

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 4 AREA XXII**

**Project number:
21-00175**

**Sixth Edition
July 2020**

Preface

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

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

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

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

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

- a. All the documents listed in the Table of Contents are normally required for the procurement of Infrastructure Projects. However, they should be adapted as necessary to the circumstances of the particular Project.
- b. Specific details, such as the “*name of the Procuring Entity*” and “*address for bid submission*,” should be furnished in the Instructions to Bidders, Bid Data Sheet, and Special Conditions of Contract. The final documents should contain neither blank spaces nor options.
- c. This Preface and the footnotes or notes in italics included in the Invitation to Bid, BDS, General Conditions of Contract, Special Conditions of Contract, Specifications, Drawings, and Bill of Quantities are not part of the text of the final document, although they contain instructions that the Procuring Entity should strictly follow.
- d. The cover should be modified as required to identify the Bidding Documents as to the names of the Project, Contract, and Procuring Entity, in addition to date of issue.

- e. Modifications for specific Procurement Project details should be provided in the Special Conditions of Contract as amendments to the Conditions of Contract. For easy completion, whenever reference has to be made to specific clauses in the Bid Data Sheet or Special Conditions of Contract, these terms shall be printed in bold typeface on Sections I (Instructions to Bidders) and III (General Conditions of Contract), respectively.
- f. For guidelines on the use of Bidding Forms and the procurement of Foreign-Assisted Projects, these will be covered by a separate issuance of the Government Procurement Policy Board.

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Glossary of Terms, Abbreviations, and Acronyms

ABC – Approved Budget for the Contract.

ARCC – Allowable Range of Contract Cost.

BAC – Bids and Awards Committee.

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

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

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

BIR – Bureau of Internal Revenue.

BSP – Bangko Sentral ng Pilipinas.

CDA – Cooperative Development Authority.

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

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

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

CPI – Consumer Price Index.

DOLE – Department of Labor and Employment.

DTI – Department of Trade and Industry.

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

GFI – Government Financial Institution.

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

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

GOP – Government of the Philippines.

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

LGUs – Local Government Units.

NFCC – Net Financial Contracting Capacity.

NGA – National Government Agency.

PCAB – Philippine Contractors Accreditation Board.

PhilGEPS - Philippine Government Electronic Procurement System.

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

PSA – Philippine Statistics Authority.

SEC – Securities and Exchange Commission.

SLCC – Single Largest Completed Contract.

UN – United Nations.

Section I. Invitation to Bid

Notes on the Invitation to Bid

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

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

- a. The date of availability of the Bidding Documents, which shall be from the time the IB is first advertised/posted until the deadline for the submission and receipt of bids;
- b. The place where the Bidding Documents may be acquired or the website where it may be downloaded;
- c. The deadline for the submission and receipt of bids; and
- d. Any important bid evaluation criteria.

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



REPUBLIC OF THE PHILIPPINES
QUEZON CITY GOVERNMENT
BIDS AND AWARDS COMMITTEE FOR INFRASTRUCTURE &
CONSULTANCY



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

November 15, 2021

Invitation to Bid

| No. | Project No. | Project Name | Location | Amount | Duration Cal. Days | Office | Source Fund |
|-----------------------------------|-------------|---|-------------------------------|--------------|--------------------|------------------------|------------------------|
| <u>Buildings – Small B</u> | | | | | | | |
| 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 Conference¹ 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 4 AREA XXII**, with Project Identification Number **21-00175**.

[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 **Eleven Million Nine Hundred Eighty-Eight Thousand One Hundred Seventy-Four Pesos & 41/100 Cts. (P 11,988,174.41)**.

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

| ITB Clause | |
|------------|---|
| 5.2 | For this purpose, similar contracts shall refer to contracts which have the same major categories of work. |
| 7.1 | Subcontracting is not allowed. |
| 10.3 | <i>No additional contractor license or permit is required</i> <i>In addition, eligible bidders shall qualify or comply with the following:</i> 1. Bidders with valid Philippine Contractors Accreditation Board (PCAB) Type Building - Small B |
| 10.4 | The minimum work experience requirements for key personnel are the following: |
| | PROPOSED CONSTRUCTION OF HAND WASHING FACILITY AND REHABILITATION OF CHAMBERETTE DAY CARE CENTER |
| | Qty. 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 |
| | 11 Skilled Worker 3 years 3 years |
| | 1 Driver 3 years 3 years |
| | 16 Laborer 1 year 3 months |
| | PROPOSED CONSTRUCTION OF HAND WASHING FACILITY AND REHABILITATION OF DOÑA JOSEFA DAY CARE CENTER |
| | Qty. 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 |
| 1 | Laborer | 1 year | 3 months |

**PROPOSED CONSTRUCTION OF HAND WASHING FACILITY AND
REHABILITATION OF GALAS 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 CONSTRUCTION OF HAND WASHING FACILITY AND
REHABILITATION OF MANUNGGA I 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 |
| 4 | Skilled Worker | 3 years | 3 years |
| 1 | Driver | 3 years | 3 years |

| | | | |
|--|---|--------------------|---------------------|
| 4 | Laborer | 1 year | 3 months |
| PROPOSED CONSTRUCTION OF HAND WASHING FACILITY AND REHABILITATION OF SANTOL DAY CARE CENTER | | | |
| Qty. | 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 |
| 3 | Skilled Worker | 3 years | 3 years |
| 1 | Driver | 3 years | 3 years |
| 6 | Laborer | 1 year | 3 months |
| PROPOSED REHABILITATION OF DON MANUEL DAY CARE CENTER | | | |
| Qty. | 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 |
| 1 | Laborer | 1 year | 3 months |
| PROPOSED REHABILITATION OF DOÑA AURORA DAY CARE CENTER | | | |
| Qty. | 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 |
| 4 | Skilled Worker | 3 years | 3 years |
| 1 | Driver | 3 years | 3 years |
| 0 | Laborer | 1 year | 3 months |
| PROPOSED REHABILITATION OF MANUNGAL II DAY CARE CENTER | | | |
| Qty. | 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 |
| 9 | Laborer | 1 year | 3 months |
| PROPOSED REHABILITATION OF STO NIÑO 1 DAY CARE CENTER | | | |
| Qty. | 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 |
| 3 | Skilled Worker | 3 years | 3 years |

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|-----------------|--|-----------------|---------|----------|-----------|----------|-----------------|-----------|--|---|-------------|--|-----------|-------------|--|-----------|-------------|--|-----------|-----------|----------|-----------------|-----------|--|---|-------------|--|-----------|-------------|--|-----------|-------------|--|-----------|-----------|----------|-----------------|-----------|--|---|-------------|--|-----------|-------------|--|-----------|-------------|--|-----------|-----------|----------|-----------------|-----------|--|---|-------------|--|-----------|-------------|--|-----------|-------------|--|-----------|-----------------|--|-----------|
| | 1 | Driver | 3 years | 3 years | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 4 | Laborer | 1 year | 3 months | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | <i>In addition, the bidder must execute an affidavit of undertaking duly notarized stating that the foregoing personnel shall perform work exclusively for the project until its completion. Please see attached bid forms.</i> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 10.5 | The minimum major equipment requirements are the following: PROPOSED CONSTRUCTION OF HAND WASHING FACILITY AND REHABILITATION OF CHAMBERETTE DAY CARE CENTER <table><tr><td>Equipment</td><td>Capacity</td><td>Number of Units</td></tr><tr><td>Elf Truck</td><td></td><td>1</td></tr><tr><td>Scaffolding</td><td></td><td>as needed</td></tr><tr><td>Power Tools</td><td></td><td>as needed</td></tr><tr><td>Minor Tools</td><td></td><td>as needed</td></tr></table> PROPOSED CONSTRUCTION OF HAND WASHING FACILITY AND REHABILITATION OF DOÑA JOSEFA DAY CARE CENTER <table><tr><td>Equipment</td><td>Capacity</td><td>Number of Units</td></tr><tr><td>Elf Truck</td><td></td><td>1</td></tr><tr><td>Scaffolding</td><td></td><td>as needed</td></tr><tr><td>Power Tools</td><td></td><td>as needed</td></tr><tr><td>Minor Tools</td><td></td><td>as needed</td></tr></table> PROPOSED CONSTRUCTION OF HAND WASHING FACILITY AND REHABILITATION OF GALAS DAY CARE CENTER <table><tr><td>Equipment</td><td>Capacity</td><td>Number of Units</td></tr><tr><td>Elf Truck</td><td></td><td>1</td></tr><tr><td>Scaffolding</td><td></td><td>as needed</td></tr><tr><td>Power Tools</td><td></td><td>as needed</td></tr><tr><td>Minor Tools</td><td></td><td>as needed</td></tr></table> PROPOSED CONSTRUCTION OF HAND WASHING FACILITY AND REHABILITATION OF MANUNGAL I DAY CARE CENTER <table><tr><td>Equipment</td><td>Capacity</td><td>Number of Units</td></tr><tr><td>Elf Truck</td><td></td><td>1</td></tr><tr><td>Scaffolding</td><td></td><td>as needed</td></tr><tr><td>Power Tools</td><td></td><td>as needed</td></tr><tr><td>Minor Tools</td><td></td><td>as needed</td></tr><tr><td>Cut Off Machine</td><td></td><td>as needed</td></tr></table> | | | | Equipment | Capacity | Number of Units | Elf Truck | | 1 | Scaffolding | | as needed | Power Tools | | as needed | Minor Tools | | as needed | Equipment | Capacity | Number of Units | Elf Truck | | 1 | Scaffolding | | as needed | Power Tools | | as needed | Minor Tools | | as needed | Equipment | Capacity | Number of Units | Elf Truck | | 1 | Scaffolding | | as needed | Power Tools | | as needed | Minor Tools | | as needed | Equipment | Capacity | Number of Units | Elf Truck | | 1 | Scaffolding | | as needed | Power Tools | | as needed | Minor Tools | | as needed | Cut Off Machine | | as needed |
| Equipment | Capacity | Number of Units | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Elf Truck | | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Scaffolding | | as needed | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Power Tools | | as needed | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Minor Tools | | as needed | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Equipment | Capacity | Number of Units | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Elf Truck | | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Scaffolding | | as needed | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Power Tools | | as needed | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Minor Tools | | as needed | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Equipment | Capacity | Number of Units | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Elf Truck | | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Scaffolding | | as needed | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Power Tools | | as needed | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Minor Tools | | as needed | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Equipment | Capacity | Number of Units | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Elf Truck | | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Scaffolding | | as needed | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Power Tools | | as needed | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Minor Tools | | as needed | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Cut Off Machine | | as needed | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

| | | |
|--|----------|-----------------|
| PROPOSED CONSTRUCTION OF HAND WASHING FACILITY AND REHABILITATION OF SANTOL 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 DON MANUEL 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 |
| PROPOSED REHABILITATION OF DOÑA AURORA DAY CARE CENTER | | |
| Equipment | Capacity | Number of Units |
| Welding Machine | | 1 |
| Elf Truck | | 1 |
| Power Tools | | as needed |
| Minor Tools | | as needed |
| PROPOSED REHABILITATION OF MANUNGAL II 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 STO NIÑO 1 DAY CARE CENTER | | |
| Equipment | Capacity | Number of Units |
| Elf Truck | | 1 |
| Scaffolding | | as needed |
| Power Tools | | as needed |
| Minor Tools | | as needed |
| <i>In addition, the bidder must execute an affidavit of undertaking duly</i> | | |

| | |
|------|---|
| | <i>notarized stating that the foregoing equipment shall be used exclusively for the project until its completion. Please see attached bid forms.</i> |
| 12 | <i>[Insert Value Engineering clause if allowed.]</i> |
| 15.1 | <p>The bid security shall be in the form of a Bid Securing Declaration with project number, or any of the following forms and amounts:</p> <ul style="list-style-type: none"> a) The amount of not less than Php 239,763.49 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 599,408.72 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 | <p>Additional Contract Documents relevant to the Project as required:</p> <ol style="list-style-type: none"> 1. Construction Schedule and S-curve, 2. Manpower Schedule, 3. Construction Methods, 4. Equipment Utilization Schedule, 5. PERT/CPM or other acceptable tools of project scheduling, shall be included in the submission of Technical Proposal. |

Section IV. General Conditions of Contract

Notes on the General Conditions of Contract

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

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

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

1. Scope of Contract

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

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

2. Sectional Completion of Works

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

3. Possession of Site

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: <i>[list here the required site investigation reports.]</i> |
| 7.2 | <p><i>[Select one, delete the other.]</i></p> <p><i>[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:]</i> Fifteen (15) years.</p> <p><i>[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:]</i> Five (5) years.</p> <p><i>[In case of other structures, such as bailey and wooden bridges, shallow wells, spring developments, and other similar structures:]</i> Two (2) years.</p> |
| 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 | <p>The date by which operating and maintenance manuals are required is <i>thirty (30) days</i></p> <p>The date by which "as built" drawings are required as part of final payment</p> |
| 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
LOCATION : REHABILITATION OF CHAMBERETTE DAY CARE CENTER /
BARANGAY DOÑA IMELDA, DISTRICT 4, 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.

III. CIVIL / STRUCTURAL WORKS

A. MASONRY WORKS

1. Masonry Units (Concrete Hollow Blocks):
 - a. 100mm thick for all interior walls and 150mm thick for all exterior walls unless otherwise indicated
 - b. Use 400 psi for non-load bearing blocks and 700 psi for load bearing blocks where required.
 - c. 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 and lintel beams as specified in the structural drawings or as specified or as deemed required to assure a stabilized wall due to height and other considerations.
2. Sand:

S-1, washed, clean and greenish in color
3. Mortar:

One-part Portland cement and two parts sand and water but not more than three parts sand and water.
4. Reinforcement

The concrete hollow blocks shall be reinforced with 10mm diameter deformed bar spaced not more than 0.8m on centers, both ways
5. Plaster bond:

The mixture of cement plaster for concrete hollow block wall finishes indicated in the drawings shall be one part Portland cement and three parts sand
6. Floor Topping Preparation for Tilework. One part Portland cement and two parts sand and water but not more than three parts sand and water.

B. ROOFING WORKS

1. Corrugated galvanized iron (G.I.) sheets including plain aluminum sheets for roofing accessories shall be cold-rolled meeting ASTM A-153 and with spelter coating of zinc of not less than 0.381 kg/sq.m (1.25 ounce/sq.ft) conforming to ASTM A-525 or pms 67:1985. Unless otherwise specified or shown on Plans, roofing sheets shall be gauge 26 (0.48mm thick) and provided in long span sizes to minimize end laps. Sheets shall weigh not less than 3.74 kg/sq.m and shall be marked or stamped showing the gauge, size amount of zinc coating, brand and name of manufacturer. Test specimens shall stand being bent through 180 degrees flat on itself without fracture of the base metal and without flaking of the zinc coating
2. Ridge/hip rolls, valleys, flashing and counter flashings, gutters and downspouts whenever required, shall be fabricated from plain G.I. sheets. Ridge/hip rolls, flashings and counter flashings shall be gauge 26. Valleys, gutters and downspouts shall be gauge 24 unless otherwise specified on Plans. Wire basket strainers shall be galvanized, gauge 24.

Roof ventilators, whenever required shall be fabricated from gauge 26 plain G.I. sheets and constructed to the dimensions and details shown on Plans.
3. The roofing shall be secured to the purlins with min. 2 1/2" max. 3" long Tek screws. Provide all-purpose sealant under the fasteners. 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

4. Polycarbonate roofing and sunbreakers 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 1/2" max. 3" long Tek screws. Provide all-purpose sealant under the fasteners. 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.
5. 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.
6. Provide 6mm thick thermal insulation with single-side aluminum foil prior to fastening of roofing sheets to serve as thermal protection.

C. 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.

IV. ARCHITECTURAL WORKS

A. FLOOR FINISHES

- 1 **Ceramic Tiles.** Unglazed ceramic tiles shall be hard, dense tiles of homogeneous composition. Its color and characteristics area determined by the materials used in the body. the method of manufacture and the thermal treatment

Tile work shall not be started until roughing-ins for sanitary/plumbing, electrical and other trades have been completed and tested. The work of all other trades shall be protected from damage.

B. WALL FINISHES AND PARTITIONING

- 1 **Ceramic Tiles.** Glazed tiles and trims shall have an impervious face of ceramic materials fused onto the body of the tiles and trims. The glazed surface may be clear white or colored depending on the color scheme approved by the Engineer. Standard glazes may be bright (glossy), semi-matte (less glossy), matte (dull) or crystalline (mottled and textured; good resistance to abrasion).

Tile work shall not be started until roughing-ins for sanitary/plumbing, electrical and other trades have been completed and tested. The work of all other trades shall be protected from damage.

- 2 **Double-Wall Fiber Cement Board Drywall on Metal Studs.** Wall panel shall be two (2) 6 mm thick fiber cement boards, properly cut and prepared for installation and shall conform to the requirements of the Plans

Metal Studs. Wall framing shall consist of 0.6 mm thick aluminum metal studs and aluminum metal tracks

Fasteners and Connection detail. All construction and connections shall be secured with rivets, screws and drive pins, and shall conform to local and standard codes. Connections shall also be secured with gypsum putty and gypsum tape.

C. CEILING FINISHES

- 1 **Fiber Cement Board on Metal Frame.** The ceiling materials to be used shall conform to the samples approved by the City Engineer. All ceiling works shall be done by men experienced and qualified to do this particular specialty trade. The installation of ceiling materials shall be in accordance with the detailed section and with the manufacturer's manual instructions. Ceiling materials shall be cut as required to fit the perpendicular condition and should be properly secured by anchorage and other accessories to complete the installation. No mechanical work shall be exposed on the finish work. All joints around electrical outlets, pipes and other works extending through materials shall be sealed with caulking.

D. PAINTING WORKS

- 1 **Paint Materials.** All types of paint material and other related products shall be subject to test as to material composition by the Bureau of Research and Standard, DPWH or the National Institute of Science and Technology.
- 2 **Tinting Colors.** Tinting colors shall be first grade quality pigment ground in alkyd resin that disperses and mixes easily with paint to produce the color desired. Use the same brand of paint and tinting color to effect good paint body.
- 3 **Skim coat.** Skim coat shall be fine powder type material like kalsomine that can be mixed into putty consistency, with oil-based primers and paints to fill minor surface dents and imperfections.
- 4 **Paint Schedule.**
 - a. Exterior Masonry Wall (plain cement plastered finish to be painted)

- i. 1 coat skim coating, 1 coat primer, 2 coats elastomeric paint finish
- b. Interior Masonry Wall (plain cement plastered finish to be painted)
 - i. 1 coat skim coating, 1 coat primer, 2 coats latex paint finish
- c. Interior Dry Wall
 - i. 1 coat primer, 2 coats latex paint finish
- d. Ceiling Boards
 - i. 1 coat primer, 2 coats latex paint finish
- e. Slab Soffit
 - i. 1 coat primer, 2 coats latex paint finish
- f. Metal / Steel Surfaces
 - i. 1 coat primer, 2 coats epoxy enamel finish

5. **Surface Preparation.** All surfaces shall be in proper condition to receive the finish. Woodworks shall be hand-sanded smooth and dusted clean. All knot-holes, pitch pockets or sappy portions shall be sealed with natural wood filler. Nail holes, cracks or defects shall be carefully puttied after the first coat, matching the color of paint.

Interior woodworks shall be sandpapered between coats. Cracks, holes or 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 flush 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.
6. **Application.** Paints when applied by brush shall become non-fluid, thick enough to lay down as adequate film of wet paint. Brush marks shall have 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.

7. Application shall be as per paint Manufacturer's specification and recommendation.
8. Provide all drop cloth and other covering requisite for protection of floors, walls, aluminum, glass, finishes and other works.
9. All applications and methods used shall strictly follow the Manufacturer's Instructions and Specifications
10. All surfaces including masonry wall shall be thoroughly cleaned, puttied, sandpapered, rubbed and polished, masonry wall shall be treated with Neutralizer
11. All exposed finish hardware, lighting fixtures and accessories, glass and the like shall be adequately protected so that these are not stained with paint and other painting materials prior to painting works.
12. All other surfaces endangered by stains and paint marks should be taped and covered with craft paper

V. 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, rodged 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 panelboards shall not be smaller than 3.5 mm but all homeruns to panelboard more than 30 meters shall not be smaller than 5.5 mm. No conductor shall be less than 2 mm in size.
5. All wires of 14mm and larger in size shall be connected to panels and apparatus by means of approved type lugs or connectors of the solderless type, sufficiently large enough to enclose all strands of the conductors and securely fastened. They shall not loosen under vibration or normal strain.
6. All joints, taps and splices on wires larger than 14 mm shall be made of suitable solderless connectors of the approved type and size. They shall be taped with rubber and PVC tapes providing insulation not less than that of the conductors.
7. No splices or joints shall be permitted in either feeder or branch conductors except within outlet boxes or accessible junction boxes or pull boxes. All joints in branch circuit wiring shall be made mechanically and electrically secured by approved splicing devices and taped with rubber and PVC tapes in a manner which will make their insulation as that of the conductor.
8. All wall switches and receptacles shall be fitted with standard Bakelite face plate covers. Device plates for flush mounting shall be installed with all four edges in continuous contact with finished wall surfaces without the use of coiled wire or similar devices. Plaster filling shall not be permitted. Plates installed in wet locations shall be gasketed.
9. When more than one switch or device is indicated in a single location, gang plate shall be used.

C. POWER LOAD CENTER, SWITCHGEAR AND PANELBOARDS

1. This item shall consist of the furnishing and installation of the power load center unit, substation or low voltage switchgear and distribution panelboards at the location shown on the approved Plans complete with transformer, circuit breakers, cabinets and all accessories, completely wired and ready for service.
2. All materials shall be brand new and shall be of the approved type meeting all the requirements of the Philippine Electrical Code and bearing the Philippine Standard Agency (PSA) mark.
3. **Power Load Center Unit Substation.** The Contractor shall furnish and install an indoor-type Power Load Center Unit Substation at the location shown on the approved Plans if required. It shall be totally metal-enclosed, dead front and shall consist of the following coordinated component parts:
 - a. **High Voltage Primary Section.** High voltage primary incoming line section consisting of the following parts and related accessories:
 - i. One (1) Air-filled Interrupter Switch, 2-position (open-close) installed in a suitable air filled metal enclosure and shall have sufficient interrupting capacity to carry the electrical load. It shall be provided with key interlock with the cubicle for the power fuses to prevent access to the fuses unless the switch is open.
 - ii. Three (3)-power fuses mounted in separate compartments within the switch housing and accessible by a hinged door.

- iii. One (1) set of high voltage potheads or 3-conductor cables or three single conductor cables
- iv. Lightning arresters shall be installed at the high voltage cubicle if required

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

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

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

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

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

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

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

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

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

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

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

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

Circuit breakers shall each be of the indicating type, providing 'ON' - 'OFF' and 'TRIP' positions of the operating handles and shall each be provided with nameplate for branch circuit designation. The circuit breaker shall be so

designed that an overload or short on one pole automatically causes all poles to open.

- d Low Voltage Switchgear (For projects requiring low-voltage switchgear only). The Contractor shall furnish and install a low-voltage switchgear at the location shown on the plans. It shall be metal-clad, dead front, free standing, safety type construction and shall have copper busbars of sufficient size, braced to resist allowable root mean square (RMS) symmetrical short circuit stresses and all necessary accessories. The low-voltage switchgear shall consist of the switchgear housing, secondary metering, main breaker and feeder branch circuit.
- e Grounding System. All non-current carrying metallic parts like conduits, cabinets and equipment frames shall be properly grounded in accordance with the Philippine Electrical Code, latest edition.

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

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

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

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

Main and branch circuit breakers for panelboards shall have the rating, capacity and number of poles as shown on the approved Plans. Breakers shall be thermal magnetic type. Multiple breaker shall 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 Panelboards at the locations shown on the approved Plans.

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

- D. Comply with the current applicable codes, ordinances, and regulations of the authority or authorities having jurisdiction, the rules, regulations and requirements of the utility companies (as applicable).
- E. Drawings, specifications, codes and standards are minimum requirements. Where requirements differ, the more stringent apply.
- F. All equipment and installations shall meet or exceed minimum requirements of the Standards and Codes.
- G. Execute work in strict accordance with the best practices of the trades in a thorough, substantial, workmanlike manner by competent workmen.
- H. When the tests and inspections have been completed, a label shall be attached to all devices tested. The label shall provide the name of the testing company, the date the tests were completed, and the initials of the person who performed the tests.

I. PANELBOARDS

1. Fabricate and test panelboards according to IEEE 344 to withstand seismic forces defined in Division 16 Sections 16073 and 16074 "Hangers and Supports for Electrical Systems and Vibration and Seismic controls for Electrical Systems" respectively.
2. Enclosures. Flush. Surface. Flush- and surface-mounted cabinets.
 - a. Rated for environmental conditions at installed location.
 - i. Indoor Dry and Clean Locations: NEMA, Type 1.
 - ii. Outdoor Locations: NEMA, Type 3R.
 - iii. Kitchen and Wash-Down Areas: NEMA, Type 4X, stainless steel.
 - iv. Indoor Locations Subject to Dust, Falling Dirt, and Dripping Noncorrosive Liquids: NEMA, Type 12.
 - v. Outdoor Locations Subject to Dust, Falling Dirt, and Dripping Noncorrosive Liquids: NEMA, Type 5R.
 - b. Front: Secured to box with concealed trim clamps. For surface-mounted fronts, match box dimensions; for flush-mounted fronts, overlap box.
 - c. Hinged Front Cover. Entire front trim hinged to box and with standard door within hinged trim cover.
 - d. Skirt for Surface-Mounted Panelboards. Same gauge and finish as panelboard front with flanges for attachment to panelboard, wall, and ceiling or floor.
 - e. Gutter Extension and Barrier: Same gage and finish as panelboard enclosure; integral with enclosure body. Arrange to isolate individual panel sections.
 - f. Finishes:
 - i. Panels and Trim: Steel and galvanized steel, factory finished immediately after cleaning and pretreating with manufacturer's standard two-coat, baked-on finish consisting of prime coat and thermosetting topcoat.
 - ii. Back Boxes: Galvanized steel Same finish as panels and trim.
 - iii. Fungus Proofing: Permanent fungicidal treatment for overcurrent protective devices and other components.
 - g. Directory Card: Inside panelboard door, mounted in transparent card holder metal frame with transparent protective cover.
3. Incoming Mains Location: Top or Bottom.
4. Phase, Neutral, and Ground Buses:
 - a. Material: Hard-drawn copper, 98 percent conductivity.
 - b. Equipment Ground Bus: Adequate for feeder and branch-circuit equipment grounding conductors, bonded to box.
 - c. Neutral Bus: 100 percent of phase bus A. 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. 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).
- C. Drawings, specifications, codes and standards are minimum requirements. Where requirements differ, the more stringent apply.
- D. All equipment and installations shall meet or exceed minimum requirements of the Standards and Codes.
- E. Execute work in strict accordance with the best practices of the trades in a thorough, substantial, workmanlike manner by competent workmen.
- F. 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 CONSTRUCTION OF HAND WASHING FACILITY AND
LOCATION : REHABILITATION OF DOÑA JOSEFA DAY CARE CENTER
BARANGAY DOÑA JOSEFA, DISTRICT 4, 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

III. CIVIL / STRUCTURAL WORKS

A. MASONRY WORKS

1. Masonry Units (Concrete Hollow Blocks):

- a. 100mm thick for all interior walls and 150mm thick for all exterior walls unless otherwise indicated.
- b. Use 400 psi for non-load bearing blocks and 700 psi for load bearing blocks where required
- c. 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 and lintel beams as specified in the structural drawings or as specified or as deemed required to assure a stabilized wall due to height and other considerations

2. Sand:

S-1, washed, clean and greenish in color

3. Mortar:

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

4. Reinforcement

The concrete hollow blocks shall be reinforced with 10mm diameter deformed bar, spaced not more than 0.8m on centers, both ways.

5. Plaster bond.

The mixture of cement plaster for concrete hollow block wall finishes indicated in the drawings shall be one part Portland cement and three parts sand

6. Floor Topping Preparation for Tilework. One part Portland cement and two parts sand and water but not more than three parts sand and water

IV. ARCHITECTURAL WORKS

A. FLOOR FINISHES

1. **Ceramic Tiles.** Unglazed ceramic tiles shall be hard, dense tiles of homogeneous composition. Its color and characteristics are determined by the materials used in the body, the method of manufacture and the thermal treatment.

Tile work shall not be started until roughing-ins for sanitary/plumbing, electrical and other trades have been completed and tested. The work of all other trades shall be protected from damage.

B. WALL FINISHES AND PARTITIONING

1. **Ceramic Tiles.** Glazed tiles and trims shall have an impervious face of ceramic materials fused onto the body of the tiles and trims. The glazed surface may be clear white or colored depending on the color scheme approved by the Engineer. Standard glazes may be bright (glossy), semi-matte (less glossy), matte (dull) or crystalline (mottled and textured, good resistance to abrasion)

Tile work shall not be started until roughing-ins for sanitary/plumbing, electrical and other trades have been completed and tested. The work of all other trades shall be protected from damage.

2. **Double-Wall Fiber Cement Board Drywall on Metal Studs.** Wall panel shall be two (2) 6 mm thick fiber cement boards, properly cut and prepared for installation and shall conform to the requirements of the Plans.

Metal Studs. Wall framing shall consist of 0.6 mm thick aluminum metal studs and aluminum metal tracks.

Fasteners and Connection detail. All construction and connections shall be secured with rivets, screws and drive pins, and shall conform to local and standard codes. Connections shall also be secured with gypsum putty and gypsum tape.

C. CEILING FINISHES

1. **Fiber Cement Board on Metal Frame.** The ceiling materials to be used shall conform to the samples approved by the City Engineer. All ceiling works shall be done by men experienced and qualified to do this particular specialty trade. The installation of ceiling materials shall be in accordance with the detailed section and with the manufacturer's manual instructions. Ceiling materials shall be cut as required to fit the perpendicular condition and should be properly secured by anchorage and other accessories to complete the installation. No mechanical work shall be exposed on the finish work. All joints around electrical outlets, pipes and other works extending through materials shall be sealed with caulking.

D. PAINTING WORKS

1. **Paint Materials.** All types of paint material and other related products shall be subject to test as to material composition by the Bureau of Research and Standard, DPWH or the National Institute of Science and Technology.
2. **Tinting Colors.** Tinting colors shall be first grade quality pigment ground in alkyd resin that disperses and mixes easily with paint to produce the color desired. Use the same brand of paint and tinting color to effect good paint body.
3. **Skim coat.** Skim coat shall be fine powder type material like kalsomine that can be mixed into putty consistency, with oil-based primers and paints to fill minor surface dents and imperfections.
4. **Paint Schedule**
 - a. **Exterior Masonry Wall (plain cement plastered finish to be painted)**
 - i. 1 coat skim coating, 1 coat primer, 2 coats elastomeric paint finish
 - b. **Interior Masonry Wall (plain cement plastered finish to be painted)**
 - i. 1 coat skim coating, 1 coat primer, 2 coats latex paint finish
 - c. **Interior Dry Wall**
 - i. 1 coat primer, 2 coats latex paint finish
 - d. **Ceiling Boards**
 - i. 1 coat primer, 2 coats latex paint finish
 - e. **Slab Soffit**
 - i. 1 coat primer, 2 coats latex paint finish
 - f. **Metal / Steel Surfaces**
 - i. 1 coat primer, 2 coats epoxy enamel finish
5. **Surface Preparation.** All surfaces shall be in proper condition to receive the finish. Woodworks shall be hand-sanded smooth and dusted clean. All knot-holes pitch

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

Interior woodworks shall be sandpapered between coats. Cracks, holes or 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 flush 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.
6. Application. Paints when applied by brush shall become non-fluid, thick enough to lay down as adequate film of wet paint. Brush marks shall have 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.
7. Application shall be as per paint Manufacturer's specification and recommendation.
 8. Provide all drop cloth and other covering requisite for protection of floors, walls, aluminum, glass, finishes and other works.
 9. All applications and methods used shall strictly follow the Manufacturer's Instructions and Specifications.
 10. All surfaces including masonry wall shall be thoroughly cleaned, puttied, sandpapered, rubbed and polished; masonry wall shall be treated with Neutralizer.
 11. All exposed finish hardware, lighting fixtures and accessories, glass and the like shall be adequately protected so that these are not stained with paint and other painting materials prior to painting works.
 12. All other surfaces endangered by stains and paint marks should be taped and covered with craft paper.

V. 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 panelboards shall not be smaller than 3.5 mm but all homeruns to panelboard more than 30 meters shall not be smaller than 5.5 mm. No conductor shall be less than 2 mm in size.
5. All wires of 14mm and larger in size shall be connected to panels and apparatus by means of approved type lugs or connectors of the solderless type, sufficiently large enough to enclose all strands of the conductors and securely fastened. They shall not loosen under vibration or normal strain.

6. All joints, taps and splices on wires larger than 14 mm shall be made of suitable solderless connectors of the approved type and size. They shall be taped with rubber and PVC tapes providing insulation not less than that of the conductors.
7. No splices or joints shall be permitted in either feeder or branch conductors except within outlet boxes or accessible junction boxes or pull boxes. All joints in branch circuit wiring shall be made mechanically and electrically secured by approved splicing devices and taped with rubber and PVC tapes in a manner which will make their insulation as that of the conductor.
8. All wall switches and receptacles shall be fitted with standard Bakelite face plate covers. Device plates for flush mounting shall be installed with all four edges in continuous contact with finished wall surfaces without the use of coiled wire or similar devices. Plaster filling shall not be permitted. Plates installed in wet locations shall be gasketed.
9. When more than one switch or device is indicated in a single location, gang plate shall be used.

C. POWER LOAD CENTER, SWITCHGEAR AND PANELBOARDS

1. This item shall consist of the furnishing and installation of the power load center unit substation or low voltage switchgear and distribution panelboards at the location shown on the approved Plans complete with transformer, circuit breakers, cabinets and all accessories, completely wired and ready for service.
2. All materials shall be brand new and shall be of the approved type meeting all the requirements of the Philippine Electrical Code and bearing the Philippine Standard Agency (PSA) mark.
3. **Power Load Center Unit Substation.** The Contractor shall furnish and install an indoor-type Power Load Center Unit Substation at the location shown on the approved Plans if required. It shall be totally metal-enclosed, dead front and shall consist of the following coordinated component parts.
 - a. **High Voltage Primary Section.** High voltage primary incoming line section consisting of the following parts and related accessories:
 - i. One (1) Air-filled Interrupter Switch, 2-position (open-close) installed in a suitable air filled metal enclosure and shall have sufficient interrupting capacity to carry the electrical load. It shall be provided with key interlock with the cubicle for the power fuses to prevent access to the fuses unless the switch is open.
 - ii. Three (3)-power fuses mounted in separate compartments within the switch housing and accessible by a hinged door
 - iii. One (1) set of high voltage potheads or 3-conductor cables or three single conductor cables
 - iv. Lightning arresters shall be installed at the high voltage cubicle if required

Items (i) and (ii) above could be substituted with a power circuit breaker with the correct rating and capacity
 - b. **Transformer Section.** The transformer section shall consist of a power transformer with ratings and capacities as shown on the plans. It shall be oil liquid-filled non-flammable type and designed in accordance with the latest applicable standards.

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

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

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

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

- i. **Switchboard Housing.** The housing shall be heavy gauge steel sheet, dead front type, gray enamel finish complete with frame supports, steel bracings, steel sheet panelboards, removable rear plates, copper busbars, and all other necessary accessories to insure sufficient mechanical strength and safety. It shall be provided with grounding bolts and clamps.
- ii. **Secondary Metering Section.** The secondary metering section shall consist of one (1) ammeter, AC, indicating type, one (1) voltmeter, AC, indicating type, one (1) ammeter transfer switch for 3-phase; one (1) voltmeter transfer switch for 3-phase and current transformers of suitable rating and capacity.

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

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

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

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

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

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

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

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

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

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

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

Main and branch circuit breakers for panelboards shall have the rating, capacity and number of poles as shown on the approved Plans. Breakers shall be thermal magnetic type. Multiple breaker shall 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 Panelboards at the locations shown on the approved Plans.

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

- D. Comply with the current applicable codes, ordinances, and regulations of the authority or authorities having jurisdiction, the rules, regulations and requirements of the utility companies (as applicable).
- E. Drawings, specifications, codes and standards are minimum requirements. Where requirements differ, the more stringent apply.
- F. All equipment and installations shall meet or exceed minimum requirements of the Standards and Codes.
- G. Execute work in strict accordance with the best practices of the trades in a thorough, substantial, workmanlike manner by competent workmen.
- H. When the tests and inspections have been completed, a label shall be attached to all devices tested. The label shall provide the name of the testing company, the date the tests were completed, and the initials of the person who performed the tests.

I. PANELBOARDS

1. Fabricate and test panelboards according to IEEE 344 to withstand seismic forces defined in Division 16 Sections 16073 and 16074 "Hangers and Supports for Electrical Systems and Vibration and Seismic controls for Electrical Systems" respectively.
2. Enclosures. Flush, Surface, Flush- and surface-mounted cabinets.
 - a. Rated for environmental conditions at installed location.
 - i. Indoor Dry and Clean Locations: NEMA Type 1
 - ii. Outdoor Locations: NEMA Type 3R.
 - iii. Kitchen and Wash-Down Areas: NEMA Type 4X, stainless steel.
 - iv. Indoor Locations Subject to Dust, Falling Dirt, and Dripping Noncorrosive Liquids: NEMA Type 12

- v. Outdoor Locations Subject to Dust, Falling Dirt, and Dripping Noncorrosive Liquids: NEMA Type 5R.
- b. Front: Secured to box with concealed trim clamps. For surface-mounted fronts, match box dimensions; for flush-mounted fronts, overlap box.
- c. Hinged Front Cover: Entire front trim hinged to box and with standard door within hinged trim cover.
- d. Skirt for Surface-Mounted Panelboards: Same gauge and finish as panelboard front with flanges for attachment to panelboard, wall, and ceiling or floor.
- e. Gutter Extension and Barrier: Same gage and finish as panelboard enclosure; integral with enclosure body. Arrange to isolate individual panel sections.
- f. Finishes
 - i. Panels and Trim: Steel and galvanized steel, factory finished immediately after cleaning and pretreating with manufacturer's standard two-coat, baked-on finish consisting of prime coat and thermosetting topcoat.
 - ii. Back Boxes: Galvanized steel. Same finish as panels and trim.
 - iii. Fungus Proofing: Permanent fungicidal treatment for overcurrent protective devices and other components.
- g. Directory Card: Inside panelboard door, mounted in transparent card holder metal frame with transparent protective cover.
- 3. Incoming Mains Location: Top or Bottom.
- 4. Phase, Neutral, and Ground Buses
 - a. Material: Hard-drawn copper, 98 percent conductivity.
 - b. Equipment Ground Bus: Adequate for feeder and branch-circuit equipment grounding conductors; bonded to box.
 - c. Neutral Bus: 100 percent of phase bus. 4. Extra-Capacity Neutral Bus: Neutral bus rated 200 percent of phase bus and UL listed as suitable for nonlinear loads.

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. 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)

- C. Drawings, specifications, codes and standards are minimum requirements. Where requirements differ the more stringent apply
- D. All equipment and installations shall meet or exceed minimum requirements of the Standards and Codes.
- E. Execute work in strict accordance with the best practices of the trades in a thorough, substantial, workmanlike manner by competent workmen
- F. 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 CONSTRUCTION OF HAND WASHING FACILITY AND
REHABILITATION OF GALAS DAY CARE CENTER**
LOCATION : **BARANGAY SAN ISIDRO GALAS, DISTRICT 4, QUEZON CITY**

TECHNICAL SPECIFICATIONS

1. GENERAL REQUIREMENTS

- A. Comply with the current and existing laws, ordinances and applicable codes, rules and regulations, and standards. Any works performed contrary to the existing laws, rules and regulations, ordinances and standards without notice shall bear all cost arising therefrom.
- B. Drawings, specifications, codes and standards are minimum requirements. Where requirements differ, the more stringent apply.
- C. Should there be any change(s) in drawings or specifications, it is required to comply with the governing regulations, notify the implementing agency.
- D. Photographs shall be taken as, when and where directed at intervals of not more than one month. The photographs shall be sufficient in number and location, to record the exact progress of the works. The photographs shall be retained and will become the property of the Government.
- E. Site verification / inspection shall be conducted to validate the scope of works. No extra compensation and extension of time shall be given due to negligence or inadvertence.
- F. The quality of materials shall be of the best grade of their respective kinds for the purpose. The work shall also be performed in the best and most capable manner in strict accordance with requirements of the plans and details. All materials not conforming to the requirements of these specifications shall be considered as defective.
- G. All equipment and installations shall meet or exceed minimum requirements of the standards and codes.
- H. Mobilization and Demobilization (if applicable)
 1. Mobilization shall include all activities and related costs for transportation of personnel, equipment, and operating supplies to the site, establishment of offices, buildings, and other necessary general facilities for the operations at the site.
 2. Demobilization shall include all activities and costs for transportation of personnel, equipment, and supplies not anymore required within the construction site including the disassembly, removal and site clean-up of offices and other facilities assembled on the site specifically for this contract.
- I. Execute work in strict accordance with the best practices of the trades in a thorough, substantial, workmanlike manner by competent workmen. Provide a competent experienced, full-time supervisor who is authorized to make decisions on behalf of the Contractor.
- J. Temporary Facilities and Utilities
 1. All facilities shall be near the job site, where necessary and shall conform to the best standard for the required types.
 2. Temporary facilities shall be provided and maintained including sanitary facilities and first aid stations.

3. Temporary utilities shall be sufficiently provided until the completion of the project such as water, power and communication
 4. Temporary enclosure shall be provided around the construction site with adequate guard lights, railings and proper signage
 5. Temporary roadways shall be constructed and maintained to sustain loads to be carried on them during the entire construction period.
 6. Upon completion of the work, the temporary facilities shall be demolished, hauled-out and disposed properly
- K. Adequate construction safety and health protection shall be provided at all times during the execution of work to both workers and property
1. A fully-trained Medical Aide shall be employed permanently on the site who shall be engaged solely to medical duties.
 2. The medical room shall be provided with waterproofing; it could be a building or room designated and used exclusively for the purpose and have a floor area of at least 15 square meters and a glazed window area of at least 2 square meters.
 3. The location of the medical room and any other arrangements shall be made known to all employees by posting on prominent locations and suitable notices in the site
 4. Additional safety precautions shall be provided in the event of a pandemic. Protocols set forth by the government shall be strictly followed.
 5. 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.

III. CIVIL / STRUCTURAL WORKS

A. MASONRY WORKS

1. **Masonry Units (Concrete Hollow Blocks):**
 - a. 100mm thick for all interior walls and 150mm thick for all exterior walls unless otherwise indicated
 - b. Use 400 psi for non-load bearing blocks and 700 psi for load bearing blocks where required.
 - c. 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 and lintel beams as specified in the structural drawings or as specified or as deemed required to assure a stabilized wall due to height and other considerations.
2. **Sand:**

S-1, washed, clean and greenish in color
3. **Mortar:**

One-part Portland cement and two parts sand and water but not more than three parts sand and water
4. **Reinforcement**

The concrete hollow blocks shall be reinforced with 10mm diameter deformed bar, spaced not more than 0.8m on centers, both ways.
5. **Plaster bond:**

The mixture of cement plaster for concrete hollow block wall finishes indicated in the drawings shall be one part Portland cement and three parts sand.
6. **Floor Topping Preparation for Tilework.** One part Portland cement and two parts sand and water but not more than three parts sand and water

B. ROOFING WORKS

1. Corrugated galvanized iron (G.I.) sheets, including plain aluminum sheets for roofing accessories shall be cold-rolled meeting ASTM A-153 and with spelter coating of zinc of not less than 0.361 kg/sq.m. (1.25 ounce/sq.ft.) conforming to ASTM A-525 or pns 67:1985. Unless otherwise specified or shown on Plans, roofing sheets shall be gauge 26 (0.48mm thick) and provided in long span sizes to minimize end laps. Sheets shall weigh not less than 3.74 kg/sq.m. and shall be marked or stamped showing the gauge, size amount of zinc coating, brand and name of manufacturer. Test specimens shall stand being bent through 180 degrees flat on itself without fracture of the base metal and without flaking of the zinc coating.
2. Ridge/hip rolls, valleys, flashing and counter flashings, gutters and downspouts, whenever required, shall be fabricated from plain G.I. sheets. Ridge/hip rolls, flashings and counter flashings shall be gauge 26. Valleys, gutters and downspouts shall be gauge 24 unless otherwise specified on Plans. Wire basket strainers shall be galvanized, gauge 24.

Roof ventilators whenever required shall be fabricated from gauge 26 plain G.I. sheets and constructed to the dimensions and details shown on Plans.
3. The roofing shall be secured to the purlins with min. 2 1/2" max. 3" long Tek screws. Provide all-purpose sealant under the fasteners. 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

- 4 Polycarbonate roofing and sunbreakers 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. Provide all-purpose sealant under the fasteners. 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.
- 5 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.
6. Provide 6mm thick thermal insulation with single-side aluminum foil prior to fastening of roofing sheets to serve as thermal protection.

C. 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.

IV. ARCHITECTURAL WORKS

A. FLOOR FINISHES

1. **Ceramic Tiles.** Unglazed ceramic tiles shall be hard, dense tiles of homogeneous composition. Its color and characteristics area determined by the materials used in the body, the method of manufacture and the thermal treatment.

Tile work shall not be started until roughing-ins for sanitary/plumbing, electrical and other trades have been completed and tested. The work of all other trades shall be protected from damage.

B. WALL FINISHES AND PARTITIONING

1. **Ceramic Tiles.** Glazed tiles and trims shall have an impervious face of ceramic materials fused onto the body of the tiles and trims. The glazed surface may be clear white or colored depending on the color scheme approved by the Engineer. Standard glazes may be bright (glossy), semi-matte (less glossy), matte (dull) or crystalline (mottled and textured; good resistance to abrasion).

Tile work shall not be started until roughing-ins for sanitary/plumbing, electrical and other trades have been completed and tested. The work of all other trades shall be protected from damage.

2. **Double-Wall Fiber Cement Board Drywall on Metal Studs.** Wall panel shall be two (2) 6 mm thick fiber cement boards, properly cut and prepared for installation and shall conform to the requirements of the Plans.

Metal Studs. Wall framing shall consist of 0.6 mm thick aluminum metal studs and aluminum metal tracks

Fasteners and Connection detail. All construction and connections shall be secured with rivets, screws and drive pins, and shall conform to local and standard codes. Connections shall also be secured with gypsum putty and gypsum tape

C. CEILING FINISHES

1. **Fiber Cement Board on Metal Frame.** The ceiling materials to be used shall conform to the samples approved by the City Engineer. All ceiling works shall be done by men experienced and qualified to do this particular specialty trade. The installation of ceiling materials shall be in accordance with the detailed section and with the manufacturer's manual instructions. Ceiling materials shall be cut as required to fit the perpendicular condition and should be properly secured by anchorage and other accessories to complete the installation. No mechanical work shall be exposed on the finish work. All joints around electrical outlets, pipes and other works extending through materials shall be sealed with caulking.

D. PAINTING WORKS

1. **Paint Materials.** All types of paint material and other related products shall be subject to test as to material composition by the Bureau of Research and Standard DPWH or the National Institute of Science and Technology
2. **Tinting Colors.** Tinting colors shall be first grade quality pigment ground in alkyd resin that disperses and mixes easily with paint to produce the color desired. Use the same brand of paint and tinting color to effect good paint body.
3. **Skim coat.** Skim coat shall be fine powder type material like kalsomine that can be mixed into putty consistency, with oil-based primers and paints to fill minor surface dents and imperfections

4. Paint Schedule

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

- i. 1 coat skim coating, 1 coat primer, 2 coats elastomeric paint finish
- b. Interior Masonry Wall (plain cement plastered finish to be painted)
 - i. 1 coat skim coating, 1 coat primer, 2 coats latex paint finish
- c. Interior Dry Wall
 - i. 1 coat primer, 2 coats latex paint finish
- d. Ceiling Boards
 - i. 1 coat primer, 2 coats latex paint finish
- e. Slab Soffit
 - i. 1 coat primer, 2 coats latex paint finish
- f. Metal / Steel Surfaces
 - i. 1 coat primer, 2 coats epoxy enamel finish

5. **Surface Preparation** All surfaces shall be in proper condition to receive the finish. Woodworks shall be hand-sanded smooth and dusted clean. All knot-holes, pitch pockets or sappy portions shall be sealed with natural wood filler. Nail holes, cracks or defects shall be carefully puttied after the first coat, matching the color of paint.

Interior woodworks shall be sandpapered between coats. Cracks, holes or 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 flush 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.
6. **Application.** Paints when applied by brush shall become non-fluid, thick enough to lay down as adequate film of wet paint. Brush marks shall have 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.

7. Application shall be as per paint Manufacturer's specification and recommendation
8. Provide all drop cloth and other covering requisite for protection of floors, walls, aluminum, glass, finishes and other works.
9. All applications and methods used shall strictly follow the Manufacturer's Instructions and Specifications.
10. All surfaces including masonry wall shall be thoroughly cleaned, puttied, sandpapered, rubbed and polished. masonry wall shall be treated with Neutralizer.
11. All exposed finish hardware, lighting fixtures and accessories, glass and the like shall be adequately protected so that these are not stained with paint and other painting materials prior to painting works.
12. All other surfaces endangered by stains and paint marks should be taped and covered with craft paper.

V. 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 panelboards shall not be smaller than 3.5 mm but all homeruns to panelboard more than 30 meters shall not be smaller than 5.5 mm. No conductor shall be less than 2 mm in size.
5. All wires of 14mm and larger in size shall be connected to panels and apparatus by means of approved type lugs or connectors of the solderless type, sufficiently large enough to enclose all strands of the conductors and securely fastened. They shall not loosen under vibration or normal strain.
6. All joints, taps and splices on wires larger than 14 mm shall be made of suitable solderless connectors of the approved type and size. They shall be taped with rubber and PVC tapes providing insulation not less than that of the conductors.
7. No splices or joints shall be permitted in either feeder or branch conductors except within outlet boxes or accessible junction boxes or pull boxes. All joints in branch circuit wiring shall be made mechanically and electrically secured by approved splicing devices and taped with rubber and PVC tapes in a manner which will make their insulation as that of the conductor.
8. All wall switches and receptacles shall be fitted with standard Bakelite face plate covers. Device plates for flush mounting shall be installed with all four edges in continuous contact with finished wall surfaces without the use of coiled wire or similar devices. Plaster tiling shall not be permitted. Plates installed in wet locations shall be gasketed.
9. When more than one switch or device is indicated in a single location, gang plate shall be used.

C. POWER LOAD CENTER, SWITCHGEAR AND PANELBOARDS

1. This item shall consist of the furnishing and installation of the power load center unit, substation or low voltage switchgear and distribution panelboards at the location shown on 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 bracing, steel sheet panelboards, removable rear plates, copper busbars, and all other necessary accessories to insure sufficient mechanical strength and safety. It shall be provided with grounding bolts and clamps.
- ii. Secondary Metering Section. The secondary metering section shall consist of one (1) ammeter, AC, indicating type; one (1) voltmeter, AC, indicating type, one (1) ammeter transfer switch for 3-phase; one (1) voltmeter transfer switch for 3-phase; and current transformers of suitable rating and capacity.

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

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

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

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

Circuit breakers shall each be of the indicating type, providing 'ON' - 'OFF' and 'TRIP' positions of the operating handles and shall each be provided with nameplate for branch circuit designation. The circuit breaker shall be so

designed that an overload or short on one pole automatically causes all poles to open

- d. Low Voltage Switchgear (For projects requiring low-voltage switchgear only). The Contractor shall furnish and install a low-voltage switchgear at the location shown on the plans. It shall be metal-clad, dead front, free standing, safety type construction and shall have copper busbars of sufficient size, braced to resist allowable root mean square (RMS) symmetrical short circuit stresses, and all necessary accessories. The low-voltage switchgear shall consist of the switchgear housing, secondary metering, main breaker and feeder branch circuit.
- e. Grounding System. All non-current carrying metallic parts like conduits, cabinets and equipment frames shall be properly grounded in accordance with the Philippine Electrical Code, latest edition.

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

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

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

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

Main and branch circuit breakers for panelboards shall have the rating, capacity and number of poles as shown on the approved Plans. Breakers shall be thermal magnetic type. Multiple breaker shall 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 Panelboards at the locations shown on the approved Plans.

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

- D. Comply with the current applicable codes, ordinances, and regulations of the authority or authorities having jurisdiction, the rules, regulations and requirements of the utility companies (as applicable).
- E. Drawings, specifications, codes and standards are minimum requirements. Where requirements differ, the more stringent apply.
- F. All equipment and installations shall meet or exceed minimum requirements of the Standards and Codes.
- G. Execute work in strict accordance with the best practices of the trades in a thorough, substantial, workmanlike manner by competent workmen.
- H. When the tests and inspections have been completed, a label shall be attached to all devices tested. The label shall provide the name of the testing company, the date the tests were completed, and the initials of the person who performed the tests.

1. PANELBOARDS

1. Fabricate and test panelboards according to IEEE 344 to withstand seismic forces defined in Division 16 Sections 16073 and 16074 "Hangers and Supports for Electrical Systems and Vibration and Seismic controls for Electrical Systems" respectively.
2. Enclosures: Flush, Surface, Flush- and surface-mounted cabinets
 - a. Rated for environmental conditions at installed location.
 - i. Indoor Dry and Clean Locations: NEMA Type 1.
 - ii. Outdoor Locations: NEMA Type 3R.
 - iii. Kitchen and Wash-Down Areas: NEMA, Type 4X, stainless steel
 - iv. Indoor Locations Subject to Dust, Falling Dirt, and Dropping Noncorrosive Liquids: NEMA, Type 12.
 - v. Outdoor Locations Subject to Dust, Falling Dirt, and Dropping Noncorrosive Liquids: NEMA, Type 5R
 - b. Front: Secured to box with concealed trim clamps. For surface-mounted fronts, match box dimensions, for flush-mounted fronts, overlap box
 - c. Hinged Front Cover: Entire front trim hinged to box and with standard door within hinged trim cover
 - d. Skirt for Surface-Mounted Panelboards: Same gauge and finish as panelboard front with flanges for attachment to panelboard, wall, and ceiling or floor
 - e. Gutter Extension and Barrier: Same gage and finish as panelboard enclosure; integral with enclosure body. Arrange to isolate individual panel sections
 - f. Finishes:
 - i. Panels and Trim: Steel and galvanized steel, factory finished immediately after cleaning and pretreating with manufacturer's standard two-coat, baked-on finish consisting of prime coat and thermosetting topcoat.
 - ii. Back Boxes: Galvanized steel Same finish as panels and trim
 - iii. Fungus Proofing: Permanent fungicidal treatment for overcurrent protective devices and other components
 - g. Directory Card: Inside panelboard door, mounted in transparent card holder metal frame with transparent protective cover.
3. Incoming Mains Location: Top or Bottom.
4. Phase, Neutral, and Ground Buses:
 - a. Material: Hard-drawn copper, 98 percent conductivity
 - b. Equipment Ground Bus: Adequate for feeder and branch-circuit equipment grounding conductors; bonded to box.
 - c. Neutral Bus: 100 percent of phase bus 4. Extra-Capacity Neutral Bus: Neutral bus rated 200 percent of phase bus and UL listed as suitable for nonlinear loads.

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. 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).

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

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

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

F. 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 MANUNGGA I DAY CARE CENTER**

LOCATION : BARANGAY TATALON, DISTRICT 4, 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
- 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.

F

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 coarse, 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 of 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 wall 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 curing 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 courses that have commenced initial set; and reinforcement embedded in concrete beginning to set or already set shall not be disturbed by vibrators. Consolidation around major embedded parts shall be 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 a finished appearance.

except for minor defects which can be easily repaired with patching with cement mortar, or can be ground 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.

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 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 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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PROJECT TITLE: PROPOSED CONSTRUCTION OF HAND WASHING FACILITY AND
REHABILITATION OF SANTOL DAY CARE CENTER
LOCATION: BARANGAY SANTOL, DISTRICT 4, QUEZON CITY ✓

TECHNICAL SPECIFICATIONS

QUEZON CITY INFRASTRUCTURE PROJECT

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. MASONRY

- a. Masonry Units (CHB):
 - i. 100mm thick for all interior walls and 125mm thick for all 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. FLOOR FINISHES

1. **Ceramic Tiles.** Unglazed ceramic tiles shall be hard, dense tiles of homogeneous composition. Its color and characteristics are determined by the materials used in the body, the method of manufacture and the thermal treatment.

Tile work shall not be started until roughing-ins for sanitary/plumbing, electrical and other trades have been completed and tested. The work of all other trades shall be protected from damage

B. WALL FINISHES

1. **Ceramic Tiles.** Glazed tiles and trims shall have an impervious face of ceramic materials fused onto the body of the tiles and trims. The glazed surface may be clear white or colored depending on the color scheme approved by the Engineer. Standard glazes may be bright (glossy), semi-matte (less glossy), matte (dull) or crystalline (mottled and textured; good resistance to abrasion).

Tile work shall not be started until roughing-ins for sanitary/plumbing, electrical and other trades have been completed and tested. The work of all other trades shall be protected from damage

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, putied, 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

D. CEILING FINISHES

- 1. **Fiber Cement Board on Metal Frame.** The ceiling materials to be used shall conform to the samples approved by the City Engineer. All ceiling works shall be done by men experienced and qualified to do this particular specialty trade. The installation of ceiling materials shall be in accordance with the detailed section and with the manufacturer's manual instructions. Ceiling materials shall be cut as required to fit the perpendicular condition and should be properly secured by anchorage and other accessories to complete the installation. No mechanical work shall be exposed on the finish work. All joints around electrical outlets, pipes and other works extending through materials shall be sealed with caulking.

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, b-bbs, 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 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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TECHNICAL SPECIFICATIONS QUEZON CITY INFRASTRUCTURE PROJECT

PROJECT TITLE: PROPOSED REHABILITATION OF DON MANUEL DAY CARE CENTER

LOCATION: BARANGAY DON MANUEL, DISTRICT 4, 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.
- j. 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.
- k. 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.
- 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. 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. Lay the tiles true to profile as specified in the plan.
- d. 300mm x 300mm Non-Skid Homogeneous Tiles including tile adhesive.

B. FABRICATED DOORS & WINDOWS

All doors and windows 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.

- 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 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.
- 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 Panel boards: Same gage and finish as panel board front with flanges for attachment to panel board, wall, and ceiling or floor.
- F.2.5 Gutter Extension and Barrier: Same gage and finish as panel board 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 panel board 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, 99 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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PROJECT NAME: PROPOSED REHABILITATION OF DOÑA AURORA DAYCARE CENTER ✓
LOCATION: BARANGAY DOÑA AURORA, DISTRICT, QUEZON CITY ✓

TECHNICAL SPECIFICATIONS

QUEZON CITY INFRASTRUCTURE PROJECT

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 clearing 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. ARCHITECTURAL WORKS

A. 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.

IV. 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.

V. 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
- Indoor Dry and Clean Locations: NEMA 250, Type 1.
 - Outdoor Locations: NEMA 250, Type 3R.
 - Kitchen and Wash-Down Areas: NEMA 250, Type 4X, stainless steel.
 - Other Wet or Damp Indoor Locations: NEMA 250, Type 4
 - 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
- 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.
 - 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.

Prepared by:


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TECHNICAL SPECIFICATIONS

QUEZON CITY INFRASTRUCTURE PROJECT

PROJECT TITLE: PROPOSED REHABILITATION OF MANUNGAL II DAY CARE CENTER

LOCATION: BARANGAY TATALON, DISTRICT 4, 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 coarse, 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 of 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 shall 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 curing 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 courses that have commenced initial set, and reinforcement embedded in concrete beginning to set or already set shall not be disturbed by vibrators. Consolidation around major embedded parts shall be 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 a finished appearance

except for minor defects which can be easily repaired with patching with cement mortar, or can be ground to a smooth surface to remove all joint marks of the form works.

- i. **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, putied, sandpapered, rubbed and polished, masonry wall shall be treated with Neutraizer.

- 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 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 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.


MIKKI J. DE GRACIA

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Republic of the Philippines
Quezon City
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PROJECT TITLE: PROPOSED REHABILITATION OF STO NIÑO 1 DAY CARE CENTER ✓
LOCATION: BARANGAY STO. NIÑO, DISTRICT 4, QUEZON CITY ✓

TECHNICAL SPECIFICATIONS

QUEZON CITY INFRASTRUCTURE PROJECT

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

- vi. Temporary facilities shall be provided and maintained including sanitary facilities and first aid stations.
 - vii. Temporary utilities shall be sufficiently provided until the completion of the project such as water, power and communication.
 - viii. Temporary enclosure shall be provided within the construction site with adequate guard lights, railings and proper signages
 - ix. Temporary roadways shall be constructed and maintained to sustain loads to be carried on them during the entire construction period
 - x. 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.

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 coarse, 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.
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- 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 of mortar from the concrete. Forms shall be ½" waterproof plywood and form lumber.
 - ii. Cleaning of Forms – before placing the concrete, the contact surfaces of the formed shall 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 curing 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.
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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.

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- 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 a finished appearance except for minor defects which can be easily repaired with patching with cement mortar, or can be ground to a smooth surface to remove all joint marks of the form works.
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B. MASONRY

a. **Masonry Units (CHB):**

- i. 100mm thick for all interior walls and 125mm thick for all exterior walls unless otherwise indicated.
- ii. Use 400 psi for non-load bearing blocks and 700 psi for load bearing blocks where required.

- ii. 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.

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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.

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Apply plaster bond to all wall area.

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- 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.
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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.

- 6.4 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 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.



ALEXIS M. DIZON

Planning and Programming Division



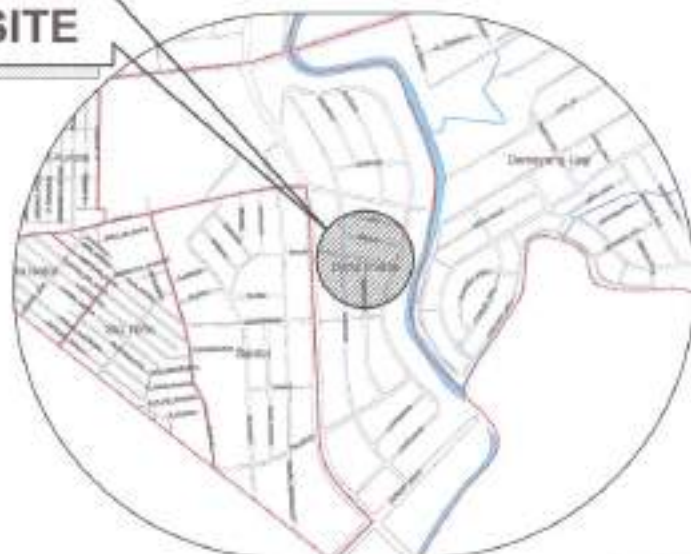
JOCELYN A. NAONG

Planning and Programming Division

Section VII. Drawings

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

SITE



1 VICINITY MAP

SCALE: NTS

SITE



2 LOCATION PLAN

SCALE: NTS



3 PERSPECTIVE

SCALE: NTS

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Republika ng Pilipinas
Lungsod ng Quezon
CITY ENGINEERING DEPARTMENT

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

LOCATION:
BARANGAY DOÑA IMELDA, DISTRICT 8, QUEZON CITY

DRAWN BY: JAG
DATE: SEPT 03, 2021
CHECKED BY: JAG
FORWARDED BY: J

SUBMITTED BY:

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

RECOMMENDING APPROVAL:

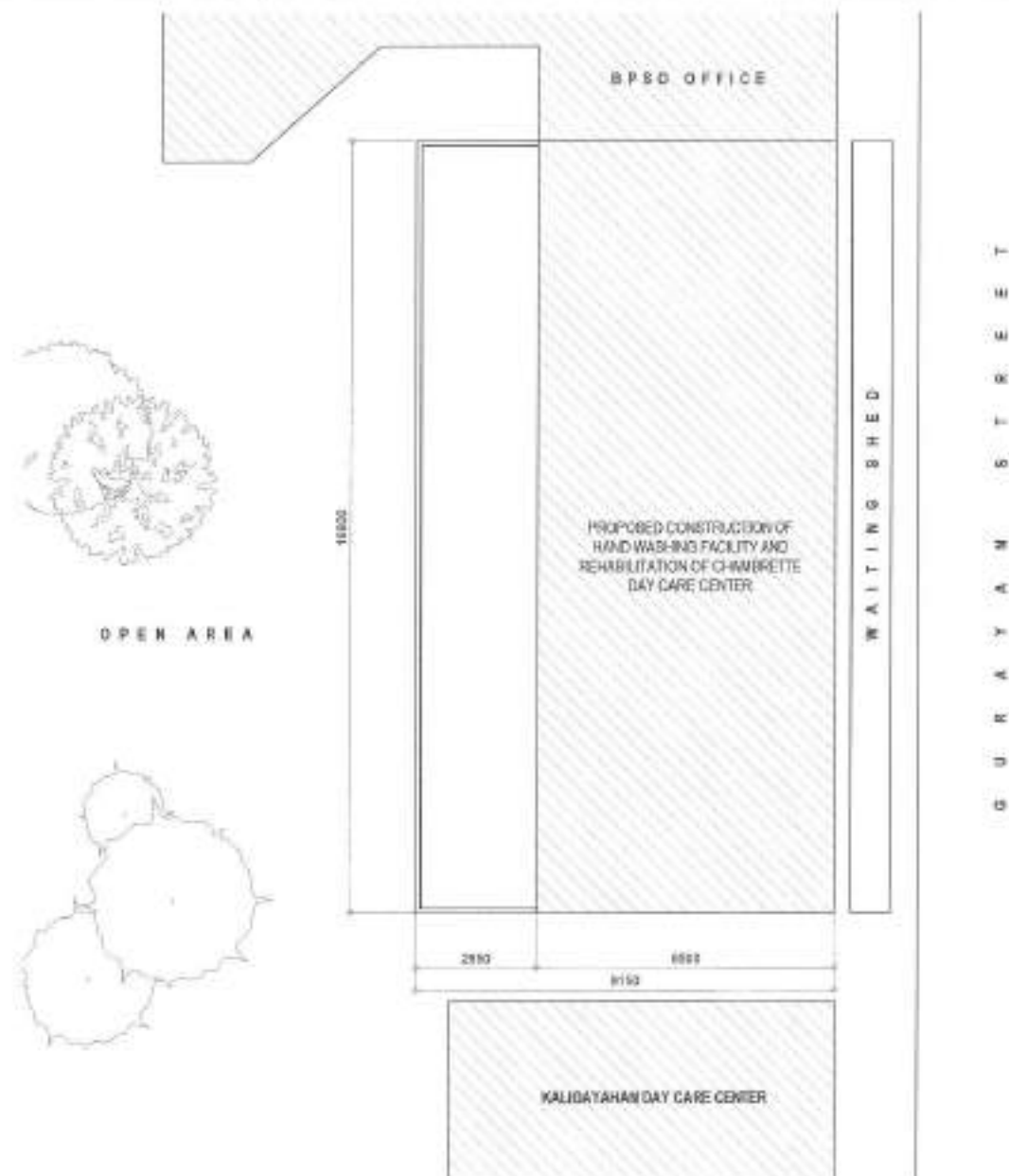
ENGR. ISMAEL R. VERZOSA, JR.
CHIEF, CITY ENGINEERING DEPARTMENT

APPROVED BY:

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

SHEET CONTENT
VICINITY MAP
PERSPECTIVE

SHEET NO.
AR-01
01/14



1

SITE DEVELOPMENT PLAN

SCALE: NTS



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CITY ENGINEERING DEPARTMENT

PROJECT TITLE:

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

LOCATION:

BARANGAY DOÑA MELBA, DISTRICT 4, QUEZON CITY

DRAWN BY: J. DEL ROSARIO

DATE: SEP 28, 2021

CHECKED BY: J. DEL ROSARIO

REVISION NO.: 1

SUBMITTED BY:

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

RECOMMENDED ATTORNEY:

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

APPROVED BY:

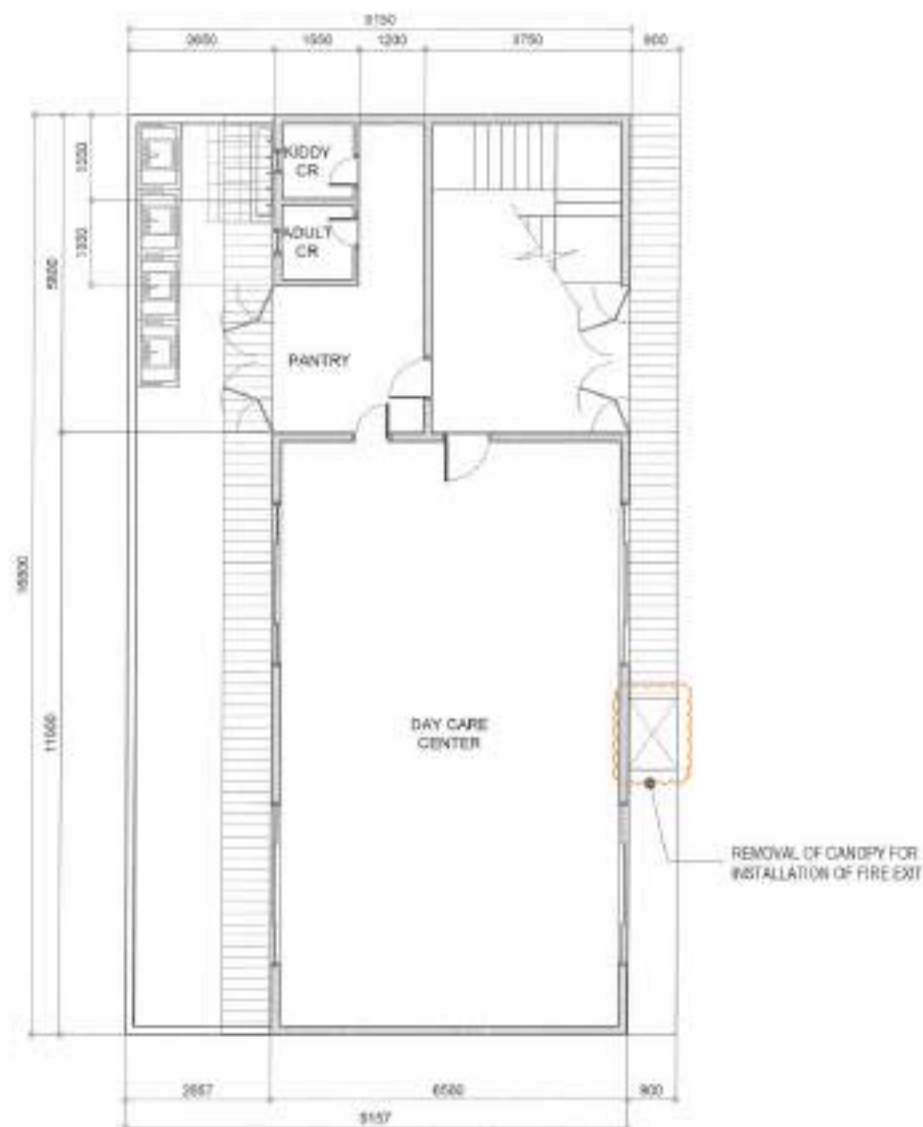
HON. MA. JOSEFINA G. BELMONTE
CITY MAYOR, QUEZON CITY

SHEET CONTENT:

SITE DEVELOPMENT PLAN

SHEET NO.:

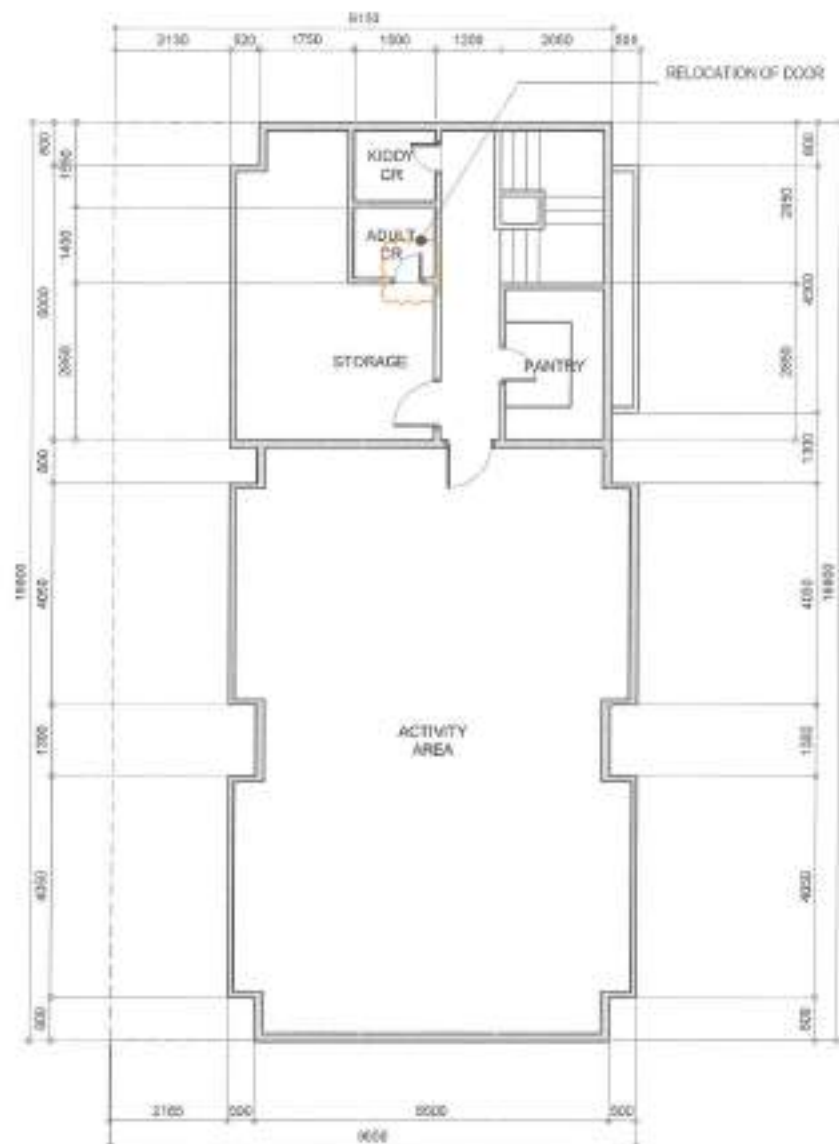
AR-02
02/14



- NOTE:
- DOORS AND WINDOWS TO BE REMOVED
 - TILES TO BE REMOVED
 - ACCORDION WALL TO BE REMOVED

1 EXISTING GROUND FLOOR

SCALE: 1:100M



- NOTE:
- DOORS AND WINDOWS TO BE REMOVED
 - TILES TO BE REMOVED
 - ACCORDION WALL TO BE REMOVED

2 EXISTING SECOND FLOOR

SCALE: 1:100M



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CITY ENGINEERING DEPARTMENT

PROJECT TITLE:
**PROPOSED CONSTRUCTION OF HAND
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REHABILITATION OF CHAMBERETTE
DAY CARE CENTER**

LOCATION:
BARANGAY DOÑA MELBA, DISTRICT 4, QUEZON CITY

DESIGNED BY: *[Signature]*
DATE: SEP 03, 2021
CHECKED BY: *[Signature]*
REVISION NO.: 1

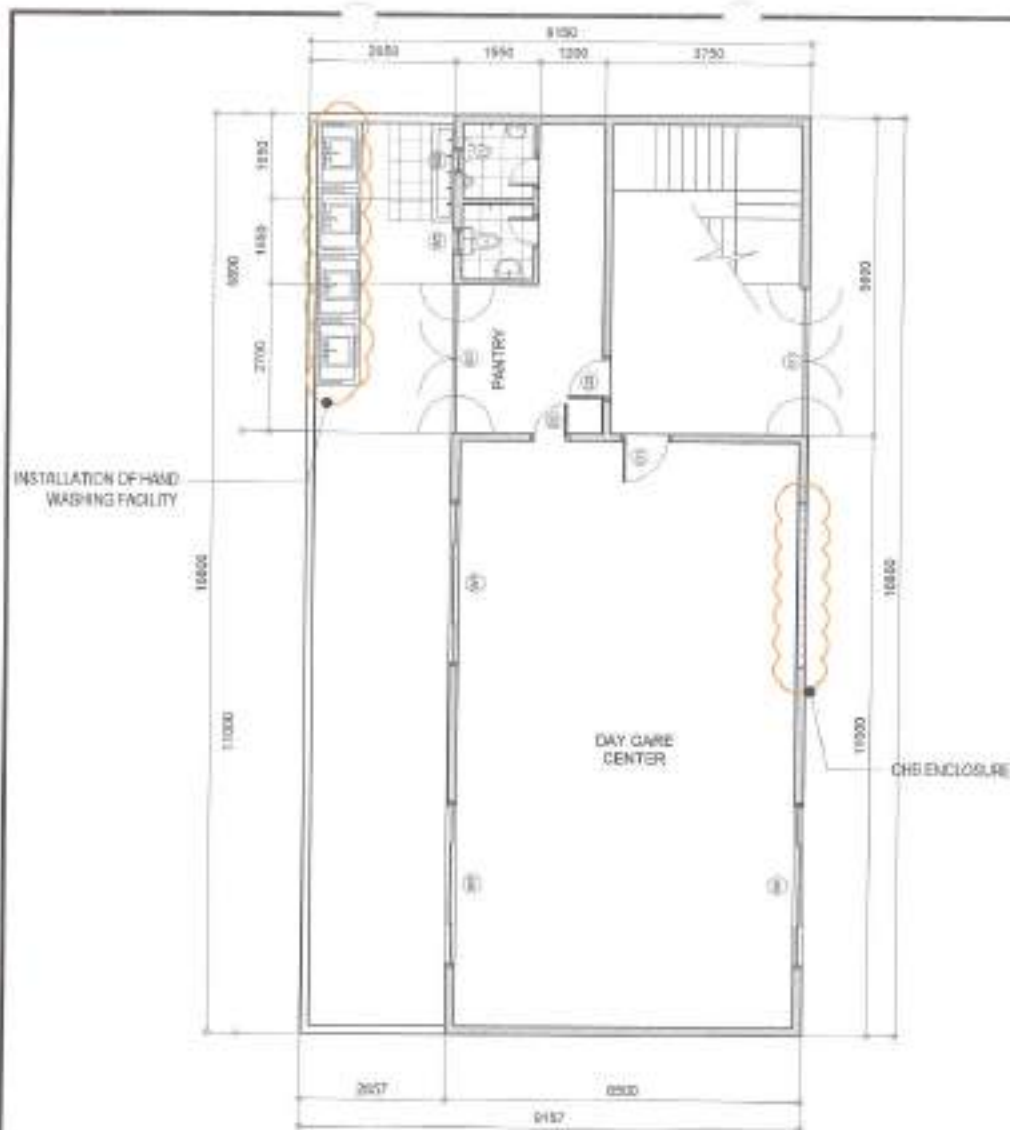
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[Signature]
ENGR. LEO S. DEL ROSARIO
HEAD, PLANNING AND PROJECTS DIVISION

