	piece		
	Grinding Disc Metal	5	piece		
	Oxygen Tank Refill	2	tank		

ITEM NO	WORK DESCRIPTION & SCOPE OF WORKS	QTY	UNIT	UNIT COST	TOTAL COST
	Welding Rod	1	box		
	Roofing Works				
	Pre-Painted Rib-type G.I. Roofing	52	sq.m		
	6mm thick One-Sided Aluminum Foil Thermal Insulation	52	sq.m		
	Pre-Painted G.I. End Flashing	29	lm		
	12mm x 300mm Fiber Cement Fascia Board	22	lm		
	Tekscrew	246	piece		
	Blind Rivets	144	piece		
	Silicon Sealant	7	tube		
				MATERIAL COST III	**₱**
				LABOR COST III	
				DIRECT COST III	**₱**
IV	**ARCHITECTURAL WORKS**				
	Floor Finishes				
	300mm x 300mm Homogeneous Floor Tiles	3	sq.m	₱	₱
	600mm x 600mm Homogeneous Floor Tiles	2	sq.m		
	Floor Topping for Preparation of Tiles	5	sq.m		
	Wall Finishes				
	400mm x 400mm Homogeneous Wall Tiles	6	sq.m		
	Ceiling Finishes				
	6mm Thick Fiber Cement Board with Complete Framing and Accesso	50	sq.m		
	Painting Works				
	Flat Latex Paint Finish (Interior Wall and Partitions)	73	sq.m		
	Flat Latex Paint Finish (Ceiling)	50	sq.m		
	Elastomeric Paint Finish (Exterior Wall and Perimeter Fence)	96	sq.m		
	Epoxy Enamel Paint Finish (Steel Surface)	20	sq.m		
				Materials Cost	₱
				Labor Cost	
				Subtotal	₱

ITEM NO	WORK DESCRIPTION & SCOPE OF WORKS	QTY	UNIT	UNIT COST	TOTAL COST
	Installation of Doors				
	D1 -(1.60m x 2.10m) Swing Type, Powder Coated Aluminum Frame with Complete Accessories	1	set	₱	₱
	D2 -(0.60m x 2.10m) Swing Type PVC Door, Painted Finish	1	set		
	Hardware Accessories				
	Door Hinges, Heavy Duty, Stainless	3	set		
	Door Knob, Lever Type, Stainless	1	set		
	Installation of Windows				
	W1 -(1.60m x 1.20m) Sliding Window, 6mm Thk, Clear Tempered Glass Powder Coated Aluminum Frame with Complete Accessories	2	set		
	W2 -(0.60m x 0.60m) Awning Window, 6mm Thk, Clear Tempered Glass Powder Coated Aluminum Frame with Complete Accessories	1	set		
	W3 -(2.40m x 1.20m) Sliding Window, 6mm Thk, Clear Tempered Glass Powder Coated Aluminum Frame with Complete Accessories	1	set		
				Materials Cost	₱
				Labor Cost	
				Subtotal	₱
	Fabricated Materials				
	Hanging Cabinet	1	sq.m	₱	₱
	Countertop Tiles And Aluminum Cover	1	l.m		
	Cabinet with Shelves	3	sq.m		
	Lettering				
	Stainless Steel Signage (150mm x 150mm)	18	set		
	"BAKAS DAY CARE CENTER"				
				Materials Cost	₱
				Labor Cost	
				Subtotal	₱
				MATERIAL COST IV	**₱**
				LABOR COST IV	
				DIRECT COST IV	**₱**
V	**PLUMBING/SANITARY WORKS**				
	Sewer Line / Storm Drainage System				
	Roughing-Ins				
	50 mm Ø, Pipe PVC	2	piece	₱	₱
	100mm Ø, Pipe PVC	2	piece		
	50mm Ø, P-Trap	4	piece		
	50mm Ø, 1/8 Bend	4	piece		
	100mm Ø, 1/8 Bend	2	piece		
	100mm Ø, 1/4 Bend	2	piece		
	100mm Ø x 50mm Ø, Wye	4	piece		
	100mm Ø x 100mm Ø, Wye	2	piece		
	100mm Ø, Cleanout with Adapter	1	piece		
	Waterline System				
	Roughing-Ins				
	20mm Ø, Pipe PPR	3	piece		