RECOMMENDING OFFICIAL:
[Signature]
ENGR. RAGNI R. VERZOSA, JR.
CH. OF PLANNING DIVISION

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

SHEET CONTENT:
EXISTING GROUND
FLOOR PLAN
EXISTING SECOND
FLOOR

SHEET NO:
AR-03
03/14



NOTE:

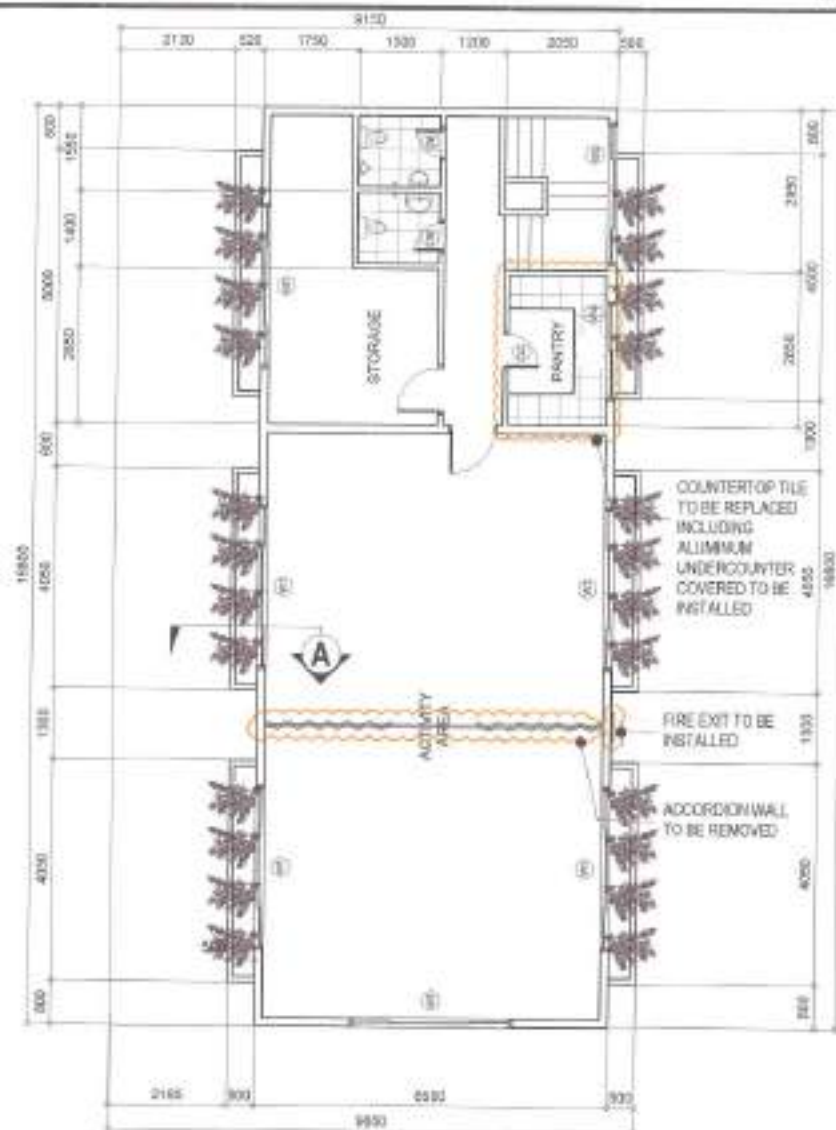
- TILES TO BE REPLACED
- REPAINTING OF WHOLE STRUCTURE
- ALUMINUM UNDER-COUNTER COVER TO BE INSTALLED
- DOORS AND WINDOWS TO BE REPLACED

1 PROPOSED GROUND FLOOR PLAN

SCALE: 1:100M

2 PROPOSED SECOND FLOOR PLAN

SCALE: 1:100M



NOTE:

- BALCONY TO BE CONVERTED TO PLANT BOX
- TILES TO BE REPLACED
- REPAINTING OF WHOLE STRUCTURE
- ACCORDION WALL TO BE REMOVED
- FIRE EXIT TO BE INSTALLED
- ALUMINUM UNDER-COUNTER COVER TO BE INSTALLED



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CITY ENGINEERING DEPARTMENT

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

LOCATION:
BARANGAY DOÑA MELBA, DISTRICT 4 QUEZON CITY

DRAWN BY: *[Signature]*
DATE: SEP 10, 2021
CHECKED BY: *[Signature]*
REVISION NO.: 1

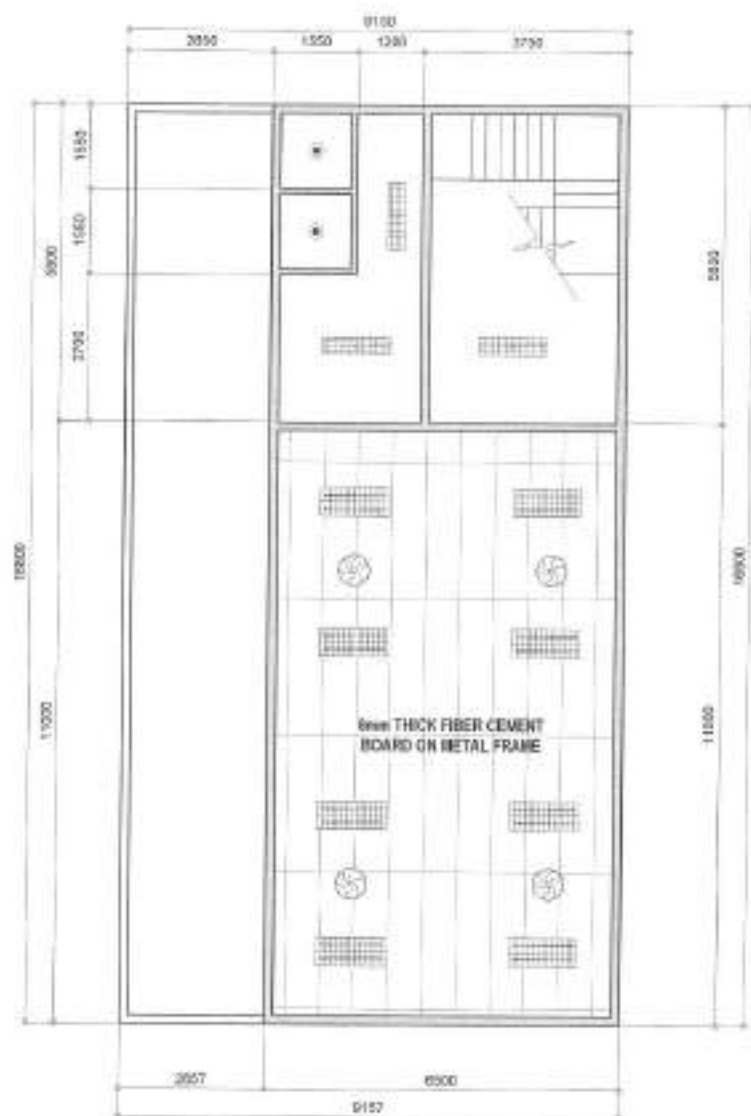
SUBMITTED BY:
[Signature]
ENGR. LEO S. DEL ROSARIO
HEAD, PLANNING PROGRAMS DIVISION

RECOMMENDING APPROVAL:
[Signature]
ENGR. ISABERN R. VERZOSA, JR.
CH. CITY ENGINEERING DEPARTMENT

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

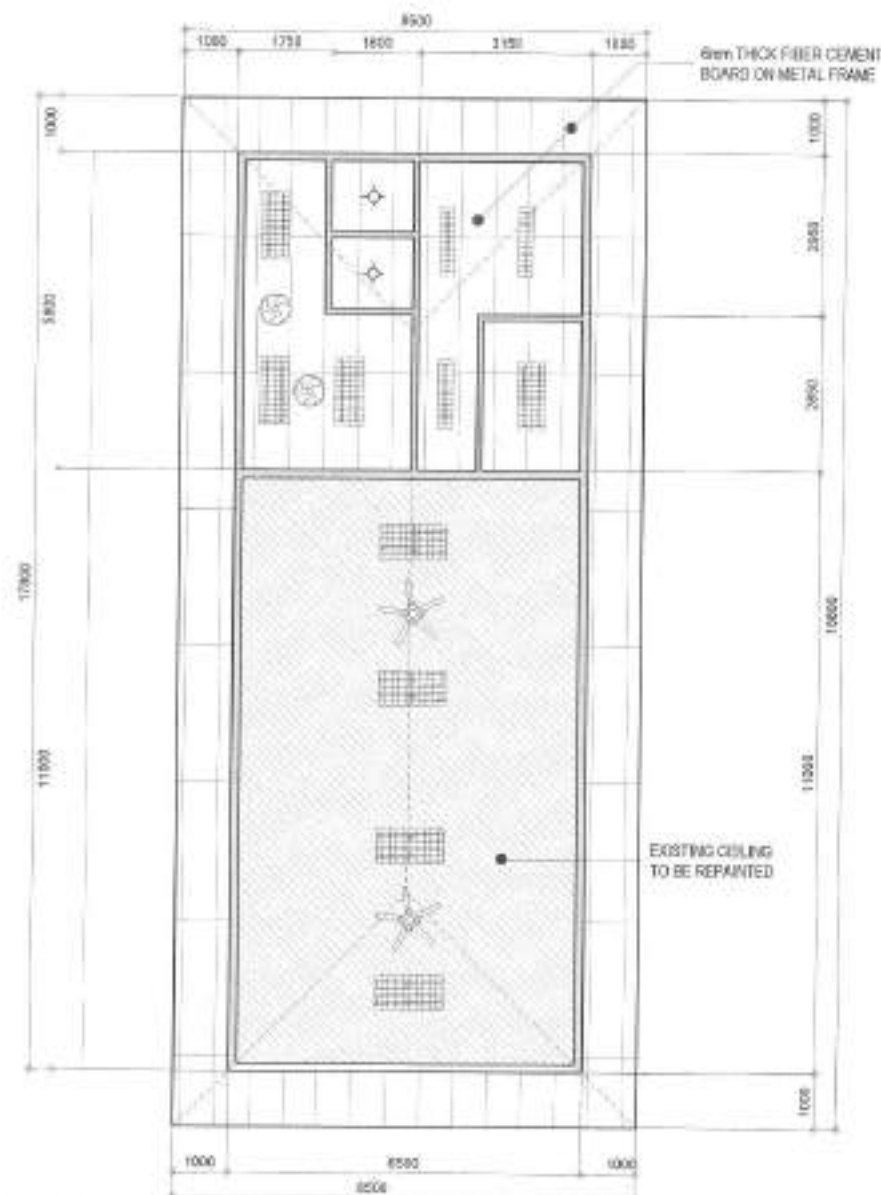
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PROPOSED GROUND
FLOOR PLAN
PROPOSED SECOND
FLOOR PLAN

SHEET NO.:
AR-04
04/14



1 GROUND FLOOR REFLECTED CEILING PLAN

SCALE: 1:100M



2 SECOND FLOOR REFLECTED CEILING PLAN

SCALE: 1:100M



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CITY ENGINEERING DEPARTMENT

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

LOCATION:
BARANAY DOÑA MELCH, DISTRICT 4, QUEZON CITY

DRAWN BY: **AKSO**
DATE: **SEP 03, 2021**
CHECKED BY: **JM**

REVISION NO.: 1

SUBMITTED BY:

ENGR. LEO S. DEL ROSARIO
HND, PLANNING & PROGRAM DIVISION

RECOMMENDING APPROVAL:

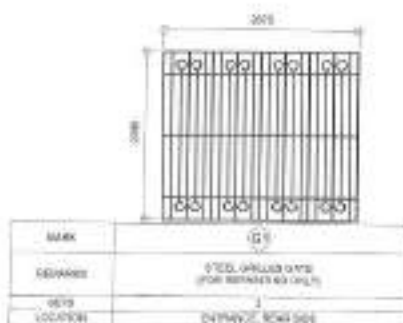
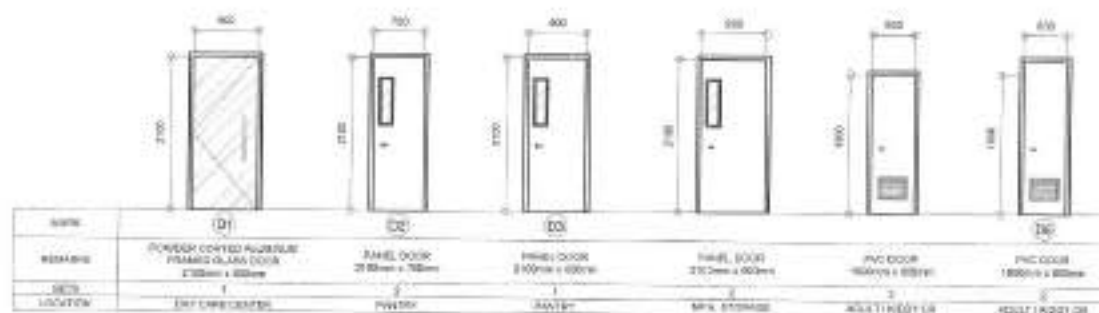
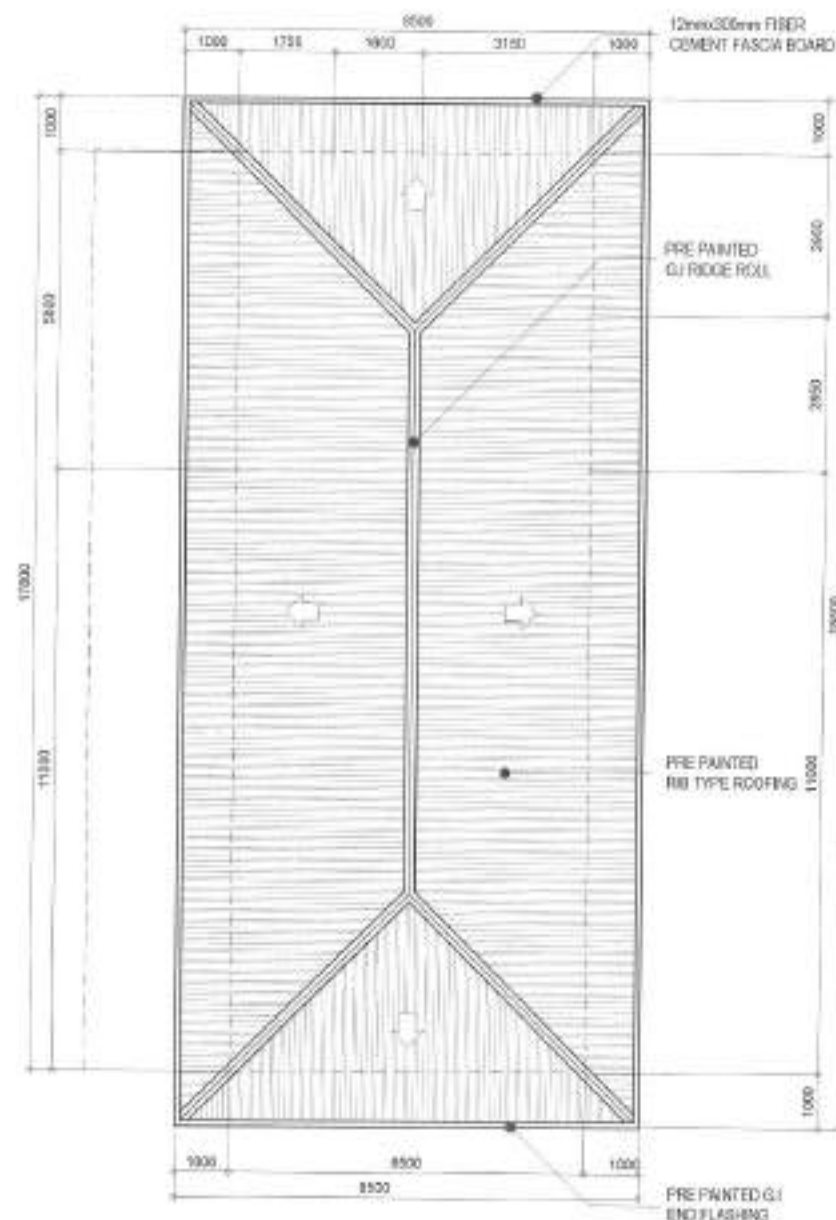
ENGR. ISMAEL R. VERZOSA, JR.
DC, CITY ENGINEERING DEPARTMENT

APPROVED BY:

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

SHEET CONTENT:
ROOF PLAN
GROUND FLOOR
REFLECTED CEILING
PLAN

SHEET NO.:
AR-05
05/14



1 ROOF PLAN

SCALE: 1:100M

2 SCHEDULE OF DOORS AND WINDOWS

SCALE: 1:75M



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CITY ENGINEERING DEPARTMENT

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

LOCATION:
BARANGAY DOÑA MELDA, DISTRICT 4, QUEZON CITY

DRAWN BY: LARSA
DATE: SEP 25, 2021
CHECKED BY: [Signature]
REVISION NO.: 1

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

RECOMMENDING APPROVAL: [Signature]
ENGR. MAGNIE R. VERZOSA, JR.
DE, CITY ENGINEERING DEPARTMENT

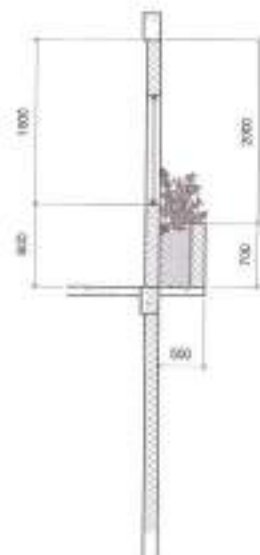
APPROVED BY: [Signature]
HON. MA. JOSEFINA G. BELMONTE
CITY MAYOR, QUEZON CITY

SHEET CONTENT:
ROOF PLAN
SCHEDULE OF DOORS AND WINDOWS

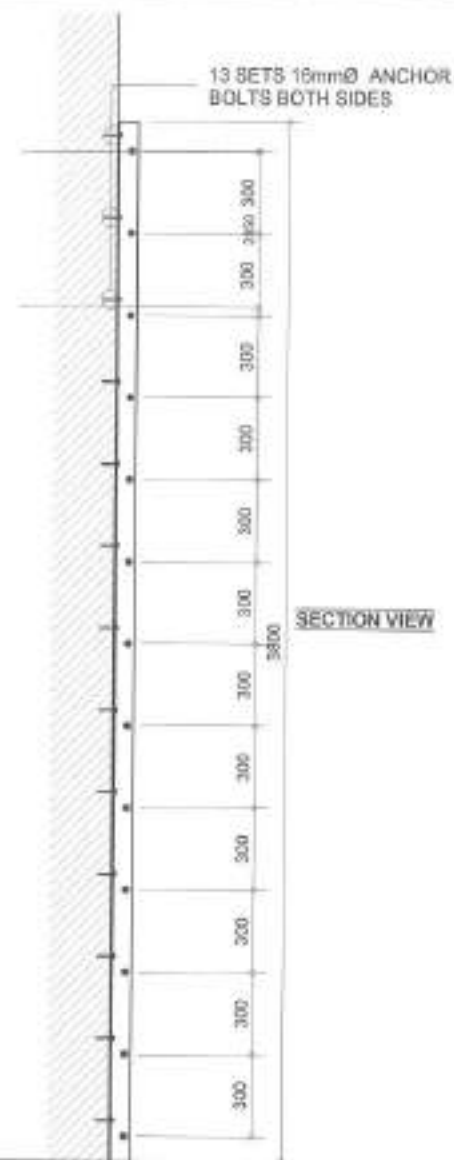
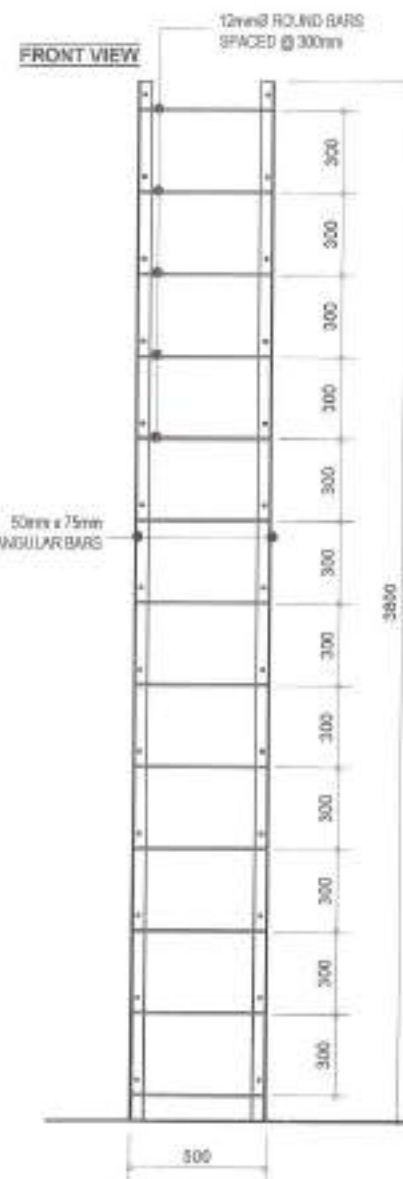
SHEET NO:
AR-06
06/14



EXISTING SECTION-A



PROPOSED SECTION-A



1 SECTION-A

SCALE: 1:50M

2 FIRE EXIT DETAILS

SCALE: 1:30M



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CITY ENGINEERING DEPARTMENT

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

LOCATION:
BARBERSAY DOÑA IMELDA, DISTRICT 4, QUEZON CITY

DESIGNED BY: **WES**
DATE: 05/11/2021
CHECKED BY: **JA**
REVISION NO.: 1

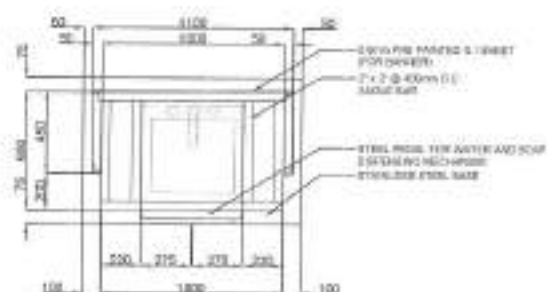
SUBMITTED BY:
ENGR. LOUIS DEL ROSARIO
ROAD, PLANNING & DESIGN DIVISION

RECOMMENDED APPROVAL:
ENGR. JOSEPH H. VERZOSA, JR.
DE, CITY ENGINEERING DEPARTMENT

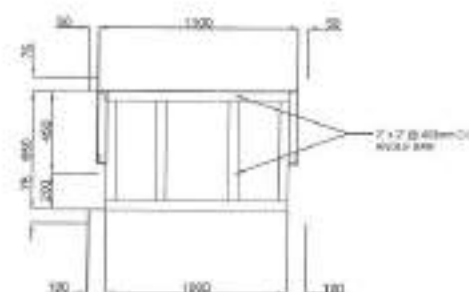
APPROVED BY:
HON. MA. JOSEFINA G. BELMONTE
CITY MAYOR, QUEZON CITY

SHEET CONTENT:
**SECTION-A
FIRE EXIT DETAILS**

SHEET NO:
**AR-07
07/14**



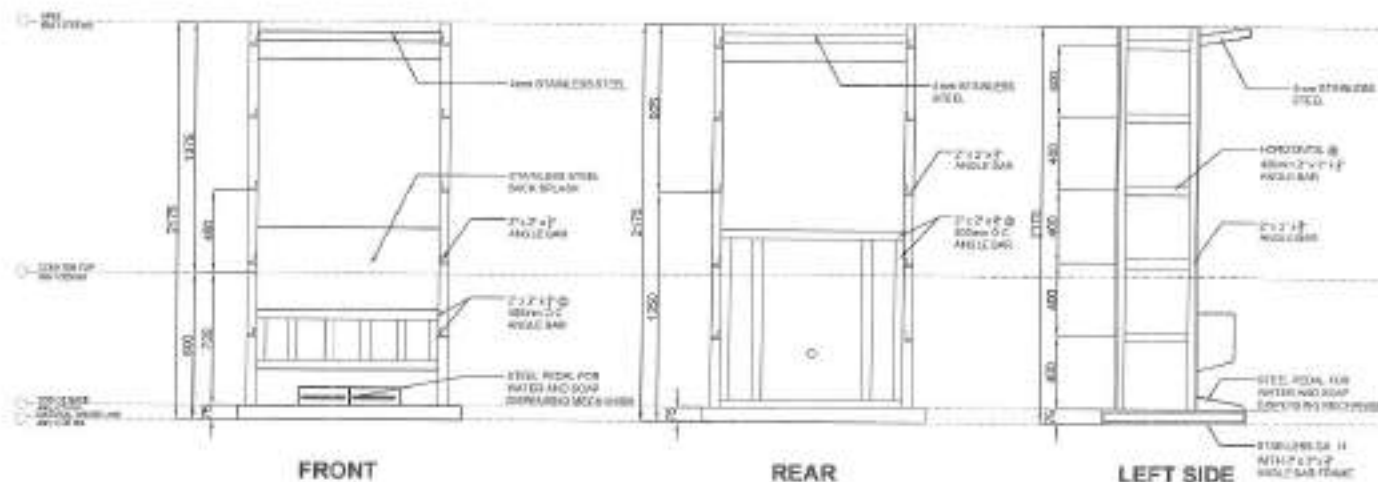
PLAN



ROOF PLAN

1 SINGLE SINK PORTABLE HAND WASHING STALL PLAN

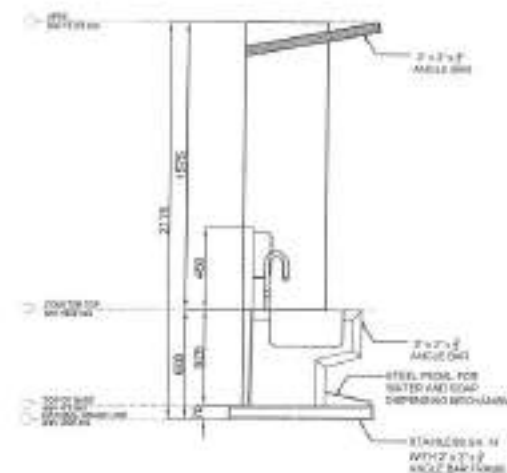
SCALE: 1:30M



FRONT

REAR

LEFT SIDE



2 ELEVATIONS

SCALE: 1:30M

3 TYPICAL SECTION

SCALE: 1:30M



Republika ng Pilipinas
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CITY ENGINEERING DEPARTMENT

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

LOCATION:
BARANGAY DOÑA INGLA, DISTRICT 4, QUEZON CITY

DESIGN BY:
DATE: SEP 13, 2021
CHECKED BY:

REVISIONS:

SUBMITTED BY:

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

RECOMMENDING APPROVAL:

ENGR. MASUMI R. VERZOSA, JR.
C.E. CITY ENGINEERING DEPARTMENT

APPROVED BY:

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

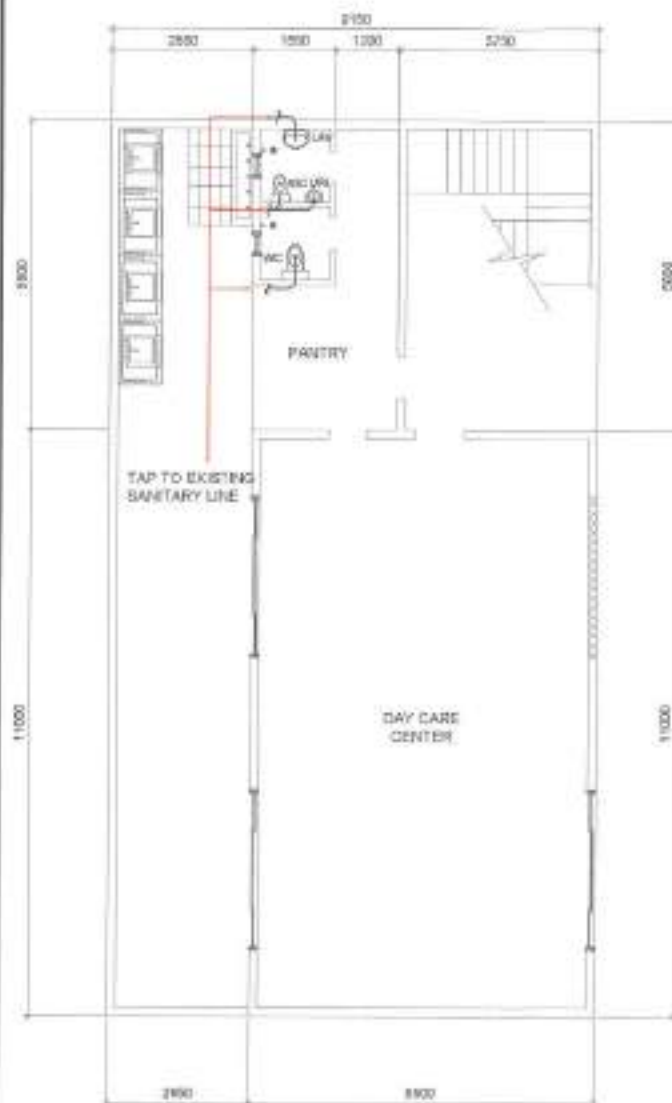
SHEET CONTENT:
DOUBLE SINK PORTABLE
HAND WASHING STALL
PLAN,
ELEVATIONS & SECTION

SHEET NO.
ST-01
08/14

GENERAL NOTES:

- All plumbing work and materials indicated herein shall be compliant to the provisions of the latest edition of National Plumbing Code, the rules and regulations of local authorities concerned, the rules and regulations of local utility companies and the provisions of the local developer when and where applicable.
- The plumbing layout is only diagrammatic; pipes, elbows and check valves shall be connected as much as possible. It is not intended to show the actual dimension of the pipes and fittings in the drawing but all the pipes and fittings shall be installed as and where indicated. Any relocation will require proper consultation in relation with other trades.
- The plumbing contractor shall verify all existing utilities at the site and shall coordinate the work with other trades.
- Pipes shall not be embedded in structural members unless otherwise specified or allowed.
- Minimum slope for horizontal sewer lines shall be 1% and for drain lines shall be 1/8%.
- Proposed plumbing utilities shall conform with the actual location, depth and exact elevation of all existing utilities.
- Connections of fixtures to pipes and fittings shall be according to manufacturer's specifications.
- All floor drains shall be vented individually.
- All clean-out fittings shall be flush-mounted to wall and shall be provided with polished cover caps. Do not install floor clean outs except at lines on grade and service areas not subject to traffic.
- All underground G.I. pipes in direct contact with soil shall be provided with two (2) coats of protective for covering and wrapped with joint cloth thoroughly soaked in tar or asphalt.
- Provide vent stack and vent pipe thru roof of cast iron service weight as required.
- All cast iron stacks shall be of approved quality and G.I. pipes for water distribution lines shall be Schedule 40 U.S. standard weight.
- Provide gate valves to all water supply lines to fixtures.
- All hot water lines shall be provided with proper insulation where exposed.
- All dedicated branches to fixtures or group of fixtures and/or equipment shall be provided with air chambers or trapped vertical pipe extensions of dimensions as shown:
H = 450 mm for 19 mm Ø and larger
H = 300 mm for 12 mm Ø and smaller
- All hose bibbs shall be 19 mm Ø (3/4" Ø) unless otherwise indicated.
- Inlet pipe of sump tank is 50 mm higher than the siphon pipe which is 30 mm higher than the outlet pipe.
- All plumbing work and material of construction shall be under the direct supervision of an able and duly licensed Master Plumber or Registered Sanitary Engineer. Any discrepancies found in plan shall be referred to the same person.

| | |
|--|-----------------------------------|
| | UNION/FITMENT |
| | CHECK VALVE |
| | BUILDING SEWER |
| | BUILDING DRAIN |
| | WASTE LINE |
| | AREA DRAIN/CATCH BASIN |
| | FLOOR DRAIN |
| | DIAMETER |
| | WASTE LINE |
| | WATER LINE |
| | GATE VALVE |
| | DECK DRAIN |
| | CLEANOUT |
| | PIPE DOWN |
| | PIPE UP |
| | VALVE |
| | GATE VALVE |
| | AREA DRAIN/CATCH BASIN |
| | WATER CLOSET |
| | LAVATORY |
| | URINAL |
| | HOSE BIBB |
| | STORM DRAINAGE |
| | VENT LINE |
| | VENT ABOVE CEILING |
| | CONCRETE PIPE (REINF. CONC. PIPE) |
| | VENT THRU ROOF |
| | DIRECTION OF FLOW/SLOPE |



1 GENERAL NOTES AND LEGENDS

2 GROUND FLOOR
SANITARY LAYOUT

SCALE: 1:100M

3 GROUND FLOOR WATER
LINE LAYOUT

SCALE: 1:100M



Republika ng Pilipinas
Lungsod ng Quezon
CITY ENGINEERING DEPARTMENT

PROJECT TITLE:

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

LOCATION:

BARANGAY DOÑA MELISA, DISTRICT 4, QUEZON CITY

DRAWN BY:

DATE: 05/06/2021

CHECKED BY:

REVISION NO.: 1

SUBMITTED BY:

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

RECOMMENDED APPROVAL:

ENGR. GABRIEL R. VERZOSA, JR.
CH. ENGR. & PROJECTS DEPARTMENT

APPROVED BY:

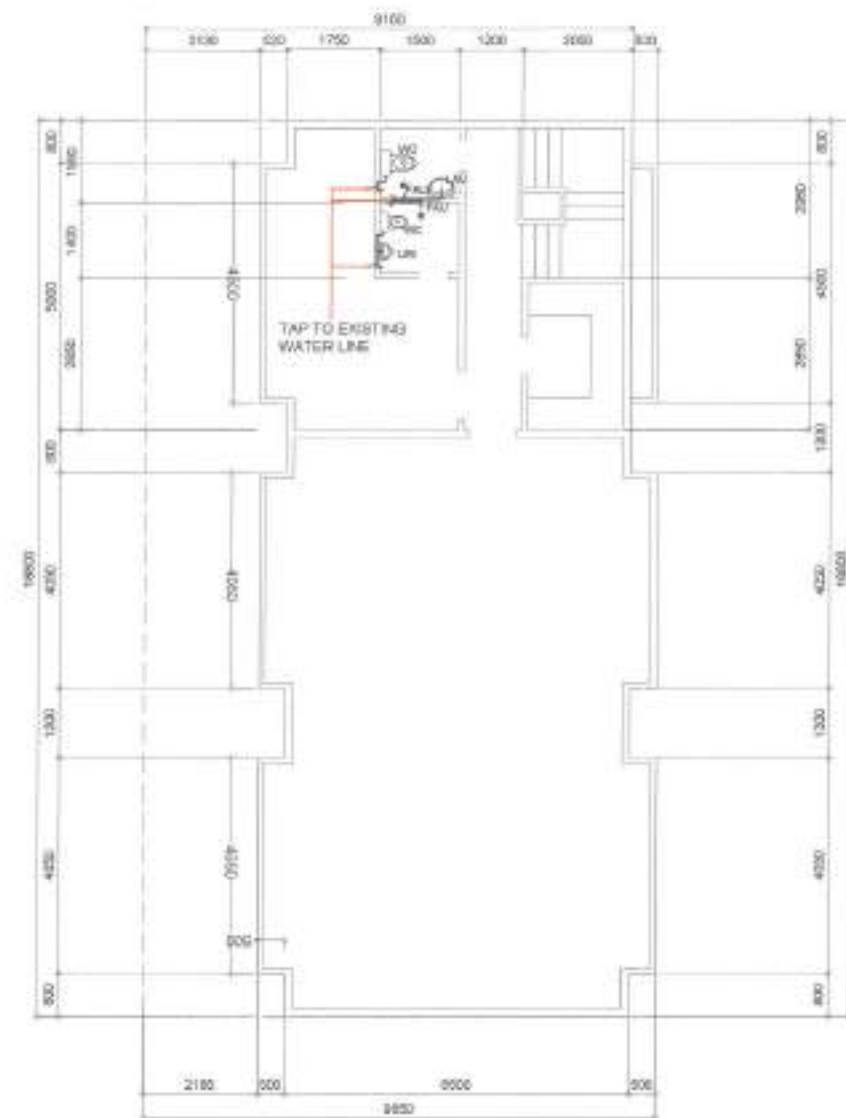
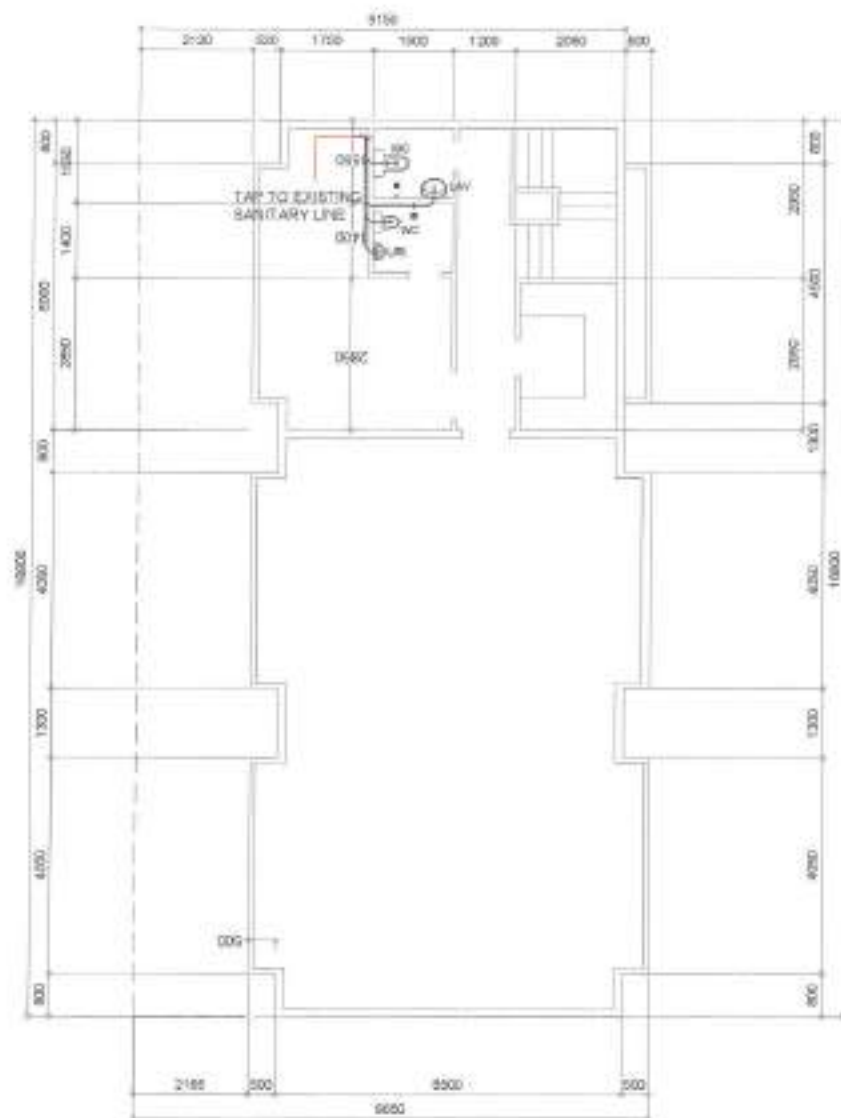
HON. MA. JOSEFINA O. BELMONTÉ
CITY MAYOR, QUEZON CITY

SHEET CONTENT:

GENERAL NOTES
AND LEGENDS
GROUND FLOOR
SANITARY LAYOUT
GROUND FLOOR
WATER LINE LAYOUT

SHEET NO.:

PL-01
09/14



1 SECOND FLOOR SANITARY LAYOUT

SCALE: 1:100 METERS

2 SECOND FLOOR WATER LINE LAYOUT

SCALE: 1:100 METERS



Republika ng Pilipinas
Lungsod ng Quezon
CITY ENGINEERING DEPARTMENT

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

LOCATION:
BAYANANG DOÑA MELDA, DISTRICT 4, QUEZON CITY

DESIGNED BY: JMS
DATE: SEPT 21, 2021
CHECKED BY: JMS
REVISION NO.: 1

SUBMITTED BY:

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

RECOMMENDED APPROVAL:

ENGR. RAULITO R. VERZOSA, JR.
S.C. CITY ENGINEERING DEPARTMENT

APPROVED BY:

HON. MA. JOSEFINA G. DELMONTE
CITY MAOR, QUEZON CITY

SHEET CONTENT:
SECOND FLOOR
SANITARY LAYOUT
SECOND FLOOR
WATER LINE LAYOUT

SHEET NO.:
PL-02
10/14

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 WORKS AND SHALL FURNISH THE OWNER THROUGH THE ENGINEER, FINAL CERTIFICATE OF ELECTRICAL INSPECTION AND APPROVAL FROM PROPER GOVERNMENT AUTHORITIES FOR COMPLETION OF WORK.
3. ALL SUBMERGED BRANCH CIRCUITS SHALL BE PVC CONDUITS AND FOR EXPOSED INSTALLATION SHALL BE RIG SUPPORTED BY CONDUIT CLAMPS EVERY 750MM CENTER.
4. PULL BOXES SHALL BE PROVIDED BY THE CONTRACTOR WHENEVER NECESSARY TO FACILITATE WIRE PULLING EVEN IF THESE ARE NOT INDICATED ON THE PLANS. SIZES OF ALL PULLBOXES SHALL BE COMPUTED BASED ON THE CODE REQUIREMENTS. SUBMIT "DETAILED" 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 ENCLOSURES TYPE WITH REMOVABLE SLOTS FOR 120V.
6. PROVIDE GROUND FAULT CURRENT INTERRUPTER CIRCUIT BREAKER FOR LOADS MARKED "GFCI" ON THE PLANS.
7. ALL METALLIC CONDUITS, CABLES AND EQUIPMENT SHALL BE PROPERLY GROUNDING AND BONDING.
8. UNLESS OTHERWISE NOTED, MOUNTING HEIGHT FOR WALL MOUNTED DEVICES SHALL BE AS FOLLOWS:

RECEPTACLE OUTLET - 800 MM AFF. (SEE ABOVE WORKING CO-ORDINATE)

TELEPHONE OUTLET - 800 MM AFF.

DATA OUTLET - 800 MM AFF.

LIGHTING SWITCH - 1400 MM AFF.

PANELBOARD - 1400 MM AFF.

9. REFER TO MECHANICAL, PLUMBING AND FIRE PROTECTION DRAWINGS FOR RATINGS AND LOCATION OF EQUIPMENT AS WELL AS THEIR CONTROLS, BEHINDS AS APPLICABLE AND OR SHOWN UNDER THEIR RESPECTIVE SECTIONS.
10. ALL MATERIALS TO BE USED SHALL BE OF THE BEST QUALITY, BRAND NAMES SPECIFIED.
11. THE DRAWINGS AND SPECIFICATIONS ARE INTENDED TO PRESENT GENERAL LAYOUT AND BASIC OUTLINE DESCRIPTION OF THE PROJECT BUT DO NOT NECESSARILY REPRESENT THE ACTUAL LOCATION, LEVEL AND SPACES OF THE EQUIPMENT. THE CONTRACTOR IS HEREBY REQUIRED TO MAKE SUCH ADJUSTMENT AT THE JOBSITE AS LOCATION, DISTANCE AND LEVEL ARE DETERMINED BY ACTUAL FIELD CONDITIONS.
12. ANY DISCREPANCY BETWEEN THE PLANS AND SPECIFICATIONS SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER FOR CLARIFICATION OR CORRECTION.
13. ALL LIGHTING AND COMMERCIAL OUTLET CIRCUITS SHALL BE 2.0 SQ. MM. THINWALL COPPER WIRE UNLESS OTHERWISE NOTED. MINIMUM SIZE OF WIRE SHALL BE 3.0 SQ. MM. COPPER WIRE. ALL WIRES AND CABLES SHALL BE COLOR CODED AS FOLLOWS:

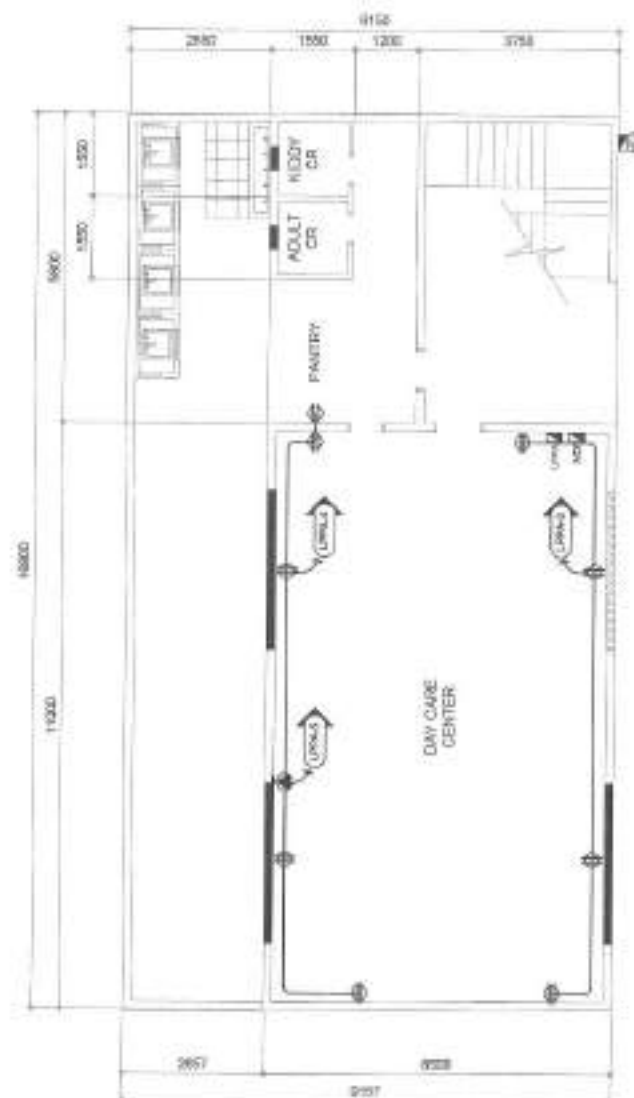
LINE 1 - RED

LINE 2 - YELLOW

NEUTRAL - WHITE

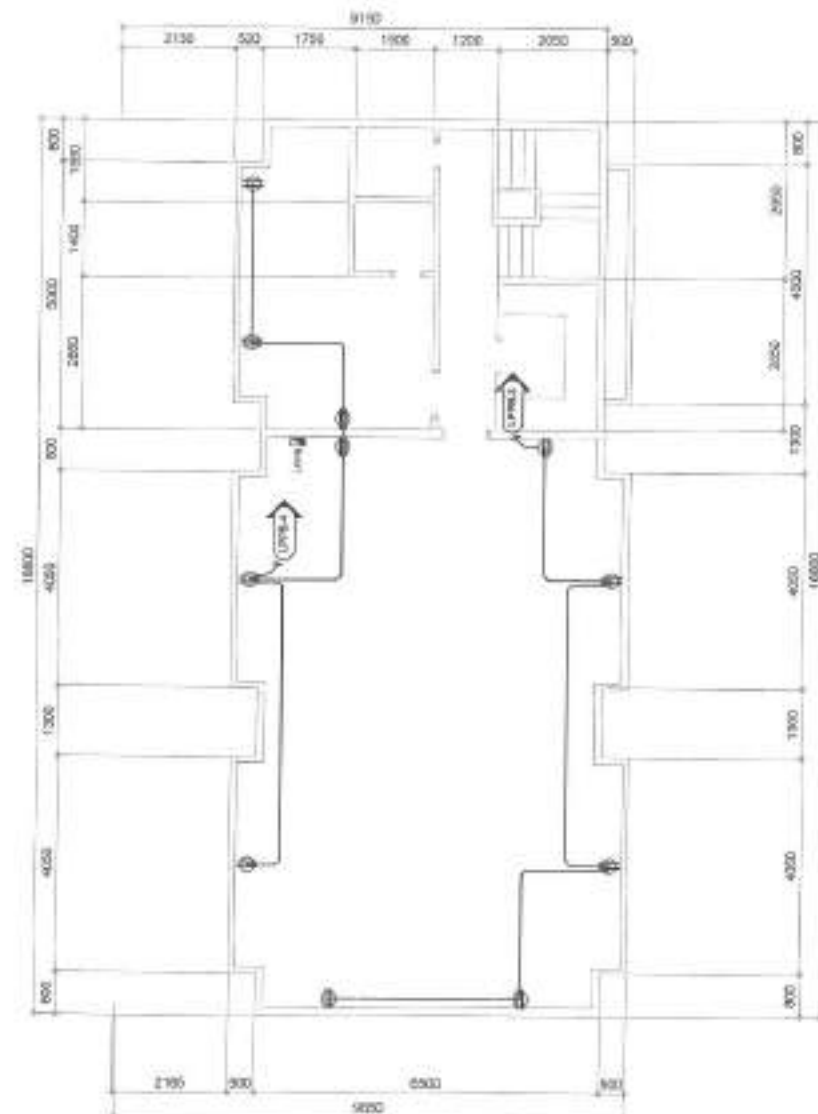
GROUND - GREEN

14. BOXES, WIRE, CABLES, ENCLOSURE SHALL BE FABRICATED FROM STEEL WITH THICKNESS AS FOLLOWS:
MINIMUM THICKNESS OF THE SHEET SURFACE STEEL:
UP TO 150 MM DIA. 1.50 MM
OVER 150 MM DIA. BUT NOT OVER 100 MM 1.75 MM
OVER 100 MM DIA. BUT NOT OVER 75 MM 2.00 MM
OVER 75 MM DIA. BUT NOT OVER 50 MM 2.25 MM
OVER 50 MM DIA. 2.50 MM
15. ALL ELECTRICAL WORKS HEREIN SHALL BE EXECUTED BY EXPERIENCED MEN UNDER THE DIRECT SUPERVISION OF A FULL-TIME LICENSED ELECTRICAL ENGINEER AND A FULLY ACCREDITED ELECTRICAL CONTRACTOR BY POWER WORKS SHALL BE NEATLY PLACED, SECURELY FASTENED AND PROPERLY PAINTED.
16. TYPE OF SERVICE ENTRANCE SHALL BE: SINGLE PHASE, TWO-WIRE PLUS GROUND, 120/240V, 60 HZ, 1-Ø, 3-Ø, 4-Ø, 5-Ø, 6-Ø, 8-Ø, 10-Ø, 12-Ø, 14-Ø, 16-Ø, 18-Ø, 20-Ø, 22-Ø, 24-Ø, 26-Ø, 28-Ø, 30-Ø, 32-Ø, 34-Ø, 36-Ø, 38-Ø, 40-Ø, 42-Ø, 44-Ø, 46-Ø, 48-Ø, 50-Ø, 52-Ø, 54-Ø, 56-Ø, 58-Ø, 60-Ø, 62-Ø, 64-Ø, 66-Ø, 68-Ø, 70-Ø, 72-Ø, 74-Ø, 76-Ø, 78-Ø, 80-Ø, 82-Ø, 84-Ø, 86-Ø, 88-Ø, 90-Ø, 92-Ø, 94-Ø, 96-Ø, 98-Ø, 100-Ø, 102-Ø, 104-Ø, 106-Ø, 108-Ø, 110-Ø, 112-Ø, 114-Ø, 116-Ø, 118-Ø, 120-Ø, 122-Ø, 124-Ø, 126-Ø, 128-Ø, 130-Ø, 132-Ø, 134-Ø, 136-Ø, 138-Ø, 140-Ø, 142-Ø, 144-Ø, 146-Ø, 148-Ø, 150-Ø, 152-Ø, 154-Ø, 156-Ø, 158-Ø, 160-Ø, 162-Ø, 164-Ø, 166-Ø, 168-Ø, 170-Ø, 172-Ø, 174-Ø, 176-Ø, 178-Ø, 180-Ø, 182-Ø, 184-Ø, 186-Ø, 188-Ø, 190-Ø, 192-Ø, 194-Ø, 196-Ø, 198-Ø, 200-Ø, 202-Ø, 204-Ø, 206-Ø, 208-Ø, 210-Ø, 212-Ø, 214-Ø, 216-Ø, 218-Ø, 220-Ø, 222-Ø, 224-Ø, 226-Ø, 228-Ø, 230-Ø, 232-Ø, 234-Ø, 236-Ø, 238-Ø, 240-Ø, 242-Ø, 244-Ø, 246-Ø, 248-Ø, 250-Ø, 252-Ø, 254-Ø, 256-Ø, 258-Ø, 260-Ø, 262-Ø, 264-Ø, 266-Ø, 268-Ø, 270-Ø, 272-Ø, 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1 GROUND FLOOR POWER LAYOUT

SCALE: 1:100M



2 SECOND FLOOR POWER LAYOUT

SCALE: 1:100M



Republic of the Philippines
Lungsod ng Quezon
CITY ENGINEERING DEPARTMENT

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

LOCATION:
BARANGAY DOÑA BELOA, DISTRICT 4, QUEZON CITY

DATE: SEPT 30, 2021
CHECKED BY: *[Signature]*
DESIGN NO.: 1

SUBMITTED BY: *[Signature]*
ENGR. LEO S. DEL ROSARIO
HEAD, PLANNING & COMMUNITY DIVISION

RECOMMENDING APPROVAL: *[Signature]*
ENGR. RICHARD R. VERZOSA, JR.
DC, CITY ENGINEERING DEPARTMENT

APPROVED BY: *[Signature]*
HON. MA. JOSEFINA B. BELMONTÉ
CITY MAYOR, QUEZON CITY

SHEET CONTENT:
GROUND FLOOR
POWER LAYOUT
SECOND FLOOR
POWER LAYOUT

SHEET NO:
EL-04
14/14

GENERAL NOTES:

- ALL ELECTRICAL WORK SHALL BE DONE IN ACCORDANCE WITH THE PROVISIONS OF THE LATEST EDITION OF THE PHILIPPINE ELECTRICAL CODE, THE LAWS AND ORDINANCES OF THE LOCAL CODE ENFORCING AUTHORITIES AND THE REQUIREMENTS OF THE LOCAL POWER AND TELEPHONE UTILITY COMPANY.
- THE CONTRACTOR SHALL SECURE ALL PERMITS AND PAY ALL FEES INCURRED FOR THE WORK AND SHALL FURNISH THE OWNER THROUGH THE ENGINEER, FINAL CERTIFICATE OF ELECTRICAL INSPECTION AND APPROVAL FROM PROPER GOVERNMENT AUTHORITIES FOR COMPLETION OF WORK.
- ALL EMBEDDED BRANCH CIRCUITS SHALL BE PVC CONDUITS AND FOR EXPOSED INSTALLATION SHALL BE MC SUPPORTED BY CONDUIT CLAMPS EVERY 750 MILLIMETER.
- PULL BOXES SHALL BE PROVIDED BY THE CONTRACTOR AND WHEN NECESSARY TO FACILITATE WIRE PULLING WHEN THERE ARE NOT INDICATED ON THE PLANS. DESIGN OF ALL PULL BOXES SHALL BE COMPLETED BASED ON THE CODE REQUIREMENTS, SUBMIT SHOP DRAWINGS TO THE ENGINEER FOR APPROVAL. PRIOR TO FABRICATION, LOCATION OF PULL BOXES SHALL BE APPROVED BY THE ARCHITECT/ENGINEER AND MUST BE REFLECTED ON THE "AS-BUILT" PLAN.
- ALL POWER OUTLETS AND SWITCHES SHALL BE GROUNDING TYPE WITH PARALLEL SLOTS FOR 220V.
- PROVIDE GROUND FAULT CURRENT INTERRUPTER (GFCI) BREAKERS FOR LOADS MARKED "GFCI" ON THE PLAN.
- ALL METALLIC CONDUITS, CONDUITS AND EQUIPMENT SHALL BE PROPERLY GROUNDED AND GROUND.
- UNLESS OTHERWISE NOTED, MOUNTING HEIGHT FOR WALL MOUNTED DEVICES SHALL BE AS FOLLOWS:

RECEPTACLE OUTLET - 300 MM AFF. (100MM ABOVE WORKING SURFACE)
 TELEPHONE OUTLET - 300 MM AFF.
 GATH OUTLET - 300 MM AFF.
 LIGHTING SWITCH - 1400 MM AFF.
 PANELBOARD - 1800 MM AFF.

- REFER TO MECHANICAL, PLUMBING AND FIRE PROTECT ON DRAWINGS FOR RATINGS AND LOCATIONS OF EQUIPMENT AS WELL AS THEIR CONTROL SCHEMATIC AS INDICATED AND OR SHOWN UNDER THEIR RESPECTIVE SECTIONS.
- ALL MATERIALS TO BE USED SHALL BE OF THE BEST QUALITY, BRAND AND AS APPROVED.
- THE DIMENSIONS AND SPECIFICATIONS ARE INTENDED TO PRESENT GENERAL LAYOUT AND BROAD OUTLINE OF THE PROJECT BUT DO NOT NECESSARILY INDICATE DESCRIBED ACTUAL LOCATIONS, LEVELS 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.
- ANY DISCREPANCY BETWEEN THE PLANS AND SPECIFICATIONS SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER FOR CLARIFICATION/DECISION.
- ALL LIGHTING AND COMMUNICATION OUTLET CIRCUITS SHALL BE 3.5 SQ. MM. 7/16" 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

- WORK, WIRE, OUTLETS, ENCLOSURE SHALL BE FABRICATED FROM STEEL WITH THICKNESS AS FOLLOWS:
 MAXIMUM WIDTH OF THE VISIBLE SURFACE STEEL:
 UP TO INCLUDING 450.45 MM GA. 18 PAINTED WITH METAL PRIMER EPOXY AND TOPCOAT
 OVER 450.45 MM BUT NOT OVER 457.30 GA. 16 PAINTED WITH METAL PRIMER EPOXY AND TOPCOAT
 OVER 457.30 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
- ALL ELECTRICAL WORK HEREIN SHALL BE EXECUTED BY A LICENSED ELEC. UNDER THE DIRECT SUPERVISION OF A FULL-TIME LICENSED ELECTRICAL ENGINEER, AND A QUALIFIED ASSISTANT ELECTRICAL CONTRACTOR BY POWER WORKS SHALL BE HEAVILY PLACED, SECURELY FASTENED AND PROPERLY FINISHED.
- TYPE OF SERVICE ENTRANCE SHALL BE SINGLE PHASE, TWO WIRE PLUS GROUND, 140 MM² 220V AC NORMAL.
- CONDUITS AND CASE SHALL THERE BE MORE THAN THE EQUIVALENT OF FOUR QUARTER BOWS IN ANY ONE RUN. ALL CONDUIT BOWS SHALL BE FIELD MADE BY USING HYDRAULIC BENDERS. MINIMUM BENDING RADIUS MUST BE IN ACCORDANCE TO THE CODE REQUIREMENTS.
- 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 DIVISION CITY ENGINEERING DEPARTMENT REPRESENTATIVE. THE GROUND RESISTANCE FOR ELECTRICAL SYSTEM SHALL NOT BE MORE THAN 5 OHMS. COMMUNICATION GROUNDING RESISTANCE SHALL NOT EXCEED 10 OHMS.

2 LEGEND & SYMBOLS

SCALE NTS



BENDING RADIUS DETAIL



SPOT DETAIL OF CONDUIT RUN AND BOX



SPOT DETAIL OF CONDUIT RUN AND BOX



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SPOT DETAIL OF CONDUIT RUN AND BOX



LED TROFFER LIGHTING, 1200x300mm, RECESSED



LED DOUBLE TROFFER LIGHTING, 600x1200mm, RECESSED



LED ROUND SURFACE MOUNT PINLIGHT



LED ROUND RECESSED PINLIGHT



LED TROFFER LIGHTING, 1200x300mm, SURFACE MOUNTED



LED DOUBLE TROFFER LIGHTING, 600x1200mm, SURFACE MOUNTED



CIRCUIT HOWERUN



PANELBOARD



CIRCUIT HOWERUN



PANELBOARD



CIRCUIT HOWERUN



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PANELBOARD



CIRCUIT HOWERUN

1 GENERAL NOTES

SCALE NTS

3 MISCELLANEOUS DETAILS

SCALE NTS



Republika ng Pilipinas
 Lungsod ng Cebu
 CITY ENGINEERING DEPARTMENT

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

LOCATION:
 BARANGAY DOÑA MELBA, DISTRICT 4, DIVISION CITY

DRAWN BY:
 DATE: SEP 18, 2021
 CHECKED BY: J.M.
 REVISIONS: 1

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

RECOMMENDING APPROVAL:
 ENGR. ISADAR R. VERZORA, JR.
 CH. CITY ENGINEERING DEPARTMENT

APPROVED BY:
 HON. RA. JOSEFINA G. BELMONT
 CITY MAYOR, DIVISION CITY

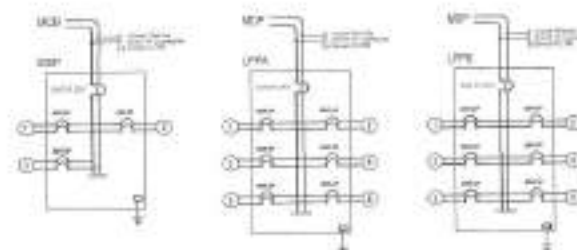
SHEET CONTENT:
 GENERAL NOTES
 LEGENDS AND SYMBOLS
 MISCELLANEOUS DETAILS

SHEET NO.:
EL-01
11/14

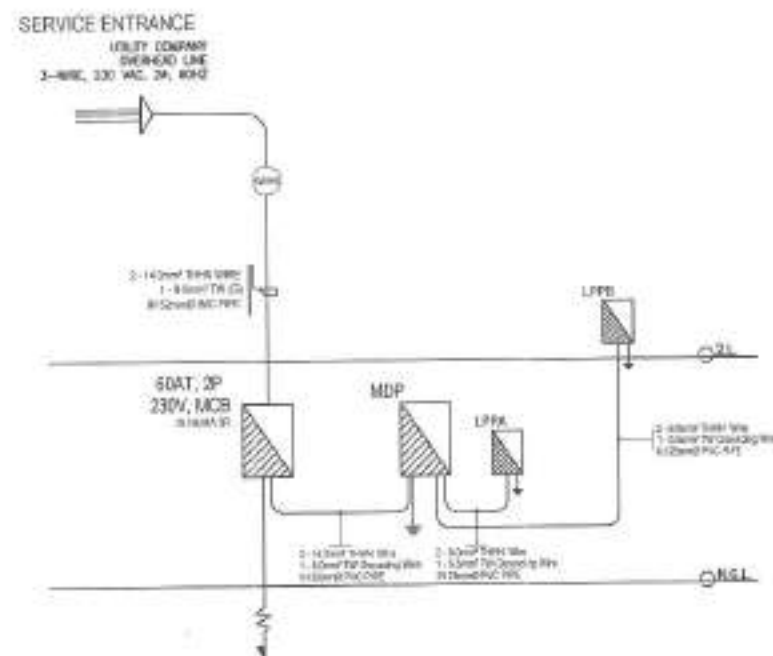
| MDP (MAIN DISTRIBUTION/PANEL) | | | | | | WIRING: 14 AWG THHN 90°C W/ 14 AWG TN GROUND WIRE IN 1/2" PVC CONDUIT | |
|-------------------------------|------------------|-------|-------|------|----|--|------------------|
| LOCATION: GROUND FLOOR | | | | | | COURT YARD W/ 14 AWG THHN 90°C W/ 14 AWG TN GROUND WIRE IN 1/2" PVC CONDUIT | |
| CIR. NO. | LOAD DESCRIPTION | VOLTS | W | AMP | AT | SIZE OF | |
| | | | | | | WIRING | CONDUITS |
| 1 | 1 LG | 220 | 3600 | 24.0 | 40 | 14 AWG THHN 90°C W/ 14 AWG TN GROUND WIRE IN 1/2" PVC CONDUIT | 1/2" PVC CONDUIT |
| 2 | 2 LG | 220 | 3600 | 24.0 | 40 | 14 AWG THHN 90°C W/ 14 AWG TN GROUND WIRE IN 1/2" PVC CONDUIT | 1/2" PVC CONDUIT |
| 3 | 3 LG | 220 | 3600 | 24.0 | 40 | 14 AWG THHN 90°C W/ 14 AWG TN GROUND WIRE IN 1/2" PVC CONDUIT | 1/2" PVC CONDUIT |
| | | | 10800 | 72.0 | | | |
| COMPUTATION: | | | | | | OVERCURRENT PROTECTION: USE: 60AT, 2P, 250V MOLDED CASE CIRCUIT BREAKER IN MAIN 1 | |
| $P = 10800$ | | | | | | WIRING: | |
| $V = 220$ | | | | | | USE: 2 - 14 AWG THHN & 14 AWG TN GROUND WIRE IN 1/2" PVC CONDUIT | |
| $I = 49.1$ AMP | | | | | | | |

| LPPA | | | | | | REMARKS: WITH 1-250V TYPE 250V FUSED, COATED FUSES 1/2" x 1/4" x 1/4" SAE, BACK FOR 1000 AMPERE BUS | | | |
|--|------------------|-------|------|------|----|---|-------------|-------------|-------------|
| LOCATION: GROUND FLOOR | | | | | | SERIAL | | | |
| LT NO. | LOAD DESCRIPTION | VOLTS | W | AMP | AT | WIRING | | CONDUITS | |
| 1 | 1- LGARSE 3000W | 220 | 720 | 4.4 | 20 | 2- 14 AWG THHN 90°C | 1- 1/2" PVC | 1- 1/2" PVC | 1- 1/2" PVC |
| 2 | 2- LGARSE 3000W | 220 | 720 | 4.4 | 20 | 2- 14 AWG THHN 90°C | 1- 1/2" PVC | 1- 1/2" PVC | 1- 1/2" PVC |
| 3 | 3- LGARSE 3000W | 220 | 720 | 4.4 | 20 | 2- 14 AWG THHN 90°C | 1- 1/2" PVC | 1- 1/2" PVC | 1- 1/2" PVC |
| 4 | 4- LGARSE 3000W | 220 | 720 | 4.4 | 20 | 2- 14 AWG THHN 90°C | 1- 1/2" PVC | 1- 1/2" PVC | 1- 1/2" PVC |
| 5 | 5- LGARSE 3000W | 220 | 720 | 4.4 | 20 | 2- 14 AWG THHN 90°C | 1- 1/2" PVC | 1- 1/2" PVC | 1- 1/2" PVC |
| 6 | 6- LGARSE 3000W | 220 | 720 | 4.4 | 20 | 2- 14 AWG THHN 90°C | 1- 1/2" PVC | 1- 1/2" PVC | 1- 1/2" PVC |
| TOTAL | | 220 | 3600 | 24.0 | 40 | | | | |
| | | 220 | 3600 | 24.0 | 40 | | | | |
| COMPUTATION: | | | | | | | | | |
| OVERCURRENT PROTECTION: USE: 16AT, 2P, 250V MOLDED CASE CIRCUIT BREAKER IN MAIN 1 WIRING: USE: 2 - 14 AWG THHN & 14 AWG TN GROUND WIRE IN 1/2" PVC CONDUIT | | | | | | | | | |

| LPPB | | | | | | REMARKS: SMALL RECESSED 16T IN GROUND WIRE CONDUIT MUST BE 1/2" IN DIA. TYPICAL IN SIZE FOR SIZE GROUND WIRE | |
|------------------------|------------------|-------|------|------|----|--|-------------|
| LOCATION: SECOND FLOOR | | | | | | SUBJECT | |
| LT NO. | LOAD DESCRIPTION | VOLTS | W | AMP | AT | WIRING | CONDUIT |
| 1 | 1- LGARSE 3000W | 220 | 600 | 4.4 | 20 | 2- 14 AWG THHN 90°C | 1- 1/2" PVC |
| 2 | 2- LGARSE 3000W | 220 | 600 | 4.4 | 20 | 2- 14 AWG THHN 90°C | 1- 1/2" PVC |
| 3 | 3- LGARSE 3000W | 220 | 600 | 4.4 | 20 | 2- 14 AWG THHN 90°C | 1- 1/2" PVC |
| 4 | 4- LGARSE 3000W | 220 | 600 | 4.4 | 20 | 2- 14 AWG THHN 90°C | 1- 1/2" PVC |
| 5 | 5- LGARSE 3000W | 220 | 600 | 4.4 | 20 | 2- 14 AWG THHN 90°C | 1- 1/2" PVC |
| 6 | 6- LGARSE 3000W | 220 | 600 | 4.4 | 20 | 2- 14 AWG THHN 90°C | 1- 1/2" PVC |
| | | 220 | 3600 | 24.0 | 40 | | |
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2 PANEL BOARD DETAIL



1 SCHEDULE OF LOAD

2 SINGLE LINE DIAGRAM



Republika ng Pilipinas
Lungsod ng Quezon
CITY ENGINEERING DEPARTMENT

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

LOCATION:
BALUNDAY DOÑA MARILYN, DISTRICT 4, QUEZON CITY

DRAWN BY:
DATE: SEP 03, 2021
CHECKED BY: JN
REVISIONS: 1

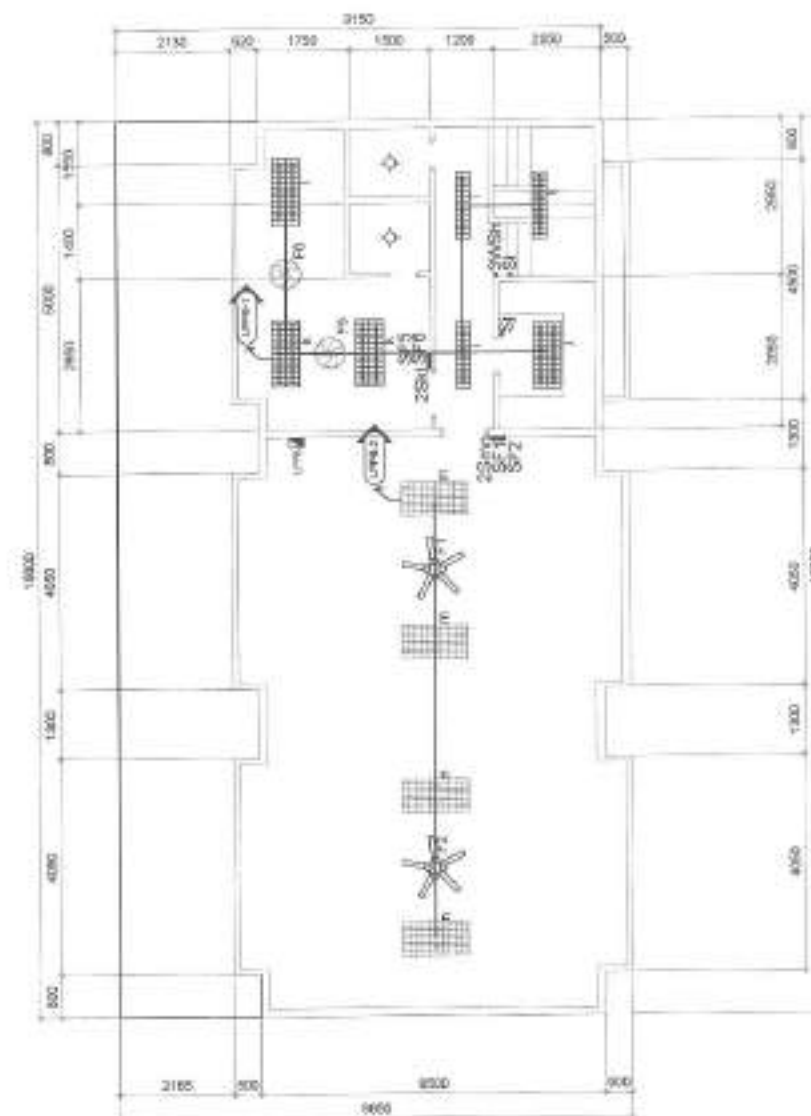
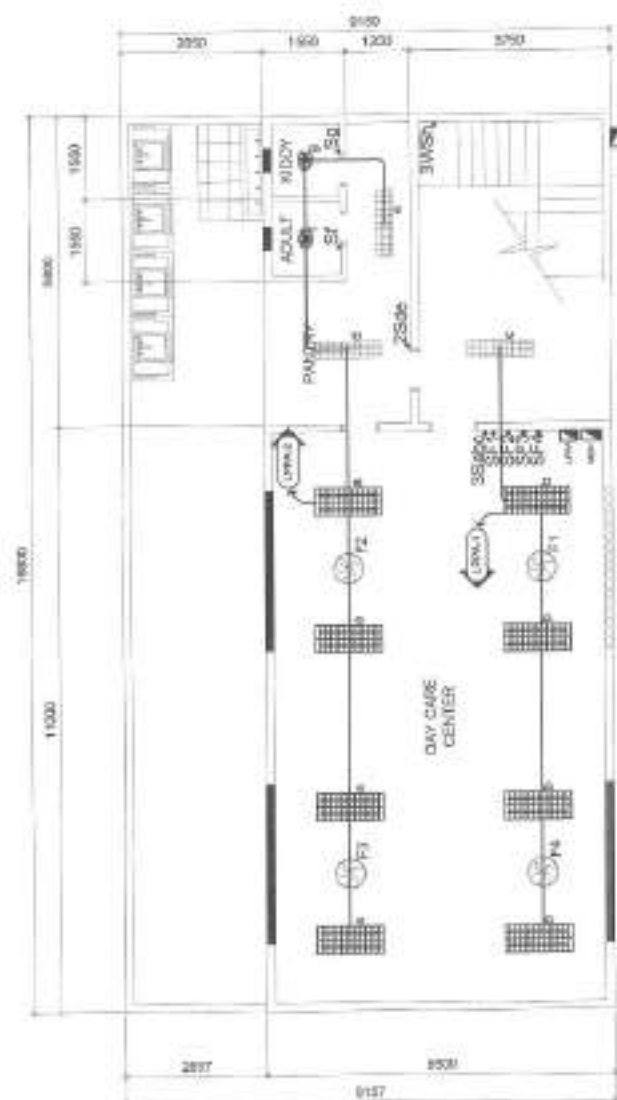
DESIGNED BY:
ENGR. LEO S. DEL ROSARIO
HEAD, PLANNING & PROGRAM DIVISION

RECOMMENDED APPROVAL:
ENGR. ISAGANI M. VERZOSA, JR.
CO., CITY ENGINEERING DEPARTMENT

APPROVED BY:
HON. MA. JOSEFINA G. BELMONTTE
CITY MANOR, QUEZON CITY

SHEET CONTENT:
SCHEDULE OF LOAD
PANEL BOARD DETAIL
SINGLE LINE DIAGRAM

SHEET NO:
EL-02
12/14


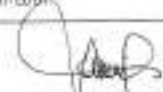
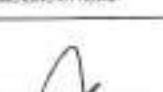



1 GROUND FLOOR LIGHTING LAYOUT

SCALE: 1:100M

2 SECOND FLOOR LIGHTING LAYOUT

SCALE: 1:100M

| | | | | | | | |
|--|---|--|--|--|--|--|------------------------------|
|  <p>Republika ng Pilipinas Lungsod ng Quezon CITY ENGINEERING DEPARTMENT</p> | PROJECT TITLE: | DRAWN BY: | SUBMITTED BY: | RECOMMENDING APPROVAL: | APPROVED BY: | SHEET CONTENT | SHEET NO. |
| | PROPOSED CONSTRUCTION OF HAND WASHING FACILITY AND REHABILITATION OF CHAMBERETTE DAY CARE CENTER | DATE: SEPT 25, 2021 CHECKED BY: JAM REVIEWING: 1 |  ENGR. LEO S. DEL ROSARIO HEAD - PLANNING & PROGRAMMING OFFICE |  ENGR. SAGOR R. VERZOSA, JR. D.C. OFFICE ASSISTANT |  HON. MA. JOSEFINA G. BELMONTE CITY MAJOR, QUEZON CITY | GROUND FLOOR LIGHTING LAYOUT SECOND FLOOR LIGHTING LAYOUT | EL-03 13/14 |



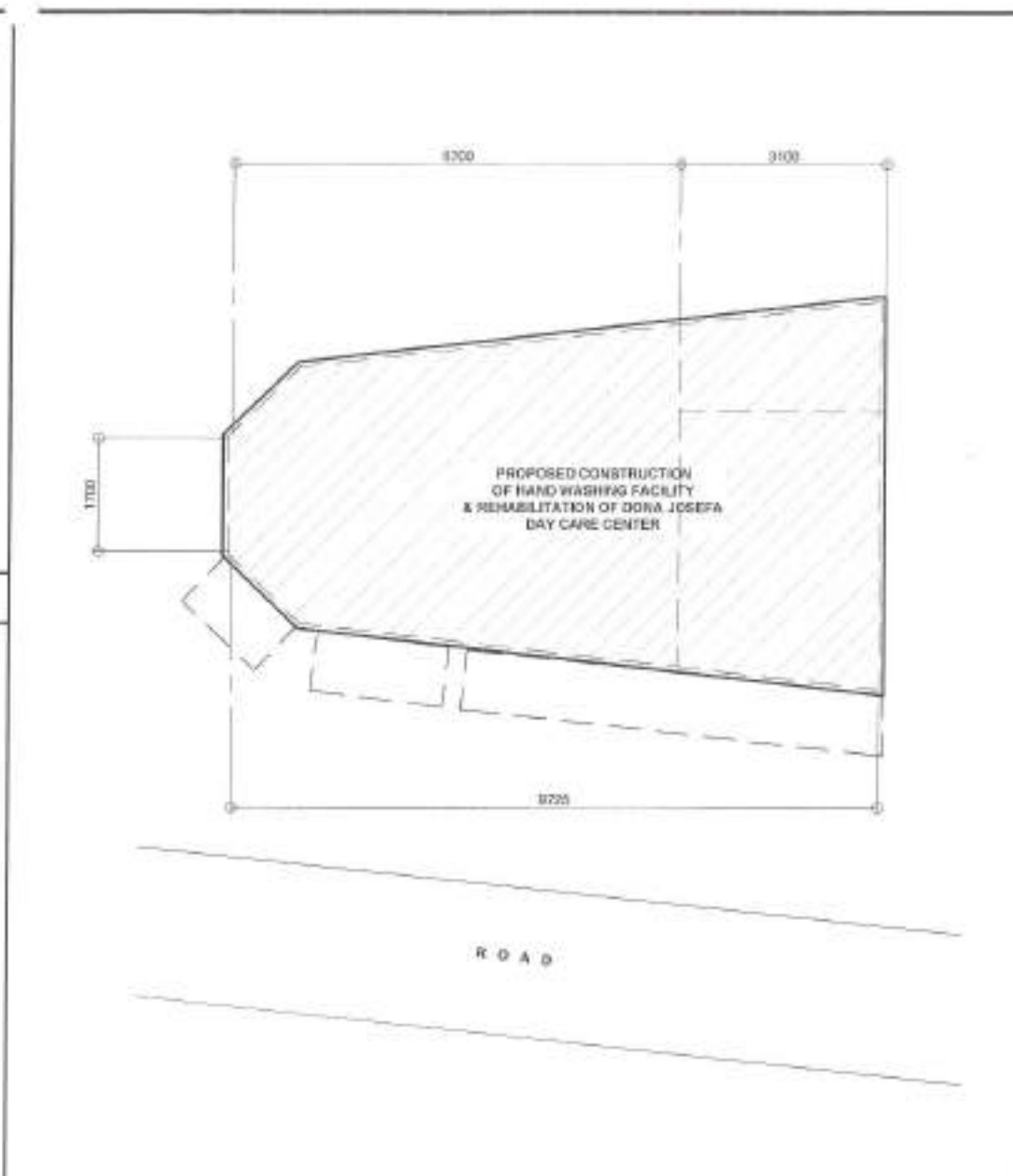
2 LOCATION MAP

SCALE: NTS



3 VICINITY MAP

SCALE: NTS



1 SITE DEVELOPMENT PLAN

SCALE: 1:100M

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ARCHITECTURAL

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SANITARY

| | |
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Republic of the Philippines
Lungsod ng Quezon
CITY ENGINEERING DEPARTMENT

PROJECT TITLE:

PROPOSED CONSTRUCTION OF HAND
WASHING FACILITY AND REHABILITATION
OF DONA JOSEFA DAY CARE CENTER

LOCATION:
BPO1, DONA JOSEFA, DISTRICT 4, QUEZON CITY

DESIGNED BY:

DATE: 12.2021

CHECKED BY:

REVISION NO.

DRAWN BY:

DATE: 12.2021

CHECKED BY:

REVISION NO.

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

RECOMMENDING OFFICIAL:

DATE: 12.2021

CHECKED BY:

REVISION NO.

ENGR. ISAGAN R. VERZOSA, JR.
CHIEF, PLANNING & DESIGN DIVISION

APPROVED BY:

DATE: 12.2021

CHECKED BY:

REVISION NO.

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

BEST COPY:

DATE: 12.2021

CHECKED BY:

REVISION NO.

SITE DEVELOPMENT PLAN
LOCATION MAP
VICINITY MAP

SHEET NO.

DATE: 12.2021

CHECKED BY:

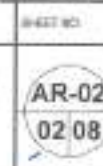
REVISION NO.

AR-01
01/08

Architectural drawing of a building floor plan. The drawing includes dimensions and annotations:

- Overall width: 9050
- Overall height: 5204
- Horizontal dimensions: 6700, 1750, 1300
- Vertical dimensions: 1700, 1418, 2916
- Internal dimensions: 6700, 5030, 2000, 300, 1800, 900
- Annotations: "USE 2MM THK. FIBER BOARD", "1118", "1418", "2916", "5204", "6700", "5030", "2000", "300", "1800", "900"

SCALE: 1:7500





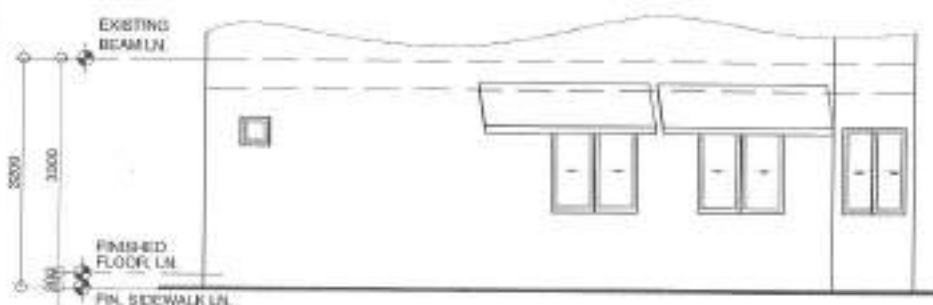
1 FRONT ELEVATION

SCALE: 1/75M.



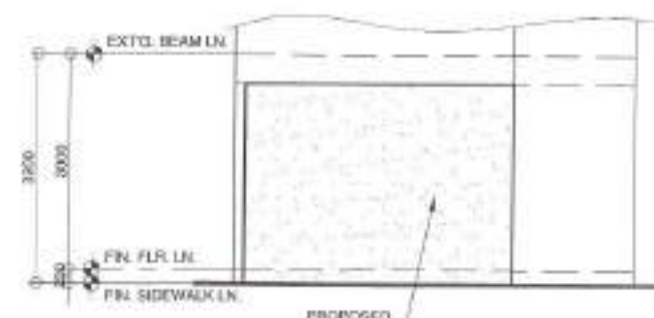
4 LEFT SIDE ELEVATION

SCALE: 1/75M.



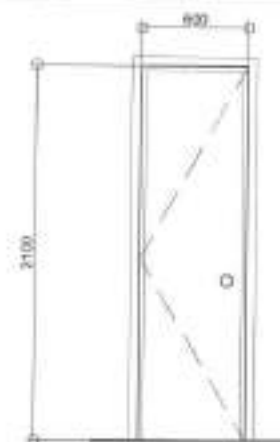
3 REAR ELEVATION

SCALE: 1/75M.



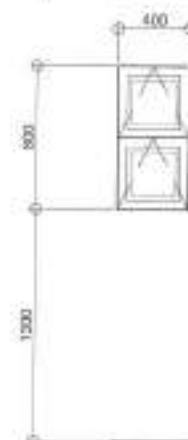
4 RIGHT SIDE ELEVATION

SCALE: 1/75M.



D-1

SETS: 1 SET
LOCATION: TOILET
TYPE: PVC DOOR



W-1

SETS: 1 SET
LOCATION: TOILET
TYPE: 2-UNITS AWNING TYPE WINDOW

4 SCHEDULE OF DOOR & WINDOW SCALE: 1/30M.



Republika ng Pilipinas
Lungsod ng Quezon
CITY ENGINEERING DEPARTMENT

PROJECT TITLE:
PROPOSED CONSTRUCTION OF HAND
WASHING FACILITY AND REHABILITATION
OF DONA JOSEFA DAY CARE CENTER
LOCATION:
BRGY. DONA JOSEFA, DISTRICT 4, QUEZON CITY

DESIGNED BY:
DATE: 9/1/2021
CHECKED BY:
REVIEWED BY:

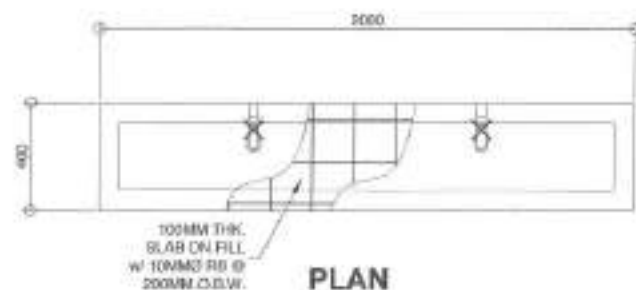
SUBMITTED BY:
ENGR. LEO S. DEL ROSARIO
HEAD, PLANNING & ENGINEERING DIVISION

RECOMMENDED APPROVAL:
ENGR. MAGNUS R. VERZOSA, JR.
CITY ENGINEERING DEPARTMENT

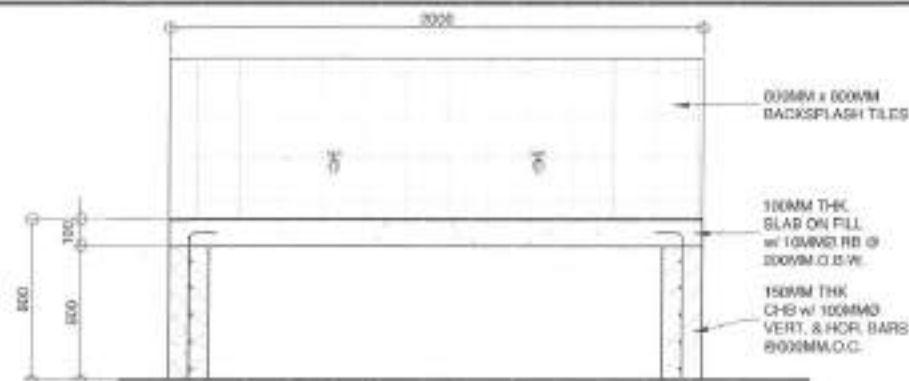
APPROVED BY:
HON. MA. JOSEFINA G. BELMONTTE
CITY MAJOR, QUEZON CITY

SHEET CONTENT:
FRONT ELEVATION
LEFT SIDE ELEVATION
REAR ELEVATION
RIGHT SIDE ELEVATION
SCHEDULE OF DOOR & WINDOW

SHEET NO.
AR-03
03/08



PLAN



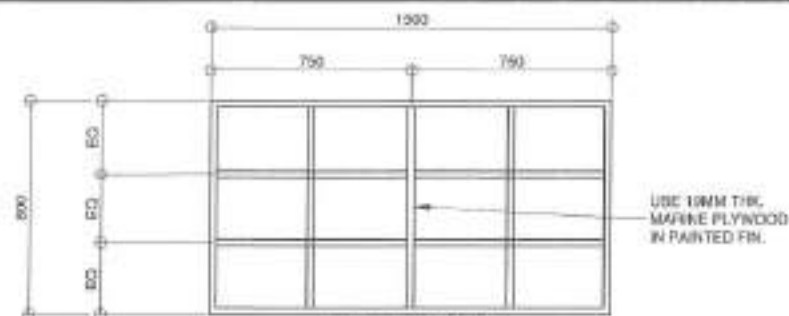
ELEVATION

3 HAND WASHING DETAILS

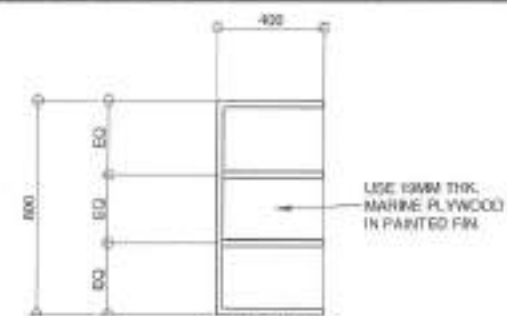
SCALE: 1:20M



PLAN



ELEVATION



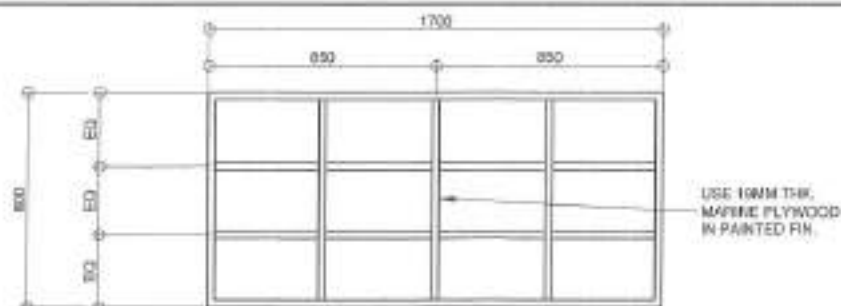
SECTION

2 CABINET 2 DETAIL

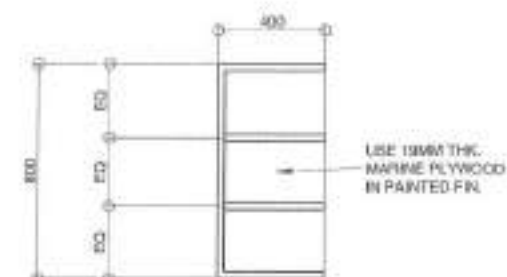
SCALE: 1:20M



PLAN



ELEVATION



SECTION

1 CABINET 1 DETAIL

SCALE: 1:20M



Republika ng Pilipinas
Lungsod ng Quezon
CITY ENGINEERING DEPARTMENT

PROJECT TITLE:
PROPOSED RECONSTRUCTION OF HAND
WASHING FACILITY AND REHABILITATION
OF DONA JOSEFA DAY CARE CENTER
LOCATION:
BAY, DONA JOSEFA, DISTRICT 4, QUEZON CITY

DESIGNED BY:
DATE: 1-4-2021
CHECKED BY:
REVISIONS:

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

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

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

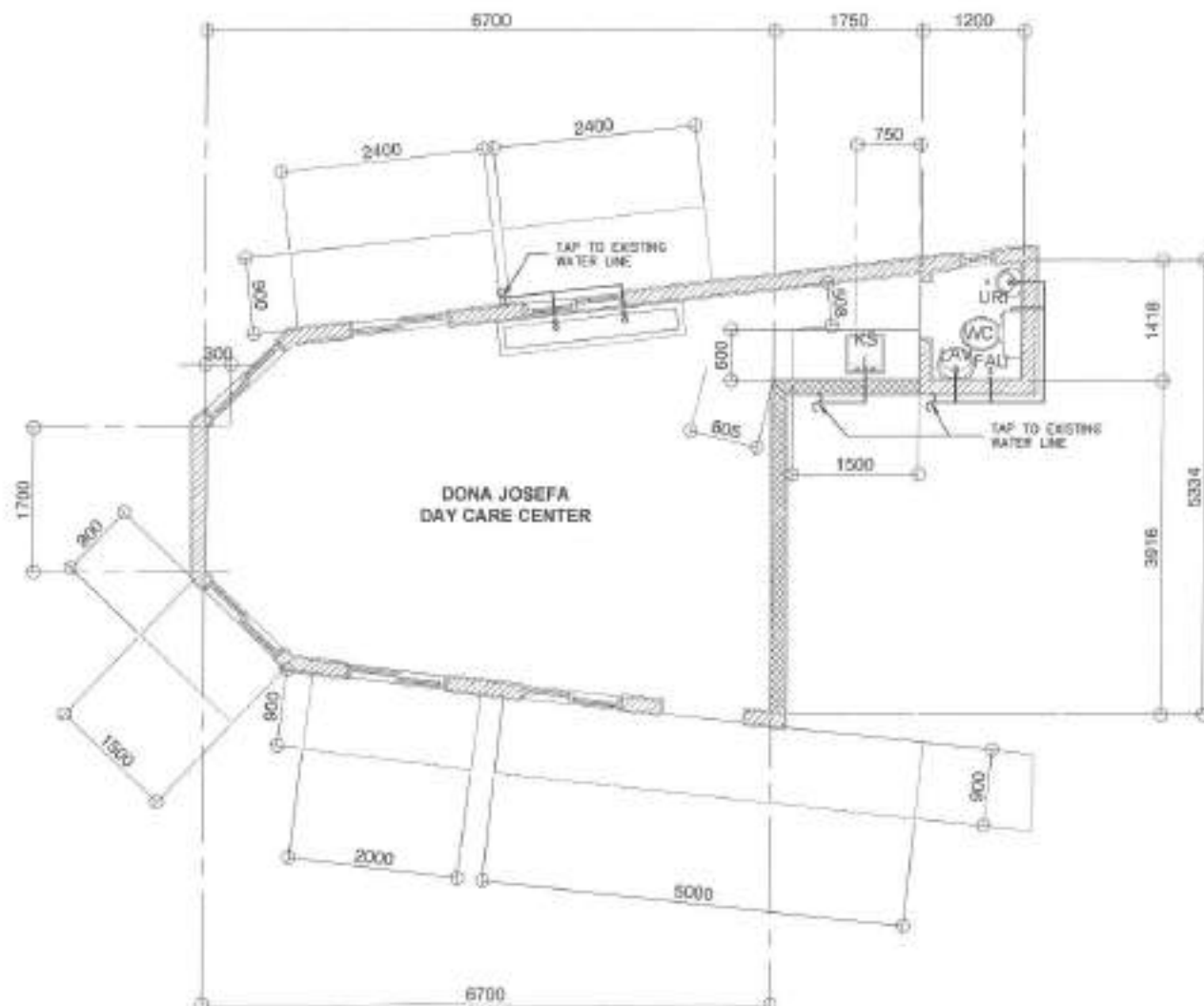
SHEET CONTENT:
DETAILS

SHEET NO.:
AR-04
04/08

GENERAL NOTES:

- All plumbing work and materials indicated herein shall be compliant to the provisions of the latest edition of National Plumbing Code, the rules and regulations of local authorities concerned, the rules and regulations of local utility companies and the provisions of the latest standards when and where applicable.
- The plumbing layout is only diagrammatic; pipes, drains and steel valves shall be concealed as much as possible. It is not intended to show the actual dimension of the pipes and fixtures in the drawing but all the pipes and fixtures shall be installed as and where indicated. Any relocation will require proper consultation in relation with other trades.
- The plumbing contractor shall verify all existing utilities at the site and shall coordinate the work with other trades.
- Pipes shall not be embedded in structural members unless otherwise specified or allowed.
- Minimum slope for horizontal sewer lines shall be 1% and for drain lines shall be 5%.
- Proposed plumbing utilities shall conform with the actual location, depth and invert elevation of all existing pipes/allies.
- Connection of fixtures to pipes and fittings shall be according to manufacturer's specifications.
- All floor drains shall be sized individually.
- All down cut females shall be flush-mounted to wall and shall be provided with polished cover caps. Do not install floor drain caps except at lines on-grade and if sanitary access not subject to traffic.
- All underground G.I. pipes in direct contact with soil shall be provided with two (2) coats of protective bituminous and wrapped with polyolefin thoroughly soaked in tar or asphalt.
- Provide vent stacks and vent pipe this roof of cast iron, vent weight as required.
- All cast iron pipes shall be of approved quality and G.I. pipes for water distribution lines shall be Schedule 40 U.S. standard weight.
- Provide gate valves to all water supply lines to fixtures.
- All hot water lines shall be provided with proper insulation where exposed.
- All extended branches to fixtures or group of fixtures and/or equipments shall be provided with air chambers or capped vertical pipe extension of dimensions as shown:
H = 450 mm for 10 mm Ø and larger
H = 300 mm for 12 mm Ø and smaller
- All house traps shall be 15 mm Ø (1/2") unless otherwise indicated.
- Side pipe of septic tank is 50 mm higher than the uprise pipe which is 33 mm higher than the outlet pipe.
- All plumbing work and material of construction shall be under the direct supervision of an able and duly licensed Master Plumber or Registered Sanitary Engineer. Any discrepancy found in plan shall be referred to the same person.

| | |
|--|--|
| | UNION/FITMENT |
| | CHECK VALVE |
| | BUILDING SEWER |
| | BUILDING DRAIN |
| | WASTE LINE |
| | AREA DRAIN/CATCH BASIN |
| | FLOOR DRAIN |
| | DRAINAGE |
| | WASTE LINE |
| | WATER LINE |
| | GATE VALVE |
| | DECK DRAIN |
| | CLEANOUT |
| | PIPE DOWN |
| | PIPE UP |
| | MANOMETER |
| | GATE VALVE |
| | AREA DRAIN/CATCH BASIN |
| | WATER CLOSET |
| | LAVATORY |
| | MANHOLE |
| | HOSE BIBB |
| | STORM DRAINAGE LINE |
| | VENT LINE |
| | VENT ABOVE CEILING |
| | CONCRETE PIPE/REINFORCED CONCRETE PIPE |
| | VENT THROUGH ROOF |
| | DIRECTION OF FLOW/SLOPE |



NOTES:
REPLACEMENT OF TOILET FIXTURES

1 GENERAL NOTES AND LEGENDS

2 GROUND FLOOR WATER LINE LAYOUT

SCALE: 1:60 METERS



Republika ng Pilipinas
Lungsod ng Quezon
CITY ENGINEERING DEPARTMENT

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

LOCATION:
BPO, DONA JOSEFA, DISTRICT 4, QUEZON CITY

DATE: 9/4/2021
CHECKED BY: JES
REVIEWED BY:

SUBMITTED BY:

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

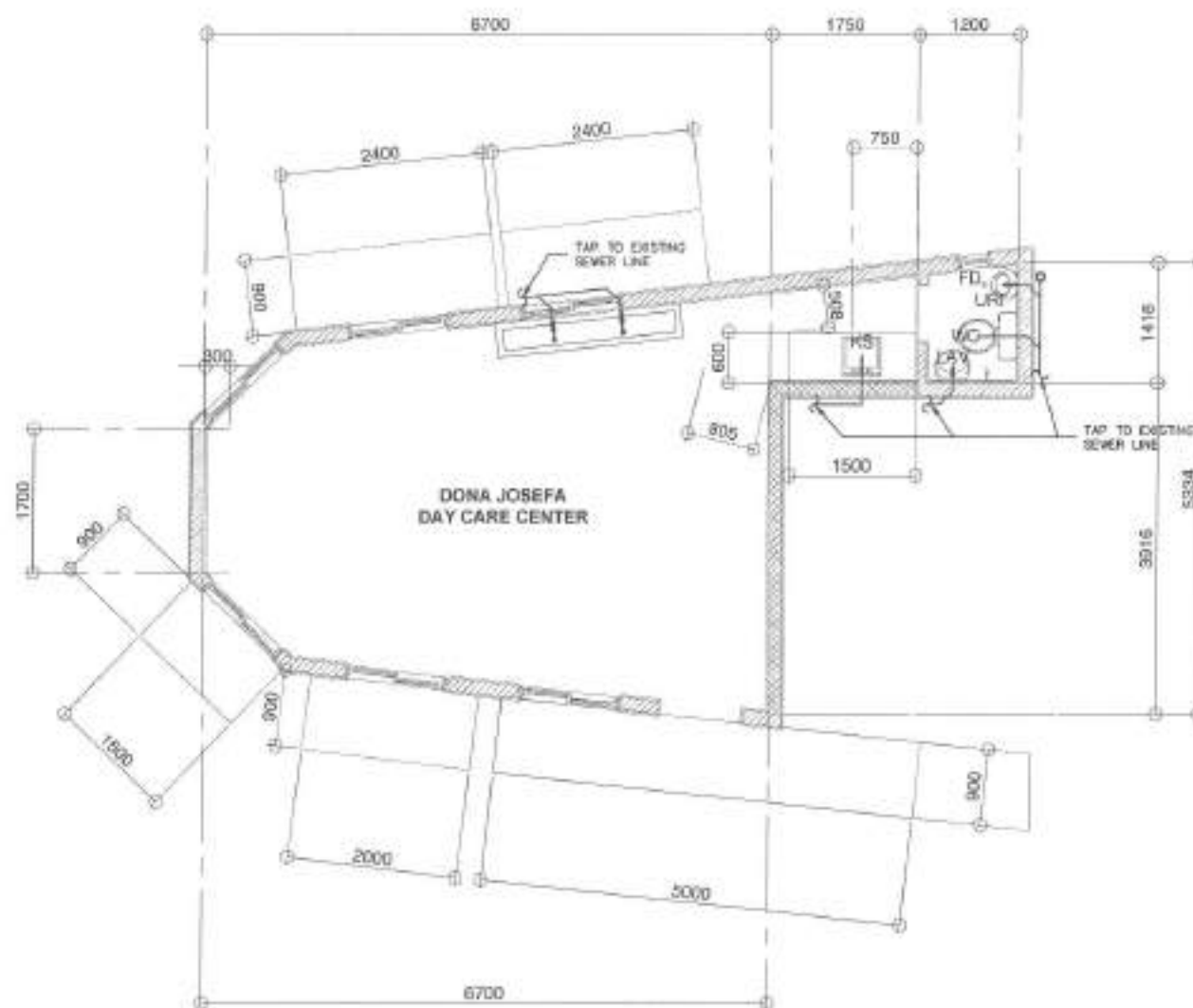
RECOMMENDED APPROVAL:

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

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

SHEET CONTENT:
GENERAL NOTES & LEGENDS
GROUND FLOOR WATER LINE LAYOUT

SHEET NO.:
PL-01
05/08



NOTES:
REPLACEMENT OF TOILET FIXTURES

1 GROUND FLOOR SANITARY LINE LAYOUT

SCALE: 1:60 METERS



Republika ng Pilipinas
Lungsod ng Quezon
CITY ENGINEERING DEPARTMENT

PROJECT TITLE:

PROPOSED CONSTRUCTION OF HAND
WASHING FACILITY AND REHABILITATION
OF DONA JOSEFA DAY CARE CENTER

LOCATION:

BRGY. DONA JOSEFA, DISTRICT 4, QUEZON CITY

DESIGNED BY: MM/JOY

DATE: 04.2021

CHECKED BY: X

REVISION NO:

SUBMITTED BY:

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

ENGR. LEO S. DEL ROSARIO

RECOMMENDING APPROVAL:

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

ENGR. SAMANTHA R. VERZOSA, JR.

APPROVED BY:

HON. MA. JOSEFINA G. BELMONTÉ
CITY MAYOR - QUEZON CITY

HON. MA. JOSEFINA G. BELMONTÉ

SHEET CONTENT

GROUND FLOOR SANITARY
LINE LAYOUT

SHEET NO.

PL-02

06/08

- ALL ELECTRICAL WORKS SHALL BE DONE IN ACCORDANCE WITH THE PROVISIONS OF THE LATEST EDITION OF THE PHILIPPINE ELECTRICAL CODE, THE LAWS AND ORDINANCES OF THE LOCAL CODE ENFORCING AUTHORITIES AND THE REQUIREMENTS OF THE LOCAL POWER AND TELEPHONE UTILITY COMPANY.
- THE CONTRACTOR SHALL SECURE ALL PERMITS AND PAY ALL FEES REQUIRED FOR THE WORK AND SHALL TURN IN THE OTHER THROUGH THE ENGINEER. FINAL CERTIFICATES OF ELECTRICAL INSPECTION AND APPROVAL, FROM PROPER GOVERNMENT AUTHORITIES FOR COMPLETION OF WORK.
- ALL EMBEDDED BRANCH CIRCUITS SHALL BE PVC CONDUITS AND FOR EXPOSED INSTALLATION SHALL BE BE SUPPORTED BY CONDUIT CLAMPS EVERY 750 MILLIMETERS.
- 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 COMPLETED 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 VISIBILITY PLAN.
- ALL POWER OUTLETS AND SWITCHES SHALL BE GROUNDING TYPE WITH PARALLEL SLOTS FOR 220V.
- PROVIDE GROUND FAULT CURRENT INTERRUPTER (GFCI) CIRCUIT BREAKER FOR LOADS MARKED "GFCI" ON THE PLAN.
- ALL METALLIC CONDUITS, CABINETS AND EQUIPMENT SHALL BE PROPERLY GROUNDING AND BONDED.
- UNLESS OTHERWISE NOTED, MOUNTING HEIGHT FOR WALL MOUNTED DEVICES SHALL BE AS FOLLOWS:

RECEPTACLE OUTLET - 380 MM AFF, 150MM ABOVE WORKING COUNTER.

TELEPHONE OUTLET - 380 MM AFF

CATV OUTLET - 380 MM AFF

LIGHTING SWITCH - 1400 MM AFF

PANELBOARD - 1900 MM AFF

- 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.
- ALL MATERIALS TO BE USED SHALL BE OF THE BEST QUALITY, BRAND NEW AS SPECIFIED.
- THE DRAWINGS AND SPECIFICATIONS ARE INTENDED TO PRESENT GENERAL LAYOUT AND BROAD OUTLINED DESCRIPTION OF THE PROJECT BUT DO NOT NECESSARILY INDICATE DISCREPANCY ACTUAL LOCATIONS, LEVEL AND DISTANCES OF THE EQUIPMENT. THE CONTRACTOR IS HEREBY REQUIRED TO MAKE SUCH ADJUSTMENT AT THE JOBSITE AS LOCATION, DISTANCE AND LEVELS ARE COVERED BY ACTUAL FIELD CONDITIONS.
- ANY DISCREPANCY BETWEEN THE PLANS AND SPECIFICATIONS SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER FOR CLARIFICATION DECISION.
- ALL WIRING AND CONDUIT OUTLET CIRCUITS SHALL BE 3.5 SQ. MM THIN-WALL 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

- BOXES, WIRE, GUTTERS, ENCLOSURE SHALL BE FABRICATED FROM STEEL WITH THICKNESS AS FOLLOWS:
MAXIMUM WIDTH OF THE HOIST SURFACE STEEL:
UP TO INCLUDING 152.40 MM GA 15 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 1016 GA 12 PAINTED WITH METAL PRIMER EPOXY AND TOPCOAT
OVER 1016 MM GA 10 PAINTED WITH METAL PRIMER EPOXY AND TOPCOAT
- ALL ELECTRICAL WORKS HEREON SHALL BE EXECUTED BY EXPERIENCED MEN UNDER THE DIRECT SUPERVISION OF A FULL-TIME LICENSED ELECTRICAL ENGINEER AND A QUALY ACCREDITED ELECTRICAL CONTRACTOR. IF WORK IS TO BE HEAVILY PLACED, SECURELY FASTENED AND PROPERLY FINISHED.
- TYPE OF SERVICE ENTRANCE SHALL BE: SINGLE-PHASE, TWO-WIRE PLUS GROUND, 60 HERTZ, 220V AC NOMINAL.
- 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.
- UPON COMPLETION OF ELECTRICAL CONSTRUCTION WORK, INSULATION RESISTANCE TEST AND FUNCTIONALITY TEST SHALL BE PERFORMED BY THE CONTRACTOR IN CLIPPING 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 7 OHMS.



CIRCUIT LINE

ACU OUTLET (REPLACEMENT)

CIRCUIT HOMERUN



LED DOUBLE TROFFER LIGHTING,
600x1200mm, SURFACE MOUNT



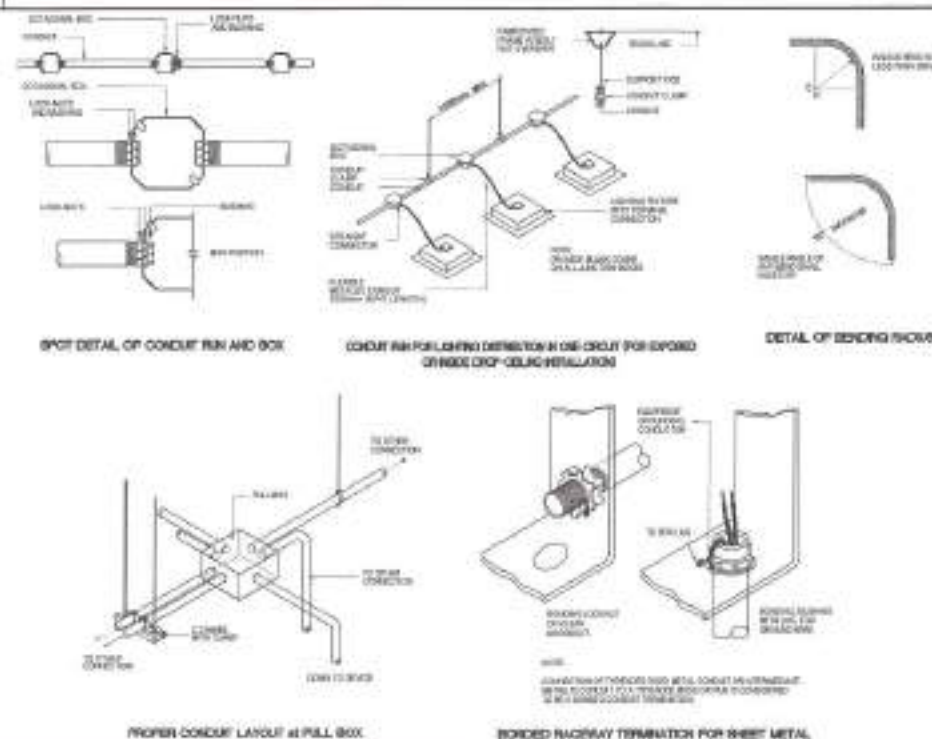
LED PINLIGHT SURFACE MOUNT



SINGLE SWITCH GANG

2 LEGENDS AND SYMBOLS

SCALE: NTS



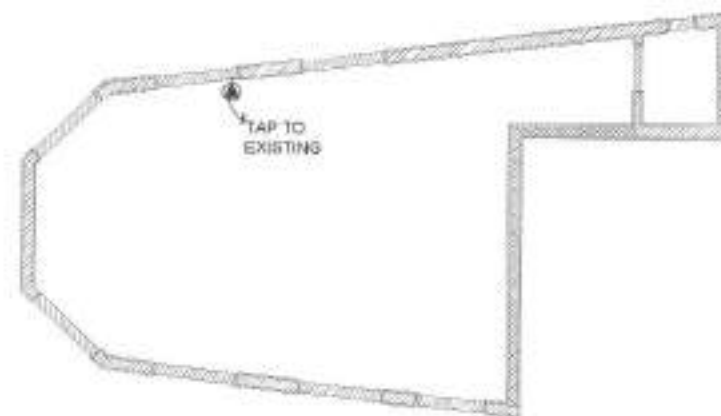
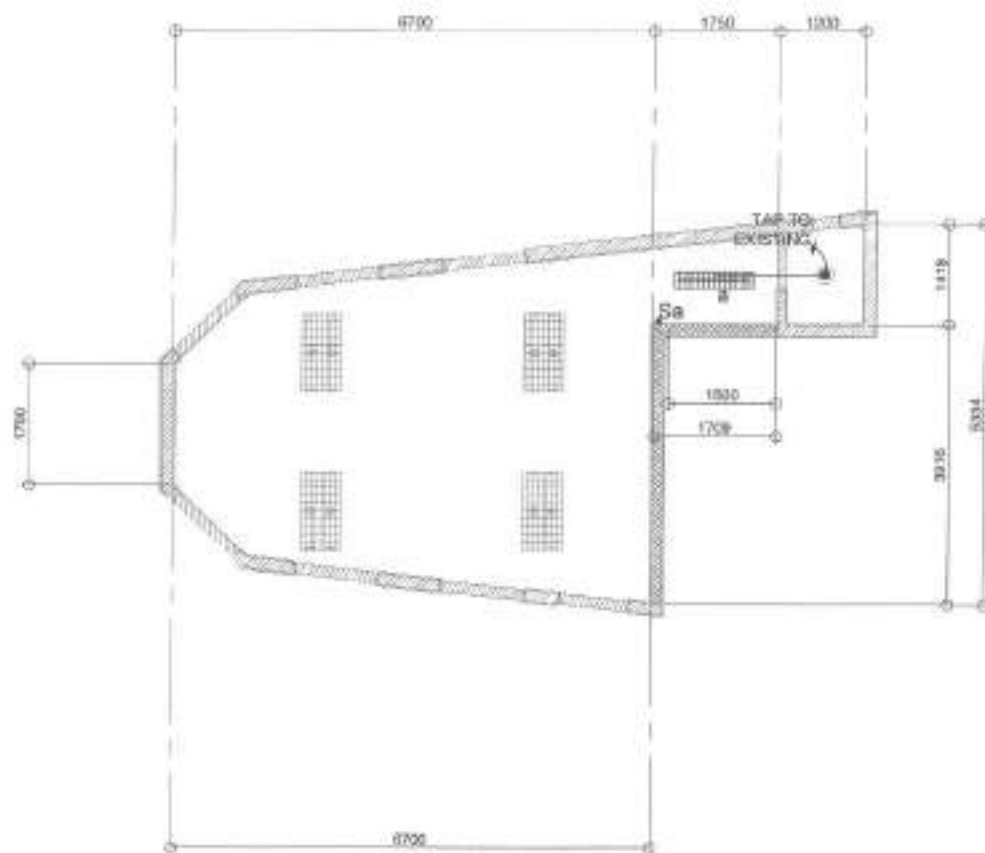
1 GENERAL NOTES

SCALE: NTS

3 MISCELLANEOUS DETAILS

SCALE: NTS

| | | | | | | | |
|---|--|--------------------------|--|--|--|---|----------------|
|  <p>Republic of the Philippines Lungsod ng Quezon CITY ENGINEERING DEPARTMENT</p> | PROJECT TITLE: | DATE: 06.2021 | SUBMITTED BY: | RECOMMENDING APPROVAL: | APPROVED BY: | SHEET CONTENT: | SHEET NO. |
| | PROPOSED CONSTRUCTION OF HAND WASHING FACILITY AND REHABILITATION OF DONA JOSEFA DAY CARE CENTER | ENGINEER BY: [Signature] | ENGR. LEO S. DEL ROSARIO HEAD, PLUMBING AND MECHANICAL DIVISION | ENGR. SARAH R. VERZOSA, JR. C.E. CIVIL ENGINEERING DEPARTMENT | HON. MA. JOSEFINA G. BELMONTTE CITY MARCH - QUEZON CITY | GENERAL NOTES, LEGENDS AND SYMBOLS, MISCELLANEOUS DETAILS | EL-01 07/08 |
| | LOCATION: | PROJECT NO.: | | | | | |
| | BRGY. DONA JOSEFA, DISTRICT 4, QUEZON CITY | | | | | | |



1 GROUND FLOOR LIGHTING LAYOUT

SCALE: 1:75M

2 GROUND FLOOR POWER LAYOUT

SCALE: 1:75M



Republika ng Pilipinas
Lungsod ng Quezon
CITY ENGINEERING DEPARTMENT

PROJECT TITLE:

PROPOSED CONSTRUCTION OF HAND
WASHING FACILITY AND REHABILITATION
OF DONA JOSEFA DAY CARE CENTER

LOCATION:

5901 DONA JOSEFA DISTRICT 4, QUEZON CITY

DESIGNED BY:

DATE: 05/2021

CHECKED BY: JEN

REVISION NO.:

SUBMITTED BY:

ENGR. LEO E. DEL ROSARIO
HEAD, PLANNING & PROGRAMS DIVISION

RECOMMENDING APPROVAL:

ENGR. ISMAEL R. VERZOSA, JR.
D.C. CITY ENGINEERING DEPARTMENT

APPROVED BY:

HON. RA. JOSEFINA O. BELMONTE
CITY MAJOR - QUEZON CITY

SHEET CONTENT:

GROUND FLOOR LIGHTING
LAYOUT
GROUND FLOOR POWER
LAYOUT

SHEET NO.:

EL-02
08/08

SITE



1 LOCATION MAP

SCALE: NTS

SITE



2 VICINITY MAP

SCALE: NTS

3 SITE DEVELOPMENT PLAN

SCALE: N.T.S.

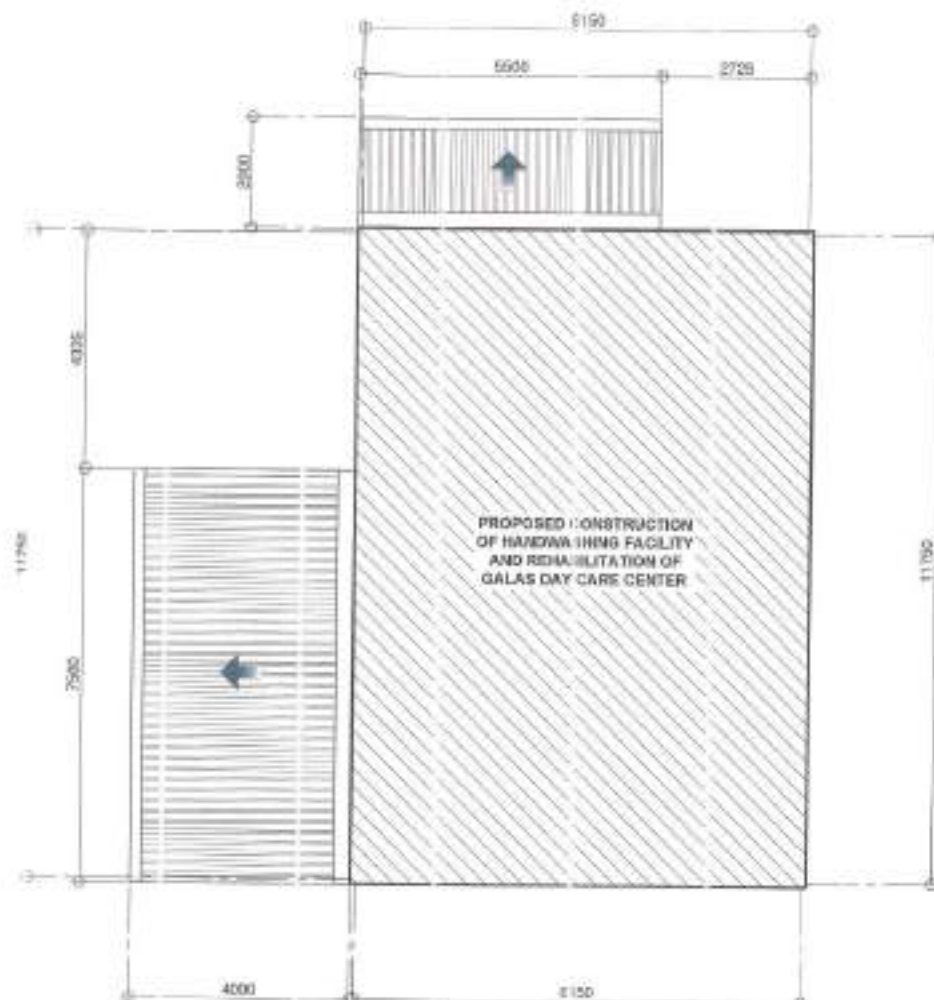


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| AR-04 | CABINET / SHELVES DETAILS |
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Republika ng Pilipinas
Lungsod ng Quezon
CITY ENGINEERING DEPARTMENT

PROJECT TITLE:

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

LOCATION:

BRGY. SAN ISIDRO GALAS DISTRICT 4,
QUEZON CITY

DRAWN BY:

DATE: 6.1.2021

CHECKED BY:

REVISION NO.:

SUBMITTED BY:

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

RECON. ENGINEER APPROVAL:

ENGR. ISMAEL R. VILLAROSA, JR.
HEAD, PLUMBING & PROGRAMMING DIVISION

APPROVED BY:

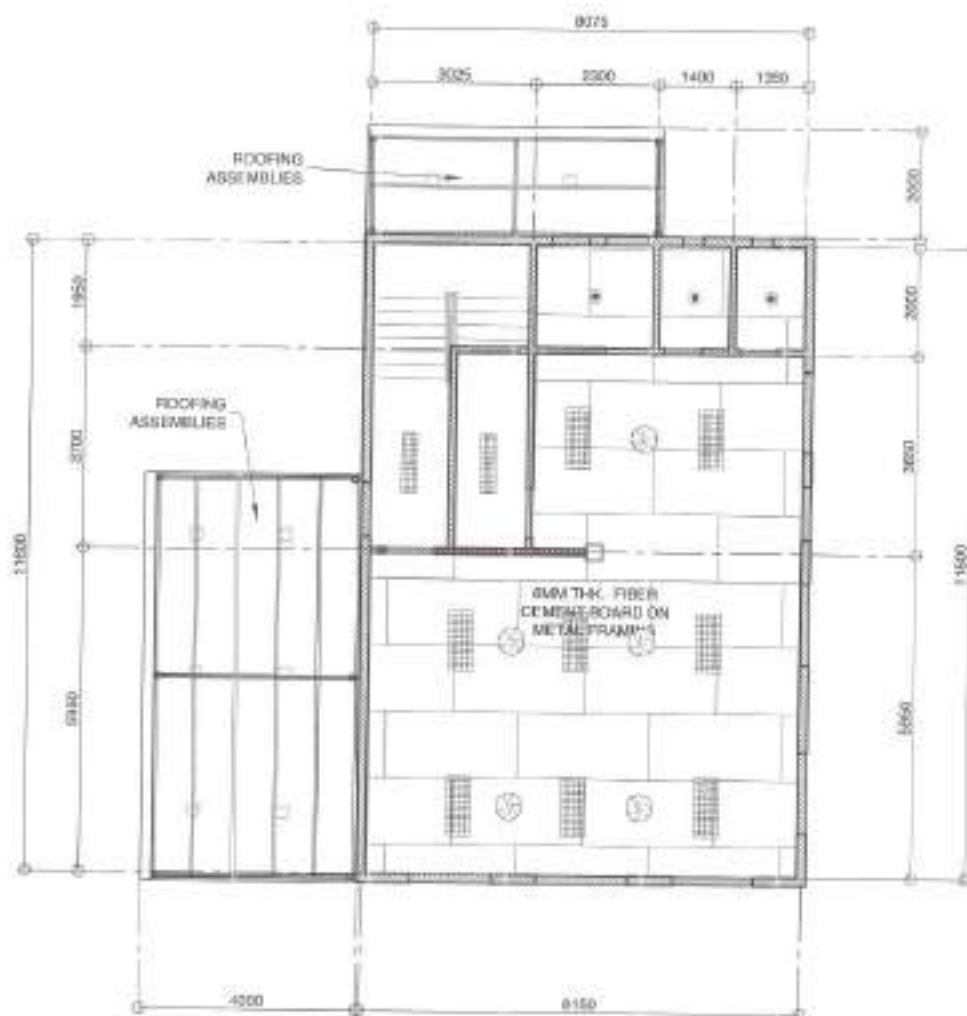
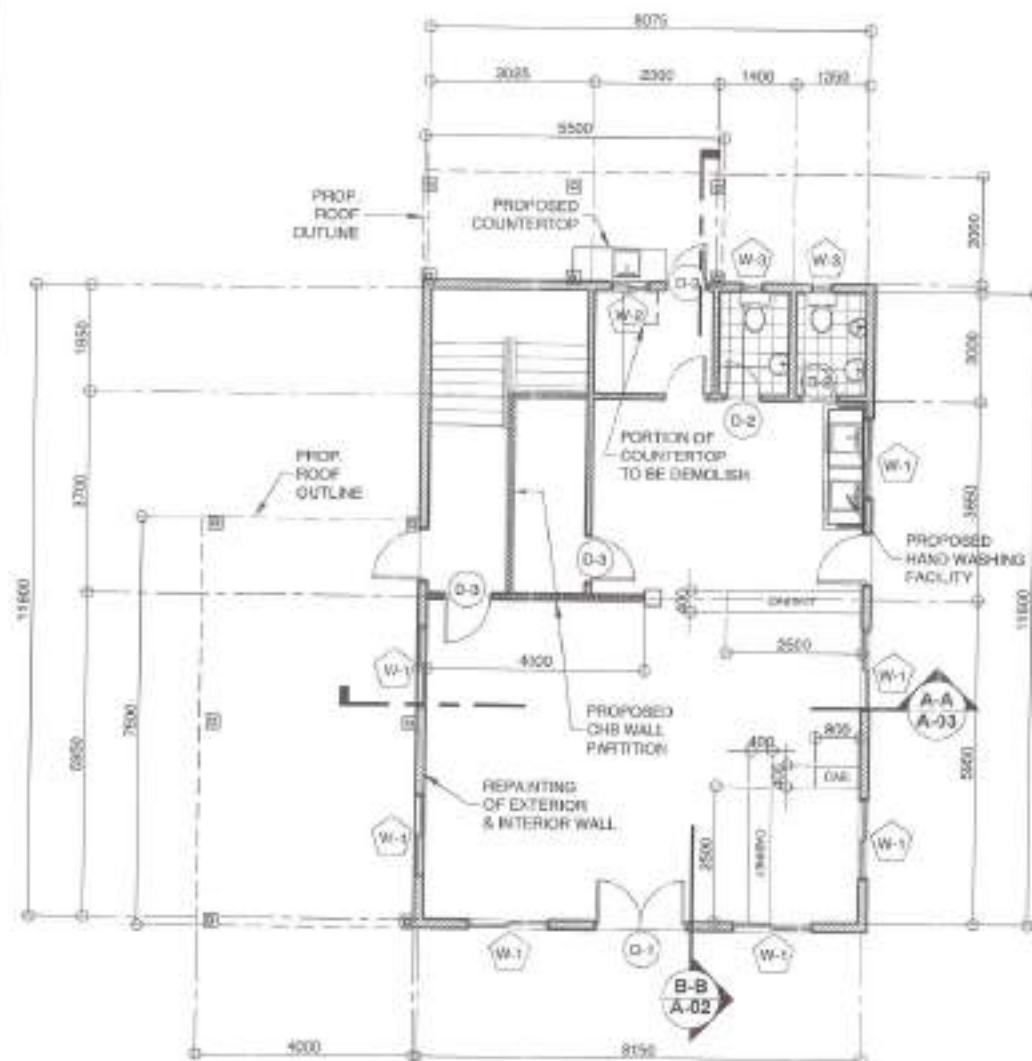
CON. MA. JOSEFIN B. BELMONTE
CITY MAJOR, QUEZON CITY

SHEET CONTENT:

LOCATION MAP
VICINITY MAP
SITE DEVELOPMENT PLAN

SHEET NO.:

AR-01
0112



1 FLOOR PLAN

SCALE: 1:100M.

2 REFLECTED CEILING PLAN

SCALE: 1:100M.



Republika ng Pilipinas
Lungsod ng Quezon
CITY ENGINEERING DEPARTMENT

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

LOCATION: BRGY. SAN ISIDRO GALAS, DISTRICT 4,
QUEZON CITY

DRAWN BY: *AM*
DATE: 02/2021
CHECKED BY: *JAM*
REVISION (S):

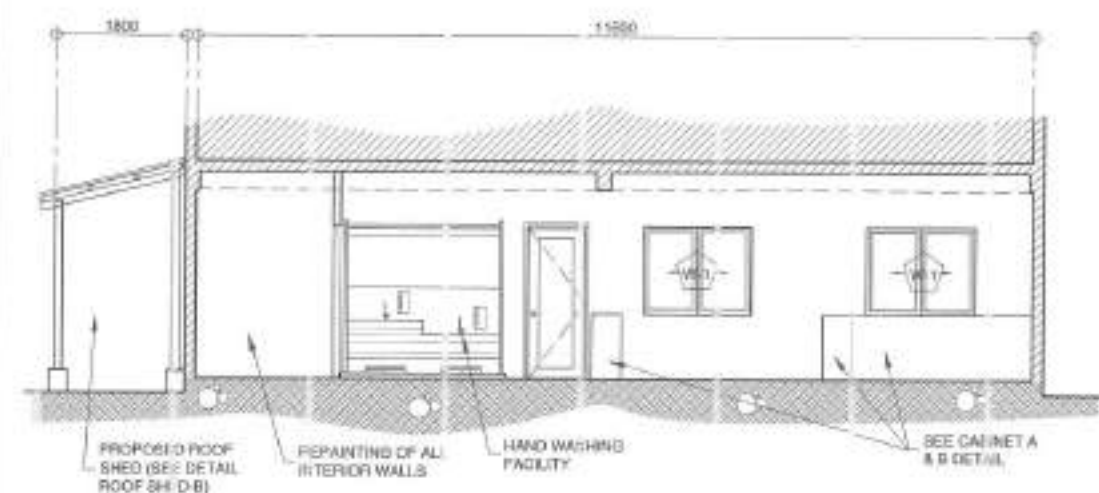
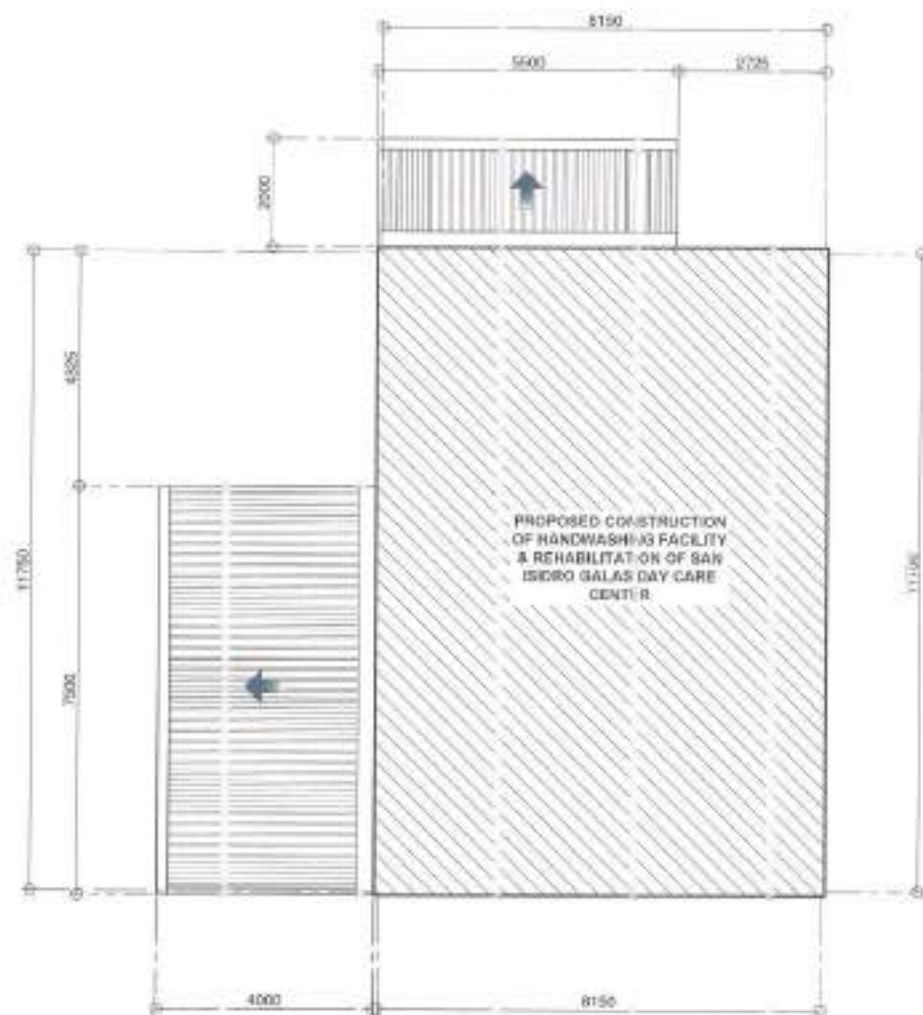
SUBMITTER:
[Signature]
ENGR. GEO. S. DEL ROSARIO
HEAD, PLANNING & PROGRAMMING DIVISION

RECOMMENDING APPROVAL:
[Signature]
ENGR. RAMON R. VERZOGA, JR.
CITY ENGINEER - CIVIL

APPROVED BY:
HON. MA. JOSEFINA B. BELMONTÉ
CITY MAYOR, QUEZON CITY

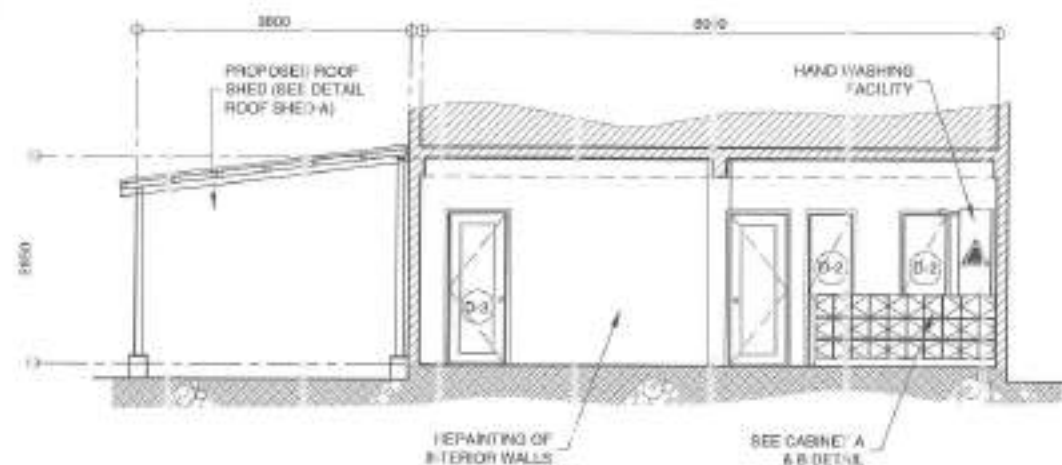
SHEET CONTENT:
FLOOR PLAN
REFLECTED CEILING
PLAN

SHEET NO.
**AR-02
0212**



3 ELEVATION B-B

SCALE: 1/75M



2 ELEVATION A-A

SCALE: 1/75M

1 ROOF PLAN

SCALE: 1/100M



Republika ng Pilipinas
Lungsod ng Quezon
CITY ENGINEERING DEPARTMENT

| | |
|--|------------------|
| PROJECT TITLE: | DATE: 5/12/2021 |
| PROPOSED CONSTRUCTION OF HAND WASHING FACILITY AND REHABILITATION OF GALAS DAY CARE CENTER | DRAWN BY: JAM |
| LOCATION: BRGY. SAN ISIDRO GALAS, DISTRICT 4, QUEZON CITY | REVIEWED BY: JAM |

| | |
|--|---|
| SUBMITTED BY: | RECEIVED BY: |
| ENGR. LEO S. DEL ROSARIO HEAD, PLANNING & PROGRAMS DIVISION | ENGR. SAMANTHA R. VERZOSA, JR. CITY ENGINEERING DEPARTMENT |

| | |
|---|--|
| RECOMMENDING APPROVAL: | APPROVED BY: |
| ENGR. SAMANTHA R. VERZOSA, JR. CITY ENGINEERING DEPARTMENT | HON. MA. JOSEFINA G. BELMONTE CITY MARCO, QUEZON CITY |

| | |
|---|----------------|
| SHEET CONTENT: | SHEET NO. |
| ROOF PLAN ELEVATION A-A ELEVATION B-B | AR-03 03 12 |

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|--|---|------------|------------|------------|------------|---|--|------|--------|-----------|--------|-------|--------------------|---|------|--------|-----------|-------------------|-------|----------------------|---|------|--------|-----------|-----------------|-------|--|--|------|-------|-----------|---------|-------|--|---|------|--------|-----------|--------|-------|-----------------------------------|
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| D-1 | D-2 | D-3 | W-1 | W-2 | W-3 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <table> <tr><td>SET:</td><td>1 SET</td></tr> <tr><td>LOCATION:</td><td>ENTRANCE</td></tr> <tr><td>TYPE:</td><td>ALUMINUM SWING-IN/OUT DOOR W/ CLEAR GLASS</td></tr> </table> | SET: | 1 SET | LOCATION: | ENTRANCE | TYPE: | ALUMINUM SWING-IN/OUT DOOR W/ CLEAR GLASS | <table> <tr><td>SET:</td><td>2 SETS</td></tr> <tr><td>LOCATION:</td><td>TOILET</td></tr> <tr><td>TYPE:</td><td>PVC DOOR W/ LOUVER</td></tr> </table> | SET: | 2 SETS | LOCATION: | TOILET | TYPE: | PVC DOOR W/ LOUVER | <table> <tr><td>SET:</td><td>3 SETS</td></tr> <tr><td>LOCATION:</td><td>STAIRWELL/STORAGE</td></tr> <tr><td>TYPE:</td><td>FLUSH TYPE WOOD DOOR</td></tr> </table> | SET: | 3 SETS | LOCATION: | STAIRWELL/STORAGE | TYPE: | FLUSH TYPE WOOD DOOR | <table> <tr><td>SET:</td><td>7 SETS</td></tr> <tr><td>LOCATION:</td><td>DAY CARE CENTER</td></tr> <tr><td>TYPE:</td><td>ALUMINUM SLIDING WINDOW W/ CLEAR GLASS</td></tr> </table> | SET: | 7 SETS | LOCATION: | DAY CARE CENTER | TYPE: | ALUMINUM SLIDING WINDOW W/ CLEAR GLASS | <table> <tr><td>SET:</td><td>1 SET</td></tr> <tr><td>LOCATION:</td><td>KITCHEN</td></tr> <tr><td>TYPE:</td><td>ALUMINUM SLIDING WINDOW W/ CLEAR GLASS</td></tr> </table> | SET: | 1 SET | LOCATION: | KITCHEN | TYPE: | ALUMINUM SLIDING WINDOW W/ CLEAR GLASS | <table> <tr><td>SET:</td><td>2 SETS</td></tr> <tr><td>LOCATION:</td><td>TOILET</td></tr> <tr><td>TYPE:</td><td>AWNING TYPE WINDOW W/ CLEAR GLASS</td></tr> </table> | SET: | 2 SETS | LOCATION: | TOILET | TYPE: | AWNING TYPE WINDOW W/ CLEAR GLASS |
| SET: | 1 SET | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| LOCATION: | ENTRANCE | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| TYPE: | ALUMINUM SWING-IN/OUT DOOR W/ CLEAR GLASS | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| SET: | 2 SETS | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| LOCATION: | TOILET | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| TYPE: | PVC DOOR W/ LOUVER | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| SET: | 3 SETS | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| LOCATION: | STAIRWELL/STORAGE | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| TYPE: | FLUSH TYPE WOOD DOOR | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| SET: | 7 SETS | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| LOCATION: | DAY CARE CENTER | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| TYPE: | ALUMINUM SLIDING WINDOW W/ CLEAR GLASS | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| SET: | 1 SET | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| LOCATION: | KITCHEN | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| TYPE: | ALUMINUM SLIDING WINDOW W/ CLEAR GLASS | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| SET: | 2 SETS | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| LOCATION: | TOILET | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| TYPE: | AWNING TYPE WINDOW W/ CLEAR GLASS | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

1 SCHEDULE OF DOORS & WINDOWS

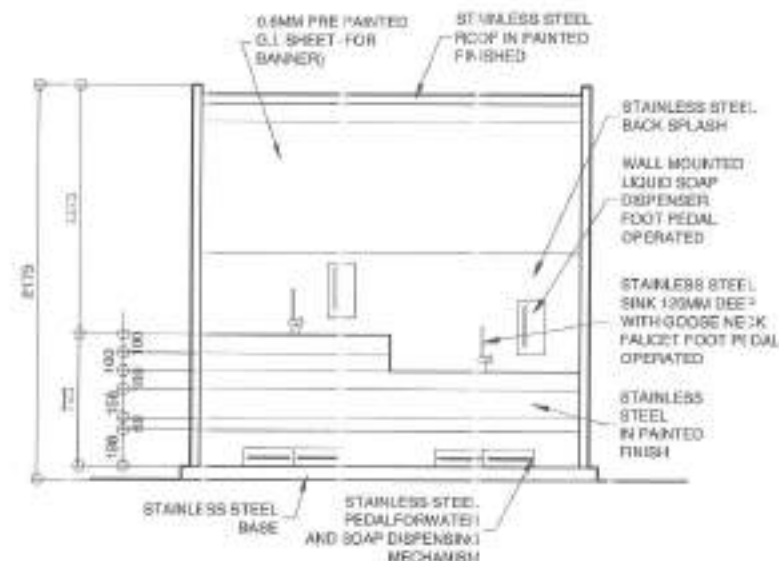
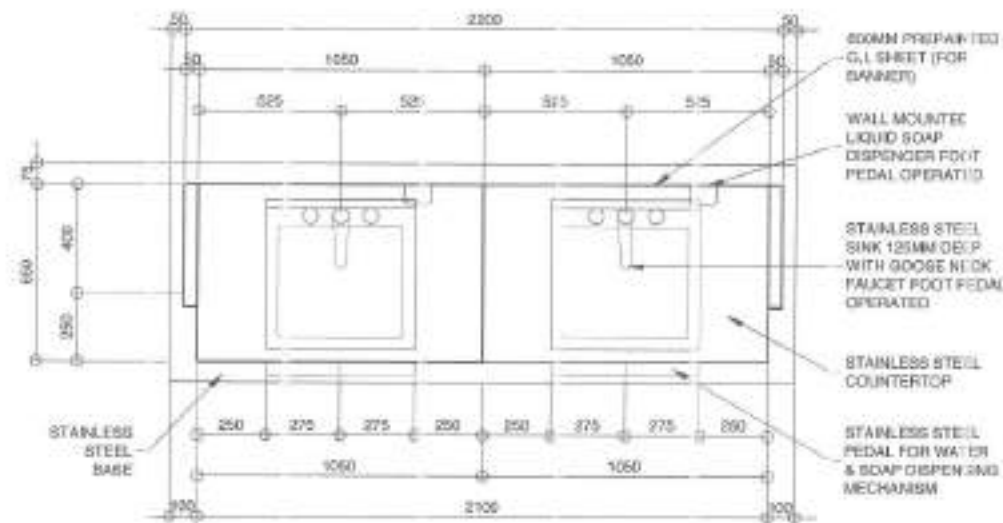
SCALE: 1:50M

| | |
|-------------------------|-------------------------|
| <p>CABINET-A</p> | <p>CABINET-B</p> |
|-------------------------|-------------------------|

2 CABINET/SHELVES DETAILS

SCALE: 1:30M

| | | | | | | | |
|---|---|---|--|--|---|--|--|
| <p>Republika ng Pilipinas Lungsod ng Quezon CITY ENGINEERING DEPARTMENT</p> | <p>PROJECT TITLE: PROPOSED CONSTRUCTION OF HAND WASHING FACILITY AND REHABILITATION OF GALAS DAY CARE CENTER</p> <p>LOCATION: BRGY. SAN ISERD GALAS, DISTRICT 4, QUEZON CITY</p> | <p>DRAWN BY: SM DATE: 9/1/2021 CHECKED BY: [Signature] REVISION NO:</p> | <p>SUBMITTED BY: [Signature] ENR. LEO S. DEL ROSARIO HEAD, PLANNING & PROGRAMMING DIVISION</p> | <p>RECOMMENDING APPROVAL: [Signature] ENR. ISMAEL VERZOSA, JR. 1st CITY ENGINEERING DIVISION</p> | <p>APPROVED BY: [Signature] 1st. MA. JOSEFINA B. BELMONTE CITY MAYOR, QUEZON CITY</p> | <p>SHEET CONTENT: SCHEDULE OF DOORS AND WINDOWS UNREVISIONED SHEET</p> | <p>SHEET NO.: AR-04 0412</p> |
|---|---|---|--|--|---|--|--|

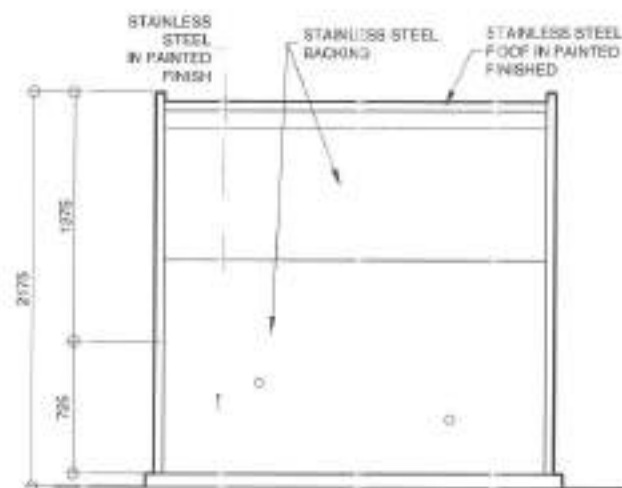


1 PLAN

SCALE: 1:20M

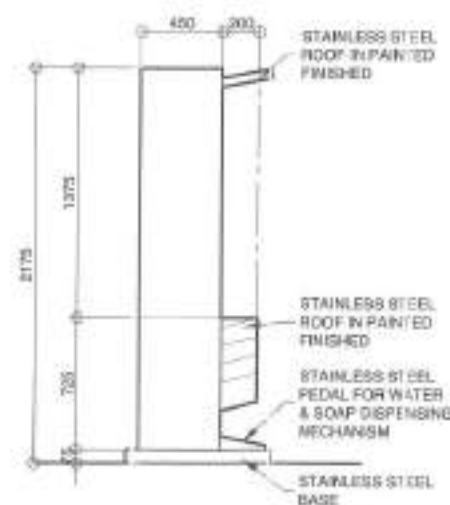
2 FRONT ELEVATION

SCALE: 1:30M



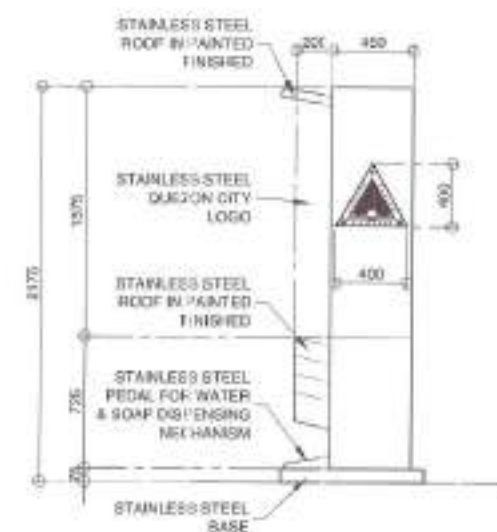
3 REAR ELEVATION

SCALE: 1:30 MTS.



4 LEFT SIDE ELEVATION

SCALE: 1:30 MTS.



5 RIGHT SIDE ELEVATION

SCALE: 1:30 MTS.