ITEM NO	WORK DESCRIPTION & SCOPE OF WORKS	QTY	UNIT	UNIT COST	TOTAL COST
	20mm Ø, Tee Equal	8	piece		
	20mm Ø, Elbow	4	piece		
	20mm Ø, Coupling	4	piece		
	20mm Ø, Female Elbow, Threaded	8	piece		
	Valves and Appurtenances				
	20mm Ø Gate Valve, PPR	1	piece		
	Fixtures				
	Bidet with Accessories, Stainless (Water Efficient)	1	piece		
	Floor Drain, 100mm x 100mm, Stainless Steel	1	piece		
	Grease Trap, 5 GPM, Heavy Duty	1	piece		
	Hose Bibb, Lever-Type Heavy Duty, Stainless Steel (Water Efficient)	4	piece		
	Kitchen Sink Faucet Lever Type, Heavy Duty (Water Efficient)	1	piece		
	Kitchen Sink, Stainless Single	1	piece		
	Lavatory Faucet Lever Type, Stainless Steel Heavy Duty(Water Efficient)	1	piece		
	Lavatory Wall Hung, Kiddy	1	piece		
	Water Closet, Kiddy, Tank Type w/ Accessories (Water Efficient)	1	piece		
	Accessories				
	Angle Valve, Single Way, Stainless Steel	2	piece		
	Angle Valve, Two Way, Stainless Steel	1	piece		
	Flexible Hose, Stainless Steel	3	piece		
	Miscellaneous & Consumables				
	400cc Solvent Cement	2	can		
	Hacksaw Blade	1	piece		
	Teflon Tape	1	roll		
	Waste Cloth	1	kg		
				MATERIAL COST V	**P**
				LABOR COST V	
				DIRECT COST V	**P**

ITEM NO	WORK DESCRIPTION & SCOPE OF WORKS	QTY	UNIT	UNIT COST	TOTAL COST
VI	**ELECTRICAL WORKS**				
	Roughing-ins				
	20mmØ PVC Pipe	40	piece	₱	₱
	32mmØ PVC Pipe	5	piece		
	25mmØ IMC Pipe	2	piece		
	Fittings and Accessories				
	20mmØ PVC Adaptor	50	piece		
	20mmØ PVC Locknut and Bushing	50	pair		
	32mmØ PVC Adaptor	4	piece		
	32mmØ PVC Locknut and Bushing	4	pair		
	25mmØ IMC Coupling	4	piece		
	25mmØ IMC Elbow	2	piece		
	25mmØ Weatherproof Entrance Cap	1	piece		
	50mm x 100mm PVC Utility Box	14	piece		
	100mm x 100mm PVC Junction Box with cover	10	piece		
	Wires and Cables				
	3.5mm² THHN Wire	2	roll		
	14.0mm² THHN Wire	30	l.m.		
	2.0mm² TW Wire	1	roll		
	8.0mm² TW Wire	15	l.m.		
	Lighting Fixtures (Energy Efficient)				
	600mm x 1200mm, 2 x 18w LED, Troffer Type, w/ complete accessories,	4	piece		
	300mm x 1200mm, 2 x 18w LED, Troffer Type, w/ complete accessories,	1	piece		
	10W LED Bulb	4	piece		
	100mmØ Round Recessed Pinlight (case)	4	piece		
	Wiring Devices & Appliances				
	Ceiling Fan, Heavy Duty with Selector Switch	1	piece		
	Wall Fan, Heavy Duty with Selector Switch	3	piece		
	Convenience Outlet with ground, One-gang	2	piece		
	Convenience Outlet with ground, Two-gang	5	piece		
	Switch with Plate & Cover, One Gang	2	piece		
	Switch with Plate & Cover, Three Gang	1	piece		
	Panelboard				
	MCB				
	Main: 60AT, 2P, 230V, MCCB	1	assy		
	Enclosure: NEMA 3R with Ground Terminals				
	MDP				
	Main: 60AT, 2P, 230V, MCCB	1	assy		
	Branches : 3 - 20AT, 2P, 230V				
	2 - Spare				
	Enclosure: NEMA 1 with Ground Terminals				
	Pipe Hangers & Supports				
	Horizontal layout of pipe	10	l.m.		
	Vertical layout of pipe	5	l.m.		
	Miscellaneous & Consumables				
	400cc Solvent Cement	1	can		