Republika ng Pilipinas
Lungsod ng Quezon
CITY ENGINEERING DEPARTMENT

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

LOCATION: BRGY. SAN ISERD GALAS, DISTRICT 4,
QUEZON CITY

DRAWN BY:
DATE: 9-1-2021
CHECKED BY:
JHA
REVISION NO:

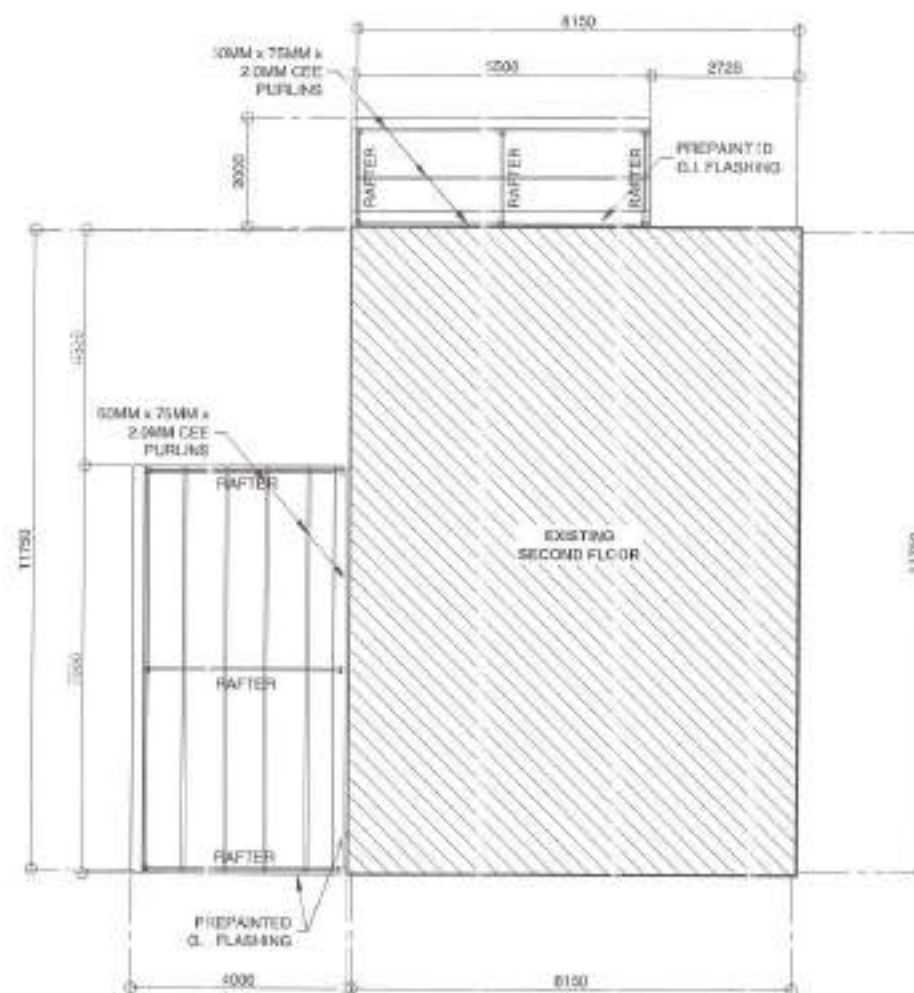
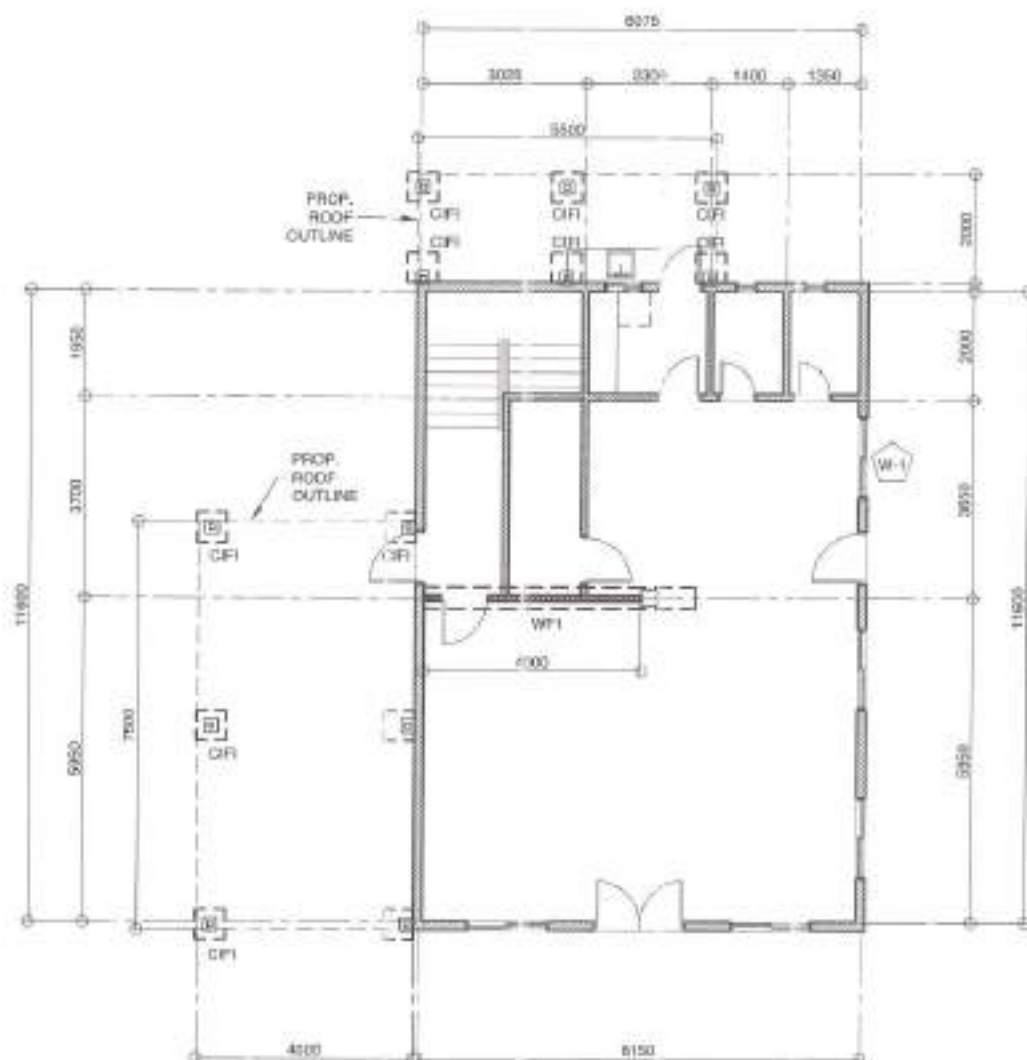
SUBMITTED BY:
ENR. LEONIL DEL ROSARIO
HEAD, PLANNING & PROGRAMMING DIVISION

RECOMMENDING APPROVAL:
ENGR. MANIL VERZOSA, JR.
HEAD, CITY ENGINEERING DEPARTMENT

APPROVED BY:
HON. MA. JOSEFINA G. BELMONTE
CITY MAYOR (2019-2022)

SHEET CONTENT:
HAND WASHING
FACILITY DETAIL
FRONT ELEVATION,
LEFT SIDE ELEVATION,
RIGHT SIDE ELEVATION

SHEET NO:
AR-05
0512



1 FOUNDATION PLAN

SCALE: 1:100M

2 ROOF FRAMING PLAN

SCALE: 1:100M



Republika ng Pilipinas
Lungsod ng Quezon
CITY ENGINEERING DEPARTMENT

PROJECT TITLE:
PROPOSED CONSTRUCTION OF HAND
WASHING FACILITY AND REHABILITATION
OF GALAS DAY CARE CENTER
LOCATION: BRGY. SAN MATEO DALAS, DISTRICT 4,
QUEZON CITY

DRAWN BY: JRM
DATE: 9/1/2021
CHECKED BY: JRM
DESIGN NO.:

SUBMITTED BY:
ENGR. LEO S. DEL ROSARIO
REGISTERED PROFESSIONAL DESIGNER

RECOMMENDING APPROVAL:
ENGR. ISMAEL R. VIZCOSA, JR.
REGISTERED PROFESSIONAL DESIGNER

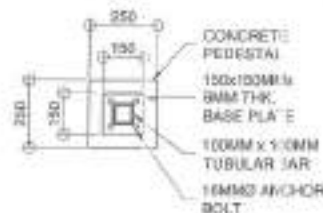
APPROVED BY:
HON. MA. JOSEFINA G. BELMONTE
CITY MAYOR, QUEZON CITY

SHEET CONTENT:
FOUNDATION PLAN
ROOF FRAMING PLAN

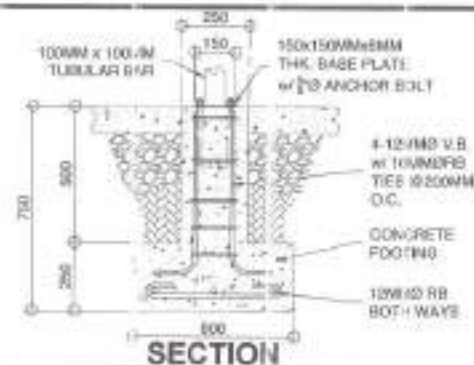
SHEET NO.:
ST-01
0612



PLAN



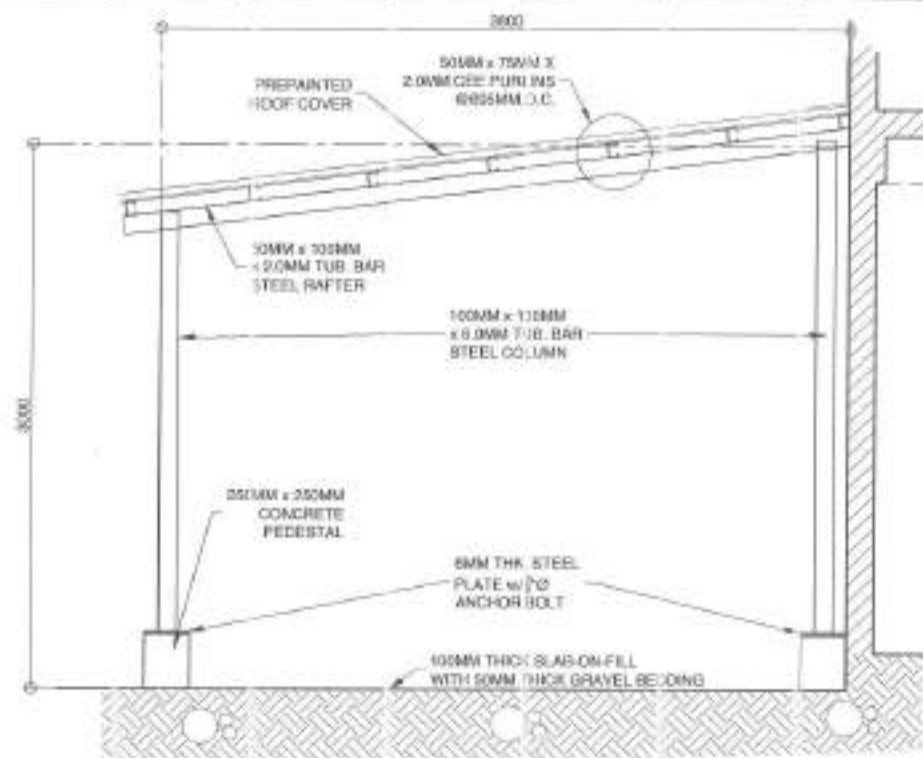
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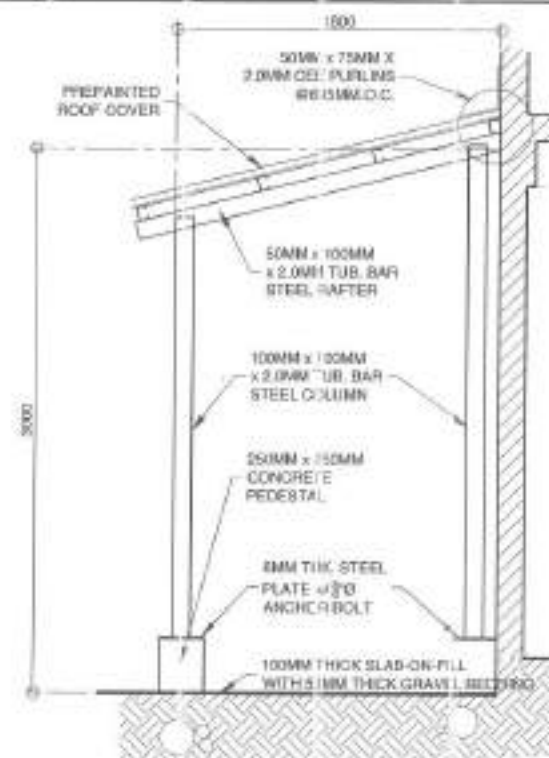
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1 PEDESTAL FOOTING DETAIL

SCALE: 1:40M






REAR ROOF SHED-A

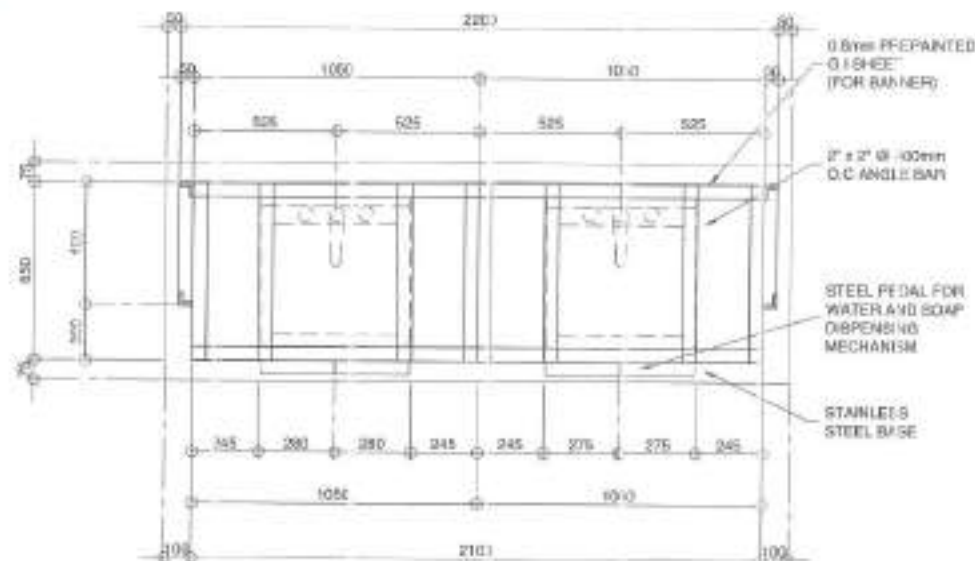


REAR ROOF SHED-B

2 ROOF SHED DETAILS (REAR & LEFT SIDE ROOF SHED)

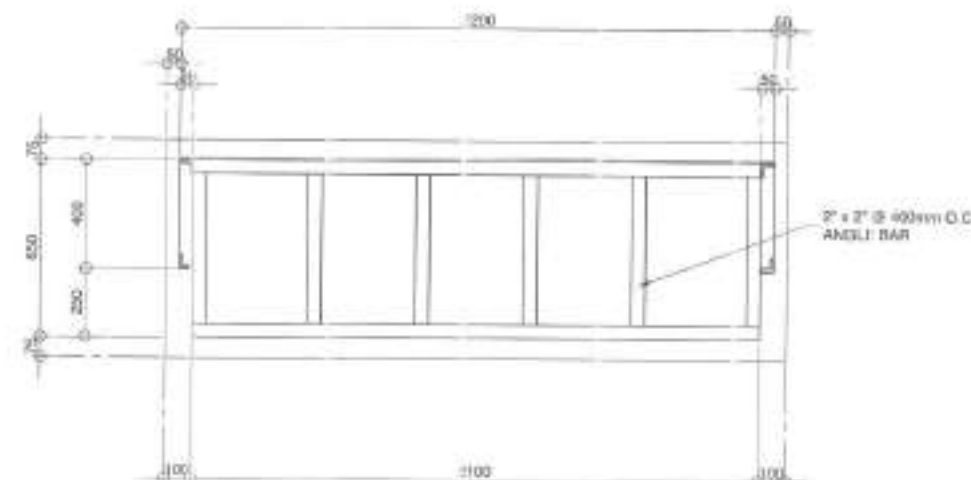
SCALE: 1:30M

| | | | | | | | |
|--|---|--|---|---|---|--|---|
|  <p>Republika ng Pilipinas Lungsod ng Quezon CITY ENGINEERING DEPARTMENT</p> | <p>PROJECT TITLE: PROPOSED CONSTRUCTION OF HAND WASHING FACILITY AND REHABILITATION OF GALAS DAY CARE CENTER</p> <p>LOCATION: BRGY. SAN ISIDRO GALAS, DISTRICT 4, QUEZON CITY</p> | <p>DRAWN BY: JSM</p> <p>DATE: 9/1/2021</p> <p>CHECKED BY: JAG</p> <p>REVISION NO.:</p> | <p>SUBMITTED BY:</p>  <p>ENGR. LEO S. DEL ROSARIO WARD, PLANNING & MANAGEMENT DIVISION</p> | <p>RECOMMENDING APPROVAL:</p>  <p>ENGR. SARAH R. VIRZOSA, JR. I/C, CITY ENGINEERING DEPARTMENT</p> | <p>APPROVED BY:</p> <p>CON. MA. JOSEFIN I.G. BELMONTE CITY MANAGER, QUEZON CITY</p> | <p>SHEET COMMENT:</p> <p>PEDESTAL FOOTING DETAILS ROOF SHED DETAIL</p> | <p>SHEET NO.</p> <p>ST-02 07/12</p> |
|--|---|--|---|---|---|--|---|



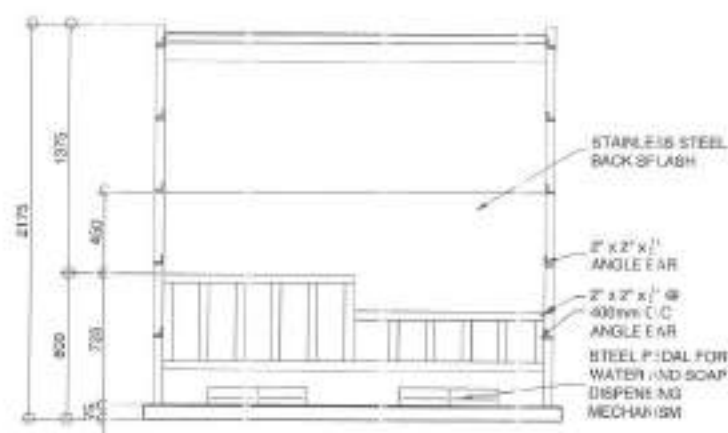
1 PLAN

SCALE: 1:20M



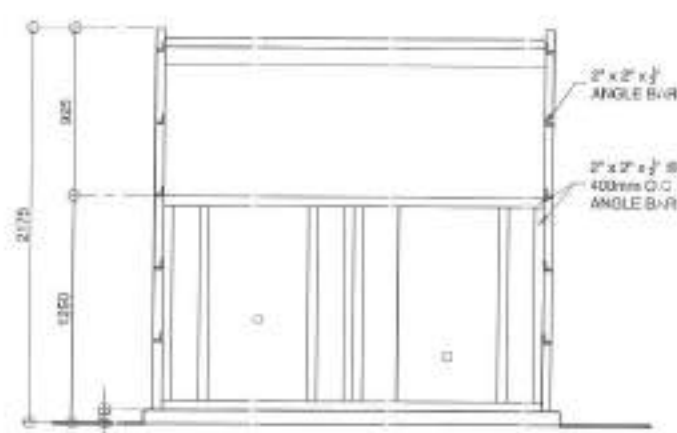
2 FRAMING PLAN

SCALE: 1:20M



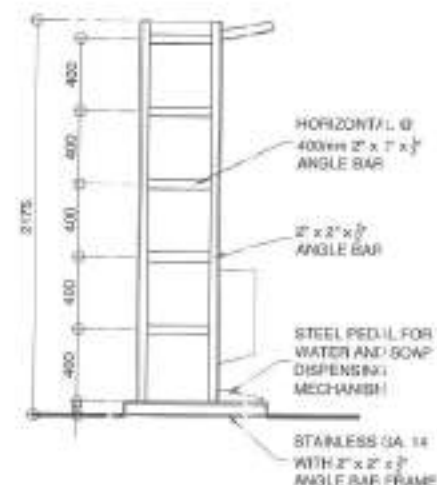
3 SECTION (FRONT)

SCALE: 1:30M



4 SECTION (REAR)

SCALE: 1:30M



5 SECTION (SIDE)

SCALE: 1:30M



Republika ng Pilipinas
Lungsod ng Cebu
CITY ENGINEERING DEPARTMENT

PROJECT TITLE:
PROPOSED CONSTRUCTION OF HAND
WASHING FACILITY AND REHABILITATION
OF GALAS DRY CARE CENTER

LOCATION: BRGY. SAN ISIDRO GALAS DISTRICT 4
CEBU CITY

DRAWN BY: [Signature]
DATE: 11/2021
CHECKED BY: [Signature]
REVISION NO.:

SUBMITTED BY: [Signature]
ENGR. LEO S. DEL ROSARIO
HEAD, PLANNING & ESTIMATING DIVISION

RECOMMENDING APPROVAL: [Signature]
ENGR. RAFAEL R. VERZOSA, JR.
CITY ENGINEER (PLANNING)

APPROVED BY: [Signature]
HON. MA. JOSEFINA G. BELMONTTE
CITY MAJOR, SAN JOSE CITY

SHEET CONTENT:
PLAN
FRAMING PLAN
SECTION (FRONT)
SECTION (REAR)
SECTION (SIDE)
HAND WASHING FACILITY
(STRUCTURAL)

SHEET NO.:
ST-03
0812

1. ALL PLUMBING WORKS AND MATERIALS INDICATED HEREIN SHALL BE COMPLIANT TO THE LATEST EDITION OF NATIONAL PLUMBING CODE.
- THE RULES AND REGULATION OF LOCAL AUTHORITIES CONCERNED, THE RULES AND REGULATIONS OF LOCAL UTILITY COMPANIES AND THE PROVISIONS OF THE LAND DEVELOPER WHEN AND WHERE APPLICABLE.
2. THE PLUMBING LAYOUT IS ONLY DIAGRAMMATIC. PIPES, CLEANOUTS AND CHECK VALVES SHALL BE CONCEALED AS MUCH AS POSSIBLE IT IS NOT INTENDED TO SHOW THE ACTUAL DIMENSION OF THE PIPES AND FIXTURES IN THE DRAWING BUT ALL THE PIPES AND FIXTURE SHALL BE INSTALLED AS AND WHERE INDICATED. ANY RELOCATION WILL REQUIRE PROPER EXECUTION IN RELATION WITH OTHER TRADES.
3. THE PLUMBING CONTRACTOR SHALL VERIFY ALL EXISTING UTILITIES AT THE SITE AND SHALL COORDINATED THE WORK WITH TRADES.
4. PIPES SHALL NOT BE EMBEDDED IN STRUCTURAL MEMBERS UNLESS OTHERWISE SPECIFIED OR ALLOWED.
5. MINIMUM SLOPE FOR HORIZONTAL SEWER LINES SHALL BE 1% AND FOR DRAIN LINES SHALL BE 5%.
6. PROPOSED PLUMBING UTILITIES SHALL CONFORM WITH THE ACTUAL LOCATION, DEPTH AND INVERT ELEVATION OF ALL EXISTING PIPES/UTILITIES.
7. CONNECTION OF FIXTURES TO PIPED AND FITTING SHALL BE ACCORDING TO MANUFACTURER'S SPECIFICATIONS.
8. ALL FLOOR DRAINS SHALL BE VERIFIED INDIVIDUALLY.
9. ALL CLEAN OUT FERRULES SHALL BE FLUSH-MOUNTED TO WALL AND SHALL BE PROVIDED WITH POLISHED COVER CAPS. DO NOT INSTALL FLOOR CLEAN OUTS EXCEPT AT LINES ON GRADE AND SERVICE AREA NOT SUBJECT TO TRAFFIC.
10. ALL UNDER GROUND G.I. PIPES IN DIRECT CONTACT WITH SOIL SHALL BE PROVIDED WITH TWO (2) COATS OF PROTECTIVE TAR COVERING AND WRAPPED WITH JUTE CLOTH THOROUGHLY SOAKED IN TAR OR ASPHALT.
11. PROVIDE VENT STACK AND VENT PIPE THRU ROOF OF CAST IRON SERVICE WEIGHT AS REQUIRED.
12. ALL CAST IRON PIPES SHALL BE OF APPROVED QUALITY AND G.I. FOR WATER DISTRIBUTION LINES SHALL BE SCHEDULE 40 U.S. STANDARD WEIGHT.
13. PROVIDE GATE VALVES TO ALL WATER SUPPLY LINES TO FIXTURES.
14. ALL HOT WATER LINES SHALL BE PROVIDED WITH PROPER INSULATION WHERE EXPOSED.
15. ALL INDIVIDUAL BRANCHES TO FIXTURE OR GROUP OF FIXTURES AND/OR EQUIPMENTS SHALL BE PROVIDED WITH AIR CHAMBER OR CAPPED VERTICAL PIPE EXTENSIONS OF DIMENSIONS AS SHOWN.

H = 450 mm FOR 19 mm AND LARGER

H = 300 mm FOR 12 mm Ø AND SMALLER

16. ALL HOSE BIBBS SHALL BE 19 mm Ø (3/4") UNLESS OTHERWISE INDICATED.
17. INLET PIPE OF SEPTIC TANK IS 50 mm HIGHER THAN THE SIPHON PIPE WHICH IS 30 mm HIGHER THAN THE OUTLET PIPE.
18. ALL PLUMBING WORKS AND MANNER OF CONSTRUCTION SHALL BE UNDER THE DIRECT SUPERVISION OF AN ABLE AND DULY LICENSED MASTER PLUMBER OR REGISTERED SANITARY ENGINEER ANY DISCREPANCIES FOUND IN PLAN SHALL BE NOTIFIED TO THE SAME PERSON.

| | |
|-----|-------------------|
| ⊗ | COUNTER TOP DRAIN |
| ⊗ | GATE VALVE |
| ⊗ | VENT STACK |
| ⊗ | CLEAN OUT |
| FAU | FAUCET |
| U | UNION PATENTE |
| — | VENT PIPE |
| — | SEWER LINE |
| — | WATER LINE |

1 GENERAL NOTES

NOT TO SCALE

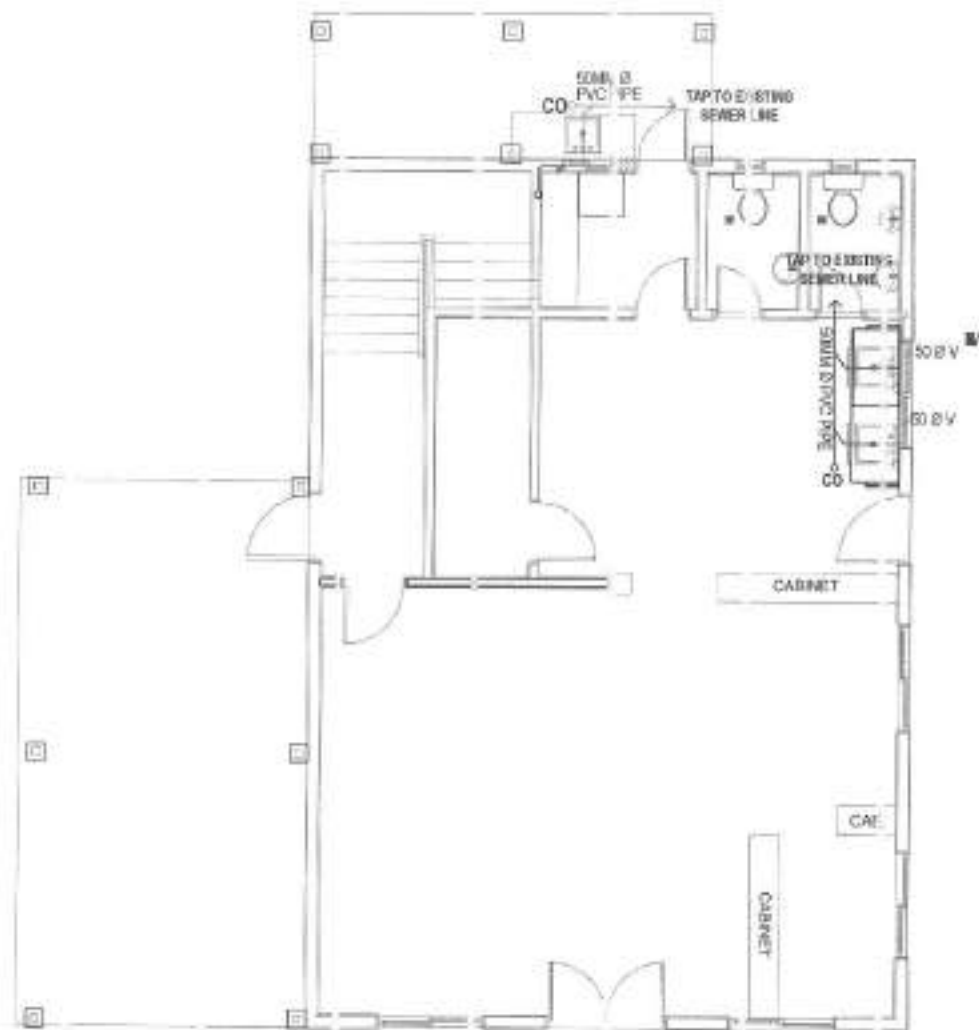
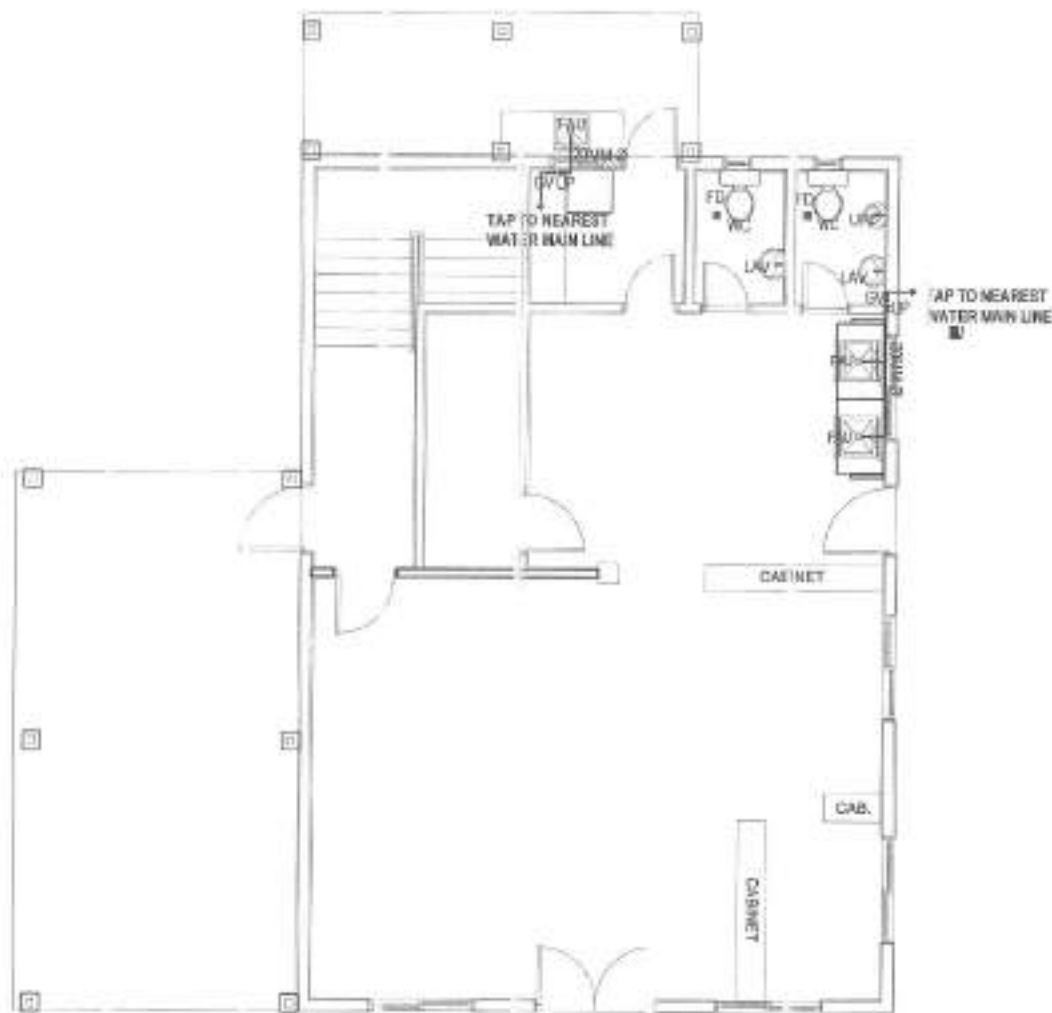
2 LEGEND AND SYMBOLS

NOT TO SCALE



Republika ng Pilipinas
Lungsod ng Cebu
CITY ENGINEERING DEPARTMENT

| | | | | | | |
|--|-----------------|---|--|---|-------------------------------------|----------------|
| PROJECT TITLE: | DATE: | SUBMITTED BY: | RECOMMENDING APPROVAL: | APPROVED BY: | SHEET CONTENT | SHEET NO. |
| PROPOSED CONSTRUCTION OF HAND WASHING FACILITY AND REHABILITATION OF GALAS DAY CARE CENTER | DATE: 1/10/2020 | ENGR. LEO S. DEL ROSARIO PLUMBING ENGINEER (PRO) | ENGR. ISAGAN R. VERZOSA, JR. CITY ENGINEER (PLUMBING) | ENGR. MA. JOSEFINA G. BELMONTE CITY ENGINEER | GENERAL NOTES LEGEND AND SYMBOLS | PL-01 09/12 |
| LOCATION: BARANGAY SAN PEDRO GALAS, DISTRICT 4, CEBU CITY | REVISIONS: | | | | | |



1 PROPOSED WASH AREA WATER LINE LAYOUT

2 PROPOSED WASH AREA SEWER LINE LAYOUT

NOT TO SCALE



Republic of the Philippines
Lungsod ng Quezon
CITY ENGINEERING DEPARTMENT

PROJECT TITLE:
PROPOSED CONSTRUCTION OF HAND
WASHING FACILITY AND REHABILITATION
OF GALAS DAY CARE CENTER
LOCATION: BANGKAY SAN ILOILO GALAS, DISTRICT 4
QUEZON CITY

DRAWN BY:
DATE:
CHECKED BY:
REVISIONS:

SUBMITTED BY:
ENG. LEO S. DEL ROSARIO
REGISTERED PROFESSIONAL ENGINEER

RECOMMENDING APPROVAL:
ENR. JUAN R. VERZOSA, JR.
REGISTERED PROFESSIONAL ENGINEER

APPROVED BY:
IGN. MA. JOSEFINA G. BELMONTE
CITY ENGINEER

SHEET CONTENT:
PROPOSED WASH AREA
WATER LINE LAYOUT
PROPOSED WASH AREA
SEWER LINE LAYOUT

SHEET NO.
PL-02
10/12

- ALL ELECTRICAL WORK SHALL BE DONE ACCORDANCE WITH THE PROVISIONS OF THE LATEST EDITION OF THE PHILIPPINE ELECTRICAL CODE, THE LAWS AND ORDINANCES OF THE LOCAL GOVERNMENT AUTHORITY AND THE REQUIREMENTS OF THE LOCAL POWER AND TELEPHONE UTILITY COMPANY.
- THE CONTRACTOR SHALL SECURE ALL PERMITS AND PAY ALL FEES REQUIRED FOR THE WORK AND SHALL FURNISH THE OWNER THROUGH THE ENGINEER, FINAL CERTIFICATES OF ELECTRICAL INSPECTION AND APPROVAL FROM PROPER GOVERNMENT AUTHORITIES FOR COMPLETION OF WORK.
- ALL EXPOSED BRANCH CIRCUITS SHALL BE PVC CONDUITS AND FOR EXPOSED INSTALLATION SHALL BE SUPPORTED BY CONDUIT CLAMPS EVERY 900 MILLIMETERS.
- PULL BOXES SHALL BE PROVIDED BY THE CONTRACTOR WHENEVER NECESSARY TO FACILITATE WIRE PULLING SUCH IF THERE ARE NOT INDICATED ON THE PLANS. LOCATIONS OF ALL PULL BOXES SHALL BE COMPUTED BASED ON THE CODE REQUIREMENTS, SUBMIT SHOP DRAWINGS TO THE ENGINEER FOR APPROVAL PRIOR TO FABRICATION. LOCATION OF PULL BOXES SHALL BE APPROVED BY THE ARCHITECT/ENGINEER AND MUST BE REFLECTED ON THE "AS-BUILT" PLAN.
- ALL POWER OUTLETS AND SWITCHES SHALL BE OF THE TYPE WITH PIVOTAL SLOTS FOR 220V.
- PROVIDE GROUND FAULT CURRENT INTERRUPTER (GFCI) BREAKER FOR LOADS MARKED "GFCI" ON THE PLAN.
- ALL METALLIC CONDUITS, CABLES AND EQUIPMENT SHALL BE PROPERLY GROUNDING AND BONDED.
- UNLESS OTHERWISE NOTED, MOUNTING HEIGHT FOR ALL MOUNTED DEVICES SHALL BE AS FOLLOWS:

RECEPTACLE OUTLET - 360 MM AFF. (1800 MILLIMETER WORKING CLEARANCE)
TELEPHONE OUTLET - 300 MM AFF.
CITY OUTLET - 360 MM AFF.
LIGHTING SWITCH - 1400 MM AFF.
PANELBOARD - 1800 MM AFF.

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

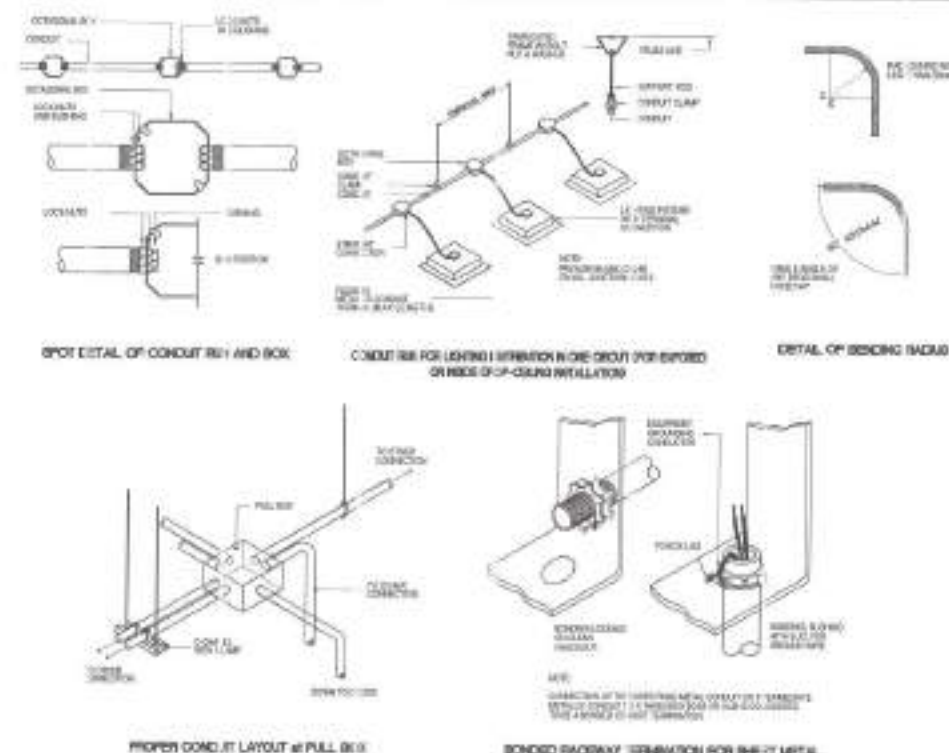
(LINE 1 - RED)
(LINE 2 - YELLOW)
NEUTRAL - WHITE
GROUND - GREEN

- BOSS WIRE, OUTLETS, ENCLASURE SHALL BE FABRICATED FROM STEEL WITH THICKNESS AS FOLLOWS:
MINIMUM WIDTH OF THE WIDEST SURFACE STEEL:
UP TO INCLUDING 100 MM (1) 16 PAINTED WITH METAL PRIMER EPOXY AND TOPCOAT
OVER 100 MM BUT NOT OVER 150 MM (2) 14 PAINTED WITH METAL PRIMER EPOXY AND TOPCOAT
OVER 150 MM BUT NOT OVER 200 MM (3) 12 PAINTED WITH METAL PRIMER EPOXY AND TOPCOAT
OVER 200 MM (4) 10 PAINTED WITH METAL PRIMER EPOXY AND TOPCOAT
- ALL ELECTRICAL WORK HEREON SHALL BE EXECUTED BY EXPERIENCED MEN UNDER THE DIRECT SUPERVISION OF A FULL-TIME LICENSED ELECTRICAL ENGINEER. AND A FULLY ACCREDITED ELECTRICAL CONTRACTOR BY ROAD WORKS SHALL BE NEATLY FINISHED, SECURELY FASTENED AND PROPERLY FINISHED.
- TYPE OF SERVICE ENTRANCE SHALL BE SINGLE-PHASE, TWO-WIRE PLUS GROUND, 60 HERTZ, 220V AT NOMINAL.
- CONDUITS IN RACE SHALL HAVE MORE THAN THE EQUIVALENT OF FOUR QUARTER BENDS IN A 100 M RUN. ALL CONDUIT BENDS SHALL BE FIELD MADE BY USING HYDRAULIC BENDERS. MINIMUM BENDING RADIUS MUST BE IN ACCORDANCE TO THE CODE REQUIREMENTS.
- UPON COMPLETION OF ELECTRICAL CONSTRUCTION, 50% INSULATION RESISTANCE TEST AND FUNCTIONALITY TEST SHALL BE PERFORMED BY THE CONTRACTOR INCLUSIVE OF THE INSTALLATION TO BE REPORTED IN DETAILS IN A FORM 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.

| | | |
|-----------------------------|--|---|
| CIRCUIT LINE | | LED DOUBLE TROFFER LIGHTING, 600x1200mm, RECESSED |
| DUPLEX OUTLET (REPLACEMENT) | | |
| DUPLEX OUTLET (ADDITIONAL) | | LED ROUND RECESSED MOUNT PINLIGHT |
| THREE WAY SWITCH | | LED ROUND SURFACE MOUNT PINLIGHT |
| THREE GANG SWITCH | | LED TROFFER LIGHTING, 1200x300mm, SURFACE MOUNTED |
| ONE GANG SWITCH | | CIRCUIT HOMERUN |
| SELECTOR SWITCH (FAN) | | PANELBOARD |
| ORBIT FAN | | |

2 LEGENDS AND SYMBOLS

NOT TO SCALE



1 GENERAL NOTES

NOT TO SCALE

3 MISCELLANEOUS DETAILS

SCALE: NTS



Republika ng Pilipinas
Lungsod ng Quezon
CITY ENGINEERING DEPARTMENT

| | | |
|--|-----------------|--|
| PROJECT TITLE: | DRAWN BY: MM | SUBMITTED TO: |
| PROPOSED CONSTRUCTION OF HAND WASHING FACILITY AND REHABILITATION OF GALAS DAY CARE CENTER | DATE: 11/2021 | ENGR. LEO S. DEL ROSARIO HEAD, PLANNING & PROGRAMMING DIVISION |
| LOCATION: SITE, SAN BERNARDINO DISTRICT 4, QUEZON CITY | DESIGNED BY: JM | ENGR. ISMAEL R. VERZOSA, JR. CHIEF, CITY ENGINEERING DEPARTMENT |

| | |
|---|--|
| RECOMMENDING APPROVAL: | APPROVED BY: |
| ENGR. LEO S. DEL ROSARIO HEAD, PLANNING & PROGRAMMING DIVISION | ENGR. ISMAEL R. VERZOSA, JR. CHIEF, CITY ENGINEERING DEPARTMENT |
| ENGR. JOSEFINA G. BELMONT CITY MAYOR, QUEZON CITY | |

| | |
|--|----------------|
| SHEET CONTENT: | SHEET NO. |
| GENERAL NOTES LOCATIONS AND DIMENSIONS MISCELLANEOUS DETAILS | EL-01 11/12 |

SCALE: 1:100M



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

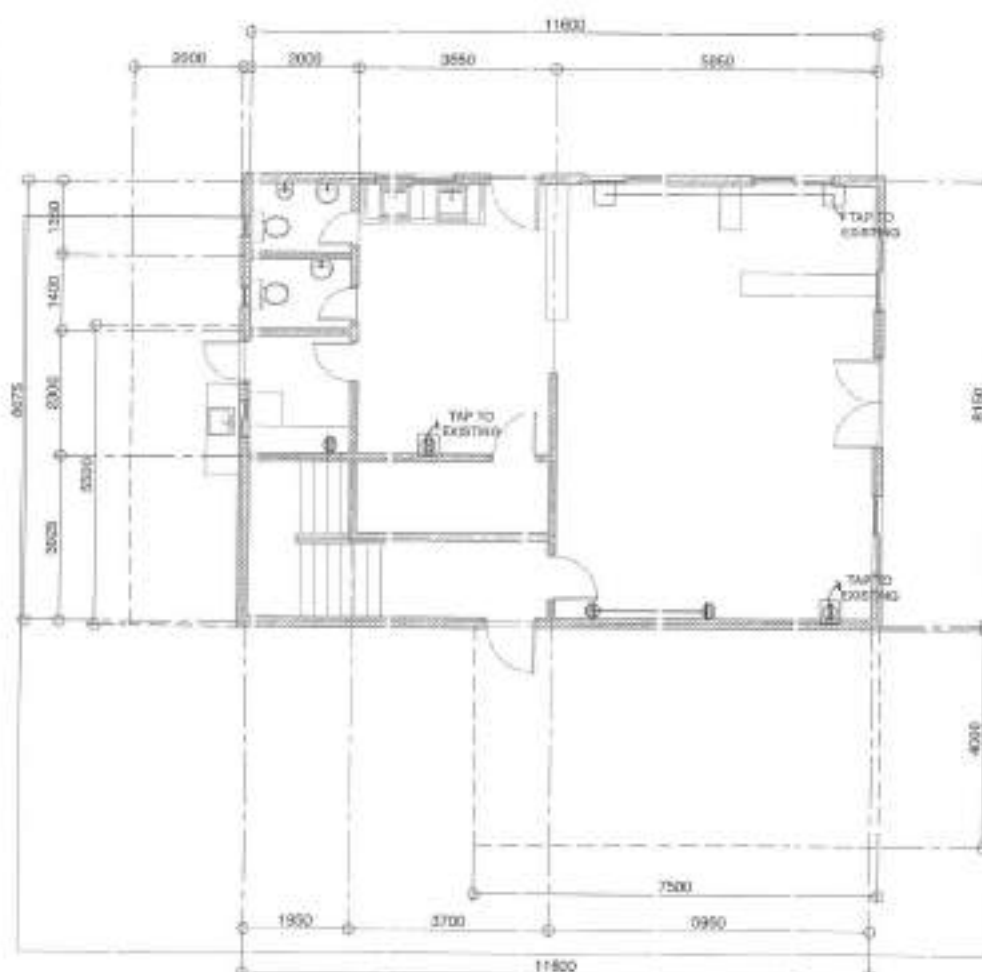
LOCATION: WFGT, SAN BERNITO CALIF., DISTRICT 4,
SUNSHINE CITY

| |
|--------------------------|
| DRAWN BY: <i>WJ</i> |
| DATE: 5.1.82 |
| CHECKED BY: <i>WJ</i> |
| REVISION NO: |

ENR R. LEO S. DEL RO-1490
HEAD, P., NAME & PROGRAMMING (1982)

2 GROUND FLOOR POWER LAYOUT

SCALE: 1:100M



2 GROUND FLOOR POWER LAYOUT

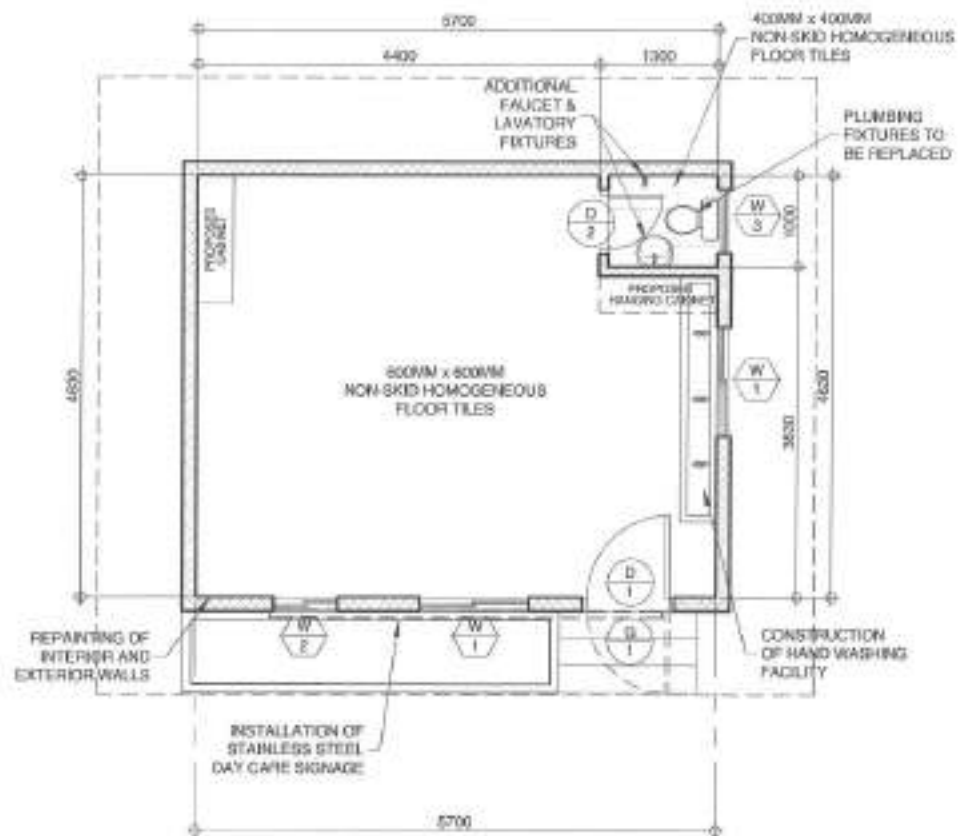
SCALE: 1:100M

EDWIN B. WYRZOSA, JR.
140 CITY ENGINEERING DISTRICT

APPROVED BY:

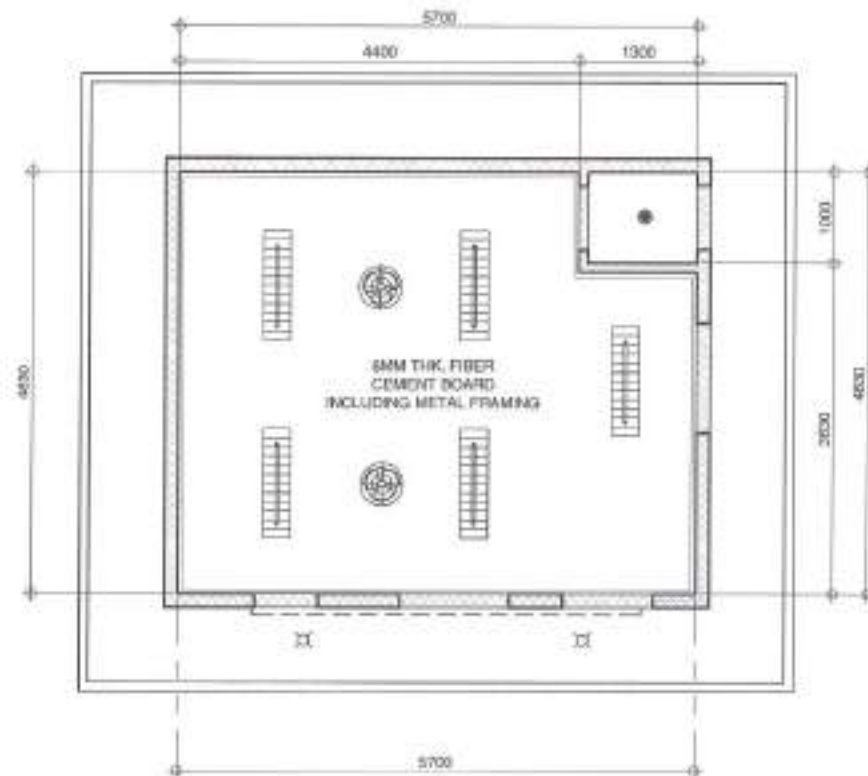
HON. MA. JOSEFINA G. BELMONTE
GOVERNOR

| | |
|--|----------------|
| PROJECT CONTENT | SHEET NO. |
| GROUND FLOOR LIGHTS & LEVELS UPPER FLOOR POWER LAYOUT | EL-02 12 12 |



NOTES

- DOORS & WINDOWS TO BE REPLACED
- FLOOR & WALL TILES TO BE REPLACED
- MAIN GATE TO BE REPLACED



1 FLOOR PLAN

SCALE: 1:50M

3 RIGHT SIDE ELEVATION

SCALE: 1:50M



Republika ng Pilipinas
Lungsod ng Quezon
CITY ENGINEERING DEPARTMENT

PROJECT TITLE:

PROPOSED CONSTRUCTION OF HAND
WASHING FACILITY AND REHABILITATION
OF MANUNGGAL I DAY CARE CENTER

LOCATION:

BRGY. TATALON, DISTRICT 4, QUEZON CITY

DRAWN BY:

DATE: 3/15/2021

CHECKED BY: MFC

REVISION NO:

SUBMITTED BY:

ENGR. LEO S. DEL ROSARIO
HEAD, PLANNING & PROGRAMING OFFICE

RECOMMENDING APPROVAL:

ENGR. ISABELA R. VERZOSA, JR.
DIO, CITY ENGINEERING DEPARTMENT

APPROVED BY:

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

SHEET CONTENT

FLOOR PLAN
REFLECTED CEILING PLAN

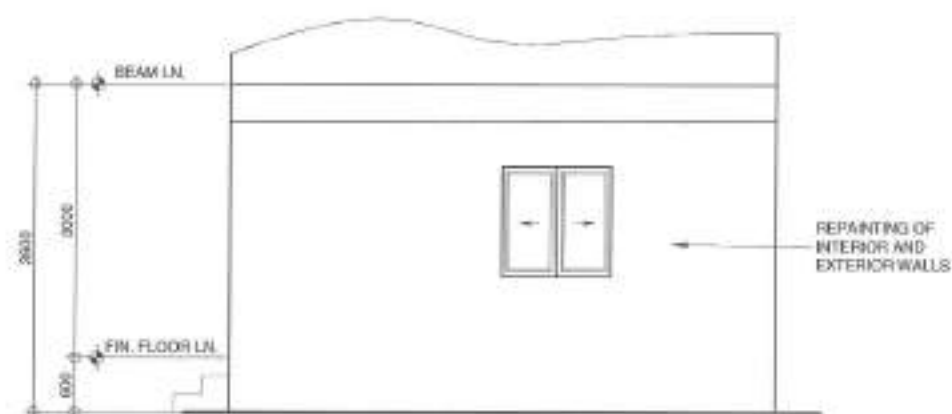
SHEET NO:

AR-02
02/08



2 FRONT ELEVATION

SCALE: 1:50M



1 RIGHT SIDE ELEVATION

SCALE: 1:50M



Republika ng Pilipinas
Lungsod ng Quezon
CITY ENGINEERING DEPARTMENT

PROJECT TITLE:

PROPOSED CONSTRUCTION OF HAND
WASHING FACILITY AND REHABILITATION
OF MANUNGGAL I DAY CARE CENTER

LOCATION:

BRGY. TATALON, DISTRICT 4, QUEZON CITY

DRAWN BY: JRM

DATE: 9/16/2021

CHECKED BY: JRM

REVISION NO:

SUBMITTED BY:

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

RECOMMENDING APPROVAL:

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

APPROVED BY:

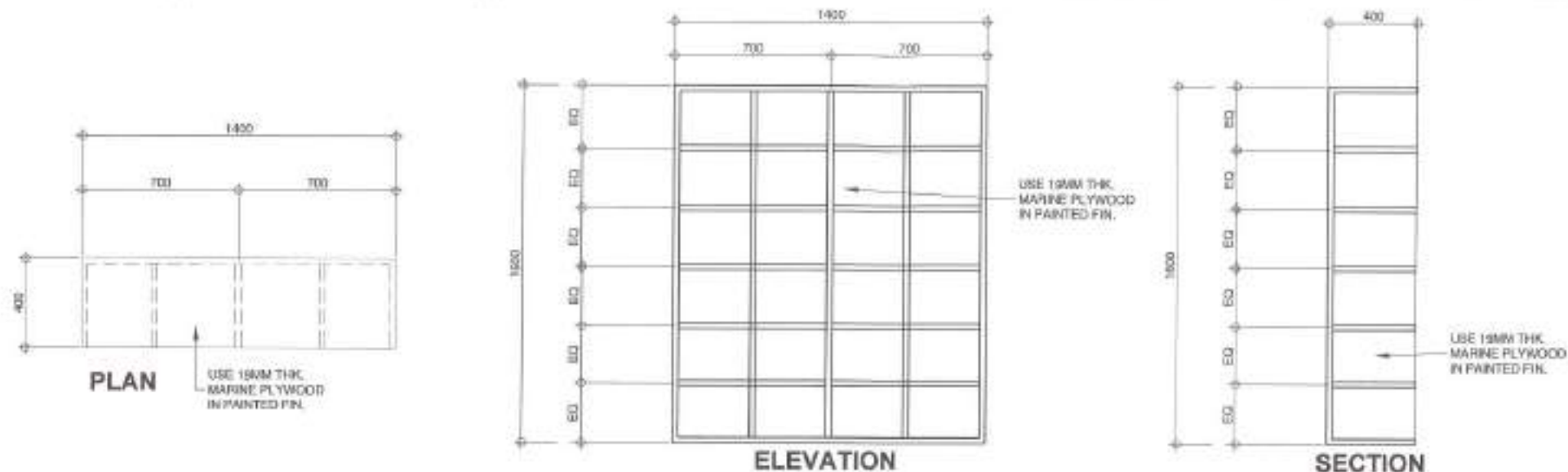
HON. RA. JOSEFINA O. BELMONTE
CITY MAJOR, QUEZON CITY

SHEET CONTENT

FRONT ELEVATION
RIGHT SIDE ELEVATION

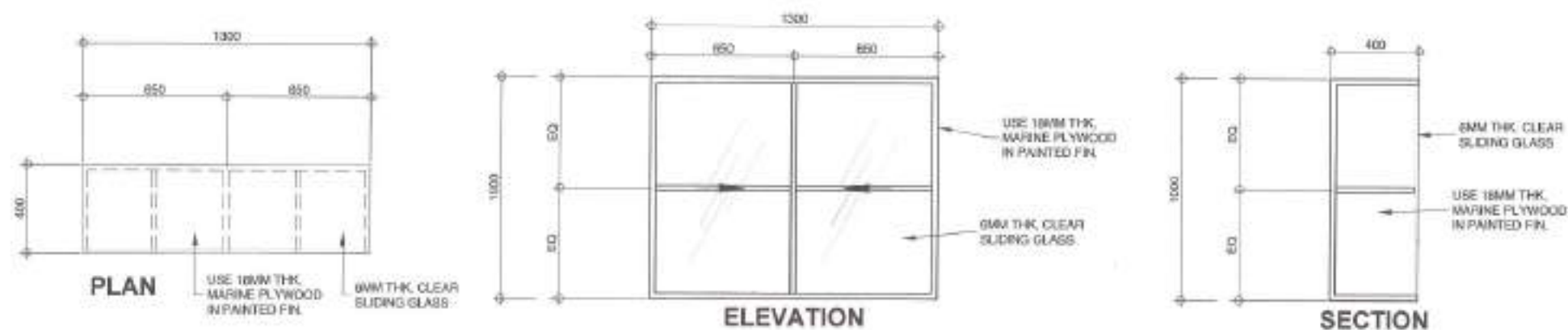
SHEET NO.

AR-03
03/08



1 BOOK SHELVES DETAILS

SCALE: 1:20R.



2 HANGING CABINET DETAILS

SCALE: 1:30R.



Republika ng Pilipinas
Lungsod ng Quezon
CITY ENGINEERING DEPARTMENT

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

LOCATION:
BRGY. TACALON, DISTRICT 4, QUEZON CITY

DRAWN BY: **MA**
DATE: **7.15.2021**
DESIGNED BY: **MA**
REVISION NO:

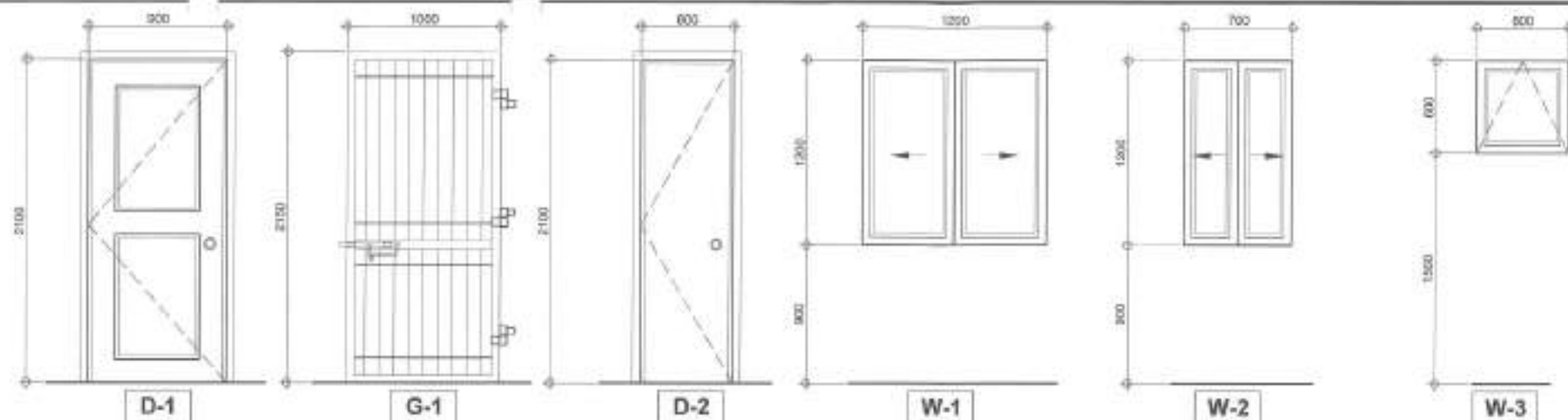
SUBMITTED BY:
ENGR. LEO S. DEL ROSARIO
HEAD, PLANNING & PROGRAMMING DIVISION

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

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

SHEET CONTENT:
CABINET DETAILS
HANGING CABINET
DETAILS

SHEET NO.
AR-04
04.08



| | |
|-----------|---|
| SETS: | 1 SET |
| LOCATION: | ENTRANCE |
| TYPE: | WOOD PANEL TYPE DOOR WITH DOOR KNOB AND DOOR HINGES |

| | |
|-----------|---|
| SETS: | 1 SET |
| LOCATION: | ENTRANCE |
| TYPE: | 50MM G.I. PIPE STEEL FRAME WITH 10MM ROUND BAR SPACED EQUALLY |

| | |
|-----------|--|
| SETS: | 1 SET |
| LOCATION: | TOILET |
| TYPE: | PVC FLUSH TYPE DOOR WITH DOOR KNOB AND DOOR HINGES |

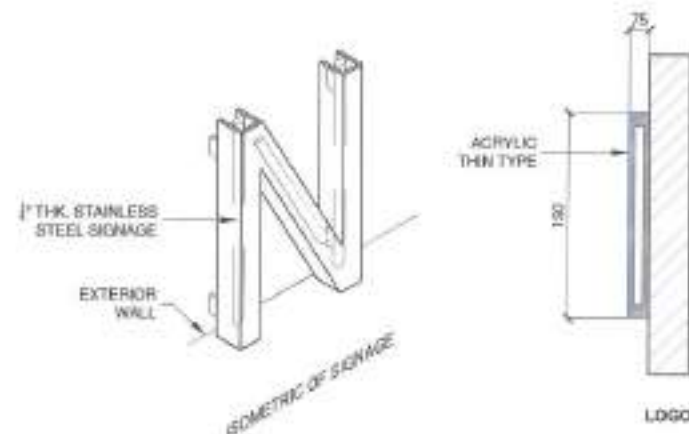
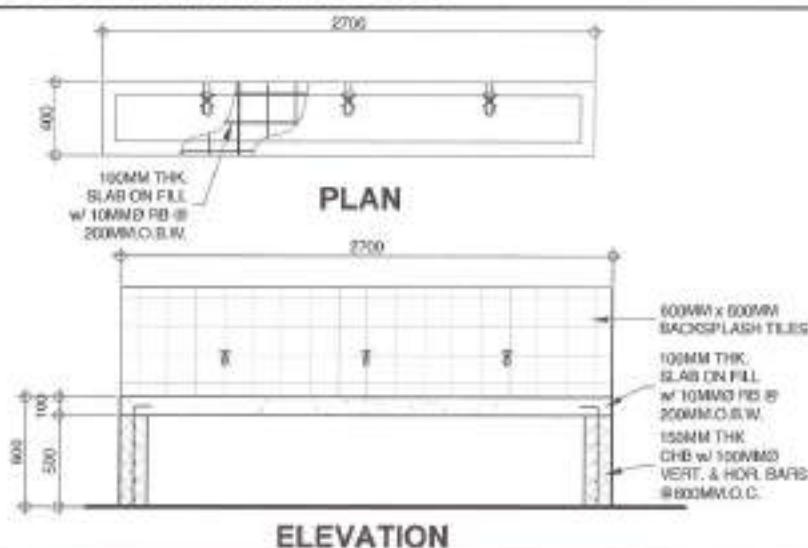
| | |
|-----------|---------------------------------------|
| SETS: | 2 SETS |
| LOCATION: | DAY CARE CENTER |
| TYPE: | ANALOG SLIDING WINDOWS W/ CLEAR GLASS |

| | |
|-----------|---------------------------------------|
| SETS: | 1 SET |
| LOCATION: | DAY CARE CENTER |
| TYPE: | ANALOG SLIDING WINDOWS W/ CLEAR GLASS |

| | |
|-----------|---|
| SETS: | 1 SET |
| LOCATION: | TOILET |
| TYPE: | ANALOG AWNING TYPE WINDOWS W/ CLEAR GLASS |

1 SCHEDULE OF DOORS & WINDOWS

SCALE: 1:20M



1 HAND WASHING FACILITY DETAILS

SCALE: 1:30M

2 STANDARD LOGO DETAILS

SCALE: 1:20M



Republika ng Pilipinas
Lungsod ng Quezon
CITY ENGINEERING DEPARTMENT

PROJECT TITLE:
PROPOSED CONSTRUCTION OF HAND
WASHING FACILITY AND REHABILITATION
OF MANUNGAL | DAY CARE CENTER
LOCATION:
SPD7, TATALON, DISTRICT 4, QUEZON CITY

DRAWN BY: JAM
DATE: 9/16/2021
CHECKED BY: JMC
REVISION NO:

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

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

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

SHEET CONTENT:
SCHEDULE OF DOORS &
WINDOWS
HAND WASHING FACILITY
DETAILS
STANDARD SIGNAGE LOGO

SHEET NO:
AR-05
05/08

GENERAL NOTES:

- 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 GOVT. AND THE REQUIREMENTS OF THE LOCAL POWER AND TELEPHONE UTILITY COMPANY.
- THE CONTRACTOR SHALL SECURE ALL PERMITS AND PAY ALL FEES REQUIRED FOR THE WORK AND SHALL FURNISH THE OWNER THROUGH THE ENGINEER, FINAL CERTIFICATES OF ELECTRICAL INSPECTION AND APPROVAL FROM PROPER GOVERNMENT AUTHORITIES FOR COMPLETION OF WORK.
- ALL EMBEDDED BRANCH CIRCUITS SHALL BE PVC CONDUITS AND FOR EXPOSED INSTALLATION SHALL BE MC SUPPORTED BY CONDUIT CLAMPS EVERY 300MM.
- PULL BOXES SHALL BE PROVIDED BY THE CONTRACTOR WHEREVER NECESSARY TO FACILITATE WIRE PULLING EVEN IF THESE ARE NOT MANDATED ON THE PLANS. SIZES 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.
- ALL POWER OUTLETS AND SWITCHES SHALL BE GROUNDING TYPE WITH PARALLEL SLOTS FOR 208V.
- PROVIDE GROUND FAULT CURRENT INTERRUPTER (GFCI) BREAKER FOR LOADS MARKED "GFCI" ON THE PLAN.
- ALL METALLIC CONDUITS, CABLES AND EQUIPMENT SHALL BE PROPERLY GROUNDING AND BONDED.
- USE OTHERS OTHERWISE NOTED. MOUNTING HEIGHT FOR WALL MOUNTED DEVICES SHALL BE AS FOLLOWS:

RECEPTACLE OUTLET - 1400 MM AFF. (1400MM ABOVE WORKING FLOOR)

TELEPHONE OUTLET - 300 MM AFF.

CATV OUTLET - 300 MM AFF.

LIGHTING SWITCH - 1400 MM AFF.

PANEL BOARD - 1400 MM AFF.

- REFER TO MECHANICAL, PLUMBING AND PIPE PROTECTION DRAWINGS FOR RATINGS AND LOCATIONS OF EQUIPMENT AS WELL AS THE IN CONTROL REQUIREMENTS SPECIFIED AND OR SHOWN UNDER THEIR RESPECTIVE SECTIONS.
- ALL MATERIALS TO BE USED SHALL BE OF THE BEST QUALITY, BRAND NAME AS SPECIFIED.
- THE DIMENSIONS AND SPECIFICATIONS ARE INTENDED TO PRESENT GENERAL LAYOUT AND (WHERE) OUTLINE FOR PROVISION OF THE PROJECT BUT DO NOT NECESSARILY INDICATE EXACT ACTUAL LOCATIONS, LEVEL AND DISTANCES OF THE EQUIPMENT. THE CONTRACTOR IS HEREBY REQUIRED TO MAKE SUCH ADJUSTMENT AT THE JOB SITE AS LOCATION, DISTANCES AND LEVELS ARE GOVERNED BY ACTUAL FIELD CONDITIONS.
- ANY DISCREPANCY BETWEEN THE PLANS AND SPECIFICATIONS SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER FOR CLARIFICATION DECISION.
- ALL LIGHTING AND CONVENIENCE OUTLET CIRCUITS SHALL BE 2.0 SQ. MM. THIN-WALL COPPER WIRE UNLESS OTHERWISE NOTED. MINIMUM SIZE OF WIRE SHALL BE 2.0 SQ. MM. COPPER WIRE. ALL WIRES AND CABLES SHALL BE COLOR CODED AS FOLLOWS:

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

- BOXES, RINGS, CLUTTERS, ENCLOSURES SHALL BE FABRICATED FROM STEEL WITH THICKNESS AS FOLLOWS:
MAXIMUM WIDTH OF THE WEDGE SURFACE STEEL:
UP TO INCLUDING 150.40 MM GA 12 PAINTED WITH METAL PRIMER EPOXY AND TOPCOAT
OVER 152.40 MM BUT NOT OVER 197.78 GA 14 PAINTED WITH METAL PRIMER EPOXY AND TOPCOAT
OVER 197.78 MM BUT NOT OVER 254.00 GA 12 PAINTED WITH METAL PRIMER EPOXY AND TOPCOAT
OVER 254.00 MM GA 16 PAINTED WITH METAL PRIMER EPOXY AND TOPCOAT
- ALL ELECTRICAL WORKS HEREIN SHALL BE EXECUTED BY EXPERIENCED MEN UNDER THE DIRECT SUPERVISION OF A FULL-TIME LICENSED ELECTRICAL ENGINEER AND A FULLY ACCREDITED ELECTRICAL CONTRACTOR BY FORM. WORK SHALL BE NEATLY PLACED, SECURELY FASTENED AND PROPERLY FINISHED.
- TYPE OF SERVICE ENTRANCE SHALL BE SINGLE-PHASE, TWO-WIRE PLUS GROUND, 40 HERTZ, 200V AC NOMINAL.
- 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.
- UPON COMPLETION OF ELECTRICAL CONSTRUCTION WORK, ISULATION RESISTANCE TEST AND FUNCTIONALITY TEST SHALL BE PERFORMED BY THE CONTRACTOR INCLUDING OF THE INSTALLATION TO BE REPORTED IN DETAIL ON FORMS APPROVED BY THE QUEZON CITY ENGINEERING DEPARTMENT REPRESENTATIVE. THE DATA AND PERFORMANCE FOR ELECTRICAL SYSTEMS SHALL NOT BE MORE THAN 5 OHMS. COMMUNICATION GROUNDING RESISTANCE SHALL NOT EXCEED 5 OHMS.

| | | | |
|-----|------------------------------------|----|---------------------|
| | 1x18W, LED TUBE LIGHT TROFFER TYPE | S | ONE GANG SWITCH |
| | RECEPTACLE WITH 10W LED BULB | | ORBIT FAN |
| | PIN LIGHT | Ss | SELECTOR SWITCH |
| | CONVENIENCE OUTLET, TWO GANG | | MULTIPURPOSE OUTLET |
| Sub | TWO GANG SWITCH | | |

2 LEGEND & SYMBOLS

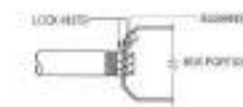
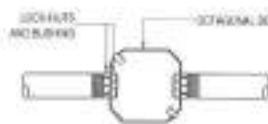
SCALE: NTS



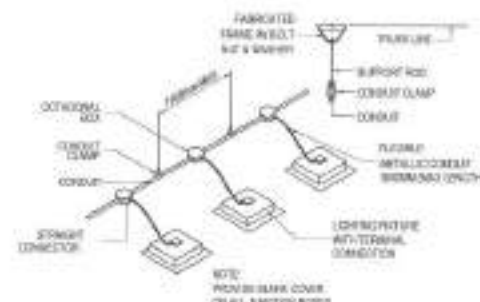
BENDING RADIUS DETAIL



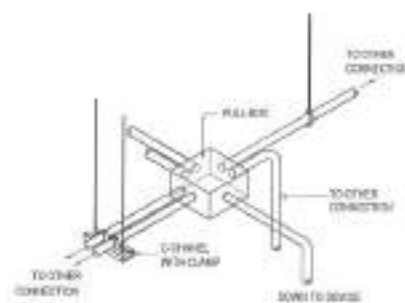
BENDING RADIUS DETAIL



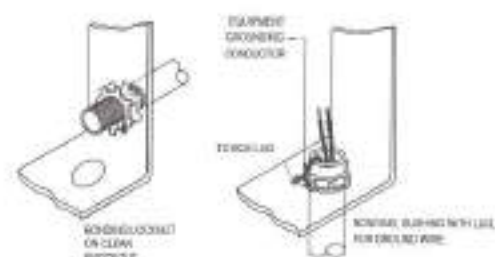
SPOT DETAIL OF CONDUIT RUN AND BOX



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

1 GENERAL NOTES

SCALE: NTS



Republika ng Pilipinas
Lungsod ng Quezon
CITY ENGINEERING DEPARTMENT

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

LOCATION:
BRGY. TATULAN, DISTRICT 4, QUEZON CITY

DATE: SEPT. 15, 2021
CHECKED BY: J.S.
REVISIONS:

SUBMITTED BY:

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

RECOMMENDED APPROVAL:

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

APPROVED BY:

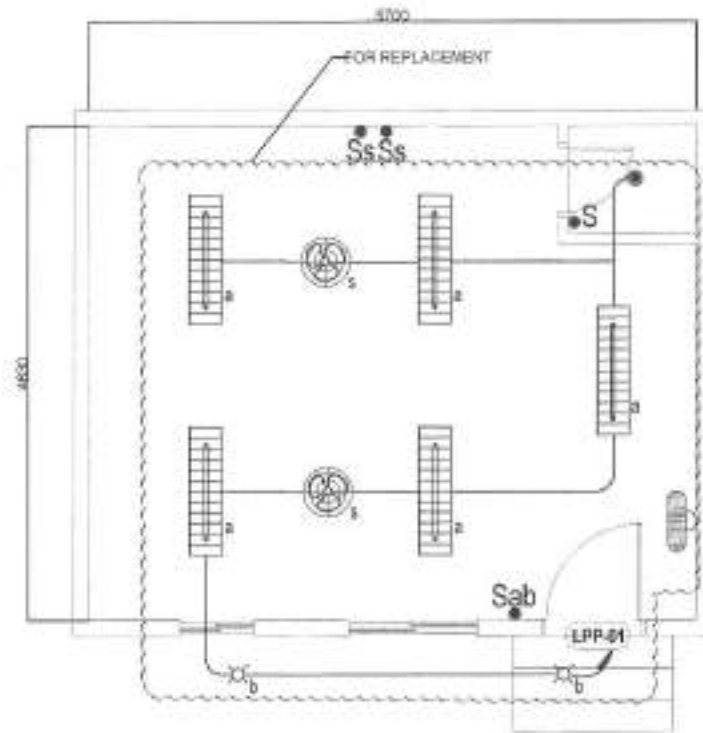
HON. MA. JOSEFINA G. BELMONTE
CITY MAYOR, QUEZON CITY

SHEET CONTENT:
GENERAL NOTES, LEGEND AND SYMBOLS, MISCELLANEOUS DETAILS

SHEET NO.:
EL-01
07/08

3 MISCELLANEOUS DETAILS

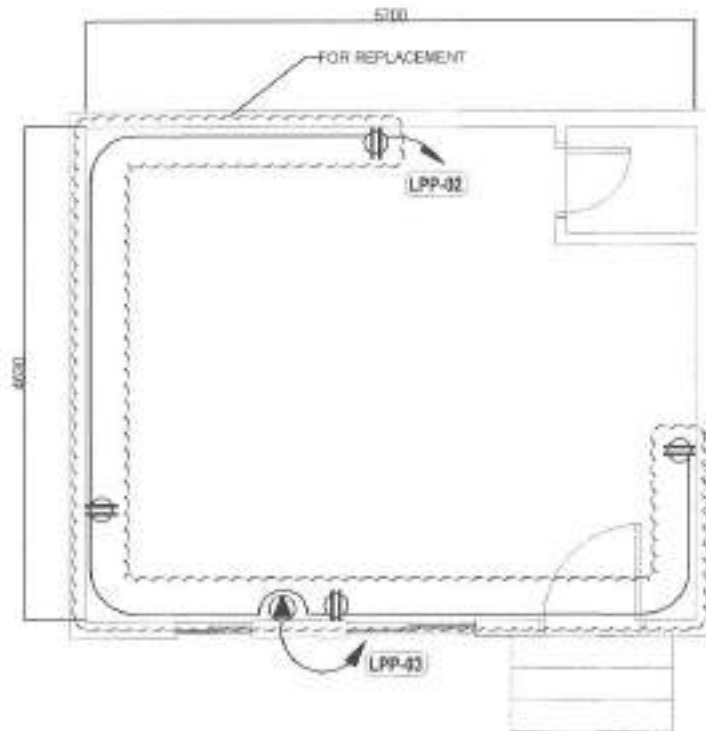
SCALE: NTS



NOTE: TAP TO EXISTING POWER SUPPLY

1 GROUND FLOOR LIGHTING LAYOUT

SCALE: 1:50M



NOTE: TAP TO EXISTING POWER SUPPLY

2 GROUND FLOOR POWER LAYOUT

SCALE: 1:50M



Republika ng Pilipinas
Lungsod ng Quezon
CITY ENGINEERING DEPARTMENT

PROJECT TITLE:

PROPOSED CONSTRUCTION OF HAND
WASHING FACILITY AND
REHABILITATION OF MANUNGDAL 1 DAY
CARE CENTER

LOCATION:

BDOY TATAKAL DISTRICT 4, QUEZON CITY

DRAWN BY:

DATE: SEPT 30, 2021

CHECKED BY:

REVISION NO.:

SUBMITTED BY:

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

RECOMMENDING APPROVAL:

ENGR. MARVIN R. VERZOSA, JR.
CIC, CITY ENGINEERING DEPARTMENT

APPROVED BY:

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

SHEET CONTENT:

GROUND FLOOR
LIGHTING LAYOUT
GROUND FLOOR
POWER LAYOUT

SHEET NO.:

EL-02
08/08

SCALE: NTS



SCALE: NTB



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

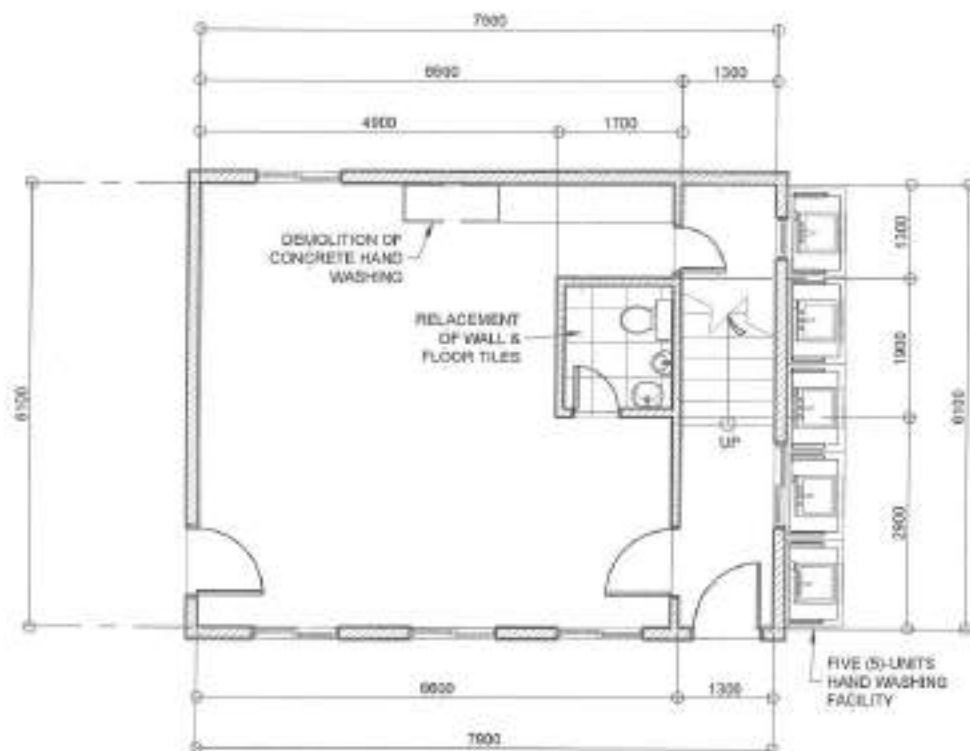
LOCATION:
BARAY, BANOL DISTRICT 4, QUEZON CITY

SCALE: 1:500M



ARCHITECTURAL

| | |
|-------------------|---|
| AR-01 | SITE DEVELOPMENT PLAN LOCATION MAP VICINITY MAP |
| AR-03 | GROUND FLOOR PLAN SECOND FLOOR PLAN |
| AR-03 | GROUND FLR REFLECTED CEILING PLAN SECOND FLR REFLECTED CEILING PLAN |
| AR-04 | FRONT ELEVATIONS LEFT SIDE ELEVATION RIGHT SIDE ELEVATION REAR ELEVATION |
| AR-05 | SHELVES DETAILS STANDARD LOOD DETAILS |
| AR-06 | HAND WASHING FACILITY DETAILS |
| STRUCTURAL | |
| ST-01 | HAND WASHING FACILITY DETAILS |
| PLUMBING | |
| PL-01 | GENERAL NOTES GROUND FLOOR WATER LINE LAYOUT |
| PL-02 | SECOND FLOOR WATER LINE LAYOUT GROUND FLOOR SANITARY LINE LAYOUT |
| PL-03 | SECOND FLOOR SANITARY LINE LAYOUT |
| ELECTRICAL | |
| EL-01 | GENERAL NOTES MISCELLANEOUS DETAILS |
| EL-02 | GROUND FLOOR LIGHTING LAYOUT GROUND FLOOR POWER LAYOUT |
| EL-03 | SECOND FLOOR LIGHTING LAYOUT SECOND FLOOR POWER LAYOUT |

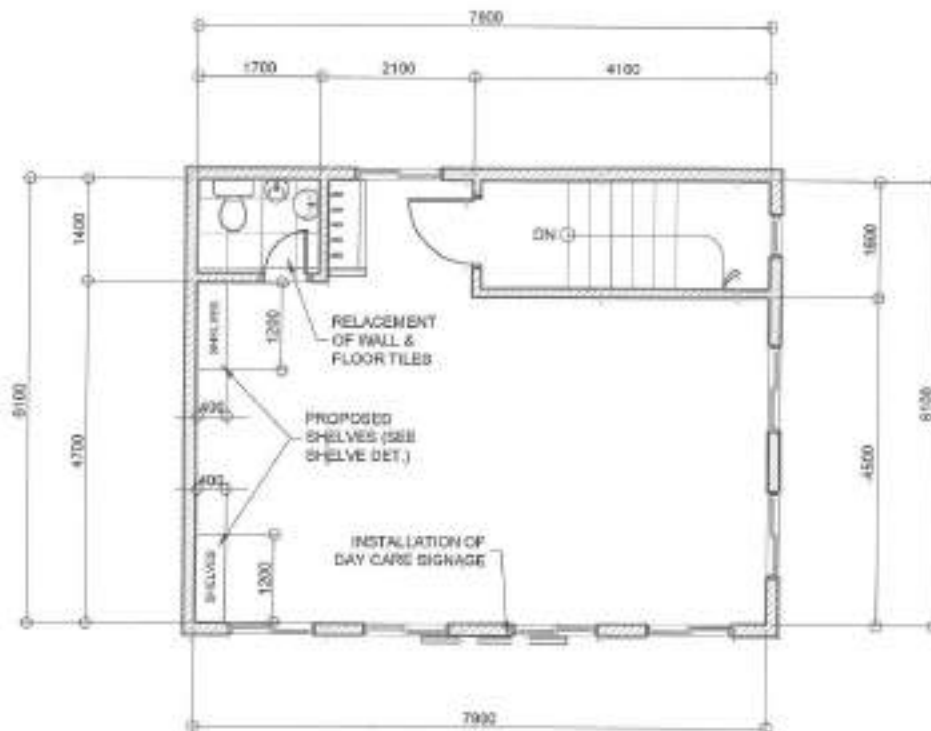


NOTE:

- EXTERIOR AND INTERIOR WALLS TO BE REPAINTED

1 GROUND FLOOR PLAN

SCALE: 1/80M



NOTE:

- EXTERIOR AND INTERIOR WALLS TO BE REPAINTED

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 SANTOL DAY CARE CENTER

LOCATION:

BRGY. SANTOL, DISTRICT 4, QUEZON CITY

DATE: 5/5/2021

CHECKED BY: J.E.