ITEM NO	WORK DESCRIPTION & SCOPE OF WORKS	QTY	UNIT	UNIT COST	TOTAL COST
	All around Sealant	2	can		
	Electrical Tape	10	roll		
	G.I Tie Wire	2	kg		
	Hacksaw Blade	3	piece		
	Masking Tape	5	roll		
	Pulling Lubricant	1	gal		
	Rubber Tape	5	roll		
				Material Cost VI	**₱**
				Labor Cost VI	
				DIRECT COST VI	**₱**

ITEM NO	WORK DESCRIPTION & SCOPE OF WORKS	QTY	UNIT	UNIT COST	TOTAL COST

SUMMARY

ITEM NO.	WORK DESCRIPTION & SCOPE OF WORKS	TOTAL COST
I.	GENERAL REQUIREMENTS	₱
II.	SITE WORKS	
III.	CIVIL WORKS/STRUCTURAL WORKS	
IV.	ARCHITECTURAL WORKS	
V.	PLUMBING/SANITARY WORKS	
VI.	ELECTRICAL WORKS	
	TOTAL DIRECT COST	₱
NOTE:	Overhead, Contingencies and Miscellaneous Expenses (OCM)	
●Strictly enforce Health Protocols relative to the latest applicable DPWH Memorandum	Profit	
	VAT	
	TOTAL ESTIMATED COST	₱

Section IX. Checklist of Technical and Financial Documents

Notes on the Checklist of Technical and Financial Documents

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

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

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

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

Checklist of Technical and Financial Documents

I. TECHNICAL COMPONENT ENVELOPE

Class "A" Documents

Legal Documents

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

Performance Securing Declaration (Revised)

[if used as an alternative performance security but it is not required to be submitted with the Bid, as it shall be submitted within ten (10) days after receiving the Notice of Award]

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

PERFORMANCE SECURING DECLARATION

Invitation to Bid: [Insert Reference Number indicated in the Bidding Documents] To: [Insert name and address of the Procuring Entity]

I/We, the undersigned, declare that:

1. I/We understand that, according to your conditions, to guarantee the faithful performance by the supplier/distributor/manufacturer/contractor/consultant of its obligations under the Contract, I/we shall submit a Performance Securing Declaration within a maximum period of ten (10) calendar days from the receipt of the Notice of Award prior to the signing of the Contract.

2. I/We accept that: I/we will be automatically disqualified from bidding for any procurement contract with any procuring entity for a period of one (1) year for the first offense, or two (2) years **for the second offense**, upon receipt of your Blacklisting Order if I/We have violated my/our obligations under the Contract;

3. I/We understand that this Performance Securing Declaration shall cease to be valid upon:

    a. issuance by the Procuring Entity of the Certificate of Final Acceptance, subject to the following conditions:
        i. Procuring Entity has no claims filed against the contract awardee;
        ii. It has no claims for labor and materials filed against the contractor; and
        iii. Other terms of the contract; or

    b. replacement by the winning bidder of the submitted PSD with a performance security in any of the prescribed forms under Section 39.2 of the 2016 revised IRR of RA No. 9184 as required by the end-user.

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]

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