REVISION NO.:

SUBMITTED BY:

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

RECOMMENDING OFFICIAL:

ENGR. MARVIN R. VERZOSA, JR.
CH. ENGINEERING DEPARTMENT

APPROVED BY:

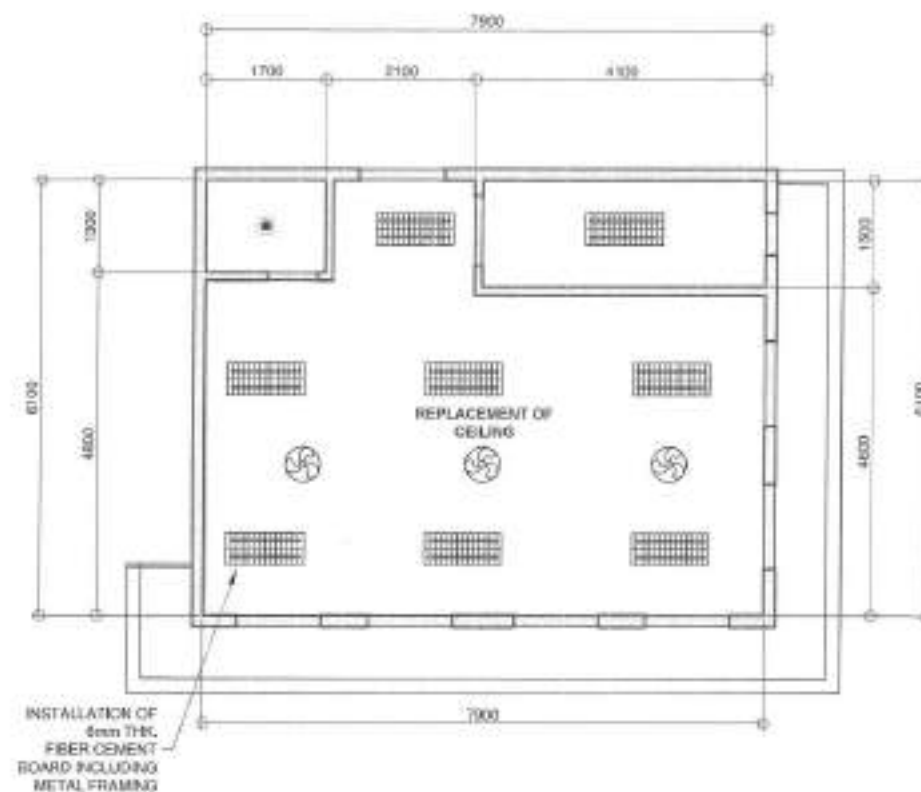
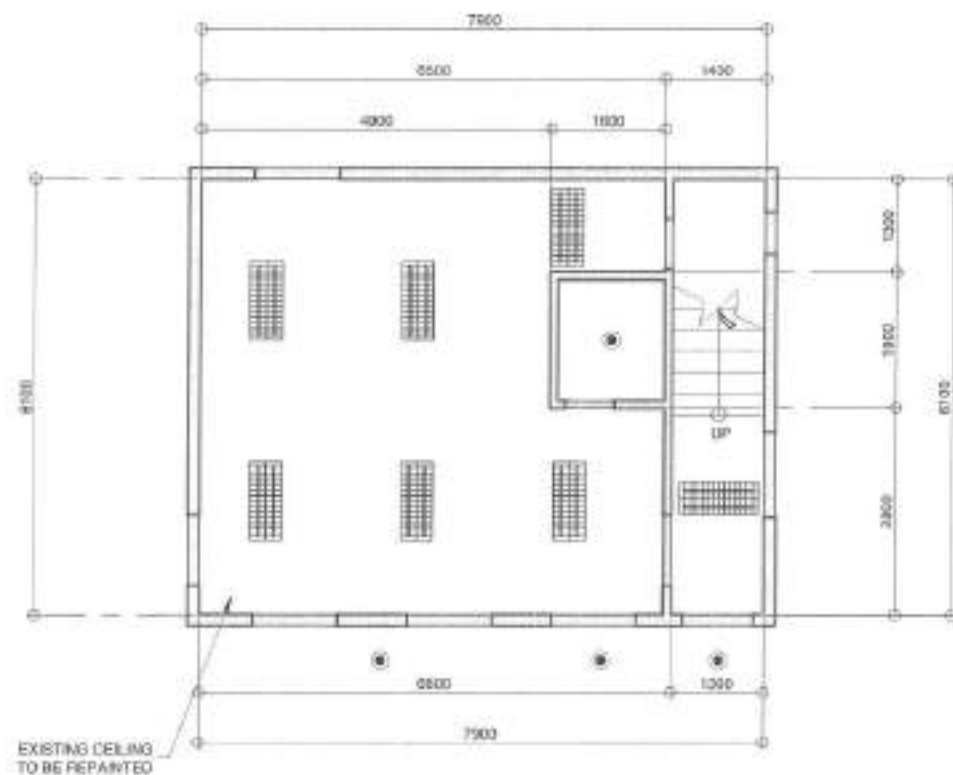
HON. MA. JOSEFINA G. BELMONTTE
CITY MAYOR, QUEZON CITY

SHEET CONTENT

GROUND FLOOR PLAN
SECOND FLOOR PLAN

SHEET NO.

AR-02
02/13



1 GROUND FLOOR REFLECTED CEILING PLAN

SCALE: 1:75M

2 SECOND FLOOR REFLECTED CEILING PLAN

SCALE: 1:75M



Republika ng Pilipinas
Lungsod ng Quezon
CITY ENGINEERING DEPARTMENT

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

LOCATION:
Brgy. SANTOL, DISTRICT 4, QUEZON CITY

DESIGNED BY: *[Signature]*
DATE: 19-8-2021
CHECKED BY: *[Signature]*
REVISION NO.

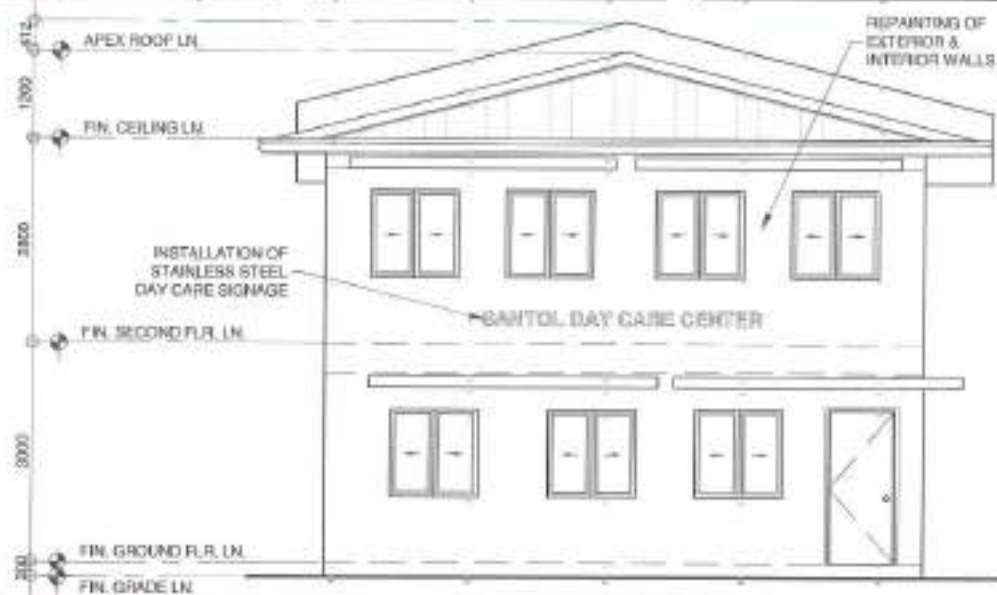
SUBMITTED BY:
[Signature]
ENGR. LEO S. DEL ROSARIO
HEAD, PLANNING & PROGRAMMING DIVISION

RECOMMENDING APPROVAL:
[Signature]
ENGR. GABRIEL R. VERZOSA, JR.
O.C. CITY ENGINEERING DEPARTMENT

APPROVED BY:
[Signature]
HON. MA. JOSEFINA S. BELMORTE
CITY MGR., QUEZON CITY

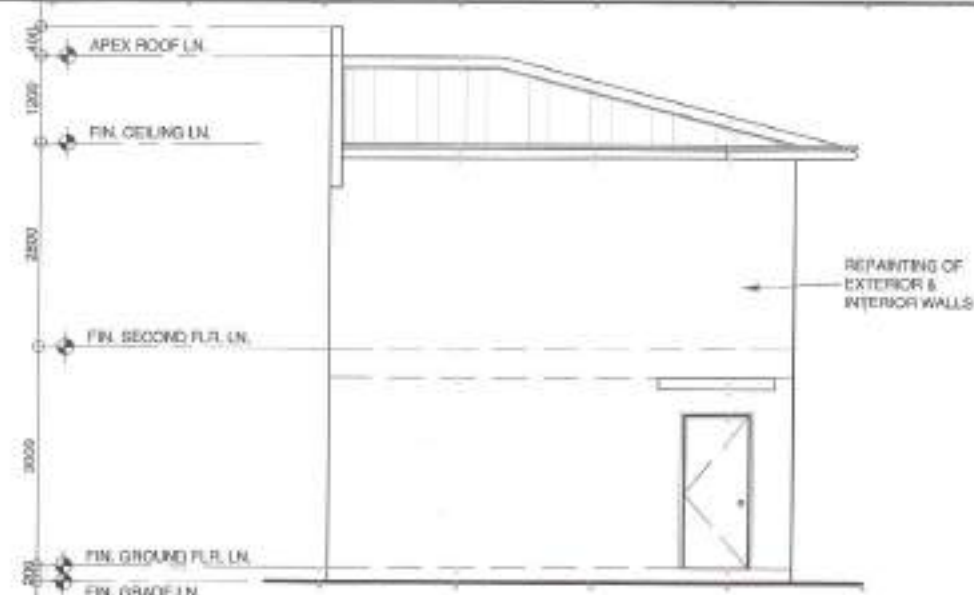
SHEET CONTENT:
GROUND FLOOR REFLECTED
CEILING PLAN
SECOND FLOOR REFLECTED
CEILING PLAN

SHEET NO.
AR-03
03/13



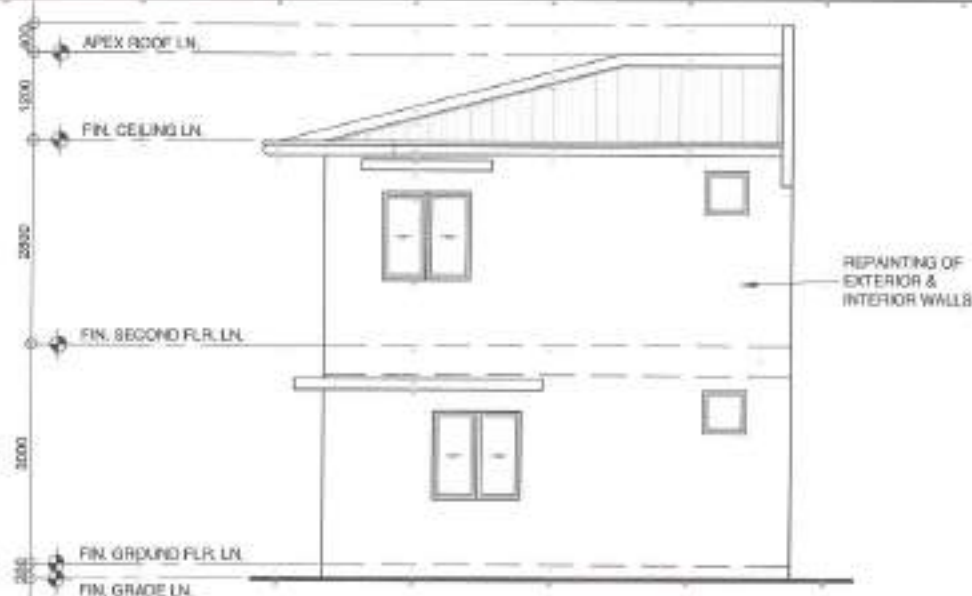
1 FRONT ELEVATION

SCALE: 1:75M



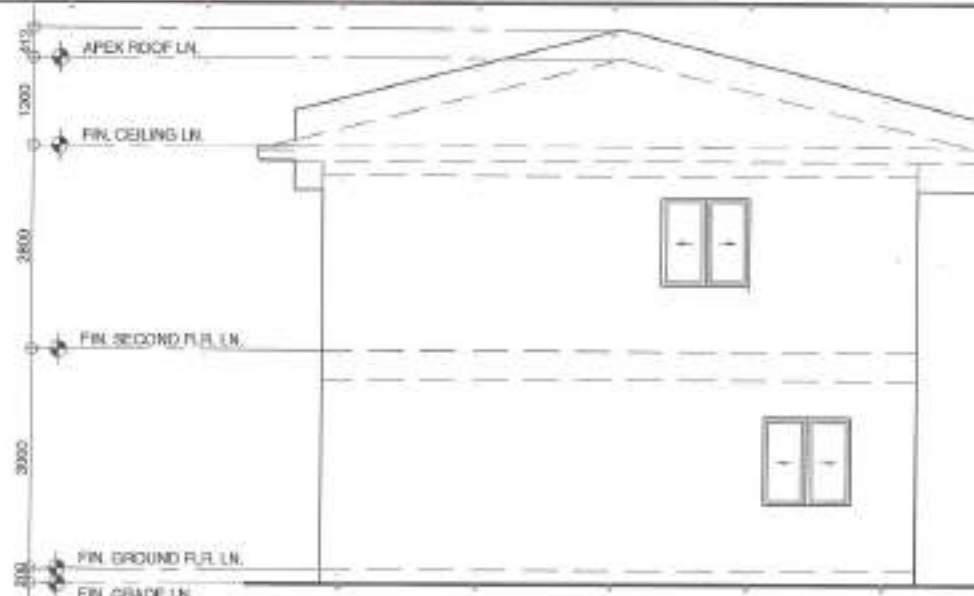
2 LEFT SIDE ELEVATION

SCALE: 1:75M



3 RIGHT SIDE ELEVATION

SCALE: 1:75M



4 REAR ELEVATION

SCALE: 1:75M



Republika ng Pilipinas
Lungsod ng Quezon
CITY ENGINEERING DEPARTMENT

PROJECT TITLE:
PROPOSED CONSTRUCTION OF HAND
WASHING FACILITY AND REHABILITATION
OF SANTOL DAY CARE CENTER
LOCATION:
BRGY. SANTOL, DISTRICT 4, QUEZON CITY

DESIGNED BY:
DATE: 06.2021
CHECKED BY: JAM
REVISION NO:

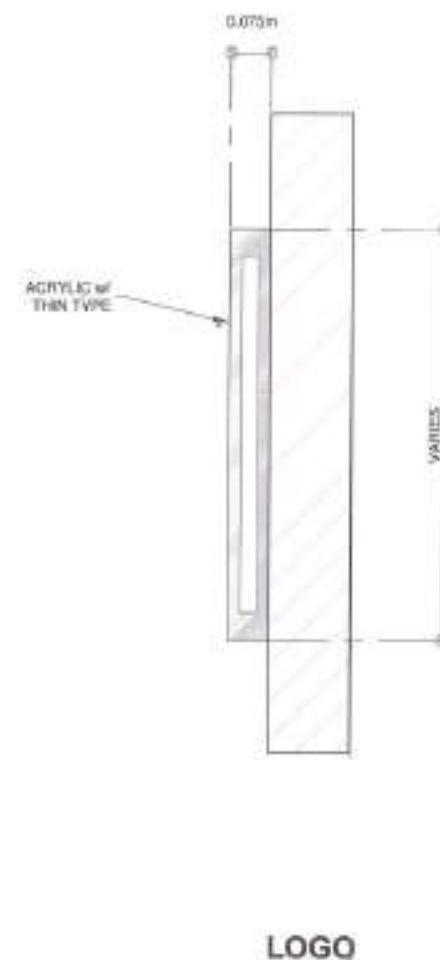
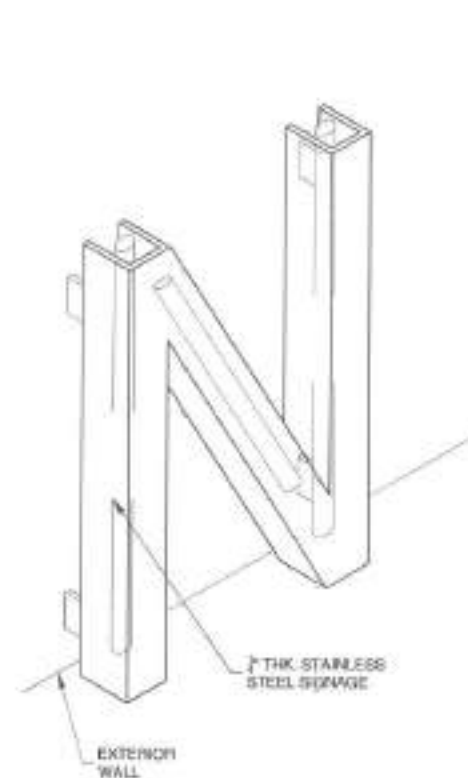
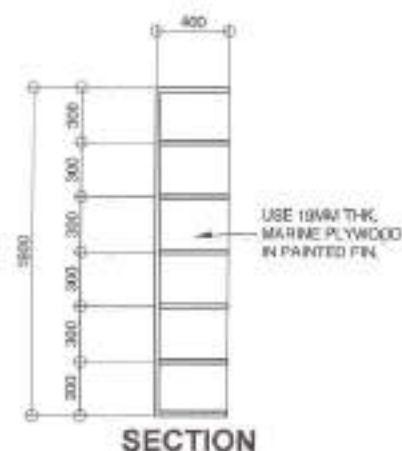
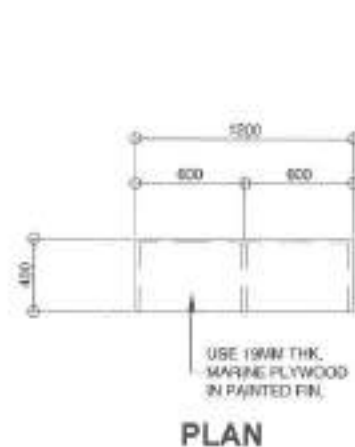
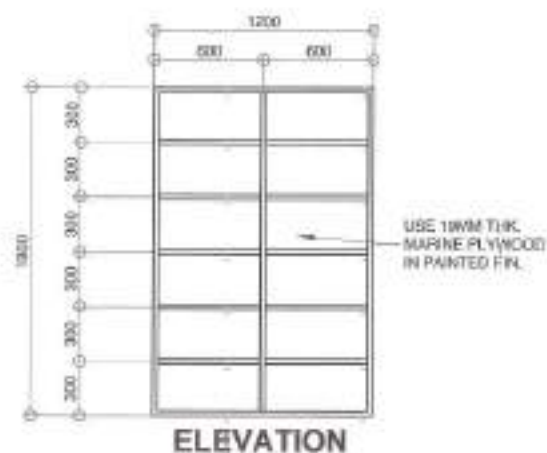
SUBMITTED BY:
ENGR. LEO S. DEL ROSARIO
HEAD, PLANNING & PROGRAMMING DIVISION

RECOMMENDING AUTHORITY:
ENGR. ISABERN R. VERZOSA, JR.
CH. CITY ENGINEERING DEPARTMENT

APPROVED BY:
HON. RA. JOSEFINA G. BELMONTTE
CITY MAYOR, QUEZON CITY

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

SHEET NO:
AR-04
04 13



1 SHELVES DETAILS

SCALE: 1:30M.

2 STANDARD LOGO DETAILS

SCALE: 1:10M.



Republika ng Pilipinas
Lungsod ng Quezon
CITY ENGINEERING DEPARTMENT

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

LOCATION:
DRIV. SANTOL, DISTRICT 4, QUEZON CITY

DESIGNED BY: MM
DATE: 04/2021
CHECKED BY: JMN
REVISION NO.

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

RECOMMENDING APPROVAL:
ENGR. SAGAN R. VERZOSA, JR.,
OFF. CITY ENGINEER/INSPECTOR

APPROVED BY:
HON. MA. JOSEFINA O. BELMORITE
CITY MAYOR, QUEZON CITY

SHEET CONTENT:
SHELVES DETAILS
STANDARD LOGO DET.

SHEET NO.:
AR-05
05 13

[illegible]

2175

825

1175

STAINLESS STEEL ROOFING PAINTED FINISH

0.5mm PREPARED G.I SHEET (FOR BANNER)

STAINLESS STEEL BACKING

STAINLESS STEEL PAINTED FINISH

STAINLESS STEEL BASE

STAINLESS STEEL ROOFING PAINTED FINISH

200 450

1375

2175

725

100 100 100 100 100 100

STAINLESS STEEL QUEZON CITY LOGO

STAINLESS STEEL PAINTED FINISH

STAINLESS STEEL PEDAL FOR WATER AND SOAP DISPENSING MECHANISM

STAINLESS STEEL BASE

450 200

STAINLESS STEEL ROOFING PAINTED FINISH

STAINLESS STEEL QUEZON CITY LOGO

STAINLESS STEEL PAINTED FINISH

STAINLESS STEEL PEDAL FOR WATER AND SOAP DISPENSING MECHANISM

STAINLESS STEEL BASE

| | |
|---|-------------------------------|
| 1 | HAND WASHING FACILITY DETAILS |
|---|-------------------------------|



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

LOCATION: BRGY. SANTOL, DISTRICT 4, QUEZON CITY

| |
|---|
| ORIGINAL OF THIS DOCUMENT DATE: 9/4/2001 CHECKED BY: <i>[Signature]</i> ACTION NO.: |
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ENGR. LEO B. DEL ROSARIO
REG. PROFESSIONAL ENGINEER CIVIL

RECOMMENDING AGENCY:

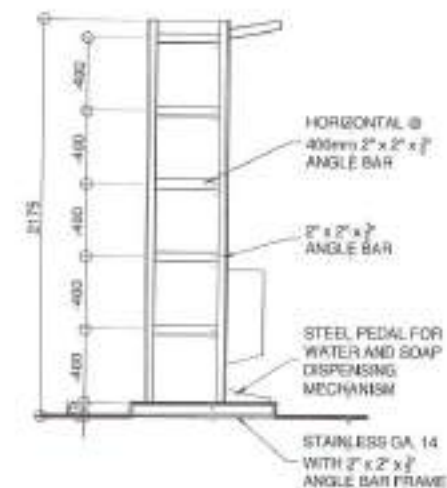
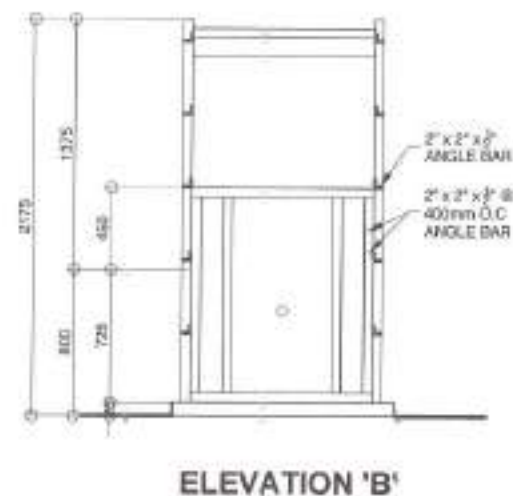
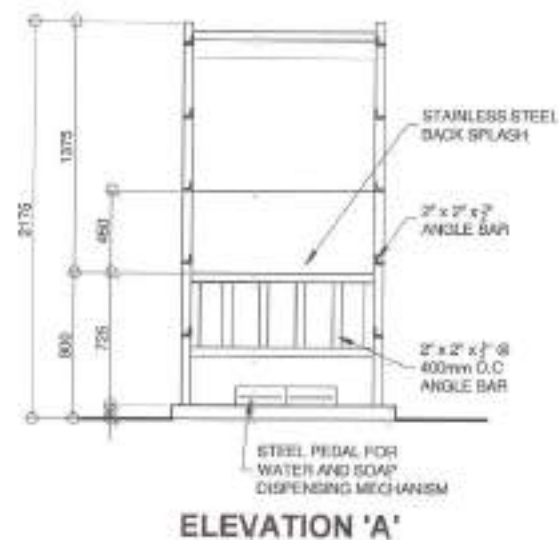
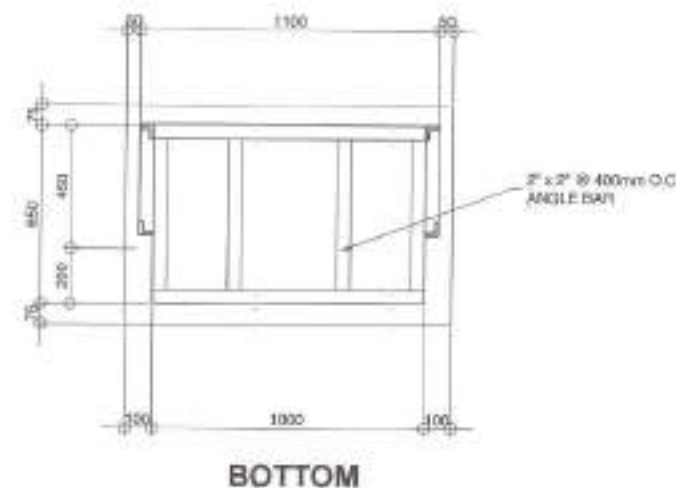
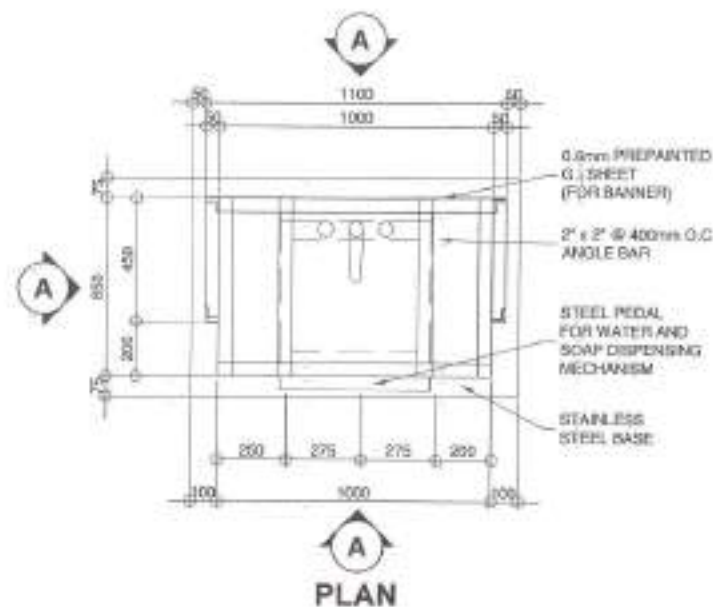
ENGR. ISAGAN R. VERZOSA, JR.
CH. CITY ENGINEER/PERMIT

APPROVED BY:

HON. RA. JOSEFINA G. BELMONT/TE
JOSE.MARQUEL@CARTELAS.COM


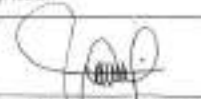


THIRD MACHINE
PAGE SIXTY-SEVEN

AR-06
06 13



1 HAND WASHING FACILITY (STRUCTURAL)

SCALE: 1/32"=1'-0"

| | | | | | | | |
|---|--|---|--|--|--|---|---|
|  <p>Republikang Pilipinas Lungsod ng Quezon CITY ENGINEERING DEPARTMENT</p> | <p>PROJECT TITLE: PROPOSED CONSTRUCTION OF HAND WASHING FACILITY AND REHABILITATION OF SANTOL DAY CARE CENTER</p> <p>LOCATION: BRGY. SANTOL DISTRICT 4, QUEZON CITY</p> | <p>DATE: 06.2021 CHECKED BY: JAE REVISION NO.</p> | <p>SUBMITTED BY:  ENGR. LEO S. DEL ROSARIO 1830, PLAMING & PROGRAMMING DIVISION</p> | <p>RECOMMENDING APPROVAL:  ENGR. EDDMAR R. VERZOSA, JR. CITY ENGINEERING DEPARTMENT</p> | <p>APPROVED BY:  HON. MA. JOSEFINA G. BELMONTE CITY ATTORNEY, QUEZON CITY</p> | <p>SHEET CONTENT: HAND WASHING DETAILS (STRUCTURAL)</p> | <p>SHEET NO.: ST-01 07/13</p> |
|---|--|---|--|--|--|---|---|

1. All plumbing and/or mechanical installation shall be subject to the approval of the local office of National Plumbing Code, the rules and regulations of local authorities concerned, and the rules and regulations of local utility companies and the economy of the local developer when and where applicable.

2. The plumbing system shall be designed to provide adequate water supply and shall be constructed in accordance with the rules and regulations of the local authorities and the rules and regulations of local utility companies and the economy of the local developer when and where applicable.

3. The plumbing system shall be designed to provide adequate water supply and shall be constructed in accordance with the rules and regulations of the local authorities and the rules and regulations of local utility companies and the economy of the local developer when and where applicable.

4. Pipes shall be installed in accordance with the rules and regulations of the local authorities and the rules and regulations of local utility companies and the economy of the local developer when and where applicable.

5. Minimum slope for sanitary sewer lines shall be 1% and for storm sewer lines shall be 2%.

6. The plumbing system shall be designed to provide adequate water supply and shall be constructed in accordance with the rules and regulations of the local authorities and the rules and regulations of local utility companies and the economy of the local developer when and where applicable.

7. The installation of fixtures and fittings shall be in accordance with the rules and regulations of the local authorities and the rules and regulations of local utility companies and the economy of the local developer when and where applicable.

8. All floor drains shall be installed in accordance with the rules and regulations of the local authorities and the rules and regulations of local utility companies and the economy of the local developer when and where applicable.

9. All water and sewer lines shall be installed in accordance with the rules and regulations of the local authorities and the rules and regulations of local utility companies and the economy of the local developer when and where applicable.

10. All underground (U) pipes in direct contact with soil shall be provided with type 304 stainless steel or equivalent pipe with the proper schedule for the application.

11. Flexible and pipe connected pipe shall be installed in accordance with the rules and regulations of the local authorities and the rules and regulations of local utility companies and the economy of the local developer when and where applicable.

12. All water and sewer lines shall be installed in accordance with the rules and regulations of the local authorities and the rules and regulations of local utility companies and the economy of the local developer when and where applicable.

13. Provide pipe sleeves to all water supply and sewer lines.

14. All water pipes shall be provided with proper insulation where exposed.

15. All individual branches or lines or group of fixtures and/or equipment shall be provided with an emergency supply or backflow prevention or backflow preventer as shown.

16. All water pipes shall be installed in accordance with the rules and regulations of the local authorities and the rules and regulations of local utility companies and the economy of the local developer when and where applicable.

17. All water pipes shall be installed in accordance with the rules and regulations of the local authorities and the rules and regulations of local utility companies and the economy of the local developer when and where applicable.

18. All water pipes shall be installed in accordance with the rules and regulations of the local authorities and the rules and regulations of local utility companies and the economy of the local developer when and where applicable.

19. All water pipes shall be installed in accordance with the rules and regulations of the local authorities and the rules and regulations of local utility companies and the economy of the local developer when and where applicable.

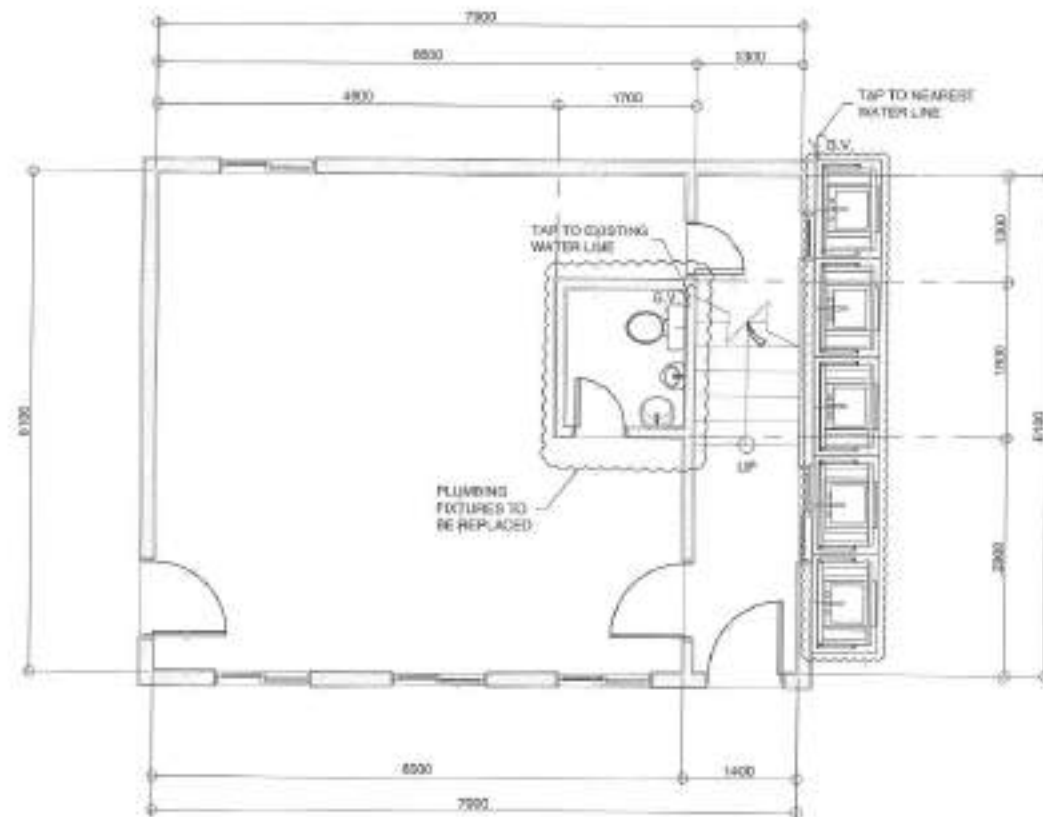
20. All plumbing and/or mechanical installation shall be subject to the approval of the local office of National Plumbing Code, the rules and regulations of local authorities concerned, and the rules and regulations of local utility companies and the economy of the local developer when and where applicable.

1. FIXTURES AND OTHER LEGEND

| | |
|-----|------------------------|
| FD | FLOOR DRAIN |
| RD | ROOF DRAIN |
| SHO | SHOWER |
| WC | WATER CLOSET |
| LAV | LAVATORY |
| UR | URINAL |
| KR | KITCHEN SINK |
| BD | BUILDING DRAIN |
| DD | DECK DRAIN |
| CCO | CEILING CLEAN-OUT |
| FCO | FLOOR/GROUND CLEAN-OUT |
| DS | DOWNSPOUT |
| SP | SUMP PUMP |
| R | 1/2" RADIUS |
| SHD | SHOWER DRAIN |
| CB | CATCH BASIN |
| MH | MANHOLE |
| DF | DIRECTION OF FLOW |
| GT | GREASE TRAP |

2. SEWER/WASTE AND VENT SYSTEM

| | |
|-----------|------------------------------------|
| SP / WP | SOIL PIPE / WASTE PIPE |
| VS / VAC | VENT STACK / VENT AT CEILING |
| DP | STORM DRAIN PIPE |
| DS | DRAINAGE STACK / DOWNSPOUT |
| SVTR | STACK VENT/EXTENDED THROUGH ROOF |
| SS | SOIL STACK |
| FCO / GCO | FLOOR CLEAN-OUT / GROUND CLEAN-OUT |
| CCO | CEILING CLEAN-OUT |
| SPDR | SUMP PIT DISCHARGE RISER |
| SPOP | SUMP PIT DISCHARGE PIPE |
| AD/CB | AREA DRAIN/CATCH BASIN |
| DD | DECK DRAIN |



1 GENERAL NOTES AND LEGENDS

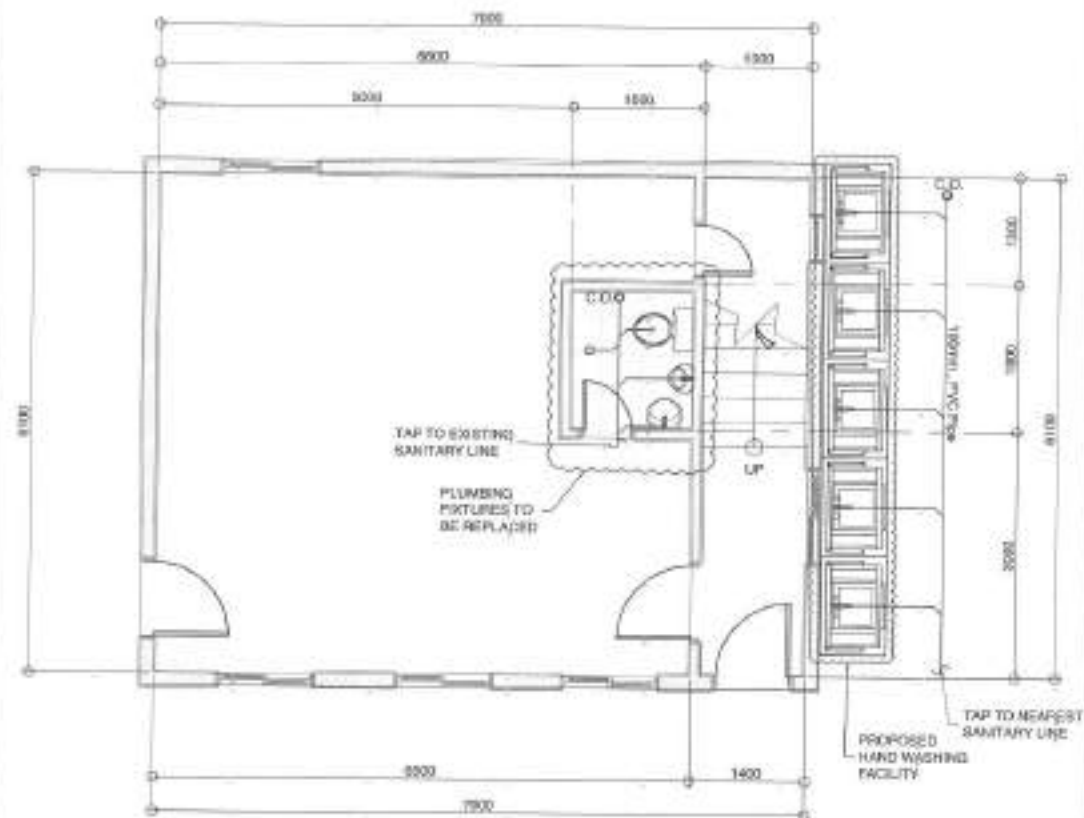
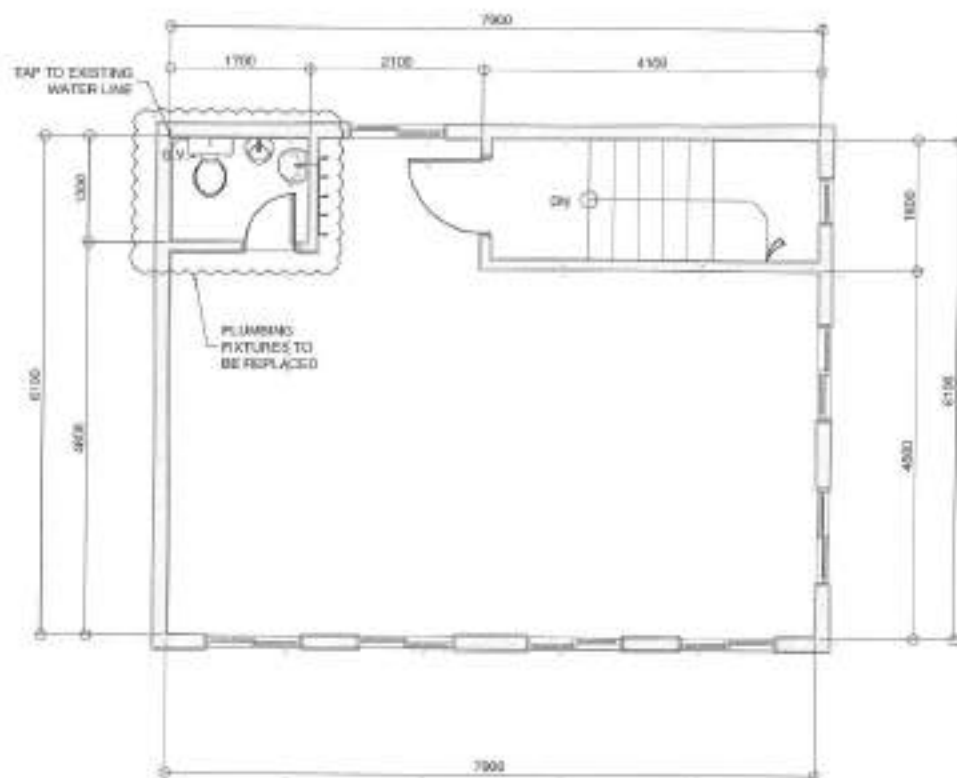
2 GROUND FLOOR WATER LINE LAYOUT

SCALE: 1:60 M.



Republika ng Pilipinas
Lungsod ng Quezon
CITY ENGINEERING DEPARTMENT

| | | | | | | |
|--|-----------------------------------|--|---|---|--|--|
| PROJECT TITLE: PROPOSED CONSTRUCTION OF HAND WASHING FACILITY AND REHABILITATION OF SANTOL DAY CARE CENTER | DATE: 5.1.2021 CHECKED BY: JAM | SUBMITTED BY: | RECOMMENDING APPROVAL: | APPROVED BY: | SHEET CONTENT: GENERAL NOTES & LEGEND GROUND FLOOR WATER LINE LAYOUT | SHEET NO.: PL-01 08/13 |
| LOCATION: BNGV, SANITOL, STREET 2, QUEZON CITY | REV/NO. | ENGR. LEO S. DEL ROSARIO HEAD, PLUMBING & PROGRAMS DIVISION | ENGR. ISAGANI R. VERZOSA, JR. C.E., CIVIL ENGINEERING DEPARTMENT | HON. RA. JOSEFINA O. BELMONTE CITY ENGINEER, QUEZON CITY | | |



1 SECOND FLOOR WATER LINE LAYOUT

SCALE: 1:60 M.

2 GROUND FLOOR SANITARY LINE LAYOUT

SCALE: 1:60 M.



Republika ng Pilipinas
Lungsod ng Quezon
CITY ENGINEERING DEPARTMENT

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

LOCATION:
BRGY. SANTOL, DISTRICT 4, QUEZON CITY

DESIGNED BY:
DATE: 11/2021
CHECKED BY:
REVISION NO.:

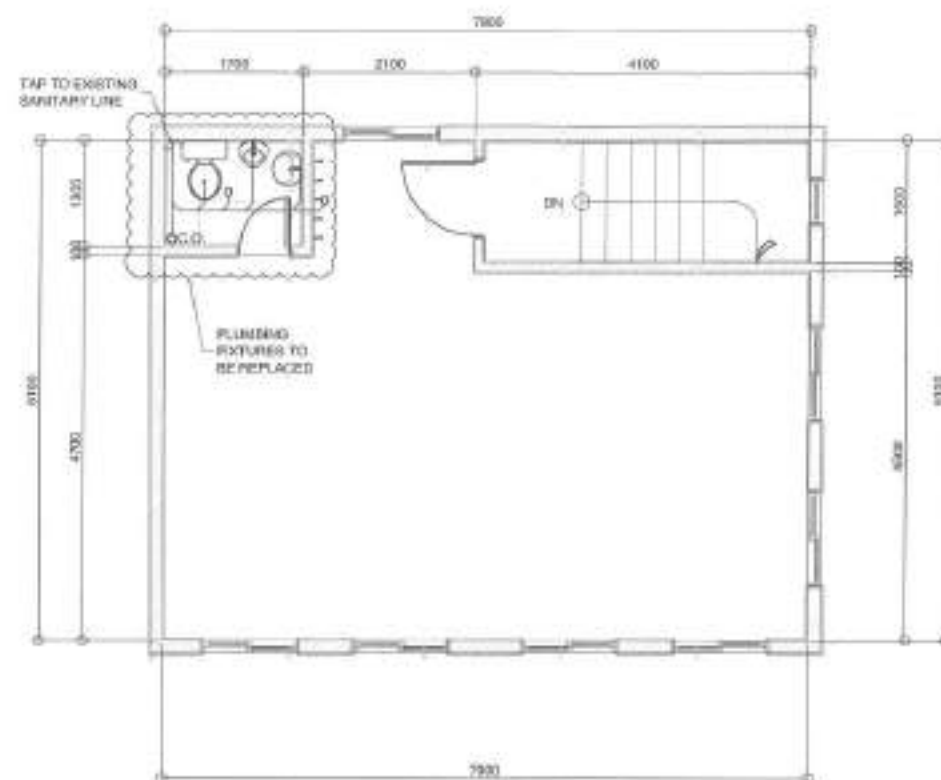
DESIGNED BY:
ENGR. LEO S. DEL ROSARIO
HEAD, PLANNING & PROGRAMMING DIVISION

RECOMMENDED APPROVAL:
ENGR. ISAGOR R. VERZOSA, JR.
D.O., CITY ENGINEERING DEPARTMENT

APPROVED BY:
NON. RA. JOSEFINA G. BELMONTE
CITY MAJOR, QUEZON CITY

SHEET CONTENT:
SECOND FLOOR
WATERLINE LAYOUT
GROUND FLOOR
SANITARY LINE
LAYOUT

SHEET NO.:
PL-02
09 13



1 SECOND FLOOR SANITARY LINE LAYOUT

SCALE: 1:50 M.



Republika ng Pilipinas
Lungsod ng Quezon
CITY ENGINEERING DEPARTMENT

PROJECT TITLE:

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

LOCATION:

DIST. SANTOL, DISTRICT 4, QUEZON CITY

DESIGNED BY:

DATE: 11/1/2021

CHECKED BY: JM

REVISION NO.

SUBMITTED BY:

ENGR. LEONIL DEL ROSARIO
HEAD, PLUMBING & ELECTRICITY DIVISION

RECOMMENDING APPROVAL:

ENGR. GABRIEL R. VERZOSA, JR.
CH. OF PLUMBING & ELECTRICITY DIVISION

APPROVED BY:

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

SHEET CONTENT:

SECOND FLOOR
SANITARY LINE
LAYOUT

SHEET NO.

PL-03
10/13

- ALL ELECTRICAL WORKS SHALL BE DONE IN ACCORDANCE WITH THE PROVISIONS OF THE LATEST EDITION OF THE PHILIPPINE ELECTRICAL CODE, THE LAWS AND ORDINANCES OF THE LOCAL CODE ENFORCING AUTHORITIES AND THE REQUIREMENTS OF THE LOCAL POWER AND TELEPHONE UTILITY COMPANY.
- THE CONTRACTOR SHALL SECURE ALL PERMITS AND PAY ALL FEES REQUIRED FOR THE WORK AND SHALL FURNISH THE OWNER THROUGH THE ENGINEER, FINAL CERTIFICATES OF ELECTRICAL INSPECTION AND APPROVAL FROM PROPER GOVERNMENT AUTHORITIES FOR COMPLETION OF WORK.
- ALL EMBEDDED BRANCH CIRCUITS SHALL BE PVC CONDUITS AND FOR EXPOSED INSTALLATION SHALL BE IMC SUPPORTED BY CONDUIT CLAMPS EVERY 900 MILLIMETERS.
- PULL BOXES SHALL BE PROVIDED BY THE CONTRACTOR WHENEVER NECESSARY TO FACILITATE WIRE PULLING EVEN IF THESE ARE NOT INDICATED ON THE PLANS. (BEND) OF ALL PULL BOXES SHALL BE COMPUTED BASED ON THE CODE REQUIREMENTS. SUBMIT SHOP DRAWINGS TO THE ENGINEER FOR APPROVAL. PRIOR TO FABRICATION LOCATION OF PULL BOXES SHALL BE APPROVED BY THE ARCHITECT/ENGINEER AND MUST BE REFLECTED ON THE "AS BUILT" PLAN.
- ALL POWER OUTLETS AND SWITCHES SHALL BE GROUNDING TYPE WITH PARALLEL SLOTS FOR 120V.
- PROVIDE GROUND FAULT CURRENT INTERRUPTER (GFCI) BREAKER FOR LOADS MARKED "GFCI" ON THE PLAN.
- ALL METALLIC CONDUITS, CABINETS AND EQUIPMENT SHALL BE PROPERLY GROUNDED AND BONDED.
- UNLESS OTHERWISE NOTED, MOUNTING HEIGHT FOR WALL MOUNTED DEVICES SHALL BE AS FOLLOWS:

RECEPTACLE OUTLET - 380 MM AFF, 150MM ABOVE WORKING COUNTER.
TELEPHONE OUTLET - 300 MM AFF
DATA OUTLET - 300 MM AFF
LIGHTING SWITCH - 1400 MM AFF
PANELBOARD - 1800 MM AFF

- REFER TO MECHANICAL, PLUMBING AND FIRE PROTECTION DRAWINGS FOR RATINGS AND LOCATIONS OF EQUIPMENT AS WELL AS THEIR CONTROL SEQUENCES AS REFERRED AND OR SHOWN UNDER THEIR RESPECTIVE NOTATIONS.
- ALL MATERIALS TO BE USED SHALL BE OF THE BEST QUALITY, BRAND NEW AS SPECIFIED.
- THE DRAWINGS AND SPECIFICATIONS ARE INTENDED TO PRESENT GENERAL LAYOUT AND BASIC OUTLINE DESCRIPTION OF THE PROJECT BUT DO NOT NECESSARILY INDICATED EXACT ACTUAL LOCATIONS, LEVEL AND DISTANCES OF THE EQUIPMENT. THE CONTRACTOR IS HEREBY REQUIRED TO MAKE SUCH ADJUSTMENT AT THE JOB SITE AS LOCATION, DISTANCES AND LEVELS ARE GOVERNED BY ACTUAL FIELD CONDITIONS.
- ANY DISCREPANCY BETWEEN THE PLANS AND SPECIFICATIONS SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER FOR CLARIFICATION DECISION.
- ALL LIGHTING AND CONDUIT OUTLET CIRCUITS SHALL BE 25 SQ. MM. THIN 2 COPPER WIRE UNLESS OTHERWISE NOTED. MINIMUM SIZE OF WIRE SHALL BE 15 SQ. MM. COPPER WIRE. ALL WIRES AND CABLES SHALL BE COLOR CODED AS FOLLOWS:

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

- BOXES, WIRE, GUTTERS, ENCLOSURE SHALL BE FABRICATED FROM STEEL WITH THICKNESS AS FOLLOWS:
MINIMUM 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 457.20 GA 14 PAINTED WITH METAL PRIMER EPOXY AND TOPCOAT
OVER 457.20 MM BUT NOT OVER 762.00 GA 12 PAINTED WITH METAL PRIMER EPOXY AND TOPCOAT
OVER 762.00 GA 10 PAINTED WITH METAL PRIMER EPOXY AND TOPCOAT
- 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.
- TYPE OF SERVICE ENTRANCE SHALL BE SINGLE-PHASE, TWO-WIRE PLUS GROUND, 60 HERTZ, 200V AC NOMINAL.
- 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.
- 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

SCALE: NTS



Republika ng Pilipinas
Lungsod ng Quezon
CITY ENGINEERING DEPARTMENT

PROJECT TITLE:
PROPOSED CONSTRUCTION OF HAND WASHING FACILITY AND REHABILITATION OF SANTOL DAY CARE CENTER
LOCATION:
BGGY. SANTOL, DISTRICT 4, QUEZON CITY

DESIGNED BY:
CHECKED BY:
REVISION NO.:

SUBMITTED BY:
ENGR. LEO S. OIL ROSARIO
HEAD, PLANNING AND DESIGN DIVISION

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

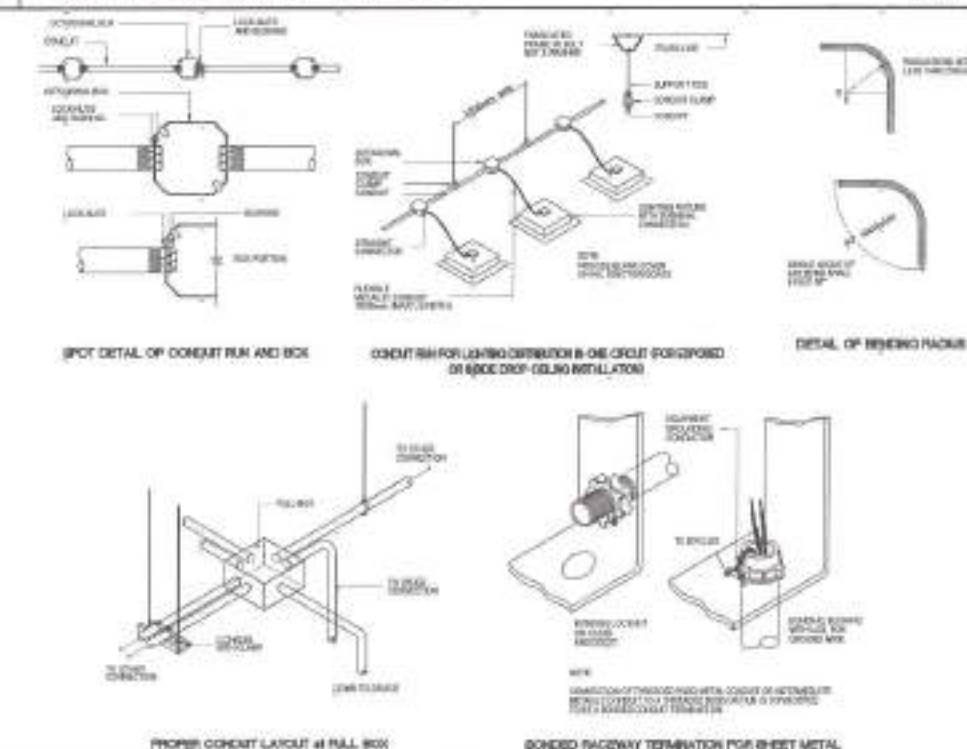
APPROVED BY:
HON. MA. JOSEFINA G. BELMONTE
CITY MAYOR, QUEZON CITY

SHEET NO./TOTAL
SHEET NO. 01
SHEET TOTAL 13

SHEET NO.
EL-01
11/13

2 LEGENDS AND SYMBOLS

SCALE: NTS

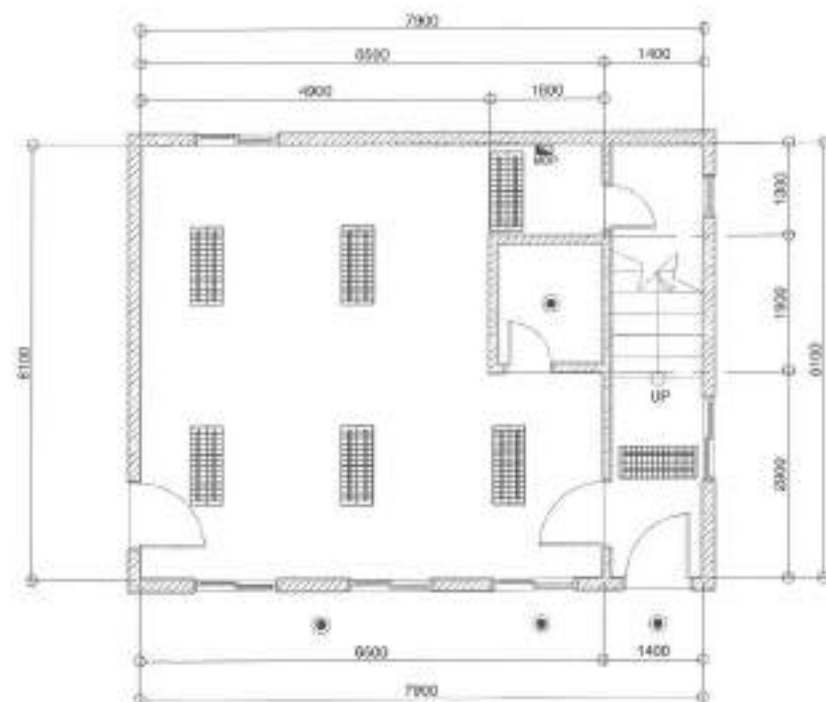


3 MISCELLANEOUS DETAILS

SCALE: NTS

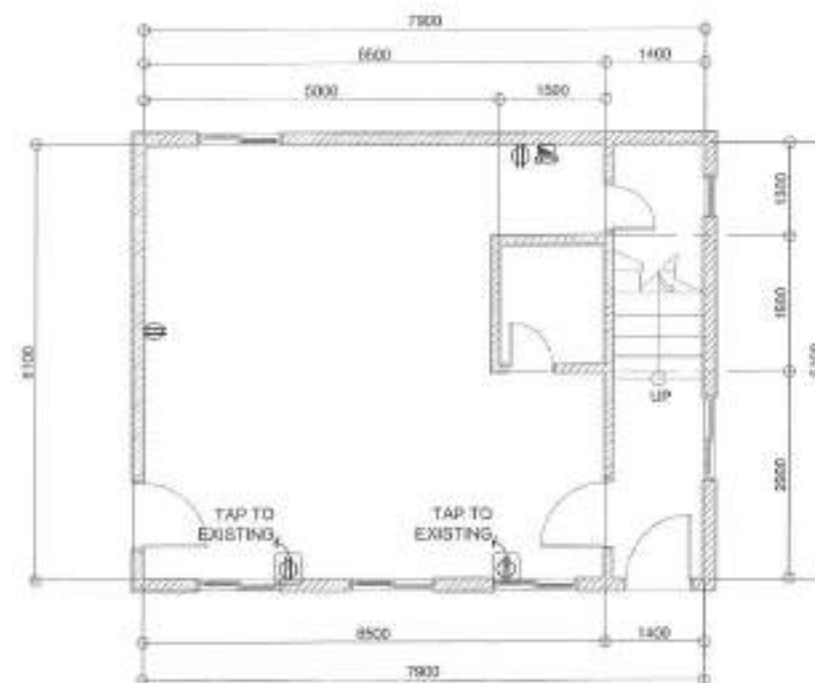
SCOPE OF WORKS:

- LIGHTING FIXTURES TO BE REPLACED.



SCOPE OF WORKS:

- CONVENIENCE OUTLET TO BE REPLACED
- ADDITIONAL CONVENIENCE OUTLET TO BE INSTALLED



1 GROUND FLOOR LIGHTING LAYOUT

SCALE: 1:375M

2 GROUND FLOOR POWER LAYOUT

SCALE: 1:375M



Republika ng Pilipinas
Lungsod ng Quezon
CITY ENGINEERING DEPARTMENT

PROJECT TITLE:

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

LOCATION:

BRGY. SANTOL, DISTRICT 4, QUEZON CITY

DRAWN BY:

DATE: 9/1/2021

CHECKED BY:

REVISION NO.:

SUBMITTED BY:

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

RECOMMENDING APPROVAL:

ENGR. RADEN R. VERZOSA, JR.
CC, CIVIL ENGINEERING DIVISION

APPROVED BY:

HON. MA. JOSEFINA G. DEL MONTE
CITY ENGINEER - QUEZON CITY

SHEET CONTENT:

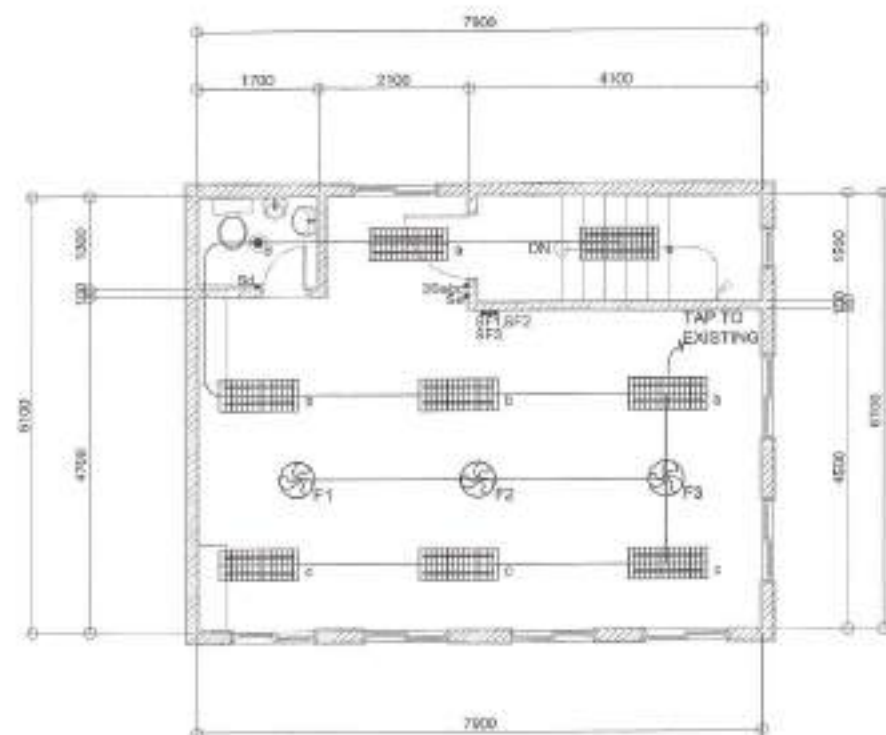
GROUND FLOOR LIGHTING
LAYOUT
GROUND FLOOR POWER
LAYOUT

SHEET NO.:

EL-02
12/13

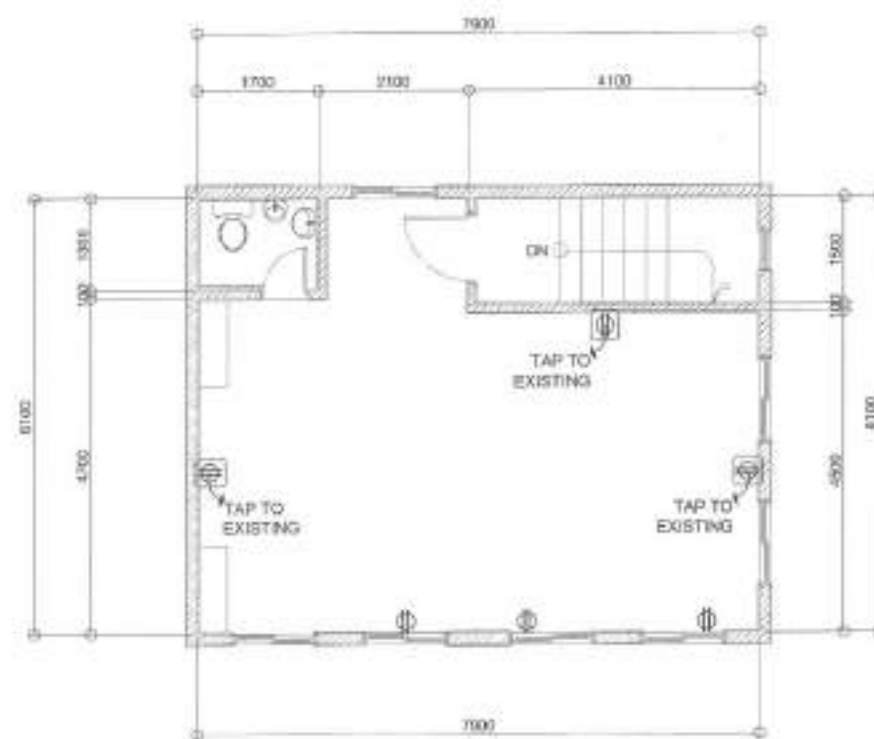
SCOPE OF WORKS:

- ADDITIONAL LIGHTING FIXTURES, SWITCHES, AND ORBIT FAN TO BE INSTALLED,



SCOPE OF WORKS:

- CONVENIENCE OUTLET TO BE REPLACED
- ADDITIONAL CONVENIENCE OUTLET TO BE INSTALLED



1 SECOND FLOOR LIGHTING LAYOUT

SCALE: 1:75M

2 SECOND FLOOR POWER LAYOUT

SCALE: 1:75M



Republika ng Pilipinas
Lungsod ng Quezon
CITY ENGINEERING DEPARTMENT

PROJECT TITLE:

PROPOSED RECONSTRUCTION OF HAND
WASHING FACILITY AND REHABILITATION
OF SANTOL DAY CARE CENTER

LOCATION:

BRGY. SANTOL, DISTRICT 4, QUEZON CITY

DESIGNED BY:

DATE: 8.1.2021

CHECKED BY:

REVISIONS:

SUBMITTED BY:

DATE: 8.1.2021

CHECKED BY:

REVISIONS:

ENGR. LEY S. DEL ROSARIO
HEAD, PLANNING & DESIGN DIVISION

RECOMMENDING AUTHORITY:

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

APPROVED BY:

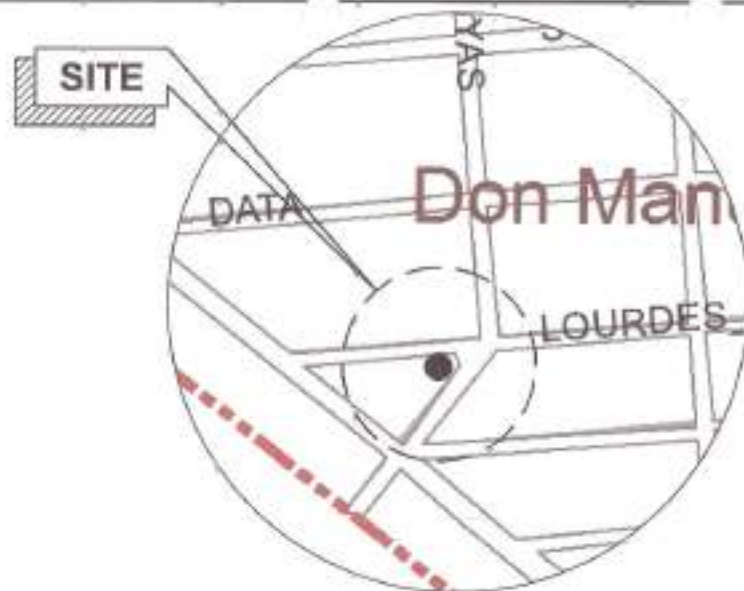
HON. MA. JOSEFINA G. BELMONTE
CITY MAJOR, QUEZON CITY

SHEET CONTENT:

SECOND FLOOR LIGHTING
LAYOUT
SECOND FLOOR POWER
LAYOUT

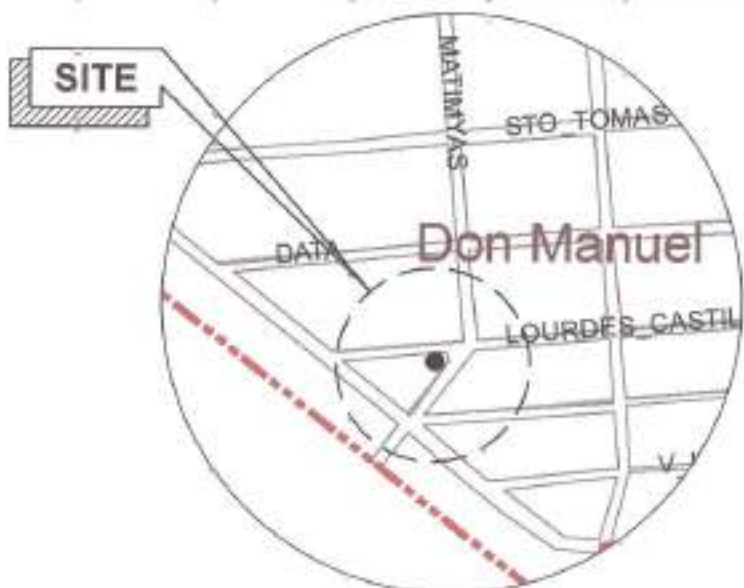
SHEET NO:

EL-03
13/13



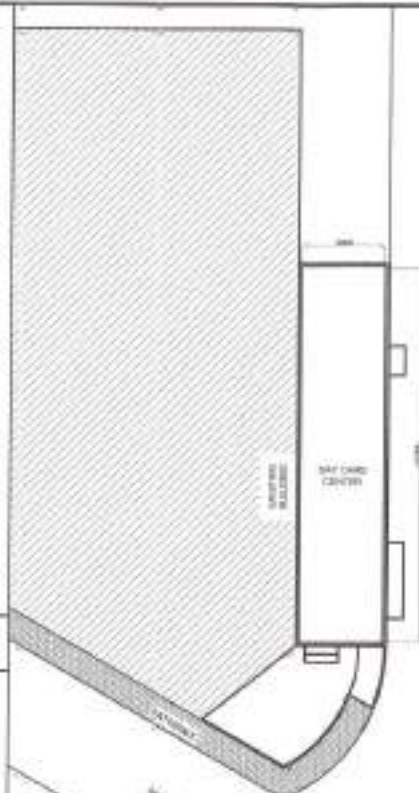
1 LOCATION MAP

SCALE: NTS



2 VICINITY MAP

SCALE: NTS



3 SITE DEVELOPMENT PLAN

SCALE: 1:200M

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| | SECTION THRU 'M' |
| | RIGHT SIDE ELEVATION |
| | FRONT SIDE ELEVATION |
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| | STANDARD LOAD DETAILS |

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Republika ng Pilipinas
Lungsod ng Quezon
CITY ENGINEERING DEPARTMENT

PROJECT TITLE:

PROPOSED REHABILITATION OF
DON MANUEL DAY CARE CENTER

LOCATION:

BRGY. DON MANUEL, DISTRICT 4, QUEZON CITY

DRAWN BY:

DATE: 08/2021

CHECKED BY:

REVISION NO:

SUBMITTED BY:

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

RECOMMENDING APPROVAL:

ENGR. ISMAEL R. VERZOSA, JR.
OC, CIVIL ENGINEERING DIVISION

APPROVED BY:

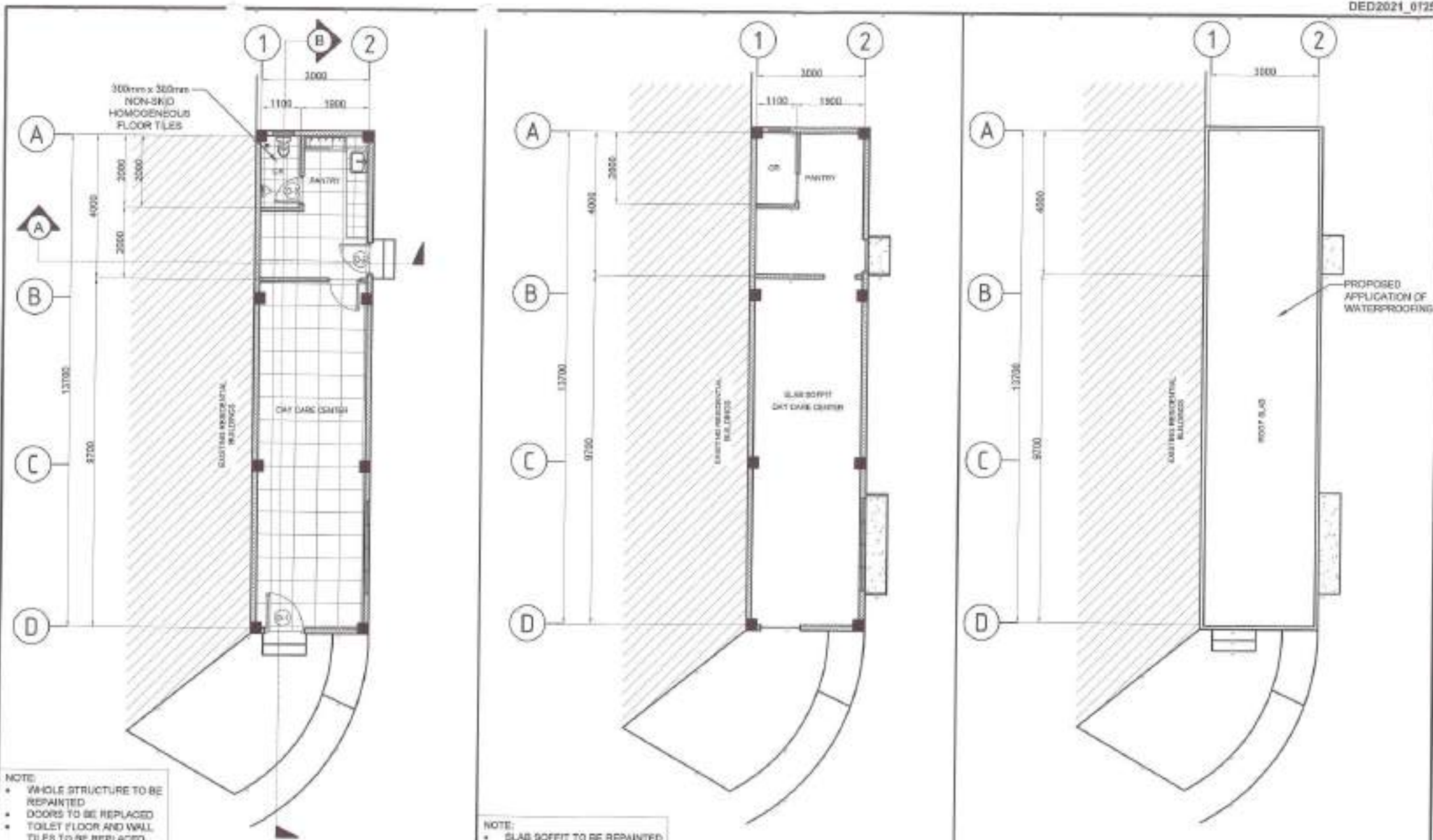
HON. MA. JOSEFINA G. BELMONTÉ
CITY MAYOR, QUEZON CITY


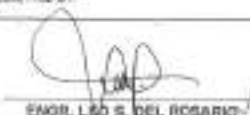
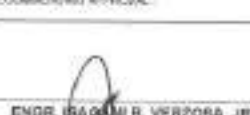
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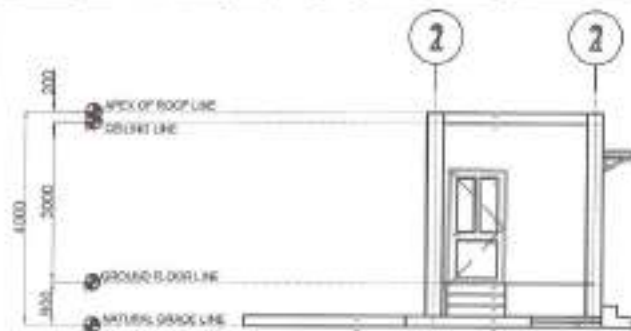
VICINITY MAP
LOCATION MAP
SITE DEVELOPMENT PLAN

SHEET NO:

AR-1
01/07

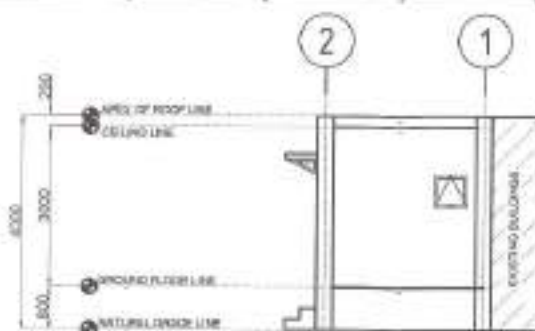


| | | | | | | | |
|--|--|---|---|---|--|--|-----------------------------|
|  <p>Republika ng Pilipinas Lungsod ng Quezon CITY ENGINEERING DEPARTMENT</p> | PROJECT TITLE: | DRAWN BY: | SUBMITTED BY: | RECOMMENDING APPROVAL: | APPROVED BY: | SHEET CONTENT: | SHEET NO. |
| | PROPOSED REHABILITATION OF DON MANUEL DAY CARE CENTER | DATE: 08.2021 CHECKED BY: JEN REVISION NO.: |  ENGR. LEO S. DEL ROSARIO HEAD, PLANNING & PROGRAM DIVISION |  ENGR. IBRAHIM R. VERZOSA, JR. CH. OF CITY ENGINEERING DEPARTMENT | HON. MA. JOSEFINA O. BELMORITE CITY MAJOR, CONJUNCTION | FLOOR PLAN REFLECTED CEILING PLAN ROOF PLAN | AR-2 02 07 |



1 FRONT ELEVATION

SCALE: 1:100M



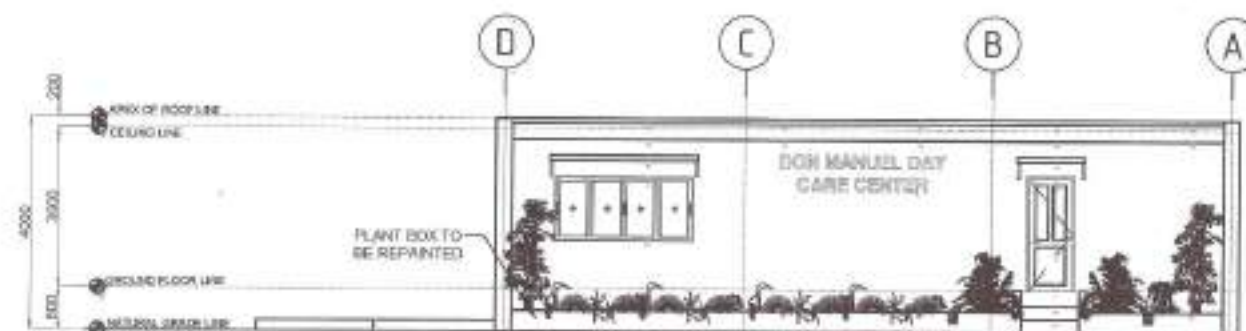
2 REAR ELEVATION

SCALE: 1:100M



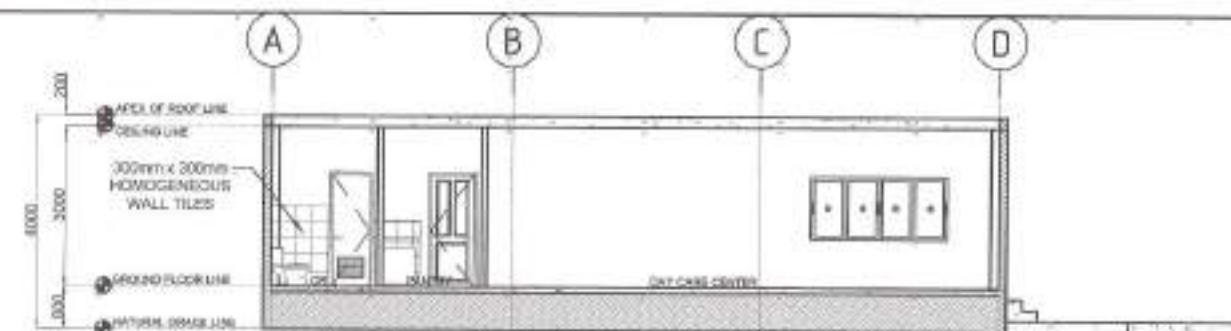
3 SECTION THRU "A"

SCALE: 1:100M



4 RIGHT SIDE ELEVATION

SCALE: 1:100M



5 SECTION THRU "B"

SCALE: 1:100M

NOTE:
• WHOLE STRUCTURE TO BE REPAINTED



Republika ng Pilipinas
Lungsod ng Quizon
CITY ENGINEERING DEPARTMENT

PROJECT TITLE:
**PROPOSED REHABILITATION OF
DON MANUEL DAY CARE CENTER**
LOCATION:
BPOV, DON MANUEL, DISTRICT 4, QUIZON CITY

DRAWN BY:
DATE: 08/08/21
CHECKED BY: JAY
REVISOR:

SUBMITTED BY:

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

RECOMMENDING APPROVAL:

ENGR. EDMAR R. VERZOSA, JR.
CH. CITY ENGINEERING DEPARTMENT

APPROVED BY:

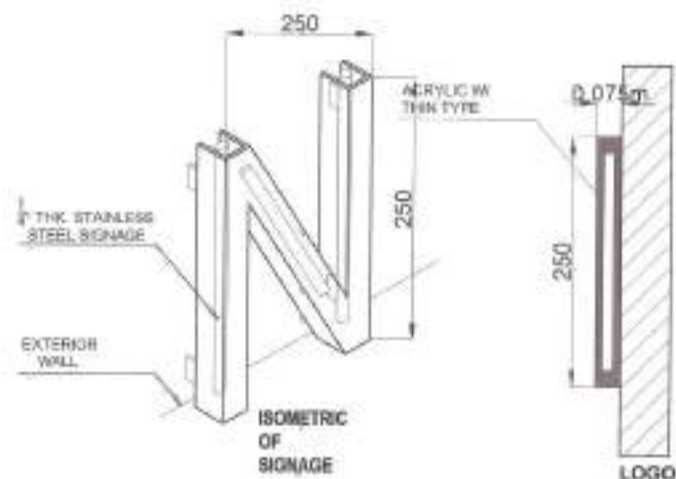
HON. MA. JOSEFINA G. BELMONTE
CITY MAJOR, QUIZON CITY

SHEET CONTENT:
FRONT ELEVATION
REAR ELEVATION
SECTION THRU 'A'
RIGHT SIDE ELEVATION
SECTION THRU 'B'

SHEET NO:
**AR-3
03/07**



| | D-1 | D-2 | D-3 |
|--------------------|----------------------|----------------------|----------------------|
| LOCATION | DAY CARE CENTER | PANTRY | COMFORT ROOM |
| SPECIFICATIONS | WOODEN PANEL DOOR | WOODEN PANEL DOOR | PVC DOOR WITH LOUVER |
| HARDWARE / GLAZING | COMPLETE ACCESSORIES | COMPLETE ACCESSORIES | COMPLETE ACCESSORIES |
| NO. OF SETS | 1 | 1 | 1 |



1 SCHEDULE OF DOORS

SCALE: 1:30M

2 STANDARD LOGO DETAILS

SCALE: 1:15M



Republika ng Pilipinas
Lungsod ng Quezon
CITY ENGINEERING DEPARTMENT

| | | | | | | |
|--|----------------|---|---|---|--|---------------|
| PROJECT TITLE: | DRAWN BY: | SUBMITTED BY: | RECOMMENDING APPROVAL: | APPROVED BY: | SHEET CONTENT: | SHEET NO. |
| PROPOSED REHABILITATION OF DON MANUEL DAY CARE CENTER | DATE: 04/07/21 | ENGR. LEO S. DEL ROSARIO HEAD, PLANNING & PROGRAMMING DIVISION | ENGR. JOSE R. VERZOGA, JR. PL. CITY ENGINEERING DEPARTMENT | HON. MA. JOSEFINA G. BELMONTE CITY ENGINEER, QUEZON CITY | SCHEDULE OF DOORS (STANDARD LOGO DETAILS) | AR-4 04/07 |
| LOCATION: DRGY. DON MANUEL, DISTRICT 4, QUEZON CITY | CHECKED BY: | REVIEWED BY: | | | | |

1. ALL THE PLUMBING/SANITARY WORKS INCLUDED HEREIN SHALL BE EXECUTED ACCORDING TO THE PROVISIONS 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 ENGINEER/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 HYPOCHLORIDE 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.

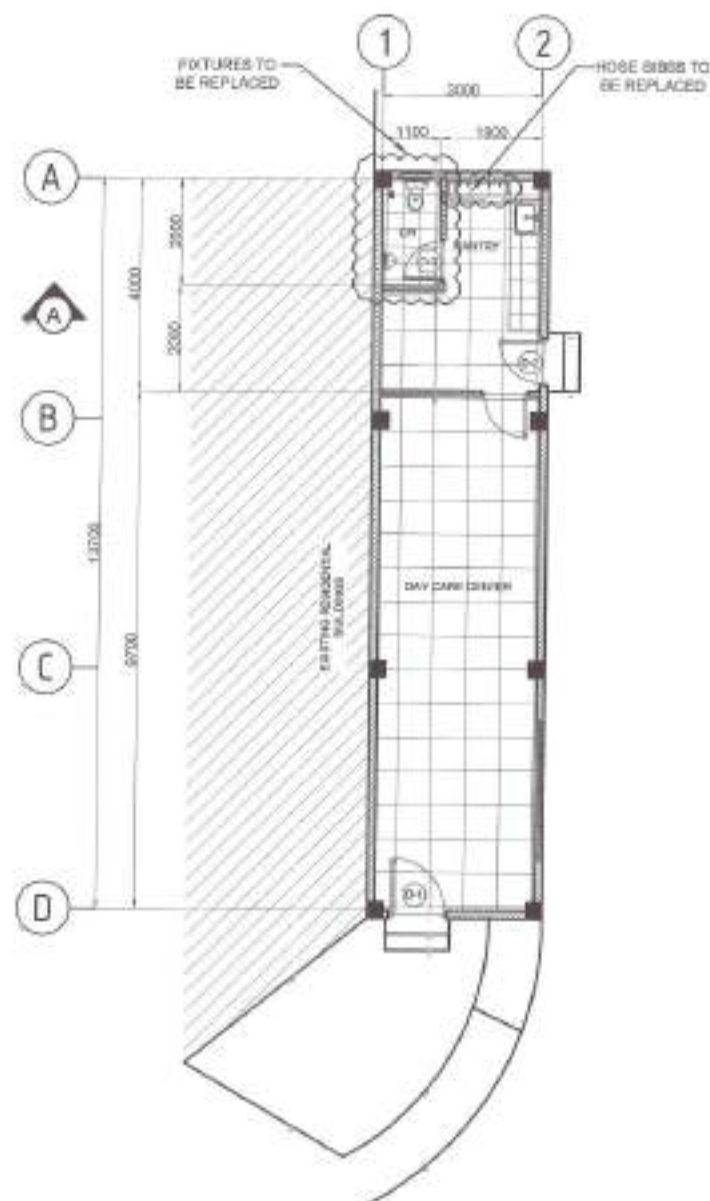
1 GENERAL NOTES

I. SEWER/WASTE AND VENT SYSTEM:

- SP/WP - SOIL PIPE / WASTE PIPE
- VP/VWC - VENT PIPE / VENT AT CEILING
- DP - STORM DRAIN PIPE
- FCG/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
- STU - 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

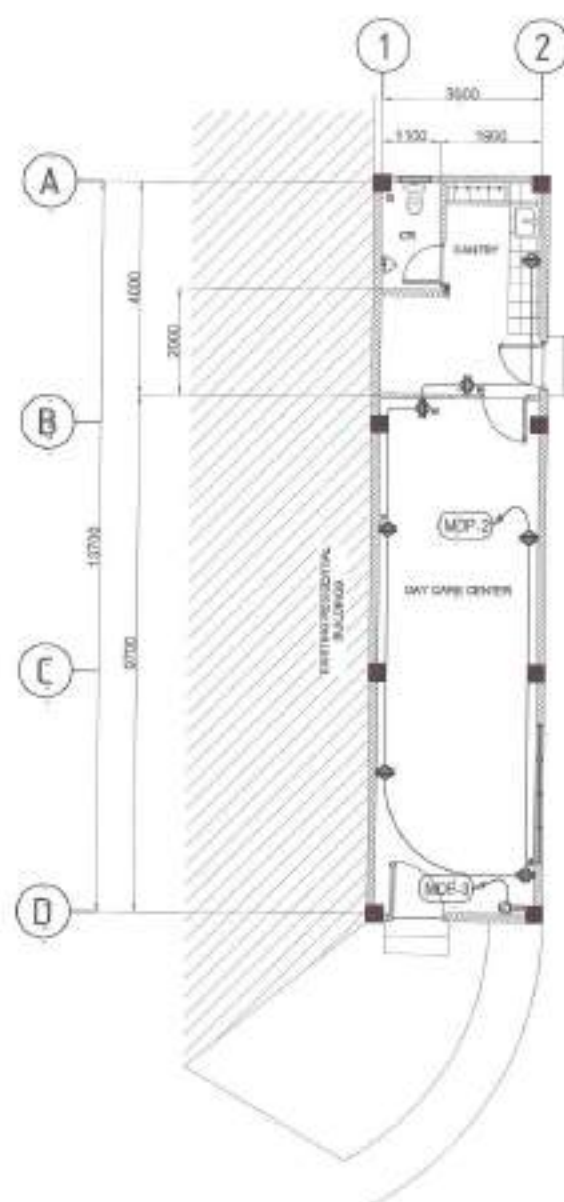
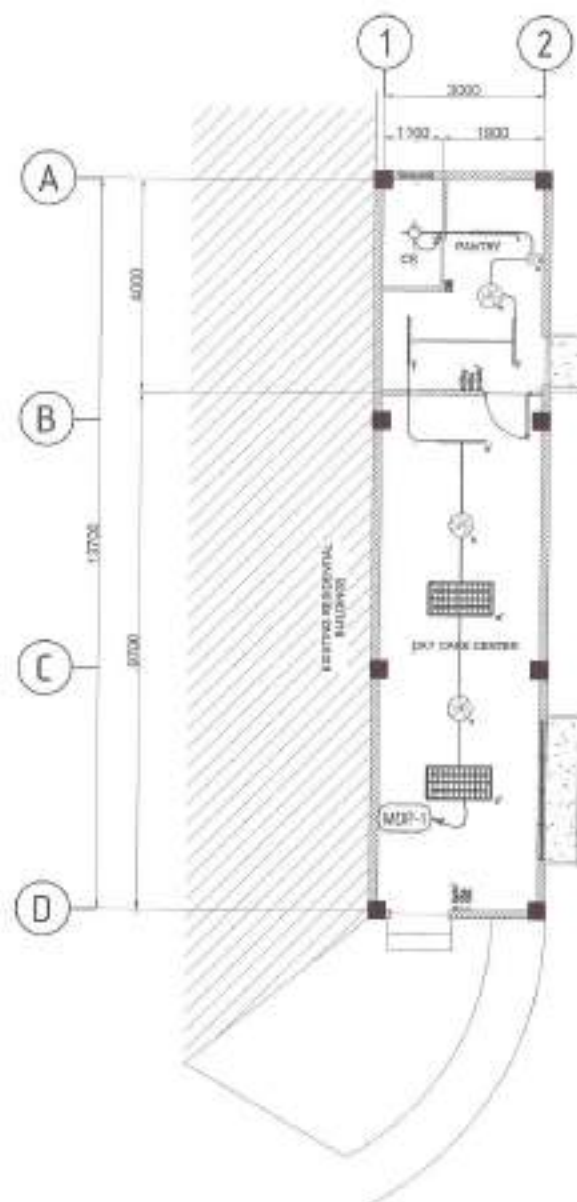
3 PLUMBING LAYOUT

SCALE: 1/75M



Republika ng Pilipinas
Lungsod ng Quezon
CITY ENGINEERING DEPARTMENT

| | | | | | | |
|--|----------------|--|--|--|--|---------------|
| PROJECT TITLE: | DESIGNED BY: | SUBMITTED BY: | RECOMMENDING APPROVAL: | APPROVED BY: | SHEET CONTENT: | SHEET NO. |
| PROPOSED REHABILITATION OF DON MANUEL DAY CARE CENTER | DATE: 08/08/21 | ENGR. LEO S. DEL ROSARIO NDAE - PLUMBING & PROGRAMMING DIVISION | ENGR. JESSE R. VERZOSA, JR. CIC CITY ENGINEERING DEPARTMENT | ENGR. MA. JOSEFINA S. BELMONTTE CITY ENGINEER - QUEZON CITY | GENERAL NOTES LEGEND AND SYMBOLS PLUMBING LAYOUT | PL-1 05/07 |
| LOCATION: BPOF, DON MANUEL, DISTRICT 4, QUEZON CITY | CHECKED BY: | REVISIONS: | | | | |



1 PROPOSED LIGHTING LAYOUT

SCALE 1:100M

2 PROPOSED POWER LAYOUT

SCALE 1:100M



Republika ng Pilipinas
Lungsod ng Quezon
CITY ENGINEERING DEPARTMENT

PROJECT TITLE:

PROPOSED REHABILITATION OF
DON MANUEL DAY CARE CENTER

LOCATION:

BRGY. DON MANUEL, DISTRICT 4, QUEZON CITY

DRAWN BY:

DATE: 8/8/2021

CHECKED BY: JB

REVISION NO:

SUBMITTED BY:

ENGR. LEO S. DEL ROSARIO
1642 PLANNING & PROGRAMS DIVISION

RECOMMENDATION APPROVAL:

ENGR. ISABELA R. VERZOSA, JR.
DG. CITY ENGINEERING DEPARTMENT

APPROVED BY:

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

SHEET CONTENT:

PROPOSED LIGHTING
LAYOUT
PROPOSED POWER
LAYOUT

SHEET NO.

EL-02
07 07

SITE



1 LOCATION MAP

SCALE: NTS

SITE



2 VICINITY MAP

SCALE: NTS

3 SITE DEVELOPMENT PLAN

SCALE: 1:125M

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| | SECTION THRU 'E' |
| | SECTION THRU 'S' |
| | SECTION THRU 'N' |

PLUMBING

| | |
|------|---------------------|
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| | LEGENDS AND SYMBOLS |
| | PLUMBING LAYOUT |

ELECTRICAL

| | |
|------|--------------------------|
| EL-1 | GENERAL NOTES |
| | LEGENDS AND SYMBOLS |
| | MISCELLANEOUS DETAILS |
| EL-1 | PROPOSED LIGHTING LAYOUT |
| | PROPOSED POWER LAYOUT |



Republic of the Philippines
Lungsod ng Quezon
CITY ENGINEERING DEPARTMENT

PROJECT TITLE:
**PROPOSED REHABILITATION OF
DONA AURORA DAY CARE CENTER**

LOCATION:
BAY, DONA AURORA, DISTRICT 4, QUEZON CITY

DRAWN BY: *[Signature]*
DATE: 8-4-2021
CHECKED BY: *[Signature]*

REVISION NO.:

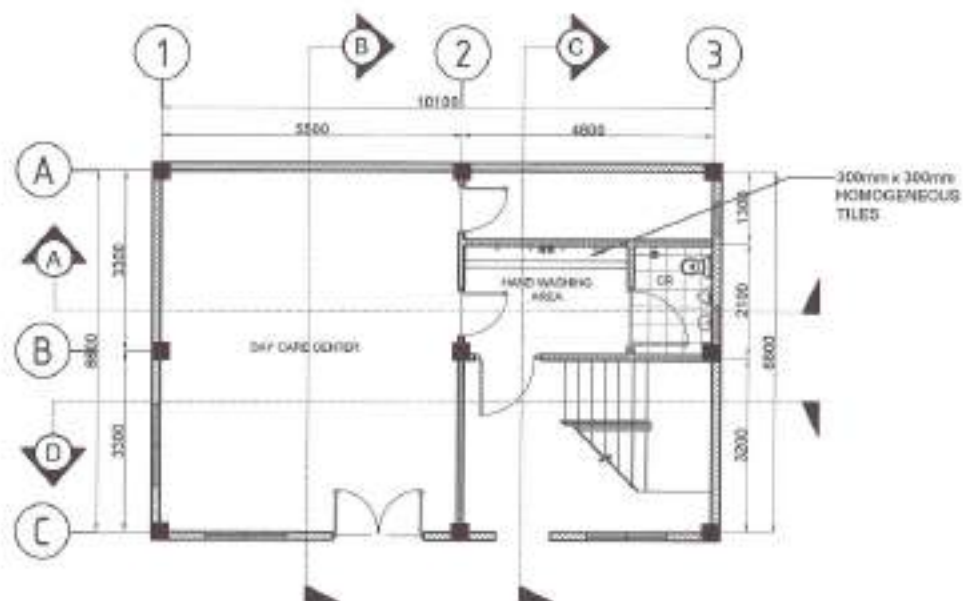
SUBMITTED BY:
[Signature]
ENGR. LEO S. DEL ROSARIO
HEAD, PLANNING & PROGRAMMING DIVISION

RECOMMENDED APPROVAL:
[Signature]
ENGR. MAGNUS R. VERZOSA, JR.
DCC, CITY ENGINEERING DEPARTMENT

APPROVED BY:
[Signature]
HON. MA. JOSEFINA G. BELMONTTE
CITY MANAGER, QUEZON CITY

SHEET CONTENT:
VICINITY MAP
LOCATION MAP
SITE DEVELOPMENT PLAN

SHEET NO.
AR-1
01/06

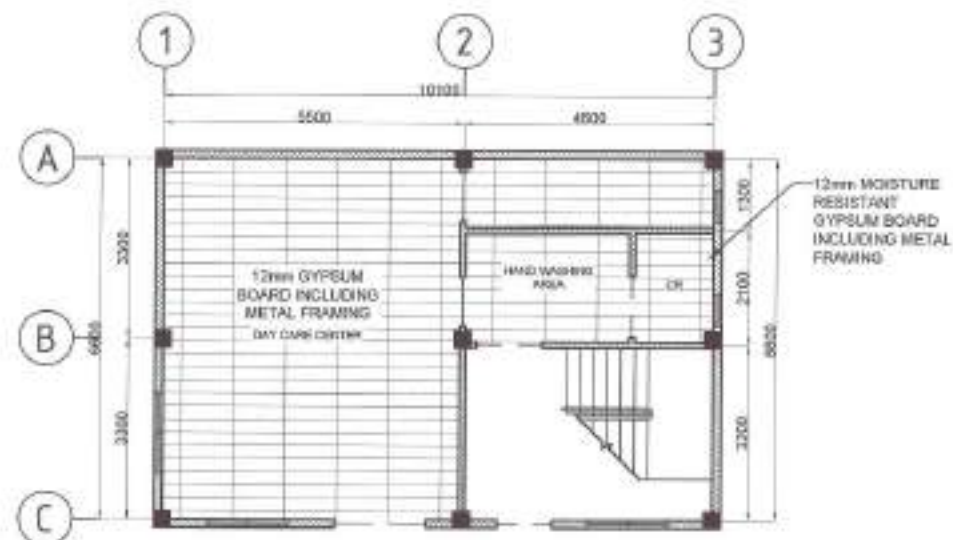


NOTE:

- INTERIOR WALLS TO BE REPAINTED
- DOOR KNOBS AND HINGES TO BE REPLACED

1 FLOOR PLAN

SCALE: 1:100M



NOTE:

- CEILING TO BE REPLACED

2 REFLECTED CEILING PLAN

SCALE: 1:100M



Republika ng Pilipinas
Lungsod ng Quezon
CITY ENGINEERING DEPARTMENT

PROJECT TITLE:

PROPOSED REHABILITATION OF
DONA AURORA DAY CARE CENTER

LOCATION:
WARD DONA AURORA, DISTRICT 4, QUEZON CITY

DRAWN BY:

DATE: 06/2021

CHECKED BY: JS

REVISION NO:

SUBMITTED BY:

ENGR. LEO S. DEL ROSARIO
HEAD, PLANNING PROGRAM DIVISION

RECOMMENDING APPROVAL:

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

APPROVED BY:

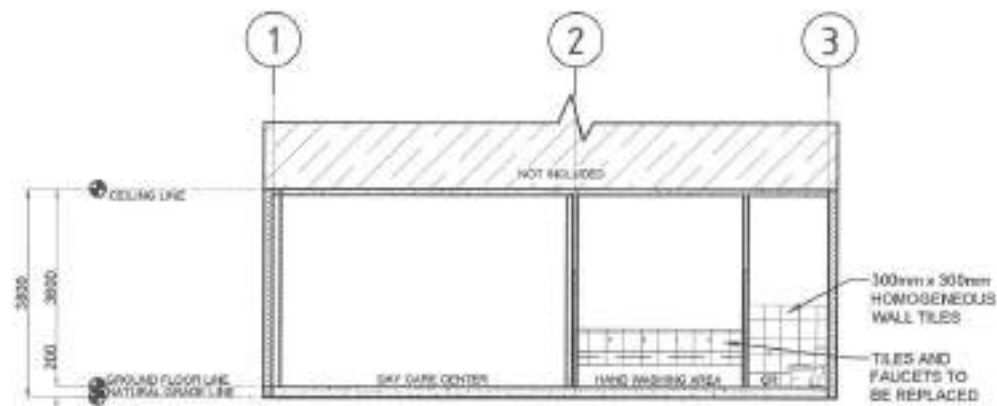
HON. MA. JOSEFINA G. BELMONTE
CITY MAYOR, QUEZON CITY

SHEET CONTENT:

FLOOR PLAN
REFLECTED CEILING
PLAN

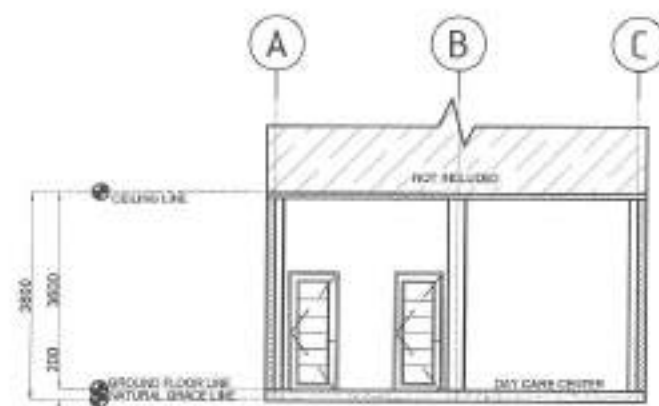
SHEET NO:

AR-2
02/06



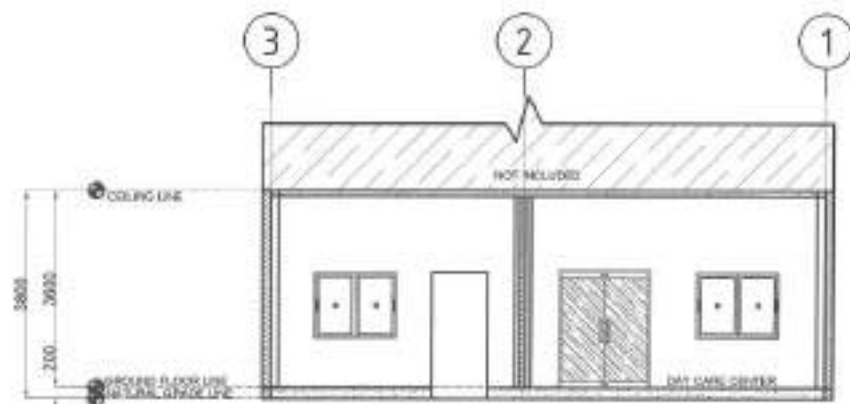
1 SECTION THRU "A"

SCALE: 1:100M



2 SECTION THRU "B"

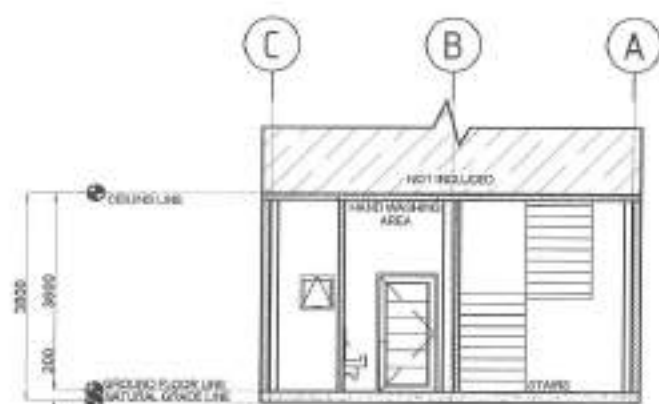
SCALE: 1:100M



NOTE:
• INTERIOR WALLS TO BE REPAINTED

3 SECTION THRU "C"

SCALE: 1:100M



4 SECTION THRU "D"

SCALE: 1:100M



Republika ng Pilipinas
Lungsod ng Quezon
CITY ENGINEERING DEPARTMENT

PROJECT TITLE:

PROPOSED REHABILITATION OF
DONA AURORA DAY CARE CENTER

LOCATION:
SQUAT DONA AURORA, DISTRICT 4, QUEZON CITY

DRAWN BY:

DATE: 10/20/21

CHECKED BY: JAM

REVISION NO.:

SUBMITTED BY:

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

RECOMMENDING APPROVAL:

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

APPROVED BY:

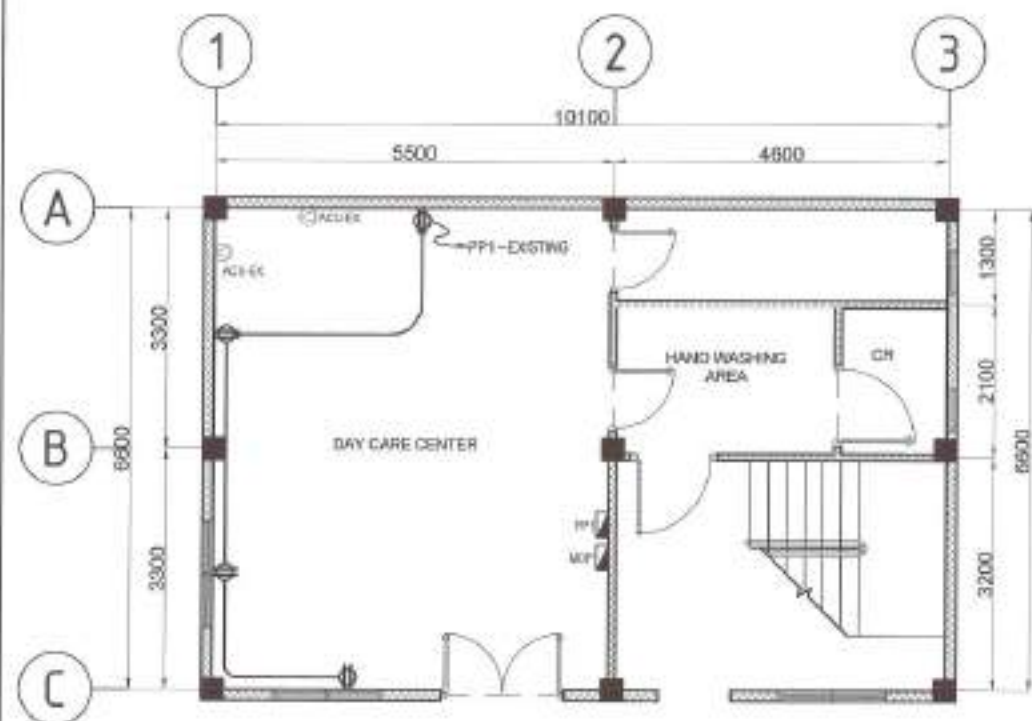
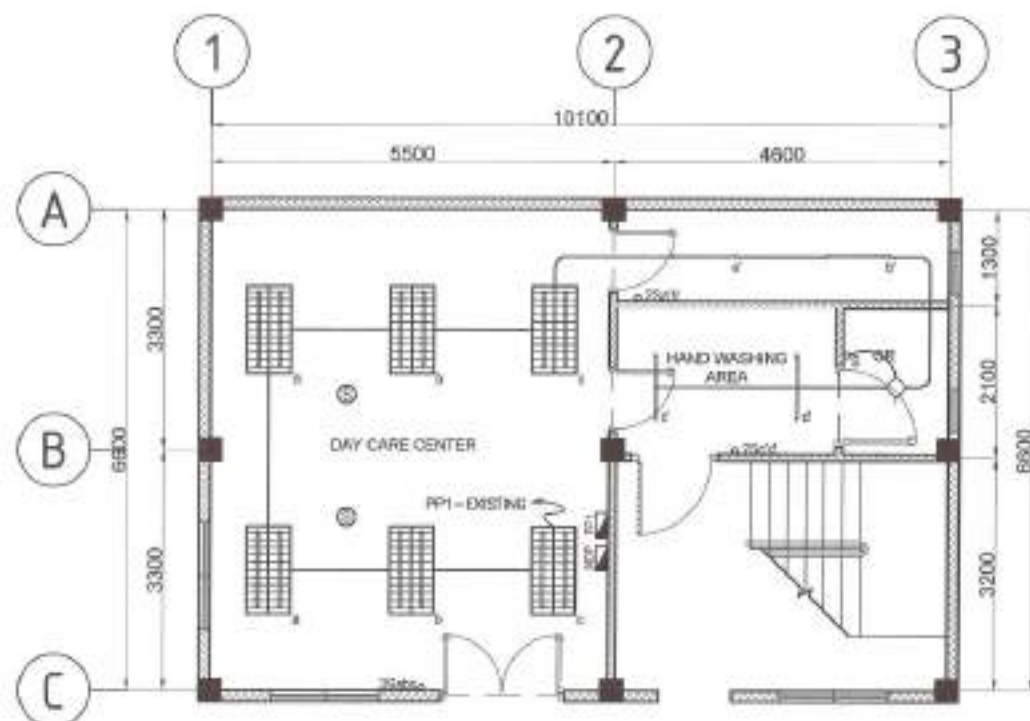
HON. RA. JOSEFINA G. BELMONTE
CITY MAYOR, QUEZON CITY

SHEET CONTENT:

SECTION THRU "A"
SECTION THRU "B"
SECTION THRU "C"
SECTION THRU "D"

SHEET NO.

AR-3
03/06



1 PROPOSED LIGHTING LAYOUT

SCALE 1/75M

2 PROPOSED POWER LAYOUT

SCALE 1/75M

| | | | | | | | |
|--|---|----------------|---|--|--|---|------------------------------|
|  <p>Republika ng Pilipinas Lungsod ng Quezon CITY ENGINEERING DEPARTMENT</p> | PROJECT TITLE: | DRAWN BY: | SUBMITTED BY: | RECOMMENDING APPROVAL: | APPROVED BY: | SHEET CONTENT: | SHEET NO. |
| | PROPOSED REHABILITATION OF DONA AURORA DAY CARE CENTER | DATE: 8/8/2021 |  ENGR. LEO S. DEL ROSARIO HEAD, PLANNING & PROGRAMMING DIVISION |  ENGR. RAQUEL R. VERZOSA, JR. DEPUTY CITY ENGINEER | HON. MA. JOSEFINA G. BELMONT CITY MAYOR, QUEZON CITY | PROPOSED LIGHTING LAYOUT PROPOSED POWER LAYOUT | EL-02 06/06 |
| | LOCATION: BNGY. DONA AURORA, DISTRICT 4, QUEZON CITY | CHECKED BY: | | | | REVISION NO.: | |

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 CHLORINE OR HYDROCHLORIC 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 30 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.

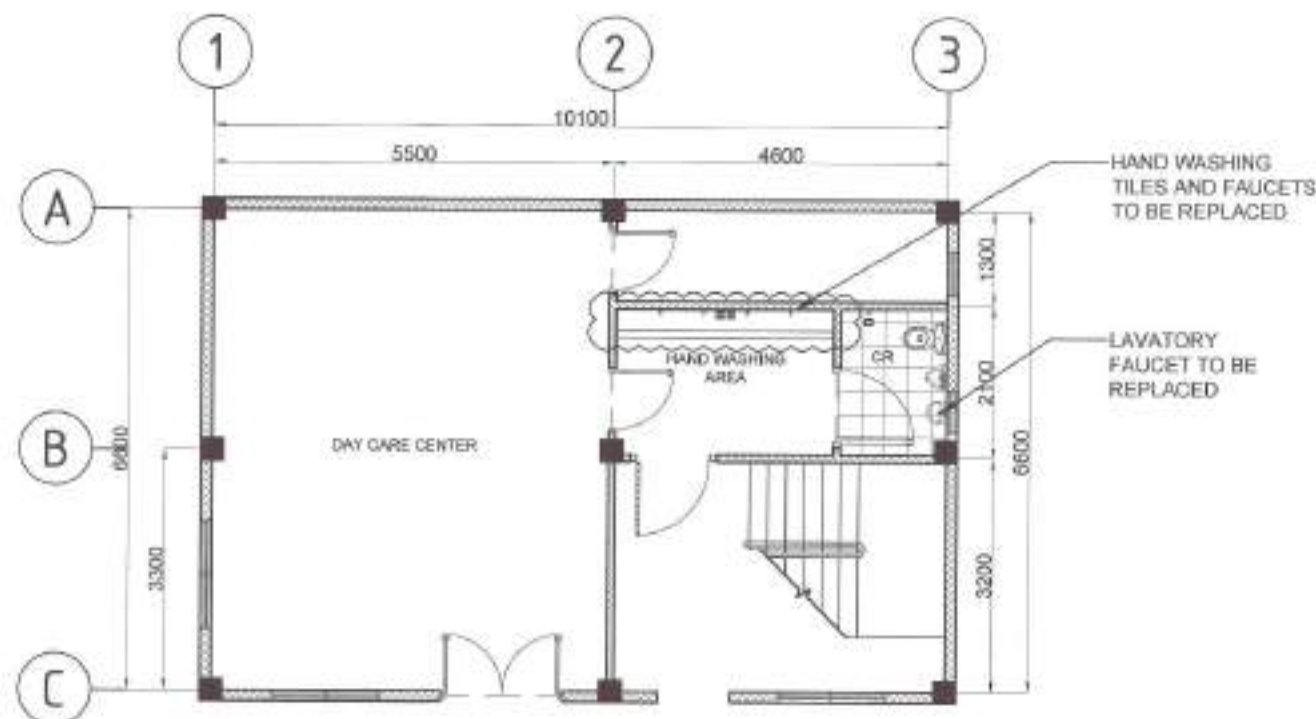
1 GENERAL NOTES

I. SEWER/WASTE AND VENT SYSTEM

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

II. WATER DISTRIBUTION SYSTEM:


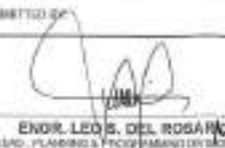
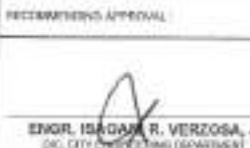

- CWL - COLD WATER LINE
- CWR - COLD WATER RISER
- GV - GATE VALVE
- CV - CHECK VALVE
- WM - WATER METER
- BD - BALCONY DRAIN



2 LEGENDS AND SYMBOLS

3 PLUMBING LAYOUT

SCALE: 1/75M.

| | | | | | | | |
|---|---|------------------|--|--|---|--|-----------------------------|
|  <p>Republika ng Pilipinas Lungsod ng Quezon CITY ENGINEERING DEPARTMENT</p> | PROJECT TITLE: | DRAWN BY: | SUBMITTED BY: | RECOMMENDATION APPROVAL: | APPROVED BY: | SHEET CONTENT: | SHEET NO.: |
| | PROPOSED REHABILITATION OF DONA AURORA DAY CARE CENTER | DATE: 04/06/2021 |  ENGR. LEO S. DEL ROSARIO HEAD, PLUMBING & PROGRAMMING DIVISION |  ENGR. ISAGANI R. VERZOSA, JR. DCL, CITY ENGINEERING DEPARTMENT |  HON. MA. JOSEFINA G. BELMONTE CITY MAYOR, QUEZON CITY | GENERAL NOTE: LIGES AND LIGES PLUMBING LATEST | PL-1 04/06 |
| LOCATION: BRGY. DONA AURORA, DISTRICT 4, QUEZON CITY | | DRAWING NO.: | | | | | |

GENERAL NOTES

- ALL ELECTRICAL WORK 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 DISTRIBUTION UTILITY COMPANY.
- THE CONTRACTOR SHALL SECURE ALL PERMITS AND PAY ALL FEES REQUIRED FOR THE WORK AND SHALL TURN THE SAME THROUGH THE ENGINEER, FINAL CERTIFICATE OF ELECTRICAL INSPECTION AND APPROVAL FROM PROPER GOVERNMENT AUTHORITIES FOR COMPLETION OF WORK.
- ALL EMERGENCY BRANCH CIRCUITS SHALL BE TWO CIRCUITS AND FOR EMERGENCY INSTALLATION SHALL BE IN SUPPORT OF CONDUIT CLAMP EVERY 750 MILLIMETER.
- PULL BOXES SHALL BE PROVIDED BY THE CONTRACTOR WHENEVER NECESSARY TO FACILITATE WIRE PULLING AND IF THERE ARE NOT INDICATED ON THE PLANS, 400MM OF ALL PULL BOXES SHALL BE COMPLETED BASED ON THE CODE REQUIREMENTS. SUMMIT SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL. PRIOR TO ERECTION, LOCATION OF PULL BOXES SHALL BE APPROVED BY THE ARCHITECT/ENGINEER AND MUST BE REFLECTED ON THE 40-BUILT PLAN.
- ALL POWER OUTLETS AND SWITCHES SHALL BE GROUNDING TYPE WITH GROUND SLOTS FOR EARTH.
- PROVIDE GROUND FAULT CURRENT INTERRUPTER (GFCI) BREAKERS FOR LIGHTING AND GFI ON THE PLAN.
- ALL METALLIC CONDUITE, CABLES AND EQUIPMENT SHALL BE PROPERLY GROUNDING AND BONDING.
- WIRING ON EXPOSED RIGID ROUGHING SHALL BE AS FOLLOWS:

RECEPTACLE OUTLET - ON (IN) OFF - 100MM ABOVE WORKING CENTER

LIGHTING SWITCH - 100MM ABOVE

PANEL BOARD - 100MM ABOVE

- REFER TO REGIONAL PLUMBING AND FIRE PROTECTION DIVISION FOR RATES AND LOCATIONS OF EQUIPMENT AS WELL AS THEIR CONTROL, SPECIFICATIONS AND CHARGES AND THEIR RESPECTIVE NOTATIONS.
- ALL MATERIALS TO BE USED SHALL BE OF THE BEST QUALITY. BRANDS SHALL BE SPECIFIED.
- THE CONTRACTOR AND SPECIFICATIONS ARE INTENDED TO PRESENT GENERAL LAYOUT AND MAJOR OUTLINES OF THE PROJECT BUT DO NOT NECESSARILY DESCRIBE EXISTING ACTUAL LOCATIONS, LINES, AND DISTANCES OF THE EQUIPMENT. THE CONTRACTOR SHALL BE RESPONSIBLE TO MAKE SUCH ADJUSTMENT IN THE SUBJECTS AS LOCATION, DISTANCE AND LEVELS ARE GOVERNED BY ACTUAL FIELD CONDITIONS.
- ANY DISCREPANCY BETWEEN THE PLANS AND SPECIFICATIONS SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER FOR CLARIFICATION/REVISION.
- ALL LIGHTING AND COVER NUMBER OUTLET CIRCUITS SHALL BE 0.5% OF THE TOTAL NUMBER OF LIGHTING AND COVER NUMBER OUTLET CIRCUITS. ALL WIRING AND CABLES SHALL BE COLOR CODED AS FOLLOWS:

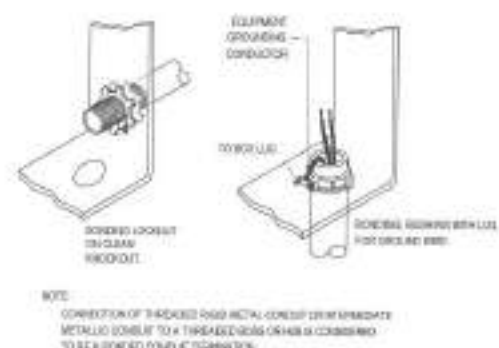
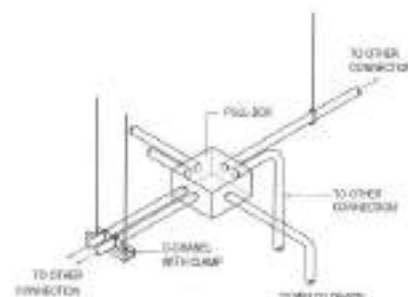
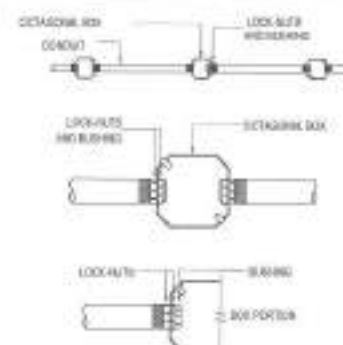
LINE 1 - RED
LINE 2 - YELLOW
NEUTRAL - WHITE
GROUND - GREEN

- WIRE AND CABLES SHALL BE MANUFACTURED FROM STEEL WITH THICKNESS AS FOLLOWS:
MAXIMUM THICKNESS SHALL BE 0.5MM.
UP TO 100MM: 0.5MM
OVER 100MM: 0.5MM BUT NOT OVER 1.0MM
OVER 150MM: 0.5MM BUT NOT OVER 1.5MM
OVER 200MM: 0.5MM BUT NOT OVER 2.0MM
OVER 250MM: 0.5MM BUT NOT OVER 2.5MM
OVER 300MM: 0.5MM BUT NOT OVER 3.0MM
OVER 350MM: 0.5MM BUT NOT OVER 3.5MM
OVER 400MM: 0.5MM BUT NOT OVER 4.0MM
OVER 450MM: 0.5MM BUT NOT OVER 4.5MM
OVER 500MM: 0.5MM BUT NOT OVER 5.0MM
OVER 550MM: 0.5MM BUT NOT OVER 5.5MM
OVER 600MM: 0.5MM BUT NOT OVER 6.0MM
OVER 650MM: 0.5MM BUT NOT OVER 6.5MM
OVER 700MM: 0.5MM BUT NOT OVER 7.0MM
OVER 750MM: 0.5MM BUT NOT OVER 7.5MM
OVER 800MM: 0.5MM BUT NOT OVER 8.0MM
OVER 850MM: 0.5MM BUT NOT OVER 8.5MM
OVER 900MM: 0.5MM BUT NOT OVER 9.0MM
OVER 950MM: 0.5MM BUT NOT OVER 9.5MM
OVER 1000MM: 0.5MM BUT NOT OVER 10.0MM
- ALL ELECTRICAL WORKS SHALL BE DONE OUTSIDE OF CONCRETE SLAB UNDER THE DIRECT SUPERVISION OF A FULL-TIME LICENSED ELECTRICAL ENGINEER AND A QUALIFIED ELECTRICAL SUPERVISOR BY NAME. ALL WORK SHALL BE PROPERLY PLACED, SECURELY FASTENED AND PROPERLY RIGID.
- TYPE OF SERVICE ENTRANCE SHALL BE: SINGLE PHASE, TWO WIRE PLUS GROUND, 200V, 60 HZ, 3 WIRE, 200V, 60 HZ.
- CONDUITS AND CABLES SHALL HAVE AT LEAST THE EQUIVALENT OF FOUR CLAMPING SURFACES IN ANY ONE RUN. ALL CONDUITS SHALL BE PROTECTED BY UNFLEXIBLE HYDRAULIC BENDING. MINIMUM BENDING RADIUS SHALL BE IN ACCORDANCE TO THE CODE REQUIREMENTS.
- UPON COMPLETION OF ELECTRICAL CONSTRUCTION WORK, INSULATION RESISTANCE TEST AND FUNCTIONALITY TEST SHALL BE PERFORMED BY THE CONTRACTOR. RESULTS OF THE INSULATION TEST SHALL BE SUBMITTED IN DETAIL ON FORMS BACKED BY THE QUALITY CITY ENGINEERING DEPARTMENT REPRESENTATIVE. THE RESULTS SHALL BE FOR ELECTRICAL SYSTEM SHALL NOT BE MORE THAN THREE (3) CONDUCTORS. INSULATION RESISTANCE SHALL NOT EXCEED 1 OHM.

| | | | |
|--|-------------------------------------|--|----------------------------|
| | 150MM LED BULB 18 WATTS | | THREE POLE SWITCH (LIGHTS) |
| | 600MM x 1200MM, 2X18W TROFFER LIGHT | | DUPLEX CONVENIENCE OUTLET |
| | T5, 28WATTS LED LIGHT | | ACU OUTLET EXISTING |
| | ONE POLE SWITCH (LIGHTS) | | PANEL BOARD |
| | TWO POLE SWITCH (LIGHTS) | | SMOKE DETECTOR |

2 LEGENDS AND SYMBOLS

SCALE: NTS



1 GENERAL NOTES

SCALE: NTS



Republic of the Philippines
Lungsod ng Quezon
CITY ENGINEERING DEPARTMENT

PROJECT TITLE:
**PROPOSED REHABILITATION OF
DONA AURORA DAY CARE CENTER**

LOCATION:
BPOV, DONA AURORA, DISTRICT 4, QUEZON CITY

3 MISCELLANEOUS DETAILS

SCALE: NTS

DRAWN BY:

DATE: 08/2021

CHECKED BY:

REVIEWED BY:

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

ENGR. BASIL R. VERZOSA, JR.
SEC. CHIEF, ENGINEERING DEPARTMENT

HON. RA. JOSEFINA G. BELMONT
CITY ENGINEER - QUEZON CITY

SHEET CONTENT
GENERAL NOTES
LEGENDS AND SYMBOLS
MISCELLANEOUS DETAILS

SHEET NO.
EL-01
05/06



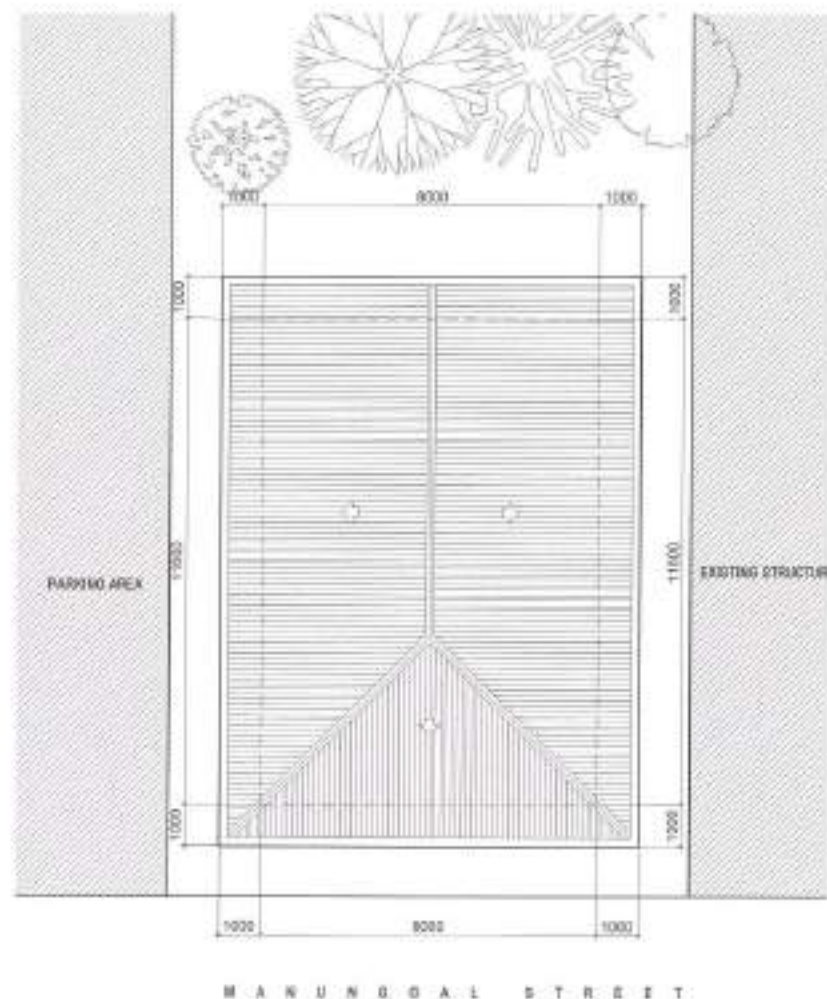
1 LOCATION MAP

SCALE: NTS



2 VICINITY MAP

SCALE: NTS



3 SITE DEVELOPMENT PLAN

SCALE: NTS

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| AR-05 | SECTION ELEVATION |
| AR-06 | SECTION ELEVATION |
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| AR-100 | SECTION ELEVATION |

SANITARY/PLUMBING

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| SP-01 | GENERAL NOTE |
| SP-02 | GENERAL NOTE |
| SP-03 | GENERAL NOTE |
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ELECTRICAL

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MECHANICAL

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Republika ng Pilipinas
Lungsod ng Quezon
CITY ENGINEERING DEPARTMENT

PROJECT TITLE:

PROPOSED REHABILITATION OF
MANUNGAL II DAY CARE
CENTER

LOCATION:

BARANGAY TATALON, DISTRICT 4, QUEZON CITY

Drawn by:

DATE: September 16, 2021

CHECKED BY:

REVIEWED BY:

SUBMITTED BY:

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

RECOMMENDING APPROVAL:

ENGR. ISABELA R. VERZOSA, JR.
SEC. CITY ENGINEERING DEPARTMENT

APPROVED BY:

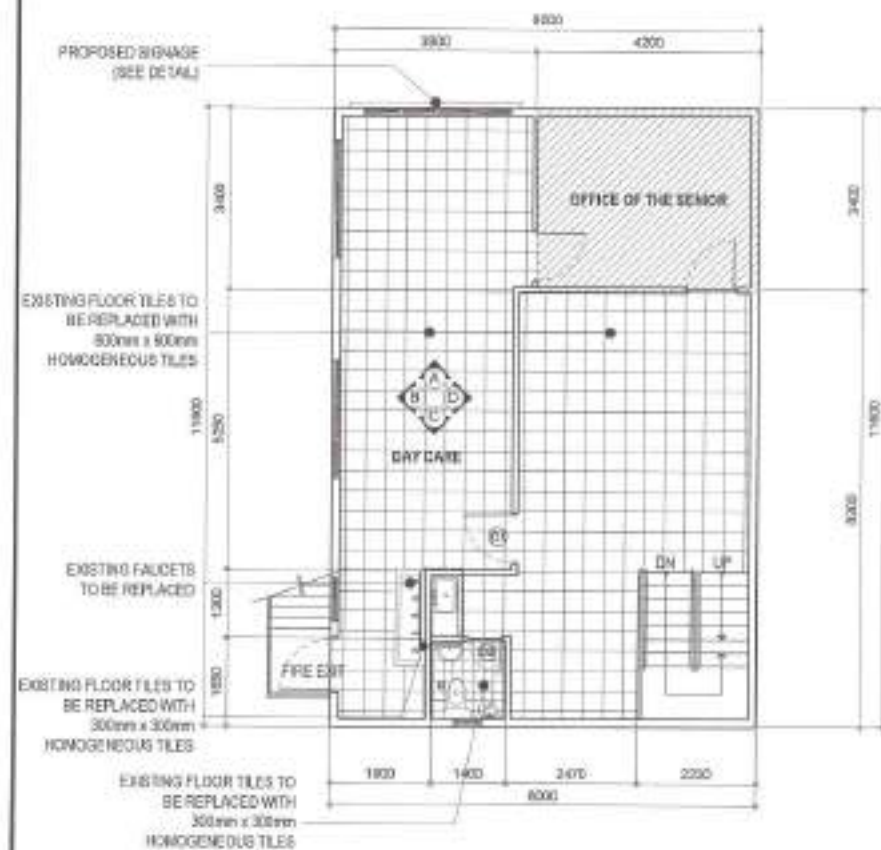
HON. MA. JOSEFINA G. BELMONTE
CITY ENGINEER, QUEZON CITY

SHEET CONTENT:

LOCATION MAP
SITE DEVELOPMENT PLAN

SHEET NO.:

AR-01
0110



LEGEND:

- REPLACEMENT OF FLOOR TILES

NOTE:

- REPAINTING OF DAY CARE (INTERIOR)
- PROPOSED SIGNAGE
- REPLACEMENT OF DOORS

EXISTING CEILING TO BE REPLACED WITH 6MM FIBER CEMENT BOARD INCLUDING METAL FRAMING



LEGEND:

- REPLACEMENT OF CEILING
- EXISTING CEILING TO BE RETAINED

1 SECOND FLOOR PLAN

4 SECOND FLOOR REFLECTED CEILING PLAN



Republika ng Pilipinas
Lungsod ng Quezon
CITY ENGINEERING DEPARTMENT

PROJECT TITLE:

PROPOSED REHABILITATION OF
MANUNGGAL II DAY CARE
CENTER

LOCATION:

BARANGAY TATALON, DISTRICT 4, QUEZON CITY

DRAWN BY:

DATE: September 16, 2021

CHECKED BY: JAM

REVISION NO.:

SUBMITTED BY:

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

RECOMMENDING APPROVAL:

ENGR. ISAGANI R. VERZOSA, JR.
CH. OF CIVIL ENGINEERING DIVISION

APPROVED BY:

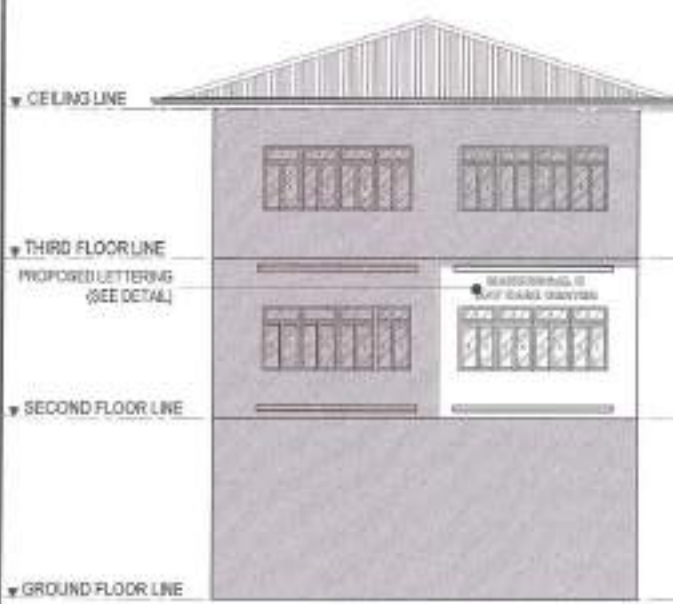
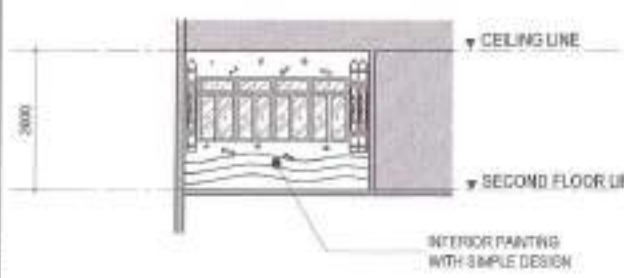
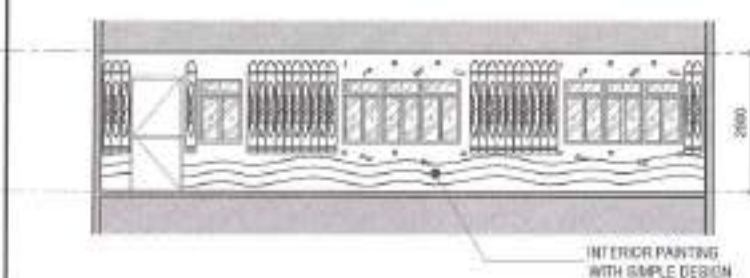
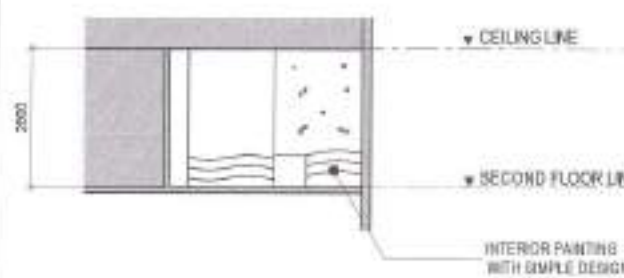
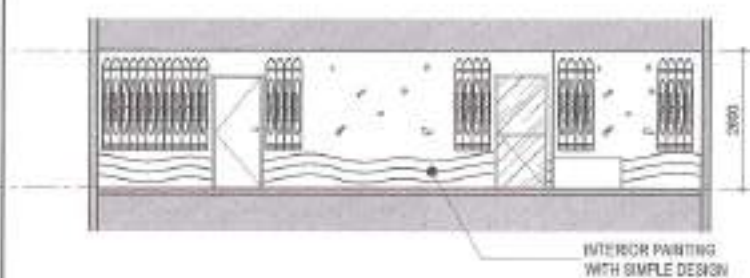
HON. MA. JOSEFINA G. BELMONTE
CITY ENGINEER, QUEZON CITY


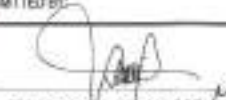
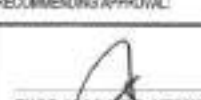
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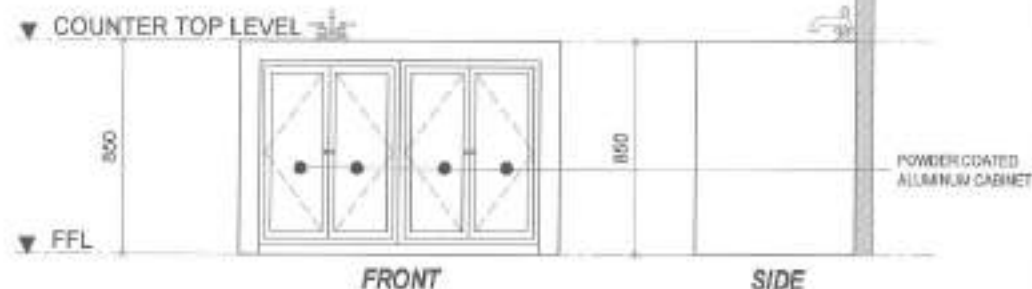
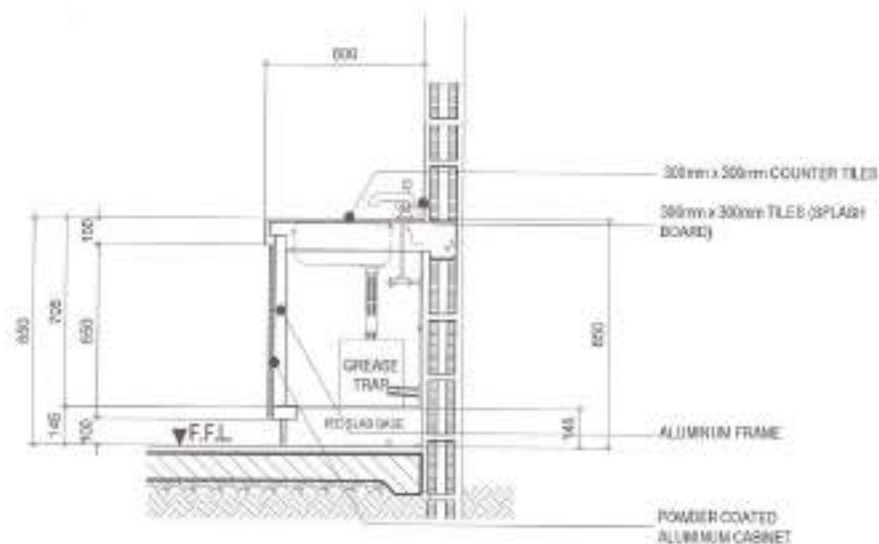
SECOND FLOOR PLAN
SECOND FLOOR REFLECTED
CEILING PLAN

SHEET NO.

AR-02
0210

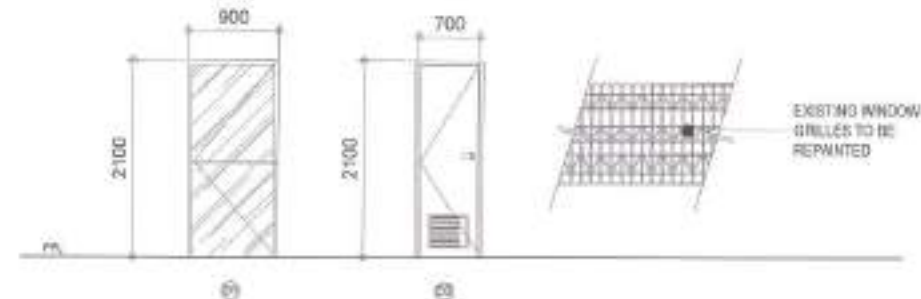
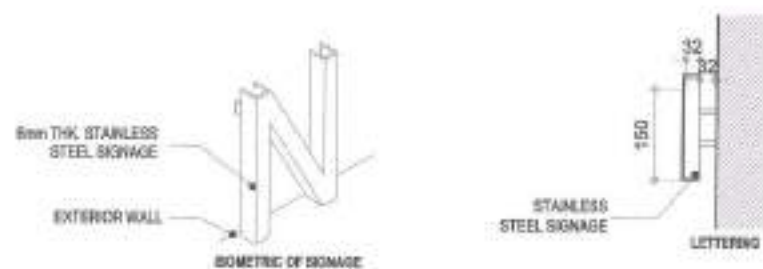
| | | |
|---|--|---|
|  |  |  |
| 2 SECTION "A" | 3 SECTION "B" | |
|  |  | |
| 4 SECTION "C" | 5 SECTION "D" | |
| 1 FACADE OF BUILDING | | |

| | | | | | | | | | | |
|--|---|--|---|--|---|---|------------------------------|---------------|--|--|
|  <p>Republika ng Pilipinas Lungsod ng Quezon CITY ENGINEERING DEPARTMENT</p> | PROJECT TITLE : | DRAWN BY: <i>DAV</i> | SUBMITTED BY: | RECOMMENDING APPROVAL: | APPROVED BY: | SHEET CONTENT | SHEET NO. | | | |
| | PROPOSED REHABILITATION OF MANUNGGA II DAY CARE CENTER | DATE: September 18, 2021 |  ENGR. LEO S. DEL ROSARIO <small>HEAD, PLANNING & RECOMMENDING DIVISION</small> |  ENGR. DIAGON R. VERZOSA, JR. <small>HED, CIVIL ENGINEERING DEPARTMENT</small> | HON. MA. JOSEFINA G. BELMONTE <small>CITY ENGINEER, QUEZON CITY</small> | <small>PACKAGE OF BUILDING SECTION 01 SECTION 02 SECTION 03</small> | AR-03 03/10 | | | |
| | | DESIGNED BY: <i>JAN</i> | | | | | | | | |
| | | LOCATION: BARANGAY TATALON, DISTRICT 4, QUEZON CITY | | | | | | REVISION NO.: | | |



1 COUNTER TOP DETAIL

2 UNDER COUNTER CABINET DETAIL



| MARK | # OF UNITS | DESCRIPTION | REMARKS |
|------|------------|--------------------------------------|----------------|
| 01 | 1-SET | GLASS DOOR WITH COMPLETE ACCESSORIES | PAINTED FINISH |
| 02 | 1-SET | PVC DOOR WITH COMPLETE ACCESSORIES | PAINTED FINISH |

2 LETTERING DETAIL

4 SCHEDULE OF DOORS

SCALE : NTS



Republika ng Pilipinas
Lungsod ng Quezon
CITY ENGINEERING DEPARTMENT

PROJECT TITLE:
**PROPOSED REHABILITATION OF
MANUNGGAL II DAY CARE
CENTER**

OWNER:
DATE: March 18, 2021
DESIGNED BY: LEO S. DEL ROSARIO
REVISIONS:

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

RECOMMENDING APPROVAL:
LEO S. DEL ROSARIO
ENGR. LEONARDO R. VERZOSA, JR.
CC: CITY ENGINEERING DEPARTMENT

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

SHEET CONTENT:
COUNTER TOP DETAIL
LETTERING DETAIL
UNDER COUNTER
CABINET DETAIL
SCHEDULE OF DOORS

SHEET NO.:
**AR-04
0410**

1 All plumbing works and materials indicated herein shall be compliant to the provisions of the latest edition of National Plumbing Code, the rules and regulations of local authorities concerned, the rules and regulations of local utility companies and the provisions of the land developer when and where applicable.

2 The plumbing layout is only diagrammatic; pipes, cleanouts and check valves shall be concealed as much as possible. It is not intended to show the actual dimension of the pipes and fixtures in the drawing but all the pipes and fixtures shall be installed as and where indicated. Any relocation will require proper execution in relation with other trades.

3 The plumbing contractor shall verify all existing utilities at the site and shall coordinate the work with other trades.

4 Pipes shall not be embedded in structural members unless otherwise specified or allowed.

5 Minimum slope for horizontal sewer lines shall be 1% and for drain lines shall be 5%.

6 Proposed plumbing utilities shall conform with the actual location, depth and invert elevation of all existing pipes/utilities.

7 Connection of fixtures to pipes and fittings shall be according to manufacturer's specifications.

8 All floor drains shall be vented individually.

9 All clean out females shall be flush-mounted to wall and shall be provided with polished cover caps. Do not install floor clean outs except at lines on grade and service areas not subject to traffic.

10 All underground G.I. pipes in direct contact with soil shall be provided with two (2) coats of protective tar covering and wrapped with jute cloth thoroughly soaked in tar or asphalt.

11 Provide vent stack and vent pipe thru roof of cast iron service weight as required.

12 All cast iron pipes shall be of approved quality and G.I. pipes for water distribution lines shall be Schedule 40 U.S. standard weight.

13 Provide gate valves to all water supply lines to fixtures.

14 All hot water lines shall be provided with proper insulation where exposed.

15 All individual branches to fixtures or group of fixtures and/or equipments shall be provided with air chambers or capped vertical pipe extensions of dimensions as shown:

H = 450 mm for 19 mm Ø and larger

H = 300 mm for 12 mm Ø and smaller

16 All hose bibbs shall be 19 mm Ø (3/4" Ø) unless otherwise indicated.

17 Inlet pipe of septic tank is 50 mm higher than the siphon pipe which is 30 mm higher than the outlet pipe.

18 All plumbing works and manner of construction shall be under the direct supervision of an able and duly licensed Master Plumber or Registered Sanitary Engineer. Any discrepancies found in plan shall be notified to the same person.

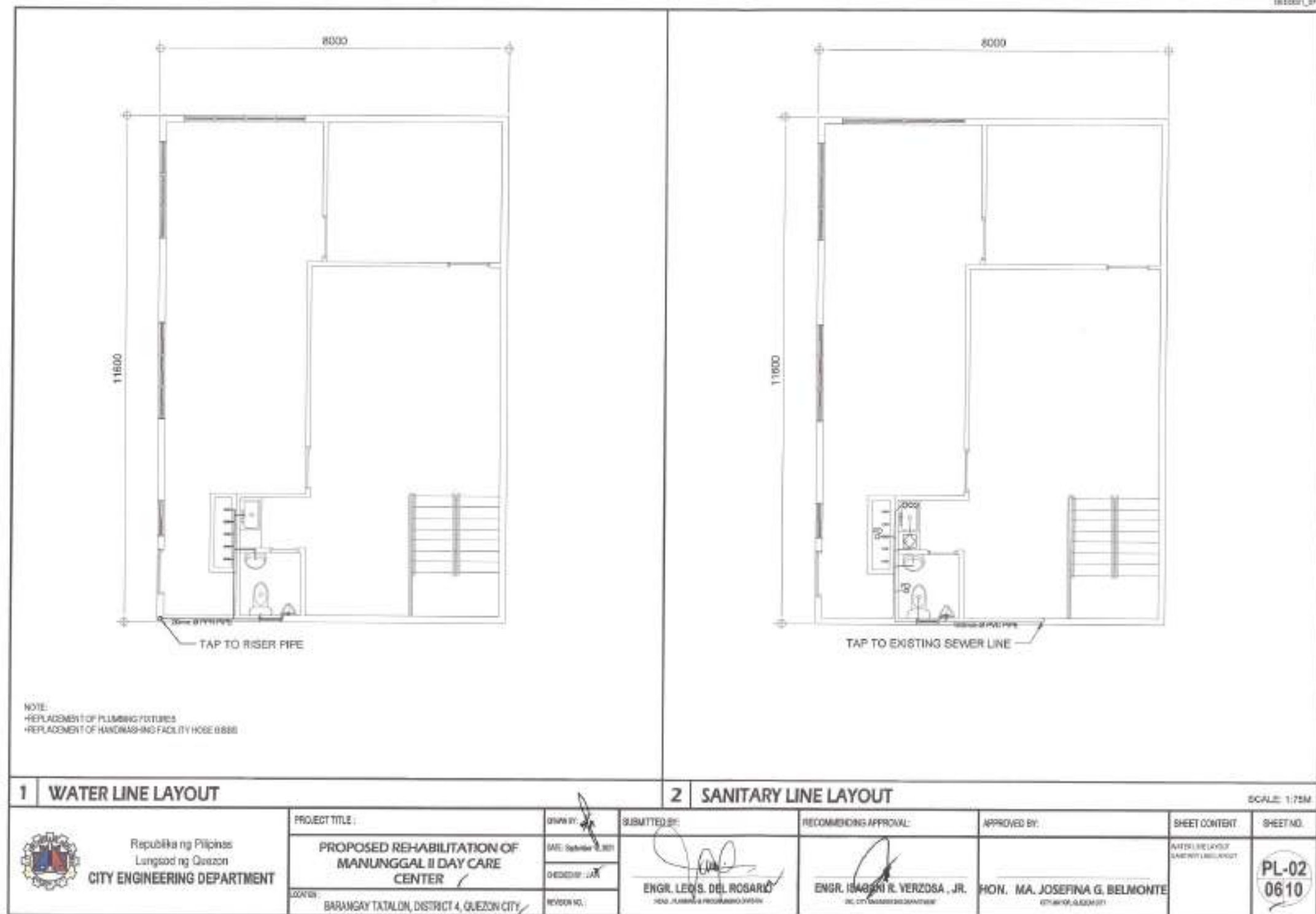
1. FIXTURES AND OTHER LEGEND

| | |
|-----|-----------------------|
| FD | FLOOR DRAIN |
| RD | ROOF DRAIN |
| SHO | SHOWER |
| WC | WATER CLOSET |
| LAV | LAVATORY |
| UR | URINAL |
| KS | KITCHEN SINK |
| BD | BUILDING DRAIN |
| DD | DECK DRAIN |
| CCO | CEILING CLEANOUT |
| FCO | FLOOR/GROUND CLEANOUT |
| DS | DOWNSPOUT |
| mm | millimeter |
| Ø | mm DIAMETER |
| SHD | SHOWER DRAIN |
| CB | CATCH BASIN |
| NH | MANHOLE |
| → | DIRECTION OF FLOW |
| | GREASE TRAP |

| | |
|--|--|
| | UNCONFORMED |
| | CHECK VALVE |
| | BUILDING SEWER |
| | BUILDING DRAIN |
| | WASTE LINE |
| | AREA DRAIN/CATCH BASIN |
| | FLOOR DRAIN |
| | DIAMETER |
| | WASTE LINE |
| | WATER LINE |
| | GATE VALVE |
| | DECK DRAIN |
| | CLEANOUT |
| | FIRE DOWN |
| | FIRE UP |
| | MILLIMETER |
| | GATE VALVE |
| | AREA DRAIN/CATCH BASIN |
| | WATER CLOSET |
| | LAVATORY |
| | MANHOLE |
| | HOSE BIBB |
| | STORM DRAIN LINE |
| | VENT LINE |
| | VENT ABOVE GROUND |
| | CONCRETE PIPE / REINFORCED CONCRETE PIPE |
| | VENT THRU ROOF |
| | DIRECTION OF FLOW / SLOPE |

1 GENERAL NOTES LEGEND AND SYMBOLS

| | | | | | | | |
|--|--|--------------------------|--|--|--|---------------------------|-----------------------------|
| <p>Republika ng Pilipinas Lungsod ng Quezon CITY ENGINEERING DEPARTMENT</p> | PROJECT TITLE: | DRAWN BY: | SUBMITTED BY: | RECOMMENDING APPROVAL: | APPROVED BY: | SHEET CONTENT | SHEET NO. |
| | PROPOSED REHABILITATION OF MANUNGAL II DAY CARE CENTER | DATE: September 15, 2023 | | | | GENERAL NOTES AND SYMBOLS | PL-01 0510 |
| | LOCATION: BARANGAY TATALON, DISTRICT 4, QUEZON CITY | CHECKED BY: J. P. R. | ENGR. LEO S. DEL ROSARIO TEAM PLANNING & ENGINEERING DIVISION | ENGR. ISAMANI R. VERZOSA, JR. CITY ENGINEERING DEPARTMENT | HON. MA. JOSEFINA G. BELMONTE CITY MAYOR, QUEZON CITY | | |



SCALE: 1:75M

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 ENGINEER, FINAL CERTIFICATES OF ELECTRICAL INSPECTION AND APPROVAL FROM PROPER ENFORCEMENT AUTHORITIES FOR COMPLETION OF WORK.
3. ALL EMBEDDED BRANCH CIRCUITS SHALL BE PVC CONDUITS AND FOR EXPOSED INSTALLATION SHALL BE NOT SUPPORTED BY CONDUIT CLAMPS EVERY 300 MILLIMETER.
4. PULL BOXES SHALL BE PROVIDED BY THE CONTRACTOR WHOEVER NECESSARY TO FACILITATE WIRE PULLING EVEN IF THESE ARE NOT INDICATED ON THE PLANS. SIZES OF ALL PULL BOXES SHALL BE COMPUTED BASED ON THE CODE REQUIREMENTS. EVENT SHOP DRAWINGS TO THE ENGINEER FOR APPROVAL. PRIOR TO FABRICATION, LOCATION OF PULL BOXES SHALL BE APPROVED BY THE ARCHITECT/ENGINEER AND MUST BE REFLECTED ON THE 'AS-BUILT' PLAN.
5. ALL POWER OUTLETS AND SWITCHES SHALL BE ENCLOSURE TYPE WITH PARALLEL SLOTS FOR 20KV.
6. PROVIDE GROUND FAULT CURRENT INTERRUPTER CIRCUIT BREAKER FOR LUGS MARKED "GFI" 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. (100MM ABOVE WORKING COUNTER)

TELEPHONE OUTLET - 300 MM AFF.

DATA 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, SENSORS AND ON/OFF VALVES UNDER THEIR RESPECTIVE SECTIONS.
10. ALL MATERIALS TO BE USED SHALL BE OF THE BEST QUALITY, BRAND NEW AND 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 JOB SITE 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. THW-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:

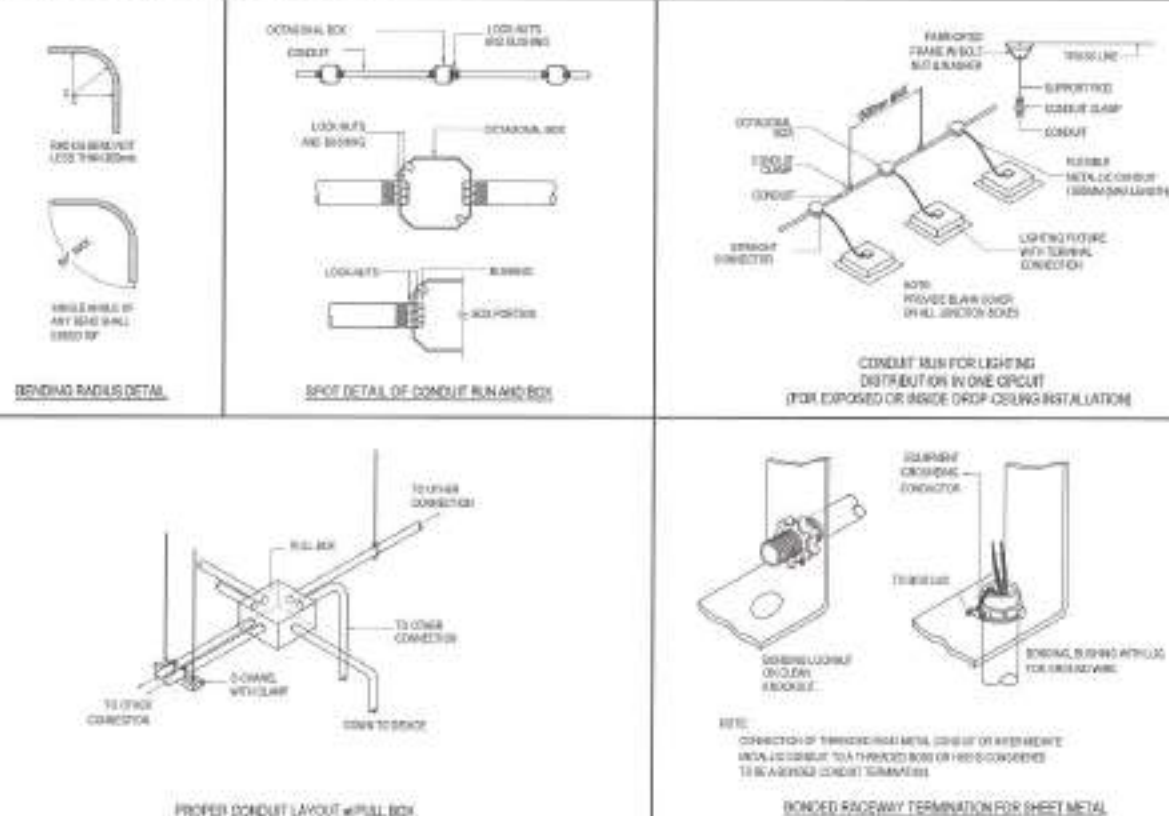
LINE 1 - RED
LINE 2 - YELLOW
NEUTRAL - WHITE
GROUND - GREEN

14. WORK, WIRE, OUTLETS, ENCLOSURES SHALL BE FABRICATED FROM STEEL WITH THICKNESS AS FOLLOWS:
MINIMUM WIDTH OF THE WIDEST SURFACE STEEL:
UP TO 150.00MM 152.40MM GA 18 PAINTED WITH METAL PRIMER EPOXY AND TOPCOAT
OVER 150.00MM BUT NOT OVER 400.00MM GA 16 PAINTED WITH METAL PRIMER EPOXY AND TOPCOAT
OVER 400.00MM BUT NOT OVER 762.00MM GA 14 PAINTED WITH METAL PRIMER EPOXY AND TOPCOAT
OVER 762.00MM GA 12 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 FULLY ACCREDITED ELECTRICAL CONTRACTOR BY POWER WORKS SHALL BE PROPERLY PLACED, SECURELY FASTENED AND PROPERLY FINISHED.
16. TYPE OF SERVICE ENTRANCE SHALL BE SINGLE-PHASE, TWO-WIRE PLUS GROUND, 40 HERTZ, 200V AC NOMINAL.
17. CONDUITS IN RACE CASE SHALL THERE BE MORE THAN THE EQUIVALENT OF FOUR QUARTER BENDS IN ANY ONE RUN. ALL CONDUIT BENDS SHALL BE FULFILLED 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.

| | | | |
|------|------------------------------------|----|-----------------|
| | 1x18W, LED TUBE LIGHT TROFFER TYPE | S | ONE GANG SWITCH |
| | PIN LIGHT | | ORBIT FAN |
| | CONVENIENCE OUTLET, TWO GANG | S8 | SELECTOR SWITCH |
| Sabc | THREE GANG SWITCH | | WALL FAN |
| Sab | TWO GANG SWITCH | | |

2 LEGEND & SYMBOLS

SCALE: NTS



1 GENERAL NOTES

SCALE: NTS

3 MISCELLANEOUS DETAILS

SCALE: NTS



Republika ng Pilipinas
Lungsod ng Quezon
CITY ENGINEERING DEPARTMENT

PROJECT TITLE:
**PROPOSED REHABILITATION OF
MANUNGAL II DAY CARE
CENTER**
LOCATION:
BARANGAY TATALON, DISTRICT 4, QUEZON CITY

DRAWN BY:
DATE: September 18, 2024
CHECKED BY: J.A.
REVIEWED BY:

SUBMITTED BY:

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

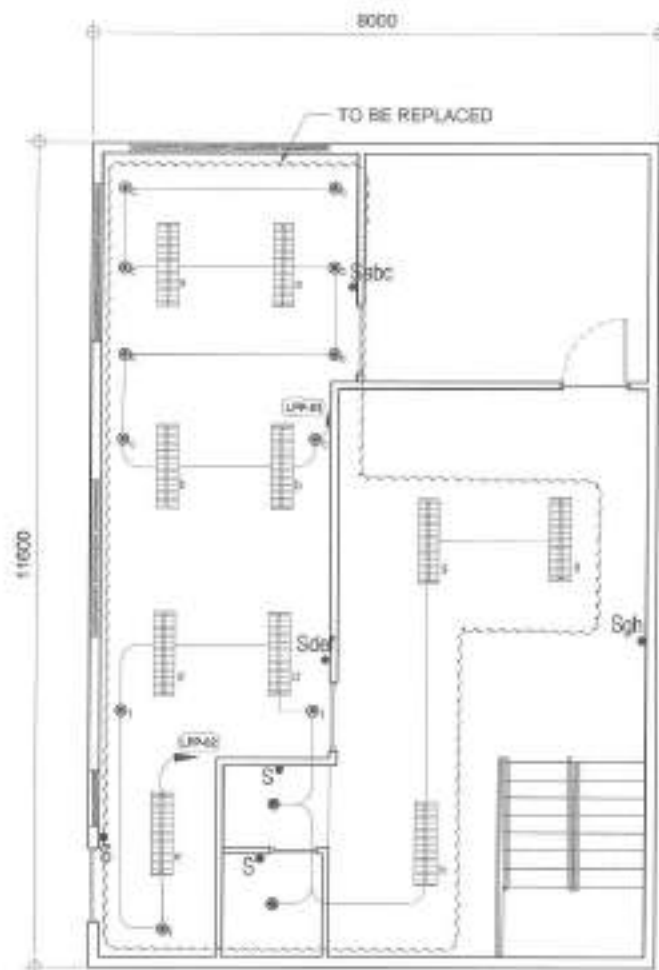
RECOMMENDING APPROVAL:

ENGR. ISAGANI R. VERZOSA, JR.
HEAD, CIVIL ENGINEERING DIVISION

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

SHEET CONTENT:
GENERAL NOTES
LEGENDS AND SYMBOLS
MISCELLANEOUS
DETAILS

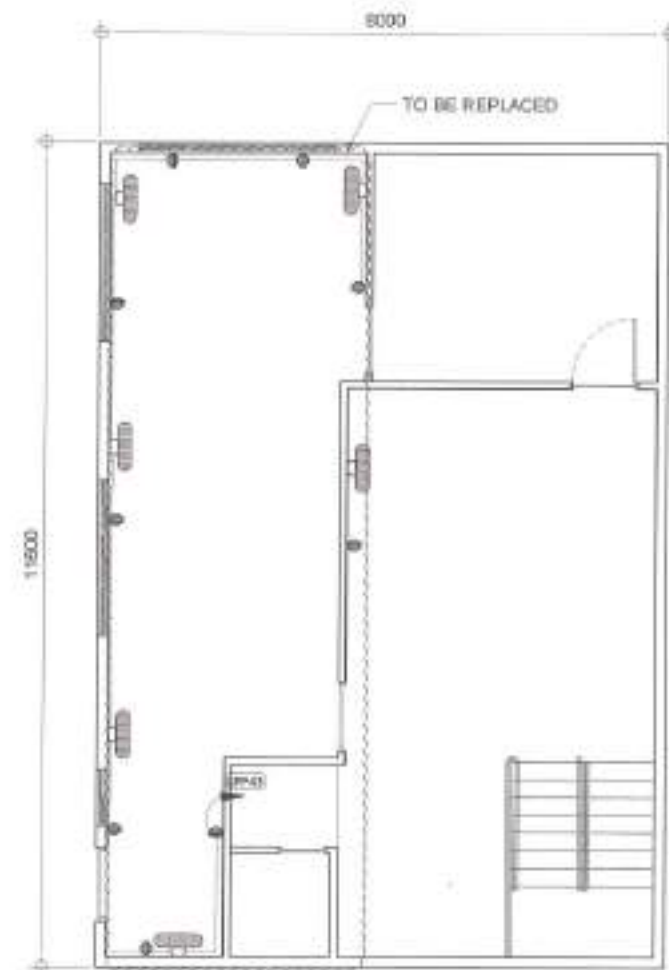
SHEET NO.:
**EL-01
0710**


NOTE:

- TAP TO EXISTING POWER SUPPLY
- ALL LIGHTING FIXTURES TO BE REPLACED

1 LIGHTING LAYOUT

SCALE: 1:75M


NOTE:

- TAP TO EXISTING POWER SUPPLY

2 POWER LAYOUT

SCALE: 1:75M



Republika ng Pilipinas
Lungsod ng Quezon
CITY ENGINEERING DEPARTMENT

PROJECT TITLE:
**PROPOSED REHABILITATION OF
MANUNGGAL II DAY CARE
CENTER**
LOCATION:
BARANGAY TATALON, DISTRICT 4, QUEZON CITY

DESIGNED BY:
DATE: 08/08/2021
CHECKED BY: J. M.
REVISION:

SUBMITTED BY:

ENGR. LEO S. DEL ROSARIO
P.E. - ELECTRICAL ENGINEERING

RECOMMENDING APPROVAL:

ENGR. SAGANI R. VERZOSA, JR.
P.E. - ELECTRICAL ENGINEERING

APPROVED BY:

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

SHEET CONTENT:
LIGHTING LAYOUT
POWER LAYOUT

SHEET NO.

EL-02
08/10

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.

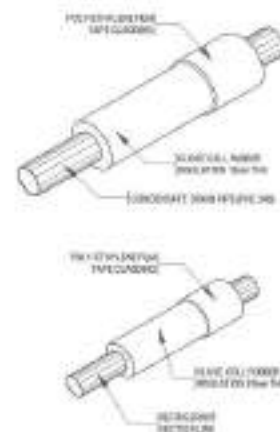
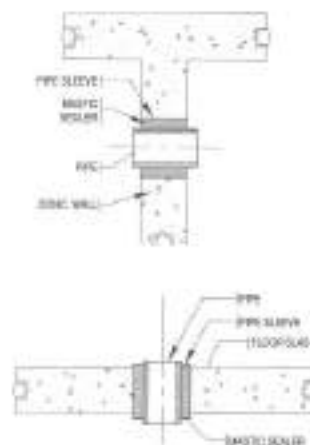
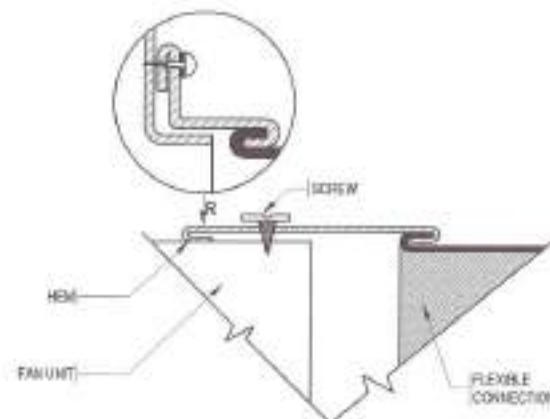
1 GENERAL NOTES

| | | | |
|--|------------------------------|--|-----------------|
| | - EQUIPMENT DESIGNATION | | - ELBOW UP |
| | - REFRIGERANT PIPE | | - ELBOW DOWN |
| | - AIR COOLED CONDENSING UNIT | | - FAN COIL UNIT |

2 LEGEND AND SYMBOLS

3 FLEXIBLE CONNECTION DETAIL

SCALE : NTS



4 PIPE SLEEVE DET.

NTS

5 REFRIGERANT/RAIN PIPE INSULATION DETAIL

SCALE : NTS



Republika ng Pilipinas
Lungsod ng Quezon
CITY ENGINEERING DEPARTMENT

PROJECT TITLE:
**PROPOSED REHABILITATION OF
MANUNGGA II DAY CARE
CENTER**

LOCATION:
BARANGAY TATALON, DISTRICT 4, QUEZON CITY

DATE: September 18, 2022
CHECKED BY: JTA
REVISION NO.:

SUBMITTED BY:

ENGR. LEO S. DEL ROSARIO
RAC, PLUMBING & MECHANICAL ENGINEER

RECOMMENDING APPROVAL:

ENGR. ISAGANI R. VERZOSA, JR.
BC, CIVIL ENGINEERING

APPROVED BY:
HON. MA. JOSEFINA G. BELMONTE
OFFICIALS QUEZON CITY

SHEET CONTENT
GENERAL NOTES
LEGEND AND
SYMBOLS
FLEXIBLE
CONNECTION DETAIL
PIPE SLEEVE DETAIL
REFRIGERANT DRAIN
PIPE DETAIL



SHEET NO.
**ME-01
09/10**



1 GROUND FLOOR AIR CONDITION UNIT LAYOUT

SCALE: 1:100M

SPLIT TYPE AIR-CONDITIONER AIR-COOLED CONDENSING UNITS

| DESIGNATION | | TYPE | QUANTITY | COOLING CAPACITY | | AIR CIRCULATION | POWER INPUT WATTS | ELECTRICAL SUPPLY | | | REFRIGERANT PIPE | | REMARKS |
|---|---|--------------|----------|------------------|--------|-----------------|----------------------|-------------------|-------|-------|------------------|----------|--|
| OUTDOOR | INDOOR | | | HP | KJ/HR | | | VOLTS | PHASE | HERTZ | LIQUID, cum | GAS, cum | |
|  |  | WALL MOUNTED | 1 SET | 2.0 | 18,000 | 450 CFM | 1650 | 230.0 | 1Ø | 60.0 | 6.35 | 12.7 | FAN COIL UNIT SHALL BE WALL MOUNTED TYPE. CONTRACTOR SUPPLY AND INSTALL. |

2 SCHEDULE OF AIR CONDITION UNIT

SCALE: 1:75 M



Republika ng Pilipinas
Lungsod ng Quezon
CITY ENGINEERING DEPARTMENT

PROJECT TITLE:

PROPOSED REHABILITATION OF
MANUNGAL II DAY CARE
CENTER

LOCATION:

BARANGAY TATALON, DISTRICT 4, QUEZON CITY

DRAWN BY:

DATE: September 16, 2021

CHECKED BY: JLV

DESIGN NO.:

SUBMITTED BY:

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

RECOMMENDING APPROVAL:

ENGR. IRISANI R. VERZOSA, JR.
HEAD, CIVIL ENGINEERING DIVISION

APPROVED BY:

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

SHEET CONTENT

GROUND FLOOR
AIR-CONDITION UNIT
SCHEDULE OF
AIR-CONDITION UNIT

SHEET NO.

ME-02
10/10

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SITE



1 LOCATION MAP

SCALE: NTS

SITE



2 VICINITY MAP

SCALE: NTS

PORTION
OF STO.
NIÑO
BARANGAY
HALL

STO. NIÑO
DAY CARE
CENTER

1500

4000

SAN ISIDRO STREET

3 SITE DEVELOPMENT PLAN

SCALE: NTS



Republika ng Pilipinas
Lungsod ng Quezon
CITY ENGINEERING DEPARTMENT

PROJECT TITLE:

PROPOSED REHABILITATION OF STO.

NIÑO DAY CARE CENTER

LOCATION: BARANGAY STO. NIÑO, DISTRICT 4, QUEZON CITY

DRAWN BY: MEG

DATE: 06/01/2021

CHECKED BY: MEG

REVISION NO.:

SUBMITTED BY:

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

RECOMMENDED APPROVAL:

ENGR. ISMAEL R. VERZOSA, JR.
CITY ENGINEER

APPROVED BY:

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

SHEET CONTENT

SHEET NO.:

VICINITY MAP

LOCATION MAP

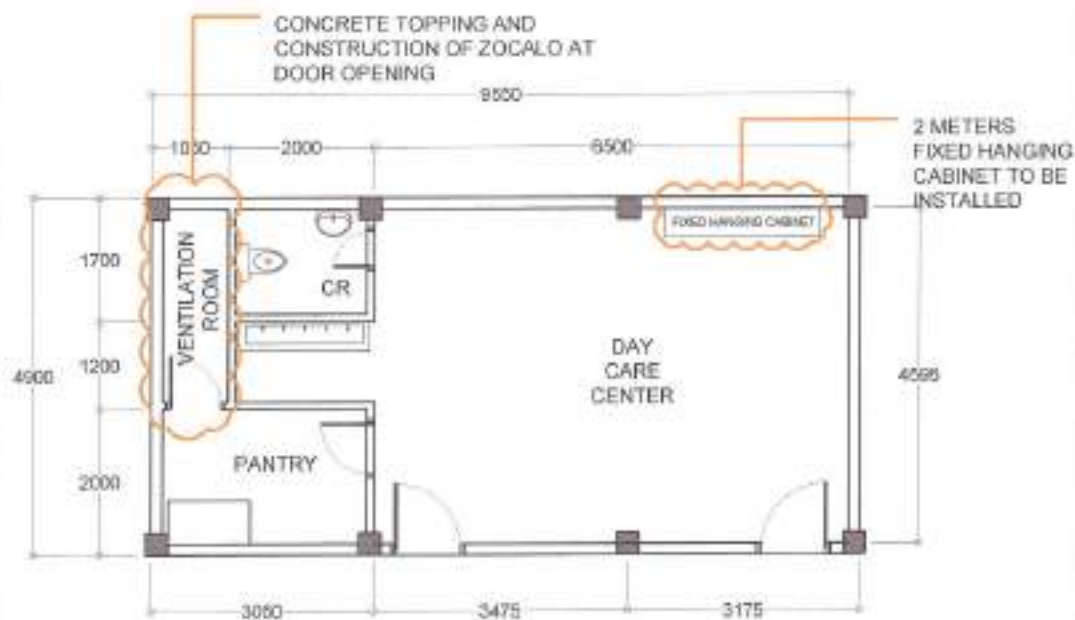
PRELIMINARY

AR-01

15

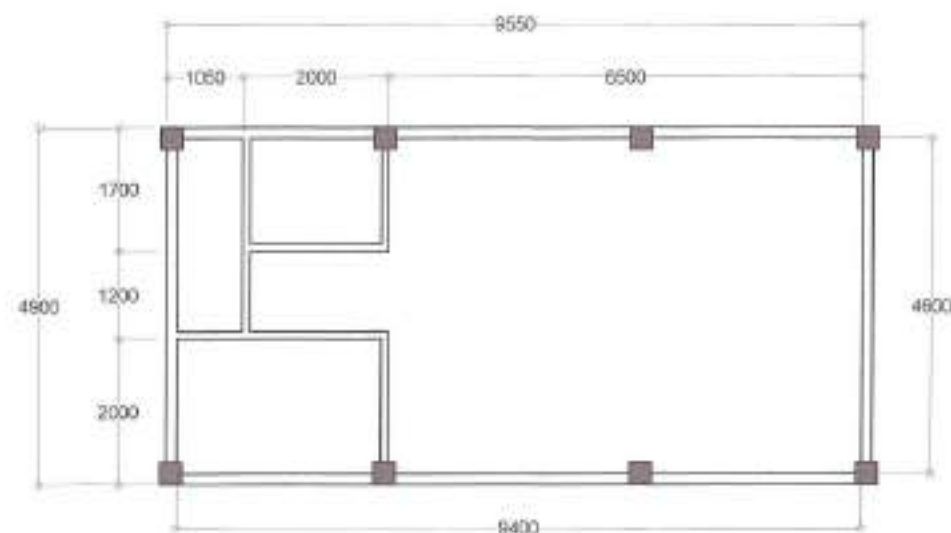
SCOPE OF WORKS:

- CONSTRUCTION OF FIXED HANGING CABINET
- CONCRETE TOPPING OF VENTILATION ROOM
- CONSTRUCTION OF ZOCALO AT DOOR OPENING OF VENTILATION ROOM
- REPAINTING OF INTERIOR WALLS



SCOPE OF WORKS:

- SLAB SOFFIT TO BE REPAINTED



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:

PROPOSED REHABILITATION OF STO.

NIÑO DAY CARE CENTER

LOCATION: BARANGAY STO. NIÑO, DISTRICT 4 QUEZON CITY

DESIGNED BY: JGO

DATE: 06/08/21

CHECKED BY: JMN

REVISION NO:

SUBMITTED BY:

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

RECOMMENDING APPROVAL:

ENGR. MARCOS R. VERZOSA, JR.
CHIEF OF PLANNING DIVISION

APPROVED BY:

HON. MA. JOSEFINA G. BELMONTTE
CITY MAJOR, QUEZON CITY

SHEET NO. 1 OF 1

STO. NIÑO DAY CARE CENTER
REFLECTED CEILING PLAN

AR-02
2 5

GENERAL NOTES:

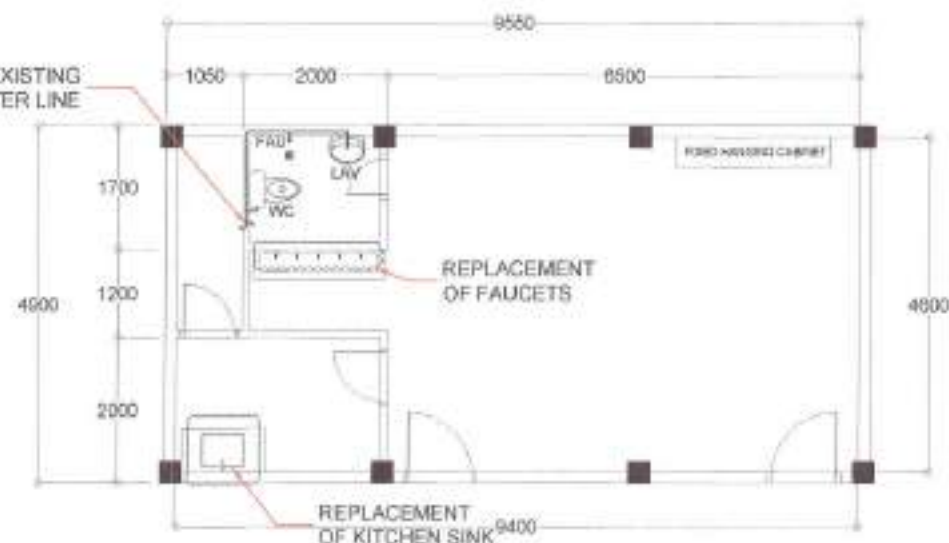
1. All plumbing work and materials indicated herein shall be compliant to the provisions of the latest edition of National Plumbing Code, the rules and regulations of local authorities concerned, the rules and regulations of local utility companies and the provisions of the land developer when and where applicable.
2. The plumbing layout is only diagrammatic; pipes, drains and check valves shall be concealed as much as possible. It is not intended to show the actual direction of the pipes and fixtures in the drawing but all the pipes and fixtures shall be installed as and where indicated. Any relocation will require proper excavation in relation with other trades.
3. The plumbing contractor shall verify all existing utilities at the site and shall coordinate the work with other trades.
4. Pipes shall not be embedded in structural members unless otherwise specified or allowed.
5. Minimum slope for horizontal sewer lines shall be 1% and for drain lines shall be 5%.
6. Proposed plumbing utilities shall conform with the actual location, depth and invert elevation of all existing sewer utilities.
7. Connection of fixtures to pipes and fittings shall be according to manufacturer's specifications.
8. All floor drains shall be vented individually.
9. All drain out fixtures shall be flush mounted to wall and shall be provided with polished over caps. Do not install floor drain out except at lines in grade and service area not subject to traffic.
10. All underground C.I. pipes in direct contact with soil shall be provided with two (2) coats of protective bit covering and wrapped with jute cloth thoroughly soaked in tar or asphalt.
11. Provide vent stacks and vent pipe free of cost iron service weight as required.
12. All cast iron pipes shall be of approved quality and C.I. pipes for water distribution lines shall be Schedule 40 U.S. standard weight.
13. Provide gate valves to all water supply lines to fixtures.
14. All hot water lines shall be provided with proper insulation where exposed.
15. All individual ventstacks to fixtures or group of fixtures and/or equipments shall be provided with air chambers or capped vertical pipe extensions of dimensions as shown:
H = 400 mm for 10 mm Ø and smaller
H = 300 mm for 12 mm Ø and smaller
All hose bibbs shall be 15 mm Ø (3/8" Ø) unless otherwise indicated.
16. All pipe of electric test is 50 mm higher than the siphon pipe which is 30 mm higher than the outlet pipe.
17. All plumbing work and material of construction shall be under the direct supervision of on-site and duly licensed Master Plumber or Registered Sanitary Engineer. Any discrepancies found in plan shall be notified to the owner prior.

| | |
|--|--------------------------------|
| | UNION PATENT |
| | CHECK VALVE |
| | BUILDING SEWER |
| | BUILDING DRAIN |
| | WASTE LINE |
| | AREA DRAIN/CATCH BASIN |
| | FLOOR DRAIN |
| | DIAMETER |
| | WASTE LINE |
| | WASTE LINE |
| | GATE VALVE |
| | DECK DRAIN |
| | CLEANOUT |
| | PIPE DOWN |
| | PIPE UP |
| | MILLIMETER |
| | GATE VALVE |
| | AREA DRAIN/CATCH BASIN |
| | WATER CLOSET |
| | LAVATORY |
| | MANHOLE |
| | ROSE BED |
| | STORM DRAIN LINE |
| | VENT LINE |
| | VENT ABOVE GROUND |
| | CONCRETE PIPE/REIN. CONC. PIPE |
| | VENT THRU ROOF |
| | DIRECTION OF FLOW/SLOPE |



2 SANITARY LAYOUT

SCALE: 1/75M



1 GENERAL NOTES AND LEGENDS

SCALE: NTS

3 WATERLINE LAYOUT

SCALE: 1/75M



Republika ng Pilipinas
Lungsod ng Quezon
CITY ENGINEERING DEPARTMENT

PROJECT TITLE:
PROPOSED REHABILITATION OF STO. NIÑO DAY CARE CENTER
LOCATION: BAKANGKY STO. NIÑO, DISTRICT 4, QUEZON CITY

DRAWN BY: MGS
DATE: 09/02/21
CHECKED BY: [Signature]
DESIGNED BY: [Signature]
REVISION NO.:

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

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

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

SHEET CONTENT:
GENERAL NOTES
SANITARY LAYOUT
WATERLINE LAYOUT

SHEET NO.:
PL-01
3/5

- ALL ELECTRICAL WORK SHALL BE DONE IN ACCORDANCE WITH THE PROVISIONS OF THE LATEST EDITION OF THE NATIONAL ELECTRICAL CODE, THE LAWS AND ORDINANCES OF THE LOCAL CODE ENFORCING AUTHORITIES AND THE REQUIREMENTS OF THE LOCAL POWER AND TELEPHONE UTILITY COMPANY.
- THE CONTRACTOR SHALL SECURE ALL PERMITS AND PAY ALL FEES REQUIRED FOR THE WORK AND SHALL FURNISH THE OWNER THROUGH THE ENGINEER, FINAL CERTIFICATES OF ELECTRICAL INSPECTION AND APPROVAL FROM APPROPRIATE GOVERNMENT AGENCIES FOR COMPLETION OF WORK.
- ALL BRANCHED BRANCH CIRCUITS SHALL BE TWO CONDUITS AND FOR EXPOSED INSTALLATION SHALL BE MC SUPPORTED BY CONDUIT CLAMPS EVERY 100 MILLIMETER.
- 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.
- ALL POWER OUTLETS AND SWITCHES SHALL BE GROUNDING TYPE WITH PARALLEL SLOTS FOR 120V.
- PROVIDE GROUND FAULT CIRCUIT INTERRUPTER (GFCI) CIRCUIT BREAKER FOR LOADS MARKED "GFCI" ON THE PLAN.
- ALL METALLIC CONDUITS, CABINETS AND EQUIPMENT SHALL BE PROPERLY GROUNDED AND BONDED.
- UNLESS OTHERWISE NOTED, MOUNTING HEIGHT FOR WALL MOUNTED DEVICES SHALL BE AS FOLLOWS:

RECEPTACLE OUTLET - 120 MM AFF. (18MM ABOVE WORKING SURFACE)
TELEPHONE OUTLET - 300 MM AFF.
DATA OUTLET - 300 MM AFF.
LIGHTING SWITCH - 1400 MM AFF.
PANELBOARD - 1800 MM AFF.

- REFER TO MECHANICAL, PLUMBING AND FIRE PROTECTION DRAWINGS FOR RATINGS AND LOCATIONS OF EQUIPMENT AS WELL AS THEIR CONTROL DEVICES AS SPECIFIED AND OR SHOWN UNDER THEIR RESPECTIVE SECTIONS.
- ALL MATERIALS TO BE USED SHALL BE OF THE BEST QUALITY. BRAND WHEN AS SPECIFIED.
- THE DRAWINGS AND SPECIFICATIONS ARE INTENDED TO PRESENT GENERAL LAYOUT AND BRING OUT THE DESCRIPTION OF THE PROJECT BUT DO NOT NECESSARILY INCLUDE DIMENSIONS, ACTUAL, LOCATIONS, LEVELS AND DIMENSIONS 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.
- ANY DISCREPANCY BETWEEN THE PLANS AND SPECIFICATIONS SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER FOR CLARIFICATION DECISION.
- ALL LIGHTING AND CONVENIENCE OUTLET CIRCUITS SHALL BE 3.0 SQ. MM. THINWALL CONDUIT WIRE. UNLESS OTHERWISE NOTED, MINIMUM SIZE OF WIRE SHALL BE 3.0 SQ. MM. COPPER WIRE. ALL WIRES AND CABLES SHALL BE COLOR CODED AS FOLLOWS:

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

- BORES, WIRE, GUTTERS, ENCASEMENT SHALL BE FABRICATED FROM STEEL WITH THICKNESS AS FOLLOWS:
MAXIMUM WIDTH OF THE WEAR SURFACE STEEL:
UP TO INCLUDING 100 MM: 1A. PAINTED WITH METAL PRIMER EPOXY AND TOPCOAT
OVER 100 MM BUT NOT OVER 400 MM: 1B. PAINTED WITH METAL PRIMER EPOXY AND TOPCOAT
OVER 400 MM BUT NOT OVER 700 MM: 1C. PAINTED WITH METAL PRIMER EPOXY AND TOPCOAT
OVER 700 MM: 1D. PAINTED WITH METAL PRIMER EPOXY AND TOPCOAT
- ALL ELECTRICAL WORK HEREIN SHALL BE EXECUTED BY EXPERIENCED MEN UNDER THE DIRECT SUPERVISION OF A FULL TIME LICENSED ELECTRICAL ENGINEER AND A FULLY ACCREDITED ELECTRICAL CONTRACTOR BY POWER WORKS SHALL BE INSTALLED, SECURELY FASTENED AND PROPERLY FINISHED.
- TYPE OF SERVICE ENTRANCE SHALL BE: SINGLE PHASE, TWO WIRE PLUS GROUND, 200 HERTZ, 230V AC NEUTRAL.
- CONDUIT TO FIELD 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.
- UPON COMPLETION OF ELECTRICAL CONSTRUCTION WORK, INSULATION RESISTANCE TEST AND FUNCTIONALITY TEST SHALL BE PERFORMED BY THE CONTRACTOR INCLUSIVE OF THE INSTALLATION TO BE REPEATED IN DETAIL ON FORMS APPROVED BY THE QUEZON CITY ENGINEERING DEPARTMENT REPRESENTATIVE. THE CIRCUIT RESISTANCE FOR ELECTRICAL SYSTEM SHALL NOT BE MORE THAN ONE. COMMUNICATION CIRCULATING RESISTANCE SHALL NOT EXCEED ONE.

1 GENERAL NOTES

SCALE: NTS

2 LEGENDS & SYMBOLS

SCALE: NTS

| | | |
|--|---|---|
| <p>BENDING RADIUS DETAIL</p> | <p>SPOT DETAIL OF CONDUIT RUN AND BOX</p> | <p>CONDUIT RUN FOR LIGHTING DISTRIBUTION IN ONE CIRCUIT (FOR EXPOSED OR INSIDE DROP-CEILING INSTALLATION)</p> |
| <p>PROPER CONDUIT LAYOUT IN PULL BOX</p> | <p>BONDED RACEWAY TERMINATION FOR SHEET METAL</p> | <p>CONNECTION OF THREADED RIGID METAL CONDUIT UNDERGROUND TO METALLIC CONDUIT TO A THREADED RIGID OR RMC CONDUIT TO BE A BONDED CONDUIT TERMINATION</p> |

3 MISCELLANEOUS DETAILS

SCALE: NTS



Republic of the Philippines
Lungsod ng Quezon
CITY ENGINEERING DEPARTMENT

PROJECT TITLE:
PROPOSED REHABILITATION OF STO NIÑO DAY CARE CENTER
LOCATION: BARANGAY STO NIÑO, DISTRICT 4 QUEZON CITY

DESIGNED BY:
DATE: 000/00/00
CHECKED BY:
REVISION NO.:

SUBMITTED BY:
ENGR. LEO S. DEL ROSARIO
SENIOR PLUMBING PROGRAMMER DESIGN

RECOMMENDED APPROVAL:
ENGR. JACOB R. VERZOSA, JR.
CHIEF OF THE ENGINEERING DEPARTMENT

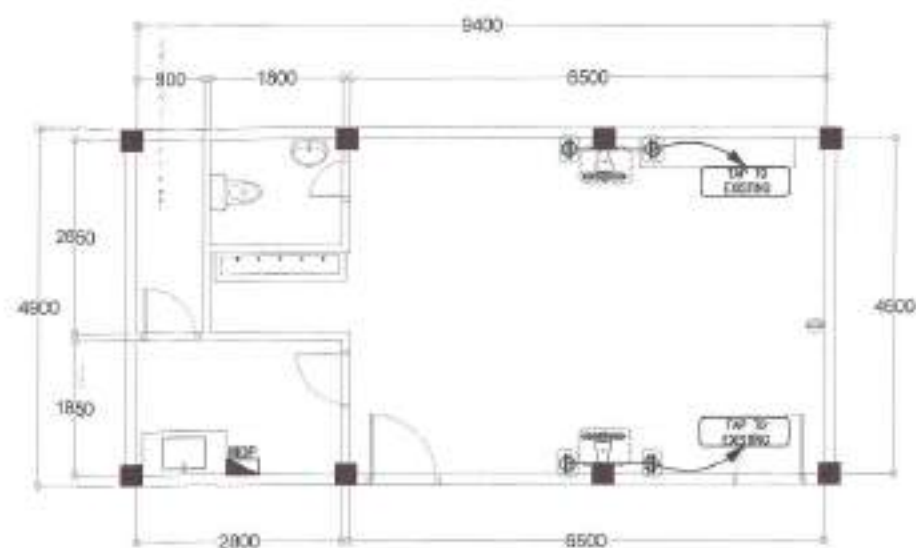
APPROVED BY:
HON. MA. JOSEFINA G. BELMONTTE
CITY ENGINEER, QUEZON CITY

SHEET CONTENT:
GENERAL NOTES
MISCELLANEOUS DETAILS

SHEET NO.:
EL-01
4 5

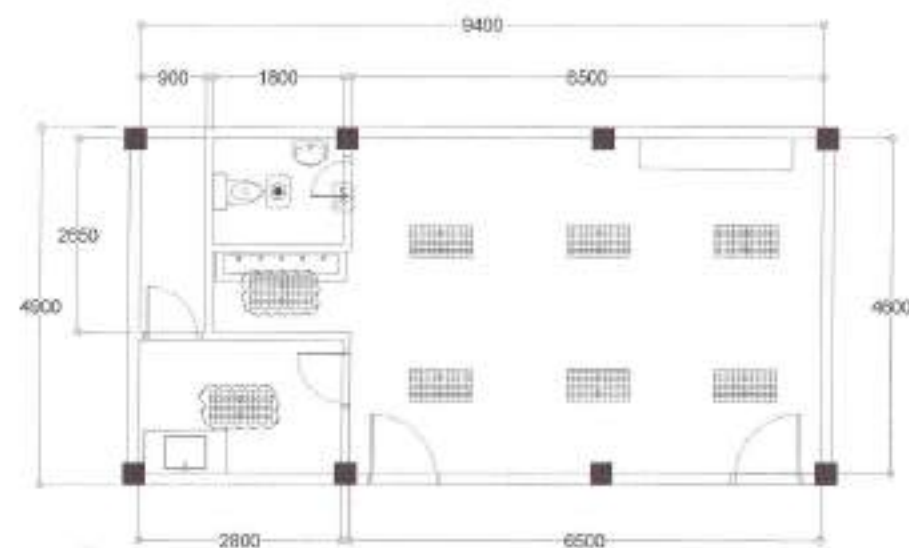
SCOPE OF WORKS:

- REPLACEMENT OF WALL FANS
- REPLACEMENT AND ADDITIONAL CONVENIENCE OUTLETS



SCOPE OF WORKS:

- REPLACEMENT OF DILAPIDATED SWITCH
- REPLACEMENT OF BUSTED LIGHTS




1 GROUND FLOOR POWER LAYOUT

SCALE: 1/75M

2 GROUND FLOOR LIGHTING LAYOUT

SCALE: 1/75M

| | | | | | | | | |
|---|--|------------------|---------------|---|--|---|---|--------------|
|  <p>Rapuhika ng Pilipinas Lungsod ng Quezon CITY ENGINEERING DEPARTMENT</p> | PROJECT TITLE: | DESIGNED BY: | SUBMITTED BY: | RECOMMENDING APPROVAL: | APPROVED BY: | SHEET CONTENT: | SHEET NO.: | |
| | PROPOSED REHABILITATION OF STO. NIÑO DAY CARE CENTER | DATE: 0001/00/00 | CHECKED BY: | ENGR. LEO S. DEL ROSARIO HEAD, PLANNING & PROGRAMMING DIVISION | ENGR. RAMON R. VERZOSA, JR. DCC CITY ENGINEERING DEPARTMENT | MON. MA. JOSEFINA G. BELMONTTE CITY MAYOR, QUEZON CITY | GROUND FLOOR POWER LAYOUT GROUND FLOOR LIGHTING LAYOUT | EL-02 5 5 |
| | LOCATION: BAYANGAY, STO. NIÑO, DISTRICT 4, QUEZON CITY | APPROVED BY: | | | | | | |

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.



Republika ng Pilipinas
Lungsod ng Quezon

CITY ENGINEERING DEPARTMENT

5th, 6th, 7th Floor, QC Civic Center Building "B"
Telephone Nos. 8988-4242 Local 8538



PROJECT TITLE: PROPOSED CONSTRUCTION OF HANDWASHING FACILITY AND REHABILITATION OF DAY CARE CENTER AT DISTRICT 4 / AREA XXII

LOCATION: BARANGAY TATALON, DON MANUEL, DOÑA AURORA, DOÑA IMELDA, DOÑA JOSEFA, SAN ISIDRO GALAS,

AGENCY ESTIMATE QUEZON CITY INFRASTRUCTURE PROJECT

| ITEM NO. | ITEM OF WORK (DESCRIPTION) | MATERIALS COST | LABOR COST | INDIRECT COST | AGGREGATE COST |
|----------|---|----------------|------------|---------------|----------------|
| | MANUNGGAL I DAYCARE CENTER, BRGY. | | | | |
| I | GENERAL REQUIREMENTS | 59,584.00 | - | 18,619.99 | 78,203.99 |
| II | CONSTRUCTION OF HANDWASHING FACILITY | 26,202.50 | 2,045.05 | 8,827.36 | 37,074.91 |
| III | REHABILITATION OF DAYCARE CENTER | 369,244.12 | 142,165.34 | 159,815.46 | 671,224.92 |
| | MANUNGGAL II DAYCARE CENTER, BRGY. | | | | |
| I | GENERAL REQUIREMENTS | 71,104.00 | - | 22,220.00 | 93,324.00 |
| II | SITE WORKS | - | 42,615.00 | 13,317.19 | 55,932.19 |
| III | CIVIL / STRUCTURAL WORKS | 5,136.00 | 1,797.60 | 2,166.75 | 9,100.35 |
| IV | ARCHITECTURAL WORKS | 321,850.04 | 87,638.01 | 127,965.02 | 537,453.07 |
| V | PLUMBING WORKS | 46,272.00 | 16,195.20 | 19,521.00 | 81,988.20 |
| VI | ELECTRICAL WORKS | 96,887.00 | 33,910.45 | 40,874.20 | 171,671.65 |
| VII | MECHANICAL WORKS | 71,304.00 | 27,263.60 | 30,802.38 | 129,369.98 |
| | DON MANUEL DAYCARE CENTER | | | | |
| I | GENERAL REQUIREMENTS | 86,314.00 | - | 26,973.13 | 113,287.13 |
| II | SITE WORKS | - | 10,770.00 | 3,365.63 | 14,135.63 |
| III | CIVIL / STRUCTURAL WORKS | 36,213.00 | 12,674.55 | 15,277.36 | 64,164.91 |
| IV | ARCHITECTURAL WORKS | 224,815.04 | 74,199.36 | 93,442.00 | 392,456.40 |
| V | PLUMBING WORKS | 18,316.00 | 6,410.60 | 7,727.06 | 32,453.66 |
| VI | ELECTRICAL WORKS | 88,632.00 | 31,021.20 | 37,391.61 | 157,044.81 |
| | DOÑA AURORA DAYCARE CENTER | | | | |
| I | GENERAL REQUIREMENTS | 59,014.00 | - | 18,441.88 | 77,455.88 |
| II | SITE WORKS | - | 11,880.00 | 3,712.50 | 15,592.50 |
| III | ARCHITECTURAL WORKS | 186,060.00 | 64,161.00 | 78,194.07 | 328,415.07 |
| IV | PLUMBING WORKS | 5,378.00 | 1,882.30 | 2,268.84 | 9,529.14 |
| V | ELECTRICAL WORKS | 49,805.00 | 17,431.75 | 21,011.48 | 88,248.23 |
| | CHAMBERETTE DAYCARE CENTER, BRGY. DOÑA | | | | |
| I | GENERAL REQUIREMENTS | 166,914.00 | - | 52,160.62 | 219,074.62 |
| II | CONSTRUCTION OF HANDWASHING FACILITY | 682,391.80 | 4,448.45 | 214,637.58 | 901,477.83 |
| III | REHABILITATION OF DAYCARE CENTER | 1,657,841.60 | 642,978.77 | 719,006.36 | 3,019,826.73 |
| | DOÑA JOSEFA DAYCARE CENTER | | | | |
| I | GENERAL REQUIREMENTS | 40,154.00 | - | 12,548.13 | 52,702.13 |
| II | CONSTRUCTION OF HANDWASHING FACILITY | 24,422.60 | 2,599.80 | 8,444.50 | 35,466.90 |
| III | REHABILITATION OF DAYCARE CENTER | 159,838.60 | 66,439.06 | 70,711.77 | 296,989.43 |
| | GALAS DAYCARE CENTER, BRGY. SAN ISIDRO | | | | |

| NO. | (DESCRIPTION) | COST | LABOR COST | INDIRECT COST | COST |
|-----|---|------------|------------|---------------|--------------|
| | MANUNGAL I DAYCARE CENTER, BRGY. | | | | |
| I | GENERAL REQUIREMENTS | 88,424.00 | - | 27,632.50 | 116,056.50 |
| II | CONSTRUCTION OF HANDWASHING FACILITY | 231,530.90 | 3,662.05 | 73,497.80 | 308,690.75 |
| III | REHABILITATION OF DAYCARE CENTER | 813,607.20 | 293,446.37 | 345,954.24 | 1,453,007.81 |
| | SANTOL DAYCARE CENTER | | | | |
| I | GENERAL REQUIREMENTS | 65,564.00 | - | 20,488.75 | 86,052.75 |
| II | CONSTRUCTION OF HANDWASHING FACILITY | 852,093.00 | 4,309.20 | 267,625.69 | 1,124,027.89 |
| III | REHABILITATION OF DAYCARE CENTER | 472,682.60 | 197,378.91 | 209,394.22 | 879,455.73 |

| NO. | (DESCRIPTION) | COST | LABOR COST | INDIRECT COST | COST |
|--------------|---|-----------|------------|---------------|----------------------|
| | MANUNGAL I DAYCARE CENTER, BRGY. | | | | |
| | STO NIÑO I DAYCARE CENTER | | | | |
| I | GENERAL REQUIREMENTS | 36,704.00 | - | 11,470.00 | 48,174.00 |
| II | SITE WORKS | - | 7,900.00 | 2,468.75 | 10,368.75 |
| III | CIVIL / STRUCTURAL WORKS | 6,062.00 | 2,121.70 | 2,557.41 | 10,741.11 |
| IV | ARCHITECTURAL WORKS | 98,391.00 | 33,686.85 | 41,274.33 | 173,352.18 |
| V | PLUMBING WORKS | 33,373.00 | 11,680.55 | 14,079.23 | 59,132.78 |
| VI | ELECTRICAL WORKS | 20,007.00 | 7,002.45 | 8,440.45 | 35,449.90 |
| TOTAL | | | | | 11,988,174.41 |

AMOUNT IN WORDS:

ELEVEN MILLION NINE HUNDRED EIGHTY EIGHT THOUSAND ONE HUNDRED SEVENTY FOUR PESOS AND FORTY ONE CENTAVOS ONLY

Note:

- Strictly enforce health protocols relative to the latest applicable DPWH memorandum
- Materials to be supplied by the government - NONE.
- The contract time for the above mentioned project shall be **Ninety (90) Calendar Days.**

Recommending Approval :

LEO S. DEL ROSARIO
Head, Planning & Programming Division

Approved by:

ISAGANI R. VERZOSA JR.
OIC, City Engineering Department



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



PROGRAM OF WORKS
QUEZON CITY INFRASTRUCTURE PROJECT

PROJECT TITLE: PROPOSED CONSTRUCTION OF HANDWASHING FACILITY AND REHABILITATION OF MANUNGAL I DAY CARE CENTER
LOCATION: BARANGAY TATALON, DISTRICT 4, QUEZON CITY

SCOPE OF WORKS:

I GENERAL REQUIREMENTS

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

II CONSTRUCTION OF HAND WASHING FACILITY

- Construction of Hand Washing Facility.
- Sanitary/Plumbing Works include installation of roughing-ins and accessories.

III REHABILITATION OF MANUNGAL I DAY CARE CENTER

- Site Works include demolition/removal works, and cleaning and clearing for painting preparation.
- Civil/Structural Works include moisture protection, masonry works, and metal works.
- Architectural Works include floor finishes, wall finishes, ceiling finishes, painting works, installation of doors and windows, fabricated materials, and letterings.
- Sanitary/Plumbing Works include installation of roughing-ins, fixtures and accessories.
- Electrical Works include installation of roughing-ins, devices, wiring, fixtures, panel board and accessories.

IV TESTING AND COMMISSIONING

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

DETAILED COST ESTIMATE

| ITEM NO | WORK DESCRIPTION AND SCOPE OF WORKS | QTY | UNIT | UNIT COST | TOTAL COST |
|-----------|---|-------|-------|----------------------|--------------------|
| I | GENERAL REQUIREMENTS | | | | |
| | Billboard | 1.00 | unit | P 4,644.00 | P 4,644.00 |
| | Clearing, Hauling and Disposal of Construction Materials and Debris | 2.00 | t.l. | 3,500.00 | 7,000.00 |
| | Construction Safety and Health | 1.00 | unit | 39,060.00 | 39,060.00 |
| | Scaffolding (Rental) | 18.00 | sq.m. | 250.00 | 4,500.00 |
| | Temporary Enclosure Around the Construction Area (h=2.40m) | 6.00 | l.m. | 730.00 | 4,380.00 |
| | | | | Direct Cost I | P 59,584.00 |
| II | CONSTRUCTION OF HAND WASHING FACILITY | | | | |
| A | Hand Washing Facility with Cover | 3.00 | l.m. | P 6,786.50 | P 20,359.50 |
| | | | | Direct Cost A | P 20,359.50 |
| B | Sanitary/Plumbing Works | | | | |
| | Sewer Line / Storm Drainage System | | | | |
| | Roughing-Ins | | | | |
| | 50 mm Ø, Pipe PVC | 2.00 | piece | P 480.00 | P 960.00 |
| | 50mm Ø, P-Trap | 1.00 | piece | 125.00 | 125.00 |
| | 75 mm Ø, Pipe PVC | 1.00 | piece | 630.00 | 630.00 |
| | 50mm Ø, 1/8 Bend | 2.00 | piece | 40.00 | 80.00 |
| | 100mm Ø, 1/8 Bend | 2.00 | piece | 120.00 | 240.00 |
| | 75mm Ø x 75mm Ø, Tee | 2.00 | piece | 115.00 | 230.00 |
| | 75mm Ø, 1/4 Bend | 1.00 | piece | 80.00 | 80.00 |
| | 100mm Ø x 50mm Ø, Wye | 2.00 | piece | 120.00 | 240.00 |
| | Waterline System | | | | |
| | Roughing-Ins | | | | |
| | 20mm Ø, Pipe PPR | 1.00 | piece | 360.00 | 360.00 |
| | 20mm Ø, Elbow | 3.00 | piece | 40.00 | 120.00 |
| | 20mm Ø, Coupling | 1.00 | piece | 30.00 | 30.00 |
| | 20mm Ø, Tee Equal | 3.00 | piece | 60.00 | 180.00 |

| ITEM NO | WORK DESCRIPTION AND SCOPE OF WORKS | QTY | UNIT | UNIT COST | TOTAL COST |
|---------|--|------|------|-----------|------------|
| | Fixtures | | | | |
| | 100mm x 100mm Floor Drain | 2.00 | set | 150.00 | 300.00 |
| | Hose Bibb, Stainless (Water Efficient) | 3.00 | set | 310.00 | 930.00 |
| | | | | | |

| ITEM NO | WORK DESCRIPTION AND SCOPE OF WORKS | QTY | UNIT | UNIT COST | TOTAL COST |
|---------|--|--------|-------|-------------------|-------------|
| | Miscellaneous & Consumables | | | | |
| | 400cc Solvent Cement | 1.00 | can | 413.00 | 413.00 |
| | All-Around Sealant | 1.00 | can | 705.00 | 705.00 |
| | Hacksaw Blade | 1.00 | piece | 80.00 | 80.00 |
| | Teflon Tape | 1.00 | roll | 40.00 | 40.00 |
| | Waste Cloth | 1.00 | kg | 100.00 | 100.00 |
| | | | | | |
| | | | | Materials Cost B | ₱ 5,843.00 |
| | | | | Labor Cost B | 2,045.05 |
| | | | | Direct Cost B | ₱ 7,888.05 |
| | | | | | |
| | | | | Materials Cost II | ₱ 26,202.50 |
| | | | | Labor Cost II | 2,045.05 |
| | | | | Direct Cost II | ₱ 28,247.55 |
| | | | | | |
| III | REHABILITATION OF MANUNGGAL I DAY CARE CENTER | | | | |
| A | Site Works | | | | |
| | Demolition/Removal Works | | | | |
| | Removal of Doors | 2.00 | set | ₱ 250.00 | ₱ 500.00 |
| | Removal of Windows | 4.00 | sq.m. | 250.00 | 1,000.00 |
| | Removal of Steel Gate | 1.00 | set | 250.00 | 250.00 |
| | Removal of Ceiling | 27.00 | sq.m. | 250.00 | 6,750.00 |
| | Removal of Cabinet | 3.00 | sq.m. | 200.00 | 600.00 |
| | Removal of Water Closet | 1.00 | set | 250.00 | 250.00 |
| | Removal of Tiles | 33.00 | sq.m. | 200.00 | 6,600.00 |
| | Chipping of Concrete Wall (Electrical Works) | 2.00 | sq.m. | 250.00 | 500.00 |
| | Cleaning and Clearing for Painting Preparation | 213.00 | sq.m. | 20.00 | 4,260.00 |
| | | | | | |
| | | | | Direct Cost A | ₱ 20,710.00 |
| | | | | | |
| B | Civil Works / Structural Works | | | | |
| | Masonry Works | | | | |
| | Restoration of Concrete Wall (Electrical Works) | 2.00 | sq.m. | ₱ 309.00 | ₱ 618.00 |
| | Moisture Protection | | | | |
| | Cementitious Capillary Type Waterproofing | 2.00 | sq.m. | 650.00 | 1,300.00 |
| | Metal Works | | | | |
| | Gate | | | | |
| | 50mm Ø G.I. Pipe | 30.00 | kg | 55.00 | 1,650.00 |
| | 10mm Ø Round Bar | 79.00 | kg | 55.00 | 4,345.00 |
| | 38mm Ø Barrel Bolt | 1.00 | set | 1,588.80 | 1,588.80 |
| | Cylindrical Hinge, Heavy Duty | 3.00 | set | 400.00 | 1,200.00 |
| | Miscellaneous and Consumables | | | | |
| | Acetylene Tank Refill | 1.00 | tank | 1,500.00 | 1,500.00 |
| | Assorted Metal Drill Bit | 2.00 | piece | 100.00 | 200.00 |
| | Cut Off Blade | 2.00 | piece | 500.00 | 1,000.00 |
| | Grinding Disc Metal | 2.00 | piece | 150.00 | 300.00 |
| | Oxygen Tank Refill | 2.00 | tank | 950.00 | 1,900.00 |
| | Welding Rod | 1.00 | box | 3,000.00 | 3,000.00 |
| | | | | | |
| | | | | Materials Cost B | ₱ 18,601.80 |
| | | | | Labor Cost B | 6,510.63 |
| | | | | Direct Cost B | ₱ 25,112.43 |
| | | | | | |
| C | Architectural Works | | | | |
| | Floor Finishes | | | | |
| | 400mm x 400mm Non - Skid Homogeneous Floor Tiles | 2.00 | sq.m. | ₱ 1,110.00 | ₱ 2,220.00 |
| | 600mm x 600mm Non - Skid Homogeneous Floor Tiles | 27.00 | sq.m. | 1,200.00 | 32,400.00 |
| | Floor Topping Preparation for Tile Works | 29.00 | sq.m. | 309.00 | 8,961.00 |
| | Wall Finishes | | | | |
| | 400mm x 400mm Homogeneous Wall Tiles | 7.00 | sq.m. | 1,110.00 | 7,770.00 |
| | Ceiling Finishes | | | | |
| | 6mm Fiber Cement Board Including Metal Framing | 28.00 | sq.m. | 850.00 | 23,800.00 |

| ITEM NO | WORK DESCRIPTION AND SCOPE OF WORKS | QTY | UNIT | UNIT COST | TOTAL COST |
|---------|-------------------------------------|-----|------|----------------|--------------|
| | | | | | |
| | | | | Materials Cost | ₱ 75,151.00 |
| | | | | Labor Cost | 26,302.85 |
| | | | | Subtotal | ₱ 101,453.85 |
| | | | | | |

| ITEM NO | WORK DESCRIPTION AND SCOPE OF WORKS | QTY | UNIT | UNIT COST | TOTAL COST |
|---------|---|--------|-------|------------------|--------------|
| | Installation of Doors | | | | |
| | D1 - (2.1m x 0.9m) Wooden Panel Door | 1.00 | set | P 8,505.00 | P 8,505.00 |
| | D2 - (2.1m x 0.6m) PVC Door with Louver | 1.00 | set | 3,442.32 | 3,442.32 |
| | Door Jambs | | | | |
| | Door Jamb D1 - (2.1m x 0.9m) Wooden Panel Door | 1.00 | set | 2,040.00 | 2,040.00 |
| | Hardware and Accessories | | | | |
| | Door Hinge, Heavy Duty, Stainless | 6.00 | set | 200.00 | 1,200.00 |
| | Door Knob, Lever Type, Stainless | 2.00 | set | 1,000.00 | 2,000.00 |
| | Installation of Windows | | | | |
| | W1 - (1.20m x 1.20m) Sliding Type Powder Coated Aluminum Framed Window with Fixed Glass | 2.00 | set | 12,240.00 | 24,480.00 |
| | W2 - (0.70m x 1.20m) Sliding Type Powder Coated Aluminum Framed Window | 1.00 | set | 7,140.00 | 7,140.00 |
| | W3 - (0.60m x 0.60m) Awning Type Powder Coated Aluminum Framed Window | 1.00 | set | 3,060.00 | 3,060.00 |
| | | | | | |
| | | | | Materials Cost | P 51,867.32 |
| | | | | Labor Cost | 10,373.46 |
| | | | | Subtotal | P 62,240.78 |
| | | | | | |
| | Painting Works | | | | |
| | Elastomeric Paint Finish (Exterior Walls) | 142.00 | sq.m. | P 390.00 | P 55,380.00 |
| | Epoxy Enamel Paint Finish (Steel Members) | 5.00 | sq.m. | 258.00 | 1,290.00 |
| | Flat Latex Paint Finish | | | | |
| | Interior Walls | 73.00 | sq.m. | 304.00 | 22,192.00 |
| | Ceiling | 28.00 | sq.m. | 160.00 | 4,480.00 |
| | | | | | |
| | | | | Materials Cost | P 83,342.00 |
| | | | | Labor Cost | 29,169.70 |
| | | | | Subtotal | P 112,511.70 |
| | | | | | |
| | Fabricated Materials | | | | |
| | Shelves | 3.00 | sq.m. | P 5,744.40 | P 17,233.20 |
| | Hanging Cabinet with Sliding Glass Door | 2.00 | sq.m. | 7,959.90 | 15,919.80 |
| | Letterings | | | | |
| | 150mm Stainless Steel Lettering with Neon Backlights "MANUNGGAL I DAY CARE CENTER" | 23.00 | set | 1,260.00 | 28,980.00 |
| | | | | | |
| | | | | Materials Cost | P 62,133.00 |
| | | | | Labor Cost | 21,746.55 |
| | | | | Subtotal | P 83,879.55 |
| | | | | | |
| | | | | Materials Cost C | P 272,493.32 |
| | | | | Labor Cost C | 87,592.56 |
| | | | | Direct Cost C | P 360,085.88 |
| | | | | | |
| D | Sanitary / Plumbing Works | | | | |
| | Sewer Line / Storm Drainage System | | | | |
| | Roughing-Ins | | | | |
| | 50 mm Ø, Pipe PVC | 1.00 | piece | P 480.00 | P 480.00 |
| | 75 mm Ø, Pipe PVC | 2.00 | piece | 630.00 | 1,260.00 |
| | 100mm Ø, Pipe PVC | 2.00 | piece | 840.00 | 1,680.00 |
| | 50mm Ø, P-Trap | 1.00 | piece | 125.00 | 125.00 |
| | 75mm Ø, P-Trap | 1.00 | piece | 195.00 | 195.00 |
| | 50mm Ø, 1/8 Bend | 2.00 | piece | 40.00 | 80.00 |
| | 75mm Ø, 1/8 Bend | 2.00 | piece | 80.00 | 160.00 |
| | 75mm Ø, 1/4 Bend | 2.00 | piece | 80.00 | 160.00 |
| | 75mm Ø x 75mm Ø, Tee | 2.00 | piece | 50.00 | 100.00 |
| | 100mm Ø x 75mm Ø, Tee | 3.00 | piece | 182.00 | 546.00 |
| | 100mm Ø x 50mm Ø, Wye | 2.00 | piece | 120.00 | 240.00 |
| | 100mm Ø x 75mm Ø, Wye | 1.00 | piece | 150.00 | 150.00 |
| | 100mm Ø, Cleanout with Adapter | 1.00 | piece | 90.00 | 90.00 |
| | Waterline System | | | | |

| ITEM NO | WORK DESCRIPTION AND SCOPE OF WORKS | QTY | UNIT | UNIT COST | TOTAL COST |
|---------|-------------------------------------|------|-------|-----------|------------|
| | Roughing-Ins | | | | |
| | 20mm Ø, Pipe PPR | 2.00 | piece | 360.00 | 720.00 |
| | 20mm Ø, Elbow | 6.00 | piece | 40.00 | 240.00 |
| | 20mm Ø, Coupling | 2.00 | piece | 30.00 | 60.00 |
| | 20mm Ø, Tee Equal | 2.00 | piece | 60.00 | 120.00 |
| | 20mm Ø, Female Threaded, Tee | 2.00 | piece | 130.00 | 260.00 |
| | Valves and Appurtenances | | | | |
| | 20mmØ PPR Gate Valve | 1.00 | piece | 330.00 | 330.00 |
| | | | | | |

| ITEM NO | WORK DESCRIPTION AND SCOPE OF WORKS | QTY | UNIT | UNIT COST | TOTAL COST |
|---------|---|-------|-------|------------------|-------------|
| | Fixtures | | | | |
| | 100mm x 100mm Floor Drain | 1.00 | set | ₱ 150.00 | ₱ 150.00 |
| | Bidet with Complete Accessories, Stainless (Water Efficient) | 1.00 | set | 450.00 | 450.00 |
| | Hose Bibb, Stainless, Heavy-Duty (Water Efficient) | 1.00 | set | 650.00 | 650.00 |
| | Lavatory, Kiddie, Wall Hung | 1.00 | set | 3,500.00 | 3,500.00 |
| | Lavatory Faucet Lever Type, Stainless Steel Heavy Duty | 1.00 | set | 450.00 | 450.00 |
| | Water Closet, Kiddie, Tank Type w/ Accessories (Water Efficient) | 1.00 | set | 5,475.00 | 5,475.00 |
| | Accessories | | | | |
| | Angle Valve, Single Way, Stainless | 1.00 | piece | 300.00 | 300.00 |
| | Angle Valve, Two Way, Stainless | 1.00 | piece | 350.00 | 350.00 |
| | Flexible Hose, Stainless Steel | 2.00 | piece | 240.00 | 480.00 |
| | Miscellaneous & Consumables | | | | |
| | 400cc Solvent Cement | 1.00 | can | 413.00 | 413.00 |
| | All-Around Sealant | 1.00 | can | 705.00 | 705.00 |
| | Hacksaw Blade | 1.00 | piece | 80.00 | 80.00 |
| | Teflon Tape | 1.00 | rolls | 40.00 | 40.00 |
| | Waste Cloth | 1.00 | kgs | 100.00 | 100.00 |
| | | | | Materials Cost D | ₱ 20,139.00 |
| | | | | Labor Cost D | 7,048.65 |
| | | | | Direct Cost D | ₱ 27,187.65 |
| E | Electrical Works | | | | |
| | Roughing-ins | | | | |
| | 20mmØ PVC Pipe | 45.00 | piece | ₱ 120.00 | ₱ 5,400.00 |
| | 25mmØ PVC Pipe | 10.00 | piece | 180.00 | 1,800.00 |
| | Fittings and Accessories | | | | |
| | 20mmØ PVC Adaptor | 50.00 | piece | 12.00 | 600.00 |
| | 20mmØ PVC Locknut and Bushing | 50.00 | pair | 18.00 | 900.00 |
| | 25mmØ PVC Adaptor | 4.00 | piece | 17.00 | 68.00 |
| | 25mmØ PVC Locknut and Bushing | 4.00 | pair | 28.00 | 112.00 |
| | 50mm x 100mm PVC Utility Box | 15.00 | piece | 36.00 | 540.00 |
| | 100mm x 100mm PVC Junction Box with Cover | 10.00 | piece | 55.00 | 550.00 |
| | Wires and Cables | | | | |
| | 3.5mm² THHN Wire | 2.00 | roll | 4,110.00 | 8,220.00 |
| | 5.5mm² THHN Wire | 50.00 | l.m. | 48.00 | 2,400.00 |
| | 2.0mm² TW Wire | 60.00 | l.m. | 19.00 | 1,140.00 |
| | 3.5mm² TW Wire | 25.00 | l.m. | 24.00 | 600.00 |
| | Lighting Fixtures (Energy Efficient) | | | | |
| | 300mm x 1200mm, 1 x 18w LED, Troffer Type, with complete accessories, r | 5.00 | piece | 2,300.00 | 11,500.00 |
| | 150mmØ Pinlight with 10W LED Bulb | 1.00 | set | 1,050.00 | 1,050.00 |
| | 100mmØ Receptacle with 10W LED Bulb | 2.00 | set | 450.00 | 900.00 |
| | Wiring Devices & Other Fixtures | | | | |
| | Aircon Outlet, Multipurpose Outlet | 1.00 | piece | 620.00 | 620.00 |
| | Convenience Outlet with Ground, Two-Gang | 4.00 | piece | 335.00 | 1,340.00 |
| | Orbit Fan, Heavy Duty with Selector Switch | 2.00 | set | 5,000.00 | 10,000.00 |
| | Wall Fan, Heavy Duty with Selector Switch | 1.00 | set | 4,300.00 | 4,300.00 |
| | Switch with Plate and Cover, One Gang | 1.00 | piece | 180.00 | 180.00 |
| | Switch with Plate and Cover, Two Gang | 1.00 | piece | 240.00 | 240.00 |
| | Miscellaneous & Consumables | | | | |
| | 400cc Solvent Cement | 1.00 | can | 413.00 | 413.00 |
| | Electrical Tape | 5.00 | roll | 56.00 | 280.00 |
| | G.I Tie Wire (for Wire/Cable Pulling) | 2.00 | kg | 65.00 | 130.00 |
| | Hacksaw Blade | 2.00 | piece | 60.00 | 120.00 |
| | Pulling Lubricant | 1.00 | gal | 4,037.00 | 4,037.00 |
| | Rubber Tape | 3.00 | roll | 190.00 | 570.00 |
| | | | | Materials Cost E | ₱ 58,010.00 |
| | | | | Labor Cost E | 20,303.50 |
| | | | | Direct Cost E | ₱ 78,313.50 |

| ITEM NO | WORK DESCRIPTION AND SCOPE OF WORKS | QTY | UNIT | UNIT COST | TOTAL COST |
|---------|-------------------------------------|-----|------|--------------------|--------------|
| | | | | | |
| | | | | Materials Cost III | P 369,244.12 |
| | | | | Labor Cost III | 142,165.34 |
| | | | | Direct Cost III | P 511,409.46 |
| | | | | | |

| 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 | ₱ 59,584.00 |
| II | CONSTRUCTION OF HAND WASHING FACILITY | 28,247.55 |
| III | REHABILITATION OF MANUNGAL I DAY CARE CENTER | 511,409.46 |
| NOTE: • Strictly enforce health protocol relative to the latest applicable DPWH Memorandum. | TOTAL DIRECT COST | ₱ 599,241.01 |
| | Overhead, Contingencies and Miscellaneous Expenses (OCM) | 89,886.15 |
| | Profit | 59,924.10 |
| | VAT | 37,452.56 |
| | TOTAL ESTIMATED COST | ₱ 786,503.82 |

Prepared by:

Checked by:

DEXTER D. ZAMUDIO

Planning & Programming Division

JOCELYN A. NAONG

Planning & Programming Division

Recommending Approval

LEO S. DEL ROSARIO

Head, Planning & Programming Division

Approved by:

ISAGANI R. VERZOSA JR.

OIC, City Engineering Department



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



PROGRAM OF WORK
QUEZON CITY INFRASTRUCTURE PROJECT

PROJECT TITLE : **PROPOSED REHABILITATION OF MANUNGGAL II DAY CARE CENTER**

LOCATION : **BARANGAY TATALON, DISTRICT 4, QUEZON CITY**

SCOPE OF WORK :

- 1 General Requirements include billboard, scaffolding, construction safety and health, and clearing, hauling and disposal of construction materials and debris.
- 2 Site Works include demolition/removal works, chipping of concrete wall, clearing and cleaning for painting preparation
- 3 Civil / Structural Works include masonry works, and moisture protection.
- 4 Architectural Works include floor finishes, wall finishes, ceiling finishes, painting works, installation of doors, fabricated materials, and lettering.
- 5 Sanitary / Plumbing Works include installation of roughing-ins, equipment, fixtures and accessories.
- 6 Electrical Works include installation of roughing-ins, wirings, devices, fixtures and accessories.
- 7 Mechanical Works include installation of equipment, pipe hangers, support and accessories.
- 8 All necessary testing and commissioning shall be performed in accordance to standards.

DETAILED COST ESTIMATE

| ITEM | WORK DESCRIPTION AND SCOPE OF WORKS | QTY. | UNIT | UNIT COST | TOTAL COST |
|------------|---|--------|-------|-----------------------|--------------------|
| I | GENERAL REQUIREMENTS | | | | |
| | Billboard | 1.00 | unit | ₱ 4,644.00 | ₱ 4,644.00 |
| | Clearing, Hauling and Disposal of Construction Materials | 1.00 | t.l. | 3,500.00 | 3,500.00 |
| | Construction Safety and Health | 1.00 | unit | 51,210.00 | 51,210.00 |
| | Scaffolding (Rental) | 47.00 | sq.m. | 250.00 | 11,750.00 |
| | | | | Direct Cost I | ₱ 71,104.00 |
| II | SITE WORKS | | | | |
| | Removal / Demolition Works | | | | |
| | Removal of Water Closet | 1.00 | set | ₱ 250.00 | ₱ 250.00 |
| | Removal of Floor Drain | 1.00 | set | 75.00 | 75.00 |
| | Removal of Urinal | 1.00 | set | 250.00 | 250.00 |
| | Removal of Lavatory | 1.00 | set | 250.00 | 250.00 |
| | Removal of Dilapidated Tiles | 76.00 | sq.m. | 250.00 | 19,000.00 |
| | Removal of Ceiling | 74.00 | sq.m. | 250.00 | 18,500.00 |
| | Removal of Doors | 2.00 | set | 250.00 | 500.00 |
| | Removal of Hanging Cabinet | 2.00 | sq.m. | 250.00 | 500.00 |
| | Removal of Undercounter Cabinet | 1.00 | sq.m. | 250.00 | 250.00 |
| | Chipping of Concrete Wall (Plumbing and Electrical Works) | 4.00 | sq.m. | 250.00 | 1,000.00 |
| | Cleaning and Clearing for Painting Preparation | 102.00 | sq.m. | 20.00 | 2,040.00 |
| | | | | Direct Cost II | ₱ 42,615.00 |
| III | CIVIL/ STRUCTURAL WORKS | | | | |
| | Masonry Works | | | | |
| | Restoration of Concrete (Plumbing and Electrical Works) | 4.00 | sq.m. | ₱ 309.00 | ₱ 1,236.00 |

| | | | | | |
|----------|-----------------------------|------|-------|---------------------------|-------------------|
| I | GENERAL REQUIREMENTS | | | | |
| | Moisture Protection | | | | |
| | Waterproofing Works | | | | |
| | Cementitious Capillary Type | 6.00 | sq.m. | 650.00 | 3,900.00 |
| | | | | | |
| | | | | Materials Cost III | ₱ 5,136.00 |
| | | | | Labor Cost III | 1,797.60 |
| | | | | Direct Cost III | ₱ 6,933.60 |
| | | | | | |

| | | | | | |
|-----------|---|-------|-------|--------------------------|---------------------|
| I | GENERAL REQUIREMENTS | | | | |
| IV | ARCHITECTURAL WORKS | | | | |
| | Floor Finishes | | | | |
| | 300mm x 300mm Non-Skid Homogeneous Floor Tiles | 4.00 | sq.m. | ₱ 1,000.00 | ₱ 4,000.00 |
| | 600mm x 600mm Non-Skid Homogeneous Floor Tiles | 73.00 | sq.m. | 1,200.00 | 87,600.00 |
| | Floor Topping Preparation for Tile Works | 77.00 | sq.m. | 309.00 | 23,793.00 |
| | Wall Finishes | | | | |
| | 300mm x 300mm Homogeneous Wall Tiles | 9.00 | sq.m. | 1,000.00 | 9,000.00 |
| | Ceiling Finishes | | | | |
| | 6mm Thk Fiber Cement Board including Metal Framing | 78.00 | sq.m. | 850.00 | 66,300.00 |
| | Fabricated Materials | | | | |
| | Countertop with Cabinet | 2.00 | l.m. | 3,578.00 | 7,156.00 |
| | | | | Materials Cost | ₱ 197,849.00 |
| | | | | Labor Cost | 39,569.80 |
| | | | | Subtotal | ₱ 237,418.80 |
| | Installation of Doors | | | | |
| | D1 - (0.9m x 2.1m) Sliding Glass Door | 1.00 | set | ₱ 16,065.00 | ₱ 16,065.00 |
| | D2 - (0.7m x 2.1m) PVC Door with Louver | 1.00 | set | 4,016.04 | 4,016.04 |
| | Hardware and Accessories | | | | |
| | Door Hinge, Heavy Duty, Stainless | 3.00 | set | 200.00 | 600.00 |
| | Door Knob, Lever Type, Stainless | 1.00 | set | 1,000.00 | 1,000.00 |
| | Cabinet Handle | 2.00 | piece | 100.00 | 200.00 |
| | | | | Materials Cost | ₱ 21,881.04 |
| | | | | Labor Cost | 4,376.21 |
| | | | | Subtotal | ₱ 26,257.25 |
| | Painting Works | | | | |
| | Epoxy Enamel Paint Finish (Steel Surface) | 11.00 | sq.m. | ₱ 258.00 | ₱ 2,838.00 |
| | Quick Dry Enamel Finish (Cabinet and Shelves) | 13.00 | sq.m. | 250.00 | 3,250.00 |
| | Flat Latex Paint Finish | | | | |
| | Ceiling | 78.00 | sq.m. | 160.00 | 12,480.00 |
| | Interior Wall | 98.00 | sq.m. | 304.00 | 29,792.00 |
| | | | | Materials Cost | ₱ 48,360.00 |
| | | | | Labor Cost | 16,926.00 |
| | | | | Subtotal | ₱ 65,286.00 |
| | Cleaning and Retouching of Painting with Simple Design | 53.00 | sq.m. | ₱ 150.00 | ₱ 7,950.00 |
| | | | | Subtotal | ₱ 7,950.00 |
| | Letterings | | | | |
| | 200mm Stainless Steel "MANUNGGAL II DAY CARE CENTER" | 24.00 | set | ₱ 2,240.00 | ₱ 53,760.00 |
| | | | | Materials Cost | 53,760.00 |
| | | | | Labor Cost | ₱ 18,816.00 |
| | | | | Subtotal | 72,576.00 |
| | | | | Materials Cost IV | ₱ 321,850.04 |
| | | | | Labor Cost IV | 87,638.01 |
| | | | | Direct Cost IV | ₱ 409,488.05 |
| V | PLUMBING WORKS | | | | |
| | Sewer Line / Storm Drainage System | | | | |
| | Roughing-Ins | | | | |
| | 50 mm Ø, Pipe PVC | 2.00 | piece | ₱ 480.00 | ₱ 960.00 |
| | 75 mm Ø, Pipe PVC | 3.00 | piece | 630.00 | 1,890.00 |
| | 100mm Ø, Pipe PVC | 2.00 | piece | 840.00 | 1,680.00 |

| I | GENERAL REQUIREMENTS | | | | |
|---|----------------------|------|-------|--------|--------|
| | 50mm Ø, P-Trap | 4.00 | piece | 125.00 | 500.00 |
| | 75mm Ø, P-Trap | 1.00 | piece | 195.00 | 195.00 |
| | 50mm Ø, 1/8 Bend | 7.00 | piece | 40.00 | 280.00 |
| | 75mm Ø, 1/8 Bend | 1.00 | piece | 80.00 | 80.00 |
| | 75mm Ø, 1/4 Bend | 2.00 | piece | 80.00 | 160.00 |
| | | | | | |

| I | GENERAL REQUIREMENTS | | | | |
|----|--|-------|-------|-------------------------|--------------------|
| | 75mm Ø x 75mm Ø, Tee | 2.00 | piece | ₱ 50.00 | ₱ 100.00 |
| | 100mm Ø x 75mm Ø, Tee | 3.00 | piece | 182.00 | 546.00 |
| | 100mm Ø x 50mm Ø, Wye | 6.00 | piece | 120.00 | 720.00 |
| | 100mm Ø x 75mm Ø, Wye | 1.00 | piece | 150.00 | 150.00 |
| | 50mm Ø, Cleanout with Adapter | 1.00 | piece | 50.00 | 50.00 |
| | 100mm Ø, Cleanout with Adapter | 1.00 | piece | 90.00 | 90.00 |
| | Waterline System | | | | |
| | Roughing-Ins | | | | |
| | 20mm Ø, Pipe PPR | 2.00 | piece | 360.00 | 720.00 |
| | 20mm Ø, Elbow | 10.00 | piece | 40.00 | 400.00 |
| | 20mm Ø, Coupling | 2.00 | piece | 30.00 | 60.00 |
| | 20mm Ø, Tee Equal | 7.00 | piece | 60.00 | 420.00 |
| | 20mm Ø, Female Threaded, Tee | 5.00 | piece | 130.00 | 650.00 |
| | Fixtures | | | | |
| | 100mm x 100mm Floor Drain | 2.00 | set | 150.00 | 300.00 |
| | Bidet with Complete Accessories, Stainless (Water Efficient) | 1.00 | set | 450.00 | 450.00 |
| | Grease Trap, 5GPM, Stainless | 1.00 | set | 5,400.00 | 5,400.00 |
| | Hose Bibb, Stainless, Heavy-Duty (Water Efficient) | 5.00 | set | 310.00 | 1,550.00 |
| | Lavatory, Wall Hung, Kiddy | 1.00 | set | 3,500.00 | 3,500.00 |
| | Lavatory Faucet Lever Type, Stainless Steel Heavy Duty | 1.00 | set | 450.00 | 450.00 |
| | Kitchen Sink Faucet, Stainless, Heavy Duty (Water Efficient) | 1.00 | set | 650.00 | 650.00 |
| | Kitchen Sink, Single Tub, Stainless | 1.00 | set | 4,800.00 | 4,800.00 |
| | Urinal, Flush Valve-Type, Kiddy (Water Efficient) | 1.00 | set | 8,800.00 | 8,800.00 |
| | Water Closet, Tank Type with Accessories, Kiddy (Water Efficient) | 1.00 | set | 5,475.00 | 5,475.00 |
| | Accessories | | | | |
| | Angle Valve, Single Way, Stainless | 4.00 | piece | 300.00 | 1,200.00 |
| | Angle Valve, Two Way, Stainless | 1.00 | piece | 350.00 | 350.00 |
| | Flexible Hose, Stainless Steel | 5.00 | piece | 240.00 | 1,200.00 |
| | Miscellaneous & Consumables | | | | |
| | 400cc Solvent Cement | 2.00 | can | 413.00 | 826.00 |
| | All-Around Sealant | 2.00 | can | 705.00 | 1,410.00 |
| | Hacksaw Blade | 1.00 | piece | 80.00 | 80.00 |
| | Teflon Tape | 2.00 | roll | 40.00 | 80.00 |
| | Waste Cloth | 1.00 | kg | 100.00 | 100.00 |
| | | | | | |
| | | | | Materials Cost V | ₱ 46,272.00 |
| | | | | Labor Cost V | 16,195.20 |
| | | | | Direct Cost V | ₱ 62,467.20 |
| | | | | | |
| VI | ELECTRICAL WORKS | | | | |
| | Roughing-ins | | | | |
| | 20mmØ PVC Pipe | 50.00 | piece | ₱ 120.00 | ₱ 6,000.00 |
| | 25mmØ PVC Pipe | 5.00 | piece | 180.00 | 900.00 |
| | Fittings and Accessories | | | | |
| | 20mmØ PVC Adaptor | 50.00 | piece | 12.00 | 600.00 |
| | 20mmØ PVC Locknut and Bushing | 50.00 | pair | 18.00 | 900.00 |
| | 25mmØ PVC Adaptor | 4.00 | piece | 17.00 | 68.00 |
| | 25mmØ PVC Locknut and Bushing | 4.00 | pair | 28.00 | 112.00 |
| | 50mm x 100mm PVC Utility Box | 25.00 | piece | 36.00 | 900.00 |
| | 100mm x 100mm PVC Junction Box with Cover | 25.00 | piece | 55.00 | 1,375.00 |
| | Wires and Cables | | | | |
| | 3.5mm² THHN Wire | 3.00 | roll | 4,110.00 | 12,330.00 |
| | 5.5mm² THHN Wire | 30.00 | l.m. | 48.00 | 1,440.00 |
| | 2.0mm² TW Wire | 70.00 | l.m. | 19.00 | 1,330.00 |
| | 3.5mm² TW Wire | 15.00 | l.m. | 24.00 | 360.00 |
| | Lighting Fixtures (Energy Efficient) | | | | |
| | 300mm x 1200mm, 1 x 18w LED, Troffer Type with Complete Accessories, Recessed Type | 10.00 | piece | 2,300.00 | 23,000.00 |

| I | GENERAL REQUIREMENTS | | | | |
|---|---|-------|-------|----------|-----------|
| | 150mmØ Pinlight with 10W LED Bulb | 2.00 | set | 1,050.00 | 2,100.00 |
| | 100mmØ Pinlight with 10W LED Bulb | 11.00 | set | 850.00 | 9,350.00 |
| | Wiring Devices & Other Fixtures | | | | |
| | Convenience Outlet with Ground, Two-Gang | 9.00 | piece | 335.00 | 3,015.00 |
| | Wall Fan, Heavy Duty with Selector Switch | 6.00 | set | 4,300.00 | 25,800.00 |
| | Switch with Plate and Cover, One Gang | 2.00 | piece | 180.00 | 360.00 |
| | Switch with Plate and Cover, Two Gang | 1.00 | piece | 240.00 | 240.00 |
| | Switch with Plate and Cover, Three Gang | 2.00 | piece | 300.00 | 600.00 |
| | | | | | |

| | | | | | |
|------------|--|-------|-------|---------------------------|---------------------|
| I | GENERAL REQUIREMENTS | | | | |
| | Miscellaneous & Consumables | | | | |
| | 400cc Solvent Cement | 1.00 | can | ₱ 413.00 | ₱ 413.00 |
| | Electrical Tape | 7.00 | roll | 56.00 | 392.00 |
| | G.I Tie Wire (for Wire/Cable Pulling) | 3.00 | kg | 65.00 | 195.00 |
| | Hacksaw Blade | 2.00 | piece | 60.00 | 120.00 |
| | Pulling Lubricant | 1.00 | gal | 4,037.00 | 4,037.00 |
| | Rubber Tape | 5.00 | roll | 190.00 | 950.00 |
| | | | | | |
| | | | | Materials Cost VI | ₱ 96,887.00 |
| | | | | Labor Cost VI | 33,910.45 |
| | | | | Direct Cost VI | ₱ 130,797.45 |
| VII | MECHANICAL WORKS | | | | |
| | Refrigerant Pipe System | | | | |
| | 6.35mm Ø Copper Coil Tubing | 9.00 | l.m. | ₱ 238.00 | ₱ 2,142.00 |
| | 12.7mm Ø Copper Coil Tubing | 9.00 | l.m. | 451.00 | 4,059.00 |
| | 6.35mm Ø x 20mm thick Rubber Foam Insulation | 9.00 | l.m. | 90.00 | 810.00 |
| | 12.7mm Ø x 20mm thick Rubber Foam Insulation | 9.00 | l.m. | 155.00 | 1,395.00 |
| | Condensate Water Drainage System | | | | |
| | 32mm Ø x 3m uPVC Pipe | 6.00 | piece | 190.00 | 1,140.00 |
| | 32mm Ø x 12mm thick Rubber Foam Insulation | 18.00 | l.m. | 267.00 | 4,806.00 |
| | 32mm Ø 90° uPVC Pipe Elbow | 9.00 | piece | 24.00 | 216.00 |
| | 32mm Ø x 25mm Ø uPVC Pipe Coupling Reducer | 1.00 | piece | 22.00 | 22.00 |
| | | | | | |
| | | | | Materials Cost | ₱ 14,590.00 |
| | | | | Labor Cost | 5,106.50 |
| | | | | Subtotal | ₱ 19,696.50 |
| | | | | | |
| | Equipment and Accessories | | | | |
| | SACU 1 - Wall Mounted Split Type Air Conditioning Unit, Inverter Type, 1.5TR, 450cfm, 6.35 mm Ø L, 12.7mm Ø G, 1650W, 230V / 1ϕ / 60Hz | 1.00 | unit | 46,144.00 | ₱ 46,144.00 |
| | | | | | |
| | | | | Materials Cost | ₱ 46,144.00 |
| | | | | Labor Cost | 18,457.60 |
| | | | | Subtotal | ₱ 64,601.60 |
| | | | | | |
| | Pipe Hangers and Supports | | | | |
| | Condensate Water Drainage System Support | 18.00 | l.m. | ₱ 125.00 | ₱ 2,250.00 |
| | Refrigerant Pipe System Support (150mm Ø U-Bolt) | 9.00 | l.m. | 337.00 | 3,033.00 |
| | ACCU Support | 1.00 | unit | 3,000.00 | 3,000.00 |
| | Vibration Isolator | 4.00 | piece | 80.00 | 320.00 |
| | Miscellaneous & Consumables | | | | |
| | 400cc Solvent Cement | 1.00 | can | 415.00 | 415.00 |
| | 25mm wide x 50m long Polyethylene Tape | 4.00 | roll | 138.00 | 552.00 |
| | Brazing Rod (10pcs/box) | 1.00 | box | 900.00 | 900.00 |
| | Waste Cloth | 1.00 | kg | 100.00 | 100.00 |
| | | | | | |
| | | | | Materials Cost | ₱ 10,570.00 |
| | | | | Labor Cost | 3,699.50 |
| | | | | Subtotal | ₱ 14,269.50 |
| | | | | | |
| | | | | Materials Cost VII | ₱ 71,304.00 |
| | | | | Labor Cost VII | 27,263.60 |
| | | | | Direct Cost VII | ₱ 98,567.60 |

| | | | | | |
|---|----------------------|--|--|--|--|
| I | GENERAL REQUIREMENTS | | | | |
|---|----------------------|--|--|--|--|

SUMMARY

| ITEM NO | WORK DESCRIPTION AND SCOPE OF WORKS | TOTAL COST |
|--|-------------------------------------|---|
| I | GENERAL REQUIREMENTS | ₱ 71,104.00 |
| II | SITE WORKS | 42,615.00 |
| III | CIVIL/ STRUCTURAL WORKS | 6,933.60 |
| IV | ARCHITECTURAL WORKS | 409,488.05 |
| V | PLUMBING WORKS | 62,467.20 |
| VI | ELECTRICAL WORKS | 130,797.45 |
| VII | MECHANICAL WORKS | 98,567.60 |
| NOTE: <ul style="list-style-type: none"> Strictly enforce health protocols relative to the latest applicable DPWH memorandum | | TOTAL DIRECT COST ₱ 821,972.90 Overhead, Contingencies and Miscellaneous and Consumables Expenses (OCME) 123,295.94 Profit 82,197.29 VAT 51,373.31 |
| | | TOTAL ESTIMATED COST ₱ 1,078,839.44 |

Prepared by:

Checked by:

MIKKI J. DE GRACIA

Planning & Programming Division

JOCELYN A. NAONG

Planning & Programming Division

Recommending Approval:

LEO S. DEL ROSARIO

Head, Planning and Programming Division

Approved by:

ISAGANI R. VERZOSA JR.

OIC, City Engineering Department



Republika ng Pilipinas
Lungsod ng Quezon
CITY ENGINEERING DEPARTMENT
5th, 6th, 7th Floors, QC Civic Center Building "B"
Telephone No. 8988-4242 Local 8538



PROGRAM OF WORK
QUEZON CITY INFRA STRUCTURE PROJECT

PROJECT TITLE: PROPOSED REHABILITATION OF DON MANUEL DAY CARE CENTER
LOCATION : BARANGAY DON MANUEL, DISTRICT 4, QUEZON CITY

SCOPE OF WORKS:

- I** General Requirements include temporary enclosure, billboard, scaffolding, construction safety and health, and clearing, hauling and disposal of construction materials and debris.
- II** Site Works include demolition/removal works and cleaning and clearing for painting preparation.
- III** Civil / Structural Works include moisture protection.
- IV** Architectural Works include floor finishes, wall finishes, painting works, installation of doors and lettering.
- V** Sanitary/Plumbing Works include installation of roughing-ins, equipment, fixtures and accessories.
- VI** Electrical Works include installation of roughing-ins, wiring, devices, fixtures, panelboard and accessories.
- VII** All necessary testing and commissioning shall be performed in accordance to standards.

DETAILED COST ESTIMATE

| ITEM NO | WORK DESCRIPTION AND SCOPE OF WORKS | QTY | UNIT | UNIT COST | TOTAL COST |
|------------|---|--------|-------|---------------------------|--------------------|
| I | GENERAL REQUIREMENTS | | | | |
| | Billboard | 1.00 | unit | ₱ 4,644.00 | ₱ 4,644.00 |
| | Clearing, Hauling and Disposal of Construction Materials and Debris | 1.00 | t.l. | 3,500.00 | 3,500.00 |
| | Construction Safety and Health Equipment | 1.00 | unit | 34,760.00 | 34,760.00 |
| | Scaffolding (Rental) | 51.00 | sq.m | 250.00 | 12,750.00 |
| | Temporary Enclosure Around the Construction Area (H=2.4m) | 42.00 | l.m | 730.00 | 30,660.00 |
| | | | | Direct Cost I | ₱ 86,314.00 |
| II | SITE WORKS | | | | |
| | Demolition/Removal Works | | | | |
| | Chipping of Wall for Electrical Pipes and Fixtures | 2.00 | sq. m | ₱ 250.00 | ₱ 500.00 |
| | Removal of Existing Doors | 3.00 | set | 250.00 | 750.00 |
| | Removal of Existing Tiles | 15.00 | sq.m | 212.00 | 3,180.00 |
| | Removal of Urinal | 1.00 | set | 250.00 | 250.00 |
| | Removal of Water Closet | 1.00 | set | 250.00 | 250.00 |
| | Cleaning and Clearing for Painting Preparation | 292.00 | sq.m. | 20.00 | 5,840.00 |
| | | | | Direct Cost II | ₱ 10,770.00 |
| III | CIVIL / STRUCTURAL WORKS | | | | |
| | Moisture Protection | | | | |
| | Cementitious Capillary Type Waterproofing (Comfort Room) | 3.00 | sq.m. | ₱ 650.00 | ₱ 1,950.00 |
| | Membrane Type Waterproofing (Deck) | 47.00 | sq.m. | 729.00 | 34,263.00 |
| | | | | Materials Cost III | ₱ 36,213.00 |
| | | | | Labor Cost III | 12,674.55 |
| | | | | Direct Cost III | ₱ 48,887.55 |
| IV | ARCHITECTURAL WORKS | | | | |
| | Floor Finishes | | | | |
| | 300mm x 300mm Non-Skid Homogeneous Tiles (Comfort Room) | 3.00 | sq.m. | ₱ 1,000.00 | ₱ 3,000.00 |
| | Floor Topping for Preparation of Tile Works | 3.00 | sq.m. | 309.00 | 927.00 |
| | Wall Finishes | | | | |
| | 300mm x 300mm Homogeneous Tiles (Comfort Room) | 11.00 | sq.m. | 1,000.00 | 11,000.00 |
| | | | | Materials Cost | ₱ 14,927.00 |
| | | | | Labor Cost | 5,224.45 |
| | | | | Subtotal | ₱ 20,151.45 |

| ITEM NO | WORK DESCRIPTION AND SCOPE OF WORKS | QTY | UNIT | UNIT COST | TOTAL COST |
|-----------|--|--------|-------|-------------------|--------------|
| | Installation of Doors | | | | |
| | D1 - (1m x 2.1m) Wooden Panel Door | 1.00 | set | P 9,450.00 | P 9,450.00 |
| | D2 - (0.8m x 2.1m) Wooden Panel Door | 1.00 | set | 7,560.00 | 7,560.00 |
| | D3 - (0.7m x 2.1m) PVC Door with Louver | 1.00 | set | 4,016.04 | 4,016.04 |
| | Door Jambs | | | | |
| | D1 - (1.0m x 2.1m) Wooden Panel Door | 1.00 | set | 2,080.00 | 2,080.00 |
| | D2 - (0.8m x 2.1m) Wooden Panel Door | 1.00 | set | 2,000.00 | 2,000.00 |
| | Hardware and Accessories | | | | |
| | Door Hinges, Heavy Duty, Stainless | 9.00 | set | 200.00 | 1,800.00 |
| | Door Knob, Lever Type, Stainless | 3.00 | set | 1,000.00 | 3,000.00 |
| | | | | | |
| | | | | Materials Cost | P 29,906.04 |
| | | | | Labor Cost | 5,981.21 |
| | | | | Subtotal | P 35,887.25 |
| | Painting Works | | | | |
| | Elastomeric Paint Finish (Exterior Walls) | 137.00 | sq.m | P 390.00 | P 53,430.00 |
| | Flat Latex Paint Finish | | | | |
| | Interior Walls | 119.00 | sq.m | 304.00 | 36,176.00 |
| | Slab Soffit | 44.00 | sq.m | 304.00 | 13,376.00 |
| | Letterings | | | | |
| | 250 mm X 250mm Stainless Steel Signage "DON MANUEL DAY CARE CENTER" | 22.00 | set | 3,500.00 | 77,000.00 |
| | | | | | |
| | | | | Materials Cost | P 179,982.00 |
| | | | | Labor Cost | 62,993.70 |
| | | | | Subtotal | P 242,975.70 |
| | | | | | |
| | | | | Materials Cost IV | P 224,815.04 |
| | | | | Labor Cost IV | 74,199.36 |
| | | | | Direct Cost IV | P 299,014.40 |
| V | SANITARY / PLUMBING WORKS | | | | |
| | Sewer Line System | | | | |
| | 50mmØ P-Trap | 1.00 | set | P 125.00 | P 125.00 |
| | Plumbing Fixtures | | | | |
| | Bidet, Heavy-Duty, Stainless Steel (Water Efficient) | 1.00 | set | 450.00 | 450.00 |
| | Floor Drain, 100mm x 100mm Stainless Steel | 1.00 | piece | 150.00 | 150.00 |
| | Hose Bibb, Stainless Steel, Lever-Type (Water Efficient) | 5.00 | set | 450.00 | 2,250.00 |
| | Urinal, Flush Valve Type, (Water Efficient) | 1.00 | set | 7,800.00 | 7,800.00 |
| | Water Closet, Tank Type (Water Efficient) | 1.00 | set | 4,475.00 | 4,475.00 |
| | Hardware and Accessories | | | | |
| | Angle Valve, Two-Way Stainless Steel | 1.00 | set | 350.00 | 350.00 |
| | Flexible Hose | 1.00 | set | 240.00 | 240.00 |
| | Metal Door Hook | 1.00 | piece | 60.00 | 60.00 |
| | Miscellaneous | | | | |
| | 400cc Solvent Cement | 2.00 | can | 413.00 | 826.00 |
| | All Around Sealant | 2.00 | can | 705.00 | 1,410.00 |
| | Teflon Tape | 2.00 | roll | 40.00 | 80.00 |
| | Waste Cloth | 1.00 | kg | 100.00 | 100.00 |
| | | | | | |
| | | | | Materials Cost V | P 18,316.00 |
| | | | | Labor Cost V | 6,410.60 |
| | | | | Direct Cost V | P 24,726.60 |
| VI | ELECTRICAL WORKS | | | | |
| | Roughing-ins, Pipes and Fittings | | | | |
| | 20mmØ PVC Pipe | 40.00 | piece | P 120.00 | P 4,800.00 |
| | 25mmØ IMC Pipe | 1.00 | piece | 1,410.00 | 1,410.00 |
| | Fittings and Accessories | | | | |
| | 20mmØ PVC Adaptor | 70.00 | piece | 12.00 | 840.00 |
| | 20mmØ PVC Locknut and Bushing | 70.00 | pair | 10.00 | 700.00 |
| | 25mmØ IMC Locknut and Bushing | 2.00 | pair | 90.00 | 180.00 |
| | 2" x 4" PVC Utility Box | 17.00 | piece | 36.00 | 612.00 |
| | 4" x 4" PVC Junction Box with cover | 13.00 | piece | 44.00 | 572.00 |

| ITEM NO | WORK DESCRIPTION AND SCOPE OF WORKS | QTY | UNIT | UNIT COST | TOTAL COST |
|---------|--|-------|-------|-----------|------------|
| | Wires and Cables | | | | |
| | 3.5mm² THHN Wire | 3.00 | roll | 4,110.00 | 12,330.00 |
| | 5.5mm² THHN Wire | 35.00 | lm | 48.00 | 1,680.00 |
| | 3.5mm² TW Wire | 2.00 | roll | 3,370.00 | 6,740.00 |
| | Lighting Fixtures (Energy Efficient) | | | | |
| | T5, 28W LED Tube Light | 4.00 | piece | 1,680.00 | 6,720.00 |
| | 18W LED Bulb With Receptacle | 1.00 | piece | 430.00 | 430.00 |
| | 600mm x 1200mm, 2 x 18w LED, Troffer Type, w/ complete accessories, Surface Mounted type | 2.00 | piece | 3,000.00 | 6,000.00 |
| | | | | | |

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

LEO S. DEL ROSARIO
Head, Planning and Programming Division

Approved by:

ISAGANI R. VERZOSA JR.
OIC, City Engineering Department



Republika ng Pilipinas
Lungsod ng Quezon
CITY ENGINEERING DEPARTMENT
5th, 6th, 7th Floors, QC Civic Center Building "B"
Telephone No. 8988-4242 Local 8538



PROGRAM OF WORK
QUEZON CITY INFRA STRUCTURE PROJECT

PROJECT NAME: PROPOSED REHABILITATION OF DOÑA AURORA DAYCARE CENTER
LOCATION: BARANGAY DOÑA AURORA, DISTRICT 4, QUEZON CITY

SCOPE OF WORKS:

- I General Requirements include temporary enclosure, billboard, scaffolding, construction safety and health, and clearing, hauling and disposal of construction materials and debris
- II Site Works include demolition / removal works and cleaning and clearing for painting preparation.
- III Architectural Works include wall finishes, ceiling finishes, installation of door hardware, fabrication of materials, painting works and lettering.
- IV Sanitary/Plumbing Works include installation of fixtures and accessories.
- V Electrical Works include installation of roughing-ins, wirings, lighting fixtures, and wiring devices.
- VI All necessary testing and commissioning shall be performed in accordance to standards.

DETAILED COST ESTIMATE

| ITEM NO | WORK DESCRIPTION AND SCOPE OF WORKS | QTY | UNIT | UNIT COST | TOTAL COST |
|------------|---|--------|-------|-----------------------|--------------------|
| I | GENERAL REQUIREMENTS | | | | |
| | Billboard | 1.00 | unit | P 4,644.00 | P 4,644.00 |
| | Clearing, Hauling and Disposal of Construction Materials and Debris | 1.00 | t.l. | 3,500.00 | 3,500.00 |
| | Construction Safety and Health Equipment | 1.00 | unit | 31,960.00 | 31,960.00 |
| | Scaffolding (Rental) | 26.00 | sq.m. | 250.00 | 6,500.00 |
| | Temporary Enclosure around the Construction Area (H=2.4m) | 17.00 | l.m. | 730.00 | 12,410.00 |
| | | | | | |
| | | | | Direct Cost I | P 59,014.00 |
| II | SITE WORKS | | | | |
| | Demolition / Removal Works | | | | |
| | Removal of Wall Tiles (Hand Washing) | 4.00 | sq.m. | P 200.00 | P 800.00 |
| | Removal of Ceiling | 55.00 | sq.m. | 120.00 | 6,600.00 |
| | Cleaning and Clearing for Painting Preparation | 224.00 | sq.m. | 20.00 | 4,480.00 |
| | | | | | |
| | | | | Direct Cost II | P 11,880.00 |
| III | ARCHITECTURAL WORKS | | | | |
| | Wall Finishes | | | | |
| | 300mm x 300mm Homogeneous Wall Tiles (Hand Washing) | 4.00 | sq.m. | P 1,000.00 | P 4,000.00 |
| | Ceiling Finishes | | | | |
| | 12mm thick Gypsum Board including Metal Framing (Daycare Center) | 53.00 | sq.m. | 605.00 | 32,065.00 |
| | 12mm thick Moisture Resistant Gypsum Board including Metal Framing (Toilet) | 4.00 | sq.m. | 783.00 | 3,132.00 |
| | | | | | |
| | | | | Materials Cost | P 39,197.00 |
| | | | | Labor Cost | 13,718.95 |
| | | | | Subtotal | P 52,915.95 |

| ITEM NO | WORK DESCRIPTION AND SCOPE OF WORKS | QTY | UNIT | UNIT COST | TOTAL COST |
|---------|--|-------|------|----------------|------------|
| | Installation of Door Hardware | | | | |
| | Hardware and Accessories | | | | |
| | Door Knob, Lever-type, Heavy Duty, Stainless | 4.00 | unit | P 1,000.00 | 4,000.00 |
| | Door Hinge, Heavy Duty, Stainless | 12.00 | unit | 200.00 | 2,400.00 |
| | | | | | |
| | | | | Materials Cost | P 6,400.00 |
| | | | | Labor Cost | 1,280.00 |
| | | | | Subtotal | P 7,680.00 |
| | | | | | |

| ITEM NO | WORK DESCRIPTION AND SCOPE OF WORKS | QTY | UNIT | UNIT COST | TOTAL COST |
|-----------|---|--------|-------|--------------------|--------------|
| | Fabricated Materials | | | | |
| | Aluminum Cabinet Door | 3.00 | l.m. | P 2,709.00 | P 8,127.00 |
| | Painting Works | | | | |
| | Flat Latex Paint Finish | | | | |
| | Interior Walls | 169.00 | sq.m. | 304.00 | 51,376.00 |
| | Ceiling | 16.00 | sq.m. | 160.00 | 2,560.00 |
| | Lettering | | | | |
| | 200mm x 250mm Stainless Steel Lettering | | | | |
| | "DOÑA AURORA YAKAP DAYCARE CENTER" | 28.00 | set | 2,800.00 | 78,400.00 |
| | | | | | |
| | | | | Materials Cost | P 140,463.00 |
| | | | | Labor Cost | 49,162.05 |
| | | | | Subtotal | P 189,625.05 |
| | | | | | |
| | | | | Materials Cost III | P 186,060.00 |
| | | | | Labor Cost III | 64,161.00 |
| | | | | Direct Cost III | P 250,221.00 |
| | | | | | |
| IV | SANITARY/PLUMBING WORKS | | | | |
| | Fixtures | | | | |
| | Bidet with Accessories, Stainless Heavy Duty (Water Efficient) | 1.00 | piece | P 450.00 | P 450.00 |
| | Floor Drain, 100mm x 100mm, Stainless | 2.00 | piece | 150.00 | 300.00 |
| | Hose Bibb, Lever-Type, Stainless (Water Efficient) | 5.00 | unit | 310.00 | 1,550.00 |
| | Lavatory Faucet, Lever-Type (Water Efficient) | 1.00 | unit | 450.00 | 450.00 |
| | Accessories | | | | |
| | Angle Valve, One-Way, Stainless Steel | 1.00 | piece | 300.00 | 300.00 |
| | Angle Valve, Two-Way, Stainless Steel | 1.00 | piece | 350.00 | 350.00 |
| | Flexible Hose, Stainless Steel | 2.00 | piece | 240.00 | 480.00 |
| | Miscellaneous and Consumables | | | | |
| | 400cc Solvent Cement | 1.00 | can | 413.00 | 413.00 |
| | All Around Sealant | 1.00 | can | 705.00 | 705.00 |
| | Hacksaw Blade | 1.00 | piece | 80.00 | 80.00 |
| | Teflon Tape | 5.00 | roll | 40.00 | 200.00 |
| | Waste Cloth | 1.00 | kg | 100.00 | 100.00 |
| | | | | | |
| | | | | Materials Cost IV | P 5,378.00 |
| | | | | Labor Cost IV | 1,882.30 |
| | | | | Direct Cost IV | P 7,260.30 |
| | | | | | |
| V | ELECTRICAL WORKS | | | | |
| | Roughing-ins | | | | |
| | 20mm Ø PVC Pipe | 20.00 | piece | P 120.00 | P 2,400.00 |
| | 20mm Ø PVC Adaptor | 50.00 | piece | 12.00 | 600.00 |
| | 20mm Ø PVC Locknut & Bushing | 50.00 | pair | 18.00 | 900.00 |
| | 50mm x 100mm PVC Utility Box | 10.00 | piece | 36.00 | 360.00 |
| | 100mm x 100mm PVC Junction Box with Cover | 15.00 | piece | 55.00 | 825.00 |
| | Wires and Cables | | | | |
| | 3.5mm² THHN Wire | 1.00 | roll | 4,110.00 | 4,110.00 |
| | 3.5mm² TW Wire | 1.00 | l.m. | 3,373.00 | 3,373.00 |
| | Lighting Fixtures (Energy Efficient) | | | | |
| | 600mm x 1200mm, 2 x 18w LED, Troffer, Recessed Type with Complete Accessories | 6.00 | set | 3,500.00 | 21,000.00 |
| | 18W LED Bulb with Receptacle | 1.00 | piece | 430.00 | 430.00 |
| | T5, 28W LED Tube Light | 4.00 | piece | 1,680.00 | 6,720.00 |

| ITEM NO | WORK DESCRIPTION AND SCOPE OF WORKS | QTY | UNIT | UNIT COST | TOTAL COST |
|---------|--|-------|-------|-----------|------------|
| | Wiring Devices | | | | |
| | Convenience Outlet with Ground, Two Gang with Weatherproof Cover | 4.00 | piece | 535.00 | 2,140.00 |
| | Switch with Plate & Cover, One-Gang | 1.00 | piece | 180.00 | 180.00 |
| | Switch with Plate & Cover, Two-Gang | 2.00 | piece | 240.00 | 480.00 |
| | Switch with Plate & Cover, Three-Gang | 1.00 | piece | 300.00 | 300.00 |
| | Pipe Hangers & Supports | | | | |
| | Horizontal Layout of Pipe | 10.00 | l.m. | 109.00 | 1,090.00 |
| | | | | | |

| ITEM NO | WORK DESCRIPTION AND SCOPE OF WORKS | QTY | UNIT | UNIT COST | TOTAL COST |
|---------|--|------|-------|------------------------|--------------------|
| | Miscellaneous & Consumables | | | | |
| | 400cc Solvent Cement | 3.00 | can | P 413.00 | P 1,239.00 |
| | All around Sealant | 3.00 | can | 705.00 | 2,115.00 |
| | Electrical Tape | 8.00 | roll | 56.00 | 448.00 |
| | GI Tie Wire, Ga. 16 (for Wire/Cable Pulling) | 3.00 | kg | 65.00 | 195.00 |
| | Hacksaw Blade | 3.00 | piece | 60.00 | 180.00 |
| | Masking Tape | 3.00 | roll | 50.00 | 150.00 |
| | Rubber Tape | 3.00 | roll | 190.00 | 570.00 |
| | | | | | |
| | | | | Material Cost V | P 49,805.00 |
| | | | | Labor Cost V | 17,431.75 |
| | | | | Direct Cost V | P 67,236.75 |
| | | | | | |

SUMMARY

| ITEM NO | WORK DESCRIPTION AND SCOPE OF WORKS | | AMOUNT | | |
|--|-------------------------------------|--|--------|------------|------------|
| I | GENERAL REQUIREMENTS | | P | 59,014.00 | |
| II | SITE WORKS | | | 11,880.00 | |
| III | ARCHITECTURAL WORKS | | | 250,221.00 | |
| IV | SANITARY/PLUMBING WORKS | | | 7,260.30 | |
| V | ELECTRICAL WORKS | | | 67,236.75 | |
| Note: Strictly enforce health protocols relative to the latest applicable DPWH Memorandum | | TOTAL DIRECT COST | | P | 395,612.05 |
| | | Overhead, Contingencies and Miscellaneous Expenses (OCM) | | | 59,341.81 |
| | | Profit | | | 39,561.21 |
| | | VAT | | | 24,725.75 |
| | | TOTAL ESTIMATED COST | | P | 519,240.82 |

Prepared by:

Checked by:

VERGEL JEROME A. MAPILI
 Planning and Programming Division

JOCELYN A. NAONG
 Planning and Programming Division

Recommending Approval:

LEO S. DEL ROSARIO
 Head, Planning and Programming Division

Approved by:

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

ISAGANI R. VERZOSA JR.
OIC, City Engineering Department



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



PROGRAM OF WORK
QUEZON CITY INFRASTRUCTURE PROJECT

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

LOCATION : BARANGAY DOÑA IMELDA, DISTRICT 4, QUEZON CITY

SCOPE OF WORK :

- I General requirements include temporary enclosure, billboard, scaffolding, construction safety and health, and clearing, hauling and disposal of demolished materials and debris.
- II CONSTRUCTION OF HAND WASHING FACILITY
 - A.) Supply and installation of single sink hand washing facility.
 - B.) Sanitary/ Plumbing Works include installation of roughing-ins, equipment, fixtures and accessories.
- III REHABILITATION OF CHAMBERETTE DAY CARE CENTER
 - A.) Site Works include demolition / removal works and cleaning and clearing for painting preparation.
 - B.) Civil / Structural Works include masonry works, metal works, waterproofing, and roofing works.
 - C.) Architectural Works include floor, wall, ceiling finishes, painting works, fabricated materials, stainless letterings and installation of doors and windows.
 - D.) Sanitary/ Plumbing Works include installation of roughing-ins, equipment, fixtures and accessories.
 - E.) Electrical Works include installation of roughing-Ins, wirings, devices and fixtures.
- IV All necessary testing of materials and commissioning works must be performed as per standard procedures.

DETAILED COST ESTIMATE

| ITEM NO. | WORK DESCRIPTION & SCOPE OF WORKS | QTY. | UNIT | UNIT COST | TOTAL COST |
|-----------|---|-------|-------|------------------------|---------------------|
| I | GENERAL REQUIREMENTS | | | | |
| | Billboard | 1.00 | unit | P 4,644.00 | P 4,644.00 |
| | Clearing, Hauling and Disposal of Construction Materials and Debris | 3.00 | t.l. | 3,500.00 | 10,500.00 |
| | Construction Health and Safety | 1.00 | unit | 96,460.00 | 96,460.00 |
| | Scaffolding (Rental) | 84.00 | sq.m. | 250.00 | 21,000.00 |
| | Temporary Enclosure around the Construction Area (H=2.4m) | 47.00 | l.m. | 730.00 | 34,310.00 |
| | | | | Direct Cost I | P 166,914.00 |
| II | CONSTRUCTION OF HANDWASHING FACILITY | | | | |
| A | Hand Washing Facility | | | | |
| | Single Sink Portable Hand Washing Facility | 4.00 | unit | P 167,956.20 | P 671,824.80 |
| | | | | Direct Cost A | P 671,824.80 |
| B | Site Works | | | | |
| | Demolition / Removal Works | | | | |
| | Chipping of Floor for Drainage | 2.00 | sq.m. | P 250.00 | P 500.00 |
| | Chipping of Wall for Waterline | 1.00 | sq.m. | 250.00 | 250.00 |
| | | | | Direct Cost B | P 750.00 |
| C | Civil Works / Structural Works | | | | |
| | Masonry Works | | | | |
| | Restoration of Wall (Sanitary Works) | 3.00 | sq.m. | 309.00 | 927.00 |
| | | | | Material Cost C | P 927.00 |
| | | | | Labor Cost C | 324.45 |
| | | | | Direct Cost C | P 1,251.45 |

| ITEM NO. | WORK DESCRIPTION & SCOPE OF WORKS | QTY. | UNIT | UNIT COST | TOTAL COST |
|----------|------------------------------------|-------|-------|-----------|------------|
| D | Sanitary / Plumbing Works | | | | |
| | Sewer Line / Storm Drainage System | | | | |
| | 50mm Ø PVC Pipe with Hub | 4.00 | piece | ₱ 480.00 | ₱ 1,920.00 |
| | 50mm Ø x 50mm Ø Wye | 4.00 | piece | 95.00 | 380.00 |
| | 50mm Ø x 50mm Ø 1/4 Bend | 20.00 | piece | 40.00 | 800.00 |
| | Waterline System | | | | |
| | 25mm Ø PPR Pipe | 4.00 | piece | 620.00 | 2,480.00 |
| | 25mm Ø x 25mm Ø PPR 90° Elbow | 8.00 | piece | 60.00 | 480.00 |
| | | | | | |

| ITEM NO. | WORK DESCRIPTION & SCOPE OF WORKS | QTY. | UNIT | UNIT COST | TOTAL COST |
|------------|--|--------|-------|------------------|--------------|
| | 25mm Ø PPR Coupling | 8.00 | piece | ₱ 40.00 | ₱ 320.00 |
| | 25mm Ø x 20mm Ø PPR Reducer | 4.00 | piece | 30.00 | 120.00 |
| | 32mm Ø x 25mm Ø PPR Reducer | 4.00 | piece | 65.00 | 260.00 |
| | Valves & Appurtenances | | | | |
| | 20mm Ø PPR Gate Valve | 4.00 | piece | 720.00 | 2,880.00 |
| | | | | | |
| | | | | Material Cost D | ₱ 9,640.00 |
| | | | | Labor Cost D | 3,374.00 |
| | | | | Direct Cost D | ₱ 13,014.00 |
| | | | | | |
| | | | | Material Cost II | ₱ 682,391.80 |
| | | | | Labor Cost II | 4,448.45 |
| | | | | Direct Cost II | ₱ 686,840.25 |
| | | | | | |
| III | REHABILITATION OF CHAMBERETTE DAY CARE CENTER | | | | |
| A | Site Works | | | | |
| | Demolition / Removal Works | | | | |
| | Chipping of Wall (Electrical Works) | 12.00 | sq.m. | ₱ 250.00 | ₱ 3,000.00 |
| | Demolition of Dilapidated CHB Walls | 31.00 | sq.m. | 250.00 | 7,750.00 |
| | Dismantling of Main Distribution Panel | 1.00 | assy | 3,000.00 | 3,000.00 |
| | Removal of Balete Tree | 1.00 | unit | 568.00 | 568.00 |
| | Removal of Dilapidated Tiles | 52.00 | sq.m. | 250.00 | 13,000.00 |
| | Removal of Dilapidated Ceiling | 38.00 | sq.m. | 250.00 | 9,500.00 |
| | Removal of Dilapidated Roofing including Bended Accessories | 175.00 | sq.m. | 250.00 | 43,750.00 |
| | Removal of Fabricated Doors and Varifold | 9.00 | set | 250.00 | 2,250.00 |
| | Demolition of Fabricated Windows | 89.00 | sq.m. | 250.00 | 22,250.00 |
| | Removal of Dilapidated Cabinets | 13.00 | sq.m. | 200.00 | 2,600.00 |
| | Removal of Kitchen Sink | 1.00 | unit | 150.00 | 150.00 |
| | Removal of Lavatory | 4.00 | unit | 250.00 | 1,000.00 |
| | Removal of Urinals | 1.00 | unit | 250.00 | 250.00 |
| | Removal of Water Closets | 3.00 | set | 250.00 | 750.00 |
| | Cleaning and Clearing for Painting Preparation | 836.00 | sq.m. | 20.00 | 16,720.00 |
| | | | | | |
| | | | | Direct Cost A | ₱ 126,538.00 |
| | | | | | |
| B | Civil Works / Structural Works | | | | |
| | Masonry Works | | | | |
| | 150mm CHB Laying including Mortar, Reinforcement and Two-Face Plastering | 64.00 | sq.m. | ₱ 1,030.00 | ₱ 65,920.00 |
| | 100mm CHB Laying including Mortar, Reinforcement and Two-Face Plastering | 2.00 | sq.m. | 830.00 | 1,660.00 |
| | Restoration of Wall (Electrical Works) | 13.00 | sq.m. | 309.00 | 4,017.00 |
| | Moisture Protection | | | | |
| | Cementitious Capillary Type Waterproofing (Toilets) | 5.00 | sq.m. | 650.00 | 3,250.00 |
| | Metal Works | | | | |
| | Ladder Rung | | | | |
| | 50mm x 75mm x 4mm Angle Bar | 29.00 | kg | 55.00 | 1,595.00 |
| | 12mmØ Round Bar | 6.00 | kg | 55.00 | 330.00 |
| | Miscellaneous and Consumables | | | | |
| | 16mmØ x 200mm Anchor Bolt | 26.00 | piece | 300.00 | 7,800.00 |
| | Acetylene Tank Refill | 1.00 | tank | 1,500.00 | 1,500.00 |
| | Assorted Metal Drill Bit | 2.00 | piece | 100.00 | 200.00 |
| | Grinding Disc Metal | 1.00 | piece | 150.00 | 150.00 |
| | Oxygen Tank Refill | 2.00 | tank | 950.00 | 1,900.00 |
| | Welding Rod | 1.00 | box | 3,000.00 | 3,000.00 |
| | Roofing Works | | | | |
| | Pre-painted G.I. Rib Type Roofing | 184.00 | sq.m. | 650.00 | 119,600.00 |
| | Pre-painted G.I. End Flashing | 47.00 | l.m. | 270.00 | 12,690.00 |
| | Pre-painted G.I. Ridge Roll | 34.00 | l.m. | 270.00 | 9,180.00 |
| | 6mm thick One-Sided Aluminum Foil Thermal Insulation | 184.00 | sq.m. | 250.00 | 46,000.00 |
| | 12mm x 300mm Fiber Cement Fascia Board | 47.00 | l.m. | 500.00 | 23,500.00 |
| | Silicon Sealant | 2.00 | gal | 200.00 | 400.00 |

| ITEM NO. | WORK DESCRIPTION & SCOPE OF WORKS | QTY. | UNIT | UNIT COST | TOTAL COST |
|----------|-----------------------------------|----------|-------|-----------------|--------------|
| | Blind Rivets | 1,472.00 | piece | 3.00 | 4,416.00 |
| | Tekscrew | 465.00 | piece | 4.00 | 1,860.00 |
| | | | | | |
| | | | | Material Cost B | ₱ 308,968.00 |
| | | | | Labor Cost B | ₱ 108,138.80 |
| | | | | Direct Cost B | ₱ 417,106.80 |
| | | | | | |

| ITEM NO. | WORK DESCRIPTION & SCOPE OF WORKS | QTY. | UNIT | UNIT COST | TOTAL COST |
|----------|--|--------|-------|---------------|--------------|
| C | Architectural Works | | | | |
| | Floor Finishes | | | | |
| | 400mm x 400mm Non Skid Homogeneous Floor Tiles | 10.00 | sq.m. | ₱ 1,110.00 | ₱ 11,100.00 |
| | Floor Topping for Preparation of Tile Works | 10.00 | sq.m. | 309.00 | 3,090.00 |
| | Wall Finishes | | | | |
| | 400mm x 400mm Homogeneous Wall Tiles | 45.00 | sq.m. | 1,110.00 | 49,950.00 |
| | Ceiling Finishes | | | | |
| | 6mm thk Fiber Cement Board including Metal Framing | 155.00 | sq.m. | 850.00 | 131,750.00 |
| | Countertop Finishes | | | | |
| | 600mm x 600mm Homogeneous Countertop Tiles | 6.00 | sq.m. | 1,200.00 | 7,200.00 |
| | Aluminum Cover for Countertops | 8.00 | l.m. | 2,743.00 | 21,944.00 |
| | Fabricated Materials | | | | |
| | Fixed Standing Cabinets | 19.00 | sq.m. | 4,957.00 | 94,183.00 |
| | Letterings | | | | |
| | Stainless Steel Signage (200mm x 150mm) "CHAMBERETTE DAY CARE CENTER" | 24.00 | piece | 1,680.00 | 40,320.00 |
| | | | | | |
| | | | | Material Cost | ₱ 359,537.00 |
| | | | | Labor Cost | ₱ 125,837.95 |
| | | | | Subtotal Cost | ₱ 485,374.95 |
| | | | | | |
| | Installation of Doors | | | | |
| | D1 - 0.90m x 2.10m Clear Glass Door on Powder Coated Aluminum Frame | 1.00 | set | ₱ 16,065.00 | ₱ 16,065.00 |
| | D2 - 0.70m x 2.10m Wooden Panel Door with Viewing Glass Panel | 2.00 | set | 6,875.00 | 13,750.00 |
| | D3 - 0.80m x 2.10m Wooden Panel Door with Viewing Glass Panel | 1.00 | set | 7,820.00 | 7,820.00 |
| | D4 - 0.90m x 2.10m Wooden Panel Door with Viewing Glass Panel | 2.00 | set | 8,765.00 | 17,530.00 |
| | D5 - 0.60m x 1.90m PVC Type Door with Louver | 2.00 | set | 3,114.48 | 6,228.96 |
| | D6 - 0.60m x 2.10m PVC Type Door with Louver | 2.00 | set | 3,442.32 | 6,884.64 |
| | Door Jamb | | | | |
| | D2- 0.70 X 2.10 Wooden Jamb | 2.00 | set | 1,960.00 | 3,920.00 |
| | D3- 0.80 X 2.10 Wooden Jamb | 1.00 | set | 2,000.00 | 2,000.00 |
| | D4- 0.90 X 2.10 Wooden Jamb | 2.00 | set | 2,040.00 | 4,080.00 |
| | Hardwares and Accessories | | | | |
| | Door Hinge, Heavy Duty, Stainless | 12.00 | piece | 200.00 | 2,400.00 |
| | Door Knob, Lever Type, Stainless | 7.00 | set | 1,000.00 | 7,000.00 |
| | Installation of Windows | | | | |
| | W1 - 3.00m x 1.20m, 6mm thk Glass Sliding Window on Powder Coated Aluminum Frame | 9.00 | set | 30,600.00 | 275,400.00 |
| | W2 - 0.50m x 0.40m, 6mm thk Glass Awning Window on Powder Coated Aluminum Frame | 2.00 | set | 1,700.00 | 3,400.00 |
| | W3 - 2.60m x 1.20m, 6mm thk Glass Sliding Window on Powder Coated Aluminum Frame | 1.00 | set | 26,520.00 | 26,520.00 |
| | W4 - 1.80m x 1.20m, 6mm thk Glass Sliding Window on Powder Coated Aluminum Frame | 1.00 | set | 18,360.00 | 18,360.00 |
| | | | | | |
| | | | | Material Cost | ₱ 411,358.60 |
| | | | | Labor Cost | ₱ 82,271.72 |
| | | | | Subtotal Cost | ₱ 493,630.32 |
| | | | | | |
| | Painting Works | | | | |
| | Epoxy Enamel (Steel Surfaces) | 13.00 | sq.m. | ₱ 258.00 | ₱ 3,354.00 |
| | Elastomeric Paint Finish (Exterior Masonry Walls) | 205.00 | sq.m. | 390.00 | 79,950.00 |
| | Flat Latex Paint Finish | | | | |
| | Interior Wall | 366.00 | sq.m. | 304.00 | 111,264.00 |
| | Ceiling | 265.00 | sq.m. | 160.00 | 42,400.00 |
| | | | | | |
| | | | | Material Cost | ₱ 236,968.00 |
| | | | | Labor Cost | ₱ 82,938.80 |
| | | | | Subtotal Cost | ₱ 319,906.80 |

| ITEM NO. | WORK DESCRIPTION & SCOPE OF WORKS | QTY. | UNIT | UNIT COST | TOTAL COST |
|----------|--|-------|-------|-----------------|----------------|
| | Cleaning and Retouching of Painting with Simple Design | 40.00 | sq.m. | ₱ 150.00 | ₱ 6,000.00 |
| | | | | | |
| | | | | Subtotal Cost | ₱ 6,000.00 |
| | | | | | |
| | | | | Material Cost C | ₱ 1,013,863.60 |
| | | | | Labor Cost C | ₱ 291,048.47 |
| | | | | Direct Cost C | ₱ 1,304,912.07 |
| | | | | | |

| ITEM NO. | WORK DESCRIPTION & SCOPE OF WORKS | QTY. | UNIT | UNIT COST | TOTAL COST |
|----------|---|--------|-------|-----------------|--------------|
| D | Sanitary / Plumbing Works | | | | |
| | Sewer Line / Storm Drainage System | | | | |
| | 75mm Ø, PVC Pipe with Hub | 2.00 | piece | P 630.00 | P 1,260.00 |
| | 50mm Ø, PVC Pipe with Hub | 6.00 | piece | 480.00 | 2,880.00 |
| | 100mm Ø x 75mm Ø, Wye | 4.00 | piece | 135.00 | 540.00 |
| | 100mm Ø x 50mm Ø, Wye | 8.00 | piece | 110.00 | 880.00 |
| | 75mm Ø x 50mm Ø, Tee | 12.00 | piece | 130.00 | 1,560.00 |
| | 50mm Ø, 1/4 Bend | 24.00 | piece | 40.00 | 960.00 |
| | 75mm Ø, 1/8 Bend | 8.00 | piece | 60.00 | 480.00 |
| | 50mm Ø, 1/8 Bend | 16.00 | piece | 30.00 | 480.00 |
| | P-Trap 50mm Ø | 4.00 | piece | 125.00 | 500.00 |
| | P-Trap 32mm Ø | 2.00 | piece | 130.00 | 260.00 |
| | Waterline (Water Efficient) | | | | |
| | 25mm Ø, PPR Pipe | 1.00 | piece | 620.00 | 620.00 |
| | 20mm Ø, PPR Pipe | 8.00 | piece | 360.00 | 2,880.00 |
| | 20mm Ø, Tee Equal | 19.00 | piece | 50.00 | 950.00 |
| | 20mm Ø, End Cap | 19.00 | piece | 40.00 | 760.00 |
| | 20mm Ø, 90 Deg Elbow | 38.00 | piece | 40.00 | 1,520.00 |
| | 20mm Ø x 15mm Ø, Female Thread Tee | 19.00 | piece | 160.00 | 3,040.00 |
| | 25mm Ø, Coupling | 2.00 | piece | 40.00 | 80.00 |
| | Fixtures | | | | |
| | Bidet with Accessories, Stainless | 4.00 | set | 450.00 | 1,800.00 |
| | Floor Drain, 100mm x 100mm Stainless Steel | 4.00 | piece | 150.00 | 600.00 |
| | Grease Trap, 5GPM, Heavy Duty, with Accessories | 1.00 | set | 5,400.00 | 5,400.00 |
| | Hose Bibb, Lever Type, Heavy Duty, Stainless Steel (Water Efficient) | 9.00 | set | 310.00 | 2,790.00 |
| | Kitchen Sink Faucet, Stainless (Water Efficient) | 1.00 | set | 650.00 | 650.00 |
| | Lavatory Faucet, Lever Type, Heavy Duty Stainless Steel (Water Efficient) | 2.00 | set | 450.00 | 900.00 |
| | Lavatory Wall Hung, Kiddy | 2.00 | set | 3,500.00 | 7,000.00 |
| | Urinal, Flash Valve, Kiddy (Water Efficient) | 2.00 | set | 8,800.00 | 17,600.00 |
| | Water Closet, Tank Type w/ Accessories (Water Efficient) | 2.00 | set | 4,475.00 | 8,950.00 |
| | Water Closet, Tank Type, Kiddy w/ Accessories (Water Efficient) | 2.00 | set | 5,475.00 | 10,950.00 |
| | Accessories | | | | |
| | Angle Valve, Single-Way Stainless Steel | 2.00 | piece | 300.00 | 600.00 |
| | Angle Valve, Two-Way Stainless Steel | 4.00 | piece | 350.00 | 1,400.00 |
| | Stainless Flexible Hose | 6.00 | piece | 240.00 | 1,440.00 |
| | Miscellaneous & Consumables | | | | |
| | 400cc Solvent Cement | 1.00 | can | 413.00 | 413.00 |
| | All-Around Sealant | 1.00 | can | 705.00 | 705.00 |
| | Hacksaw Blade | 3.00 | piece | 80.00 | 240.00 |
| | Teflon Tape | 6.00 | roll | 40.00 | 240.00 |
| | Waste Cloth | 2.00 | kg | 100.00 | 200.00 |
| | | | | | |
| | | | | Material Cost D | P 81,528.00 |
| | | | | Labor Cost D | P 28,534.80 |
| | | | | Direct Cost D | P 110,062.80 |
| E | Electrical Works | | | | |
| | Roughing-ins | | | | |
| | 32mmØ IMC Pipe | 1.00 | piece | P 1,815.00 | P 1,815.00 |
| | 20mmØ PVC Pipe | 100.00 | piece | 120.00 | 12,000.00 |
| | 25mmØ PVC Pipe | 15.00 | piece | 180.00 | 2,700.00 |
| | 32mmØ PVC Pipe | 3.00 | piece | 240.00 | 720.00 |
| | Fittings and Accessories | | | | |
| | 32mmØ IMC Locknut and Bushing | 2.00 | pair | 120.00 | 240.00 |
| | 20mmØ PVC Adaptor | 180.00 | piece | 12.00 | 2,160.00 |
| | 25mmØ PVC Adaptor | 10.00 | piece | 17.00 | 170.00 |
| | 32mmØ PVC Adaptor | 2.00 | piece | 23.00 | 46.00 |
| | 20mmØ PVC Flexible Tube | 50.00 | l.m. | 20.00 | 1,000.00 |
| | 20mmØ PVC Locknut | 180.00 | pair | 10.00 | 1,800.00 |
| | 25mmØ PVC Locknut | 10.00 | pair | 15.00 | 150.00 |

| ITEM NO. | WORK DESCRIPTION & SCOPE OF WORKS | QTY. | UNIT | UNIT COST | TOTAL COST |
|----------|---|-------|-------|-----------|------------|
| | 32mmØ PVC Locknut | 2.00 | pair | 19.00 | 38.00 |
| | 32mmØ Weatherproof Entrance Cap, Diecast type | 1.00 | piece | 400.00 | 400.00 |
| | 16mm Ø x 3000mm Grounding Rod (Copper Clod) with Ground Clamp | 1.00 | piece | 1,500.00 | 1,500.00 |
| | 50mm x 100mm PVC Utility Box | 31.00 | piece | 36.00 | 1,116.00 |
| | 100mm x 100mm PVC Junction Box with Cover | 32.00 | piece | 44.00 | 1,408.00 |
| | 100mm x 100mm PVC Utility Box (Pullbox) | 10.00 | piece | 44.00 | 440.00 |
| | | | | | |

| ITEM NO. | WORK DESCRIPTION & SCOPE OF WORKS | QTY. | UNIT | UNIT COST | TOTAL COST |
|----------|--|-------|-------|------------|-------------|
| | Wires and Cables | | | | |
| | 3.5mm ² THHN Wire | 4.00 | roll | ₱ 4,110.00 | ₱ 16,440.00 |
| | 5.5mm ² THHN Wire | 50.00 | l.m. | 48.00 | 2,400.00 |
| | 8.0mm ² THHN Wire | 40.00 | l.m. | 72.00 | 2,880.00 |
| | 14mm ² THHN Wire | 30.00 | l.m. | 117.00 | 3,510.00 |
| | 3.5mm ² TW Wire | 2.00 | roll | 3,370.00 | 6,740.00 |
| | 5.5mm ² TW Wire | 20.00 | l.m. | 35.00 | 700.00 |
| | 8.0mm ² TW Wire | 15.00 | l.m. | 60.00 | 900.00 |
| | Lighting Fixtures (Energy Efficient) | | | | |
| | 300mm x 1200mm, 1 x 18w LED, Troffer Type, with Complete Accessories, Recessed | 3.00 | set | 2,500.00 | 7,500.00 |
| | 300mm x 1200mm, 1 x 18w LED, Troffer Type, with Complete Accessories, Surface M | 3.00 | set | 2,500.00 | 7,500.00 |
| | 600mm x 1200mm, 2 x 18w LED, Troffer Type, with Complete Accessories, Recessed | 12.00 | set | 3,500.00 | 42,000.00 |
| | 600mm x 1200mm, 2 x 18w LED, Troffer Type, with Complete Accessories, Surface M | 4.00 | set | 3,500.00 | 14,000.00 |
| | 100mm Ø Round Recessed Pinlight (case) | 2.00 | piece | 600.00 | 1,200.00 |
| | 100mm Ø Round Recessed Pinlight LED 9W | 2.00 | piece | 300.00 | 600.00 |
| | 100mm Ø Round Surface Mounted Pinlight (case) | 2.00 | piece | 350.00 | 700.00 |
| | 100mm Ø Round Surface Mounted Pinlight LED 9W | 2.00 | piece | 300.00 | 600.00 |
| | Wiring Devices and Other Fixtures | | | | |
| | Aircon Outlet, Multipurpose Outlet 250V/20A | 1.00 | piece | 620.00 | 620.00 |
| | Ceiling Fan with Selector Switch 1400mm Ø | 2.00 | piece | 6,000.00 | 12,000.00 |
| | Orbit Fan with Selector Switch | 4.00 | piece | 4,000.00 | 16,000.00 |
| | Outlet with Grounding, Two Gang | 20.00 | piece | 335.00 | 6,700.00 |
| | Switch With Plate and Cover, One Gang | 4.00 | piece | 180.00 | 720.00 |
| | Switch With Plate and Cover, Two Gang | 3.00 | piece | 240.00 | 720.00 |
| | Switch With Plate and Cover, Three Gang | 1.00 | piece | 300.00 | 300.00 |
| | Switch With Plate and Cover, Three Way | 2.00 | piece | 350.00 | 700.00 |
| | Weatherproof Plate Cover | 20.00 | piece | 395.00 | 7,900.00 |
| | Panelboard | | | | |
| | Main Circuit Breaker (MCB) Main: 60AT, 2P, 230V, 18 KAIC, MCCB Enclosure: NEMA 3 with Ground Terminals | 1.00 | assy | 5,700.00 | 5,700.00 |
| | Main Distribution Panel (MDP) Main: 60AT, 2P, 230V, 18 KAIC, MCCB Branches: 2-40AT, 2P, 230V, Bolt-on Branches: 1-30AT, 2P, 230V, Bolt-on Enclosure: NEMA 1 with Ground Terminals | 1.00 | assy | 15,500.00 | 15,500.00 |
| | Lighting Power Panel A (LPPA) and Panel B (LPPB) Main: 40AT, 2P, 230V, 18 KAIC, MCCB Branches: 2-30AT, 2P, 230V, Bolt-on Branches: 4-20AT, 2P, 230V, Bolt-on Enclosure: NEMA 1 with Ground Terminals | 2.00 | assy | 15,800.00 | 31,600.00 |
| | Pipe Hangers & Supports | | | | |
| | Horizontal Layout of Pipe | 50.00 | l.m. | 109.00 | 5,450.00 |
| | Vertical Layout of Pipe | 5.00 | l.m. | 1,050.00 | 5,250.00 |
| | Miscellaneous & Consumables | | | | |
| | 400cc Solvent Cement | 4.00 | can | 413.00 | 1,652.00 |
| | Electrical Tape | 7.00 | roll | 50.00 | 350.00 |
| | G.I. Tie Wire Ga. 16 (for cable pulling) | 2.00 | kg | 90.00 | 180.00 |
| | Hacksaw Blade | 7.00 | piece | 70.00 | 490.00 |
| | Masking Tape | 1.00 | roll | 50.00 | 50.00 |
| | Pulling Lubricant | 1.00 | can | 4,037.00 | 4,037.00 |

| ITEM NO. | WORK DESCRIPTION & SCOPE OF WORKS | QTY. | UNIT | UNIT COST | TOTAL COST |
|----------|-----------------------------------|------|------|-------------------|----------------|
| | Rubber Tape | 1.00 | roll | ₱ 190.00 | ₱ 190.00 |
| | Torch With Butane | 4.00 | set | 500.00 | 2,000.00 |
| | | | | | |
| | | | | Material Cost E | ₱ 253,482.00 |
| | | | | Labor Cost E | ₱ 88,718.70 |
| | | | | Direct Cost E | ₱ 342,200.70 |
| | | | | | |
| | | | | Material Cost III | ₱ 1,657,841.60 |
| | | | | Labor Cost III | ₱ 642,978.77 |
| | | | | Direct Cost III | ₱ 2,300,820.37 |
| | | | | | |

SUMMARY

| ITEM NO | WORK DESCRIPTION AND SCOPE OF WORKS | TOTAL COST |
|--|---|---|
| I | GENERAL REQUIREMENTS | ₱ 166,914.00 |
| II | CONSTRUCTION OF HANDWASHING FACILITY | 686,840.25 |
| III | REHABILITATION OF CHAMBERETTE DAY CARE CENTER | 2,300,820.37 |
| NOTE: • Strictly enforce health protocols relative to the latest DPWH Memorandum. | | |
| | | TOTAL DIRECT COST ₱ 3,154,574.62 |
| | | Overhead, Contingencies and Miscellaneous and Consumables Expenses (OCM) 473,186.19 |
| | | Profit 315,457.46 |
| | | VAT 197,160.91 |
| | | TOTAL ESTIMATED COST ₱ 4,140,379.18 |

Prepared by:

Checked by:

JOHN CHRISTOPHER P. TOMACRUZ

Planning and Programming Division

JOCELYN A. NAONG

Planning and Programming Division

Recommending Approval:

LEO S. DEL ROSARIO

Head, Planning and Programming Division

Approved by:

ISAGANI R. VERZOSA JR.

OIC, City Engineer



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



PROGRAM OF WORK

QUEZON CITY INFRASTRUCTURE PROJECT

PROJECT TITLE :

PROPOSED CONSTRUCTION OF HAND WASHING FACILITY AND REHABILITATION OF DOÑA JOSEFA DAY CAR

LOCATION :

BARANGAY DOÑA JOSEFA, DISTRICT 4, QUEZON CITY

SCOPE OF WORK :

I GENERAL REQUIREMENTS

1.) General Requirements include billboard, construction safety and health, clearing, hauling and disposal of construction

II CONSTRUCTION OF HAND WASHING FACILITY

1.) Supply and installation of single sink hand washing stall.

2.) Sanitary/Plumbing Works include installation of roughing-ins, fixtures and accessories.

III REHABILITATION OF DAY CARE CENTER

1.) Site Works include removal works, and cleaning and clearing for painting preparation.

2.) Civil / Structural Works include masonry works, metal works, and roofing works.

3.) Architectural Works include floor, wall and ceiling finishes, painting works, installation of doors and windows, and fat

4.) Sanitary/Plumbing Works include installation of roughing-ins, equipment, fixtures and accessories.

5.) Electrical Works include installation of roughing-ins, wirings, devices, fixtures, and accessories.

IV All necessary testing and commisioning shall be performed in accordance to standards.

DETAILED COST ESTIMATE

| ITEM NO. | WORK DESCRIPTION & SCOPE OF WORKS | QTY. | UNIT | UNIT COST | TOTAL COST |
|-----------|---|------|------|----------------------|--------------------|
| I | GENERAL REQUIREMENTS | | | | |
| | Billboard | 1.00 | unit | ₱ 4,644.00 | ₱ 4,644.00 |
| | Clearing, Hauling and Disposal of Construction Materials | 1.00 | t.l. | 3,500.00 | 3,500.00 |
| | Construction Safety and Health | 1.00 | unit | 28,360.00 | 28,360.00 |
| | Temporary Enclosure around the Construction Area (H=2.4m) | 5.00 | l.m. | 730.00 | 3,650.00 |
| | | | | | |
| | | | | Direct Cost I | ₱ 40,154.00 |
| | | | | | |
| II | CONSTRUCTION OF HANDWASHING FACILITY | | | | |
| A | Hand Washing Facility | | | | |
| | Concrete Hand Washing Facility | 2.00 | l.m. | ₱ 8,497.30 | ₱ 16,994.60 |

| ITEM NO. | WORK DESCRIPTION & SCOPE OF WORKS | QTY. | UNIT | UNIT COST | TOTAL COST |
|----------|-----------------------------------|------|------|---------------|-------------|
| | | | | | |
| | | | | Direct Cost A | ₱ 16,994.60 |
| | | | | | |

| ITEM NO. | WORK DESCRIPTION & SCOPE OF WORKS | QTY. | UNIT | UNIT COST | TOTAL COST |
|----------|---|-------|-------|------------------|-------------|
| B | Sanitary / Plumbing Works | | | | |
| | Sanitary Line / Sewer Line | | | | |
| | 50mm Ø PVC Pipe with Hub | 2.00 | piece | ₱ 480.00 | ₱ 960.00 |
| | 50mm Ø x 50mm Ø Wye | 3.00 | piece | 95.00 | 285.00 |
| | 50mm Ø x 50mm Ø PVC 1/8 Bend | 2.00 | piece | 30.00 | 60.00 |
| | P-Trap 50mm Ø | 2.00 | piece | 125.00 | 250.00 |
| | Waterline System | | | | |
| | 20mm Ø PPR Pipe | 2.00 | piece | 360.00 | 720.00 |
| | 25mm Ø PPR Pipe | 1.00 | piece | 620.00 | 620.00 |
| | 20mm Ø x 20mm Ø Equal Tee | 2.00 | piece | 50.00 | 100.00 |
| | 25mm Ø x 20mm Ø Female Threaded Tee | 2.00 | piece | 190.00 | 380.00 |
| | 25mm Ø End Cap | 2.00 | piece | 50.00 | 100.00 |
| | 20mm Ø x 20mm Ø PPR 90° Elbow | 2.00 | piece | 40.00 | 80.00 |
| | 25mm Ø x 25mm Ø PPR 90° Elbow | 2.00 | piece | 60.00 | 120.00 |
| | 20mm Ø Union Patente | 1.00 | piece | 280.00 | 280.00 |
| | 20mm Ø PPR Coupling | 2.00 | piece | 30.00 | 60.00 |
| | 25mm Ø PPR Coupling | 2.00 | piece | 40.00 | 80.00 |
| | 25mm Ø x 20mm Ø PPR Reducer | 1.00 | piece | 30.00 | 30.00 |
| | 32mm Ø x 25mm Ø PPR Reducer | 1.00 | piece | 65.00 | 65.00 |
| | Fixtures | | | | |
| | Floor Drain, 100mm x 100mm Stainless Steel | 2.00 | piece | 150.00 | 300.00 |
| | Hose Bibb, Lever Type, Heavy Duty, Stainless Steel (Water | 2.00 | piece | 310.00 | 620.00 |
| | Valves & Appurtenances | | | | |
| | 20mm Ø PPR Gate Valve | 1.00 | piece | 720.00 | 720.00 |
| | Miscellaneous & Consumables | | | | |
| | 400cc Solvent Cement | 1.00 | can | 413.00 | 413.00 |
| | All Purpose Sealant | 1.00 | can | 705.00 | 705.00 |
| | Hacksaw Blade | 2.00 | piece | 80.00 | 160.00 |
| | Teflon Tape | 3.00 | roll | 40.00 | 120.00 |
| | Waste Cloth | 2.00 | kg | 100.00 | 200.00 |
| | | | | | |
| | | | | Material Cost B | ₱ 7,428.00 |
| | | | | Labor Cost B | 2,599.80 |
| | | | | Direct Cost B | ₱ 10,027.80 |
| | | | | | |
| | | | | Material Cost II | ₱ 24,422.60 |
| | | | | Labor Cost II | 2,599.80 |
| | | | | Direct Cost II | ₱ 27,022.40 |
| | | | | | |
| III | REHABILITATION OF DAY CARE CENTER | | | | |
| A | Site Works | | | | |
| | Demolition / Removal Works | | | | |
| | Chipping of Wall (Electrical Works) | 1.00 | sq.m. | ₱ 250.00 | ₱ 250.00 |
| | Demolition of Concrete Countertop | 1.00 | cu.m. | 500.00 | 500.00 |
| | Demolition of Dry Wall Partition | 18.00 | sq.m. | 250.00 | 4,500.00 |

| ITEM NO. | WORK DESCRIPTION & SCOPE OF WORKS | QTY. | UNIT | UNIT COST | TOTAL COST |
|----------|--|-------|-------|-----------|------------|
| | Removal of Dilapidated Door and Door Jambs | 1.00 | set | 250.00 | 250.00 |
| | Removal of Dilapidated Tiles | 12.00 | sq.m. | 250.00 | 3,000.00 |
| | Removal of Water Closet, Kiddy | 1.00 | set | 250.00 | 250.00 |
| | Removal of Wall Hung Lavatory, Kiddy | 1.00 | set | 250.00 | 250.00 |
| | Removal of Urinal, Kiddy | 1.00 | set | 250.00 | 250.00 |
| | | | | | |

| ITEM NO. | WORK DESCRIPTION & SCOPE OF WORKS | QTY. | UNIT | UNIT COST | TOTAL COST |
|----------|--|--------|-------|-----------------|-------------|
| | Clearing and Cleaning for Painting Preparation | 128.00 | sq.m. | ₱ 20.00 | ₱ 2,560.00 |
| | | | | | |
| | | | | Direct Cost A | ₱ 11,810.00 |
| | | | | | |
| B | Civil Works / Structural Works | | | | |
| | Masonry Works | | | | |
| | 100mm CHB Laying including Mortar, Reinforcement and | 15.00 | sq.m. | ₱ 830.00 | ₱ 12,450.00 |
| | Floor Topping for Preparation of Tile Works | 15.00 | sq.m. | 309.00 | 4,635.00 |
| | Restoration of Concrete (Electrical Works) | 1.00 | sq.m. | 309.00 | 309.00 |
| | | | | | |
| | | | | Material Cost B | ₱ 17,394.00 |
| | | | | Labor Cost B | 6,087.90 |
| | | | | Direct Cost B | ₱ 23,481.90 |
| | | | | | |
| C | Architectural Works | | | | |
| | Floor Finishes | | | | |
| | 300mm x 300mm Non Skid Homogeneous Floor Tiles (Cor | 3.00 | sq.m. | ₱ 1,000.00 | ₱ 3,000.00 |
| | Wall Finishes | | | | |
| | 300mm x 300mm Homogeneous Wall Tiles (Comfort Room | 10.00 | sq.m. | 1,000.00 | 10,000.00 |
| | Ceiling Finishes | | | | |
| | 6mm Thick Fiber Cement Board including Metal Framing | 12.00 | sq.m. | 850.00 | 10,200.00 |
| | | | | | |
| | | | | Material Cost | ₱ 23,200.00 |
| | | | | Labor Cost | 8,120.00 |
| | | | | Subtotal | ₱ 31,320.00 |
| | | | | | |
| | Installation of Doors | | | | |
| | D1 - (2.10m x 0.60m) PVC Door with Louver | 1.00 | set | ₱ 3,443.00 | ₱ 3,443.00 |
| | Hardwares and Accessories | | | | |
| | Door Hinges, Heavy Duty Stainless | 3.00 | piece | 200.00 | 600.00 |
| | Door Knob, Lever Type, Stainless | 2.00 | piece | 1,000.00 | 2,000.00 |
| | Installation of Windows | | | | |
| | W1 - (0.80m x 0.40m) Aluminum Framed Powder Coated | 1.00 | set | 2,720.00 | 2,720.00 |
| | | | | | |
| | | | | Material Cost | ₱ 8,763.00 |
| | | | | Labor Cost | 1,752.60 |
| | | | | Subtotal | ₱ 10,515.60 |
| | | | | | |
| | Painting Works | | | | |
| | Flat Latex Paint Finish | | | | |
| | Interior Wall | 80.00 | sq.m. | ₱ 304.00 | ₱ 24,320.00 |

| ITEM NO. | WORK DESCRIPTION & SCOPE OF WORKS | QTY. | UNIT | UNIT COST | TOTAL COST |
|----------|-----------------------------------|-------|-------|---------------|-------------|
| | Ceiling | 48.00 | sq.m. | 160.00 | 7,680.00 |
| | | | | | |
| | | | | Material Cost | ₱ 32,000.00 |
| | | | | Labor Cost | 11,200.00 |
| | | | | Subtotal | ₱ 43,200.00 |
| | | | | | |

| ITEM NO. | WORK DESCRIPTION & SCOPE OF WORKS | QTY. | UNIT | UNIT COST | TOTAL COST |
|----------|---|-------|-------|-----------------|--------------|
| | Fabricated Materials | | | | |
| | Concrete Counter with Aluminum Cover and Sink | 2.00 | l.m. | ₱ 4,957.00 | ₱ 9,914.00 |
| | Fixed Cabinet with Cover | 3.00 | sq.m. | 5,302.20 | 15,906.60 |
| | | | | | |
| | | | | Material Cost | ₱ 25,820.60 |
| | | | | Labor Cost | 9,037.21 |
| | | | | Subtotal | ₱ 34,857.81 |
| | | | | | |
| | | | | Material Cost C | ₱ 89,783.60 |
| | | | | Labor Cost C | 30,109.81 |
| | | | | Direct Cost C | ₱ 119,893.41 |
| | | | | | |
| D | Sanitary / Plumbing Works | | | | |
| | Sewer Line / Storm Drainage System | | | | |
| | 75mm Ø, PVC Pipe with Hub | 1.00 | piece | ₱ 630.00 | ₱ 630.00 |
| | 50mm Ø, PVC Pipe with Hub | 8.00 | piece | 480.00 | 3,840.00 |
| | 100mm Ø x 100mm Ø, Wye | 1.00 | piece | 140.00 | 140.00 |
| | 100mm Ø x 75mm Ø, Wye | 1.00 | piece | 135.00 | 135.00 |
| | 100mm Ø x 50mm Ø, Wye | 4.00 | piece | 110.00 | 440.00 |
| | 75mm Ø x 50mm Ø, Tee | 5.00 | piece | 130.00 | 650.00 |
| | 50mm Ø, 1/4 Bend | 10.00 | piece | 40.00 | 400.00 |
| | 100mm Ø, 1/8 Bend | 2.00 | piece | 80.00 | 160.00 |
| | 75mm Ø, 1/8 Bend | 2.00 | piece | 60.00 | 120.00 |
| | 50mm Ø, 1/8 Bend | 8.00 | piece | 30.00 | 240.00 |
| | 100mm Ø, Cleanout | 1.00 | piece | 80.00 | 80.00 |
| | 32mm Ø, P-Trap | 1.00 | piece | 130.00 | 130.00 |
| | 40mm Ø, P-Trap | 1.00 | piece | 140.00 | 140.00 |
| | 50mm Ø, P-Trap | 1.00 | piece | 125.00 | 125.00 |
| | 100mm Ø, P-Trap | 1.00 | piece | 280.00 | 280.00 |
| | Waterline System (Water Efficient) | | | | |
| | 25mm Ø, PPR Pipe | 1.00 | piece | 620.00 | 620.00 |
| | 20mm Ø, PPR Pipe | 5.00 | piece | 360.00 | 1,800.00 |
| | 20mm Ø, Tee Equal | 5.00 | piece | 50.00 | 250.00 |
| | 20mm Ø, End Cap | 5.00 | piece | 40.00 | 200.00 |
| | 20mm Ø, 90 Deg Elbow | 10.00 | piece | 40.00 | 400.00 |
| | 20mm Ø x 15mm Ø, Female Thread Tee | 5.00 | piece | 160.00 | 800.00 |
| | 25mm Ø, Coupling | 2.00 | piece | 40.00 | 80.00 |
| | Fixtures | | | | |
| | Bidet with Accessories, Stainless | 1.00 | set | 450.00 | 450.00 |
| | Floor Drain, 100mm x 100mm Stainless Steel | 1.00 | piece | 150.00 | 150.00 |
| | Grease Trap, 5GPM, Heavy Duty, with Accessories | 1.00 | set | 5,400.00 | 5,400.00 |
| | | 1.00 | piece | 310.00 | 310.00 |
| | Hose Bibb, Lever Type, Heavy Duty, Stainless Steel (Water | | | | |
| | Kitchen Sink, Stainless Single Tub | 1.00 | set | 4,800.00 | 4,800.00 |
| | Kitchen Sink Faucet, Stainless (Water Efficient) | 1.00 | piece | 650.00 | 650.00 |

| ITEM NO. | WORK DESCRIPTION & SCOPE OF WORKS | QTY. | UNIT | UNIT COST | TOTAL COST |
|----------|--|------|-------|-----------|------------|
| | Lavatory Faucet, Lever Type, Heavy Duty Stainless Steel (V | 1.00 | piece | 450.00 | 450.00 |
| | Lavatory Wall Hung, Kiddy | 1.00 | set | 3,500.00 | 3,500.00 |
| | Urinal, Flash Valve, Kiddy (Water Efficient) | 1.00 | set | 8,800.00 | 8,800.00 |
| | Water Closet, Tank Type, Kiddy w/ Accessories (Water Effi | 1.00 | set | 5,475.00 | 5,475.00 |
| | | | | | |

| ITEM NO. | WORK DESCRIPTION & SCOPE OF WORKS | QTY. | UNIT | UNIT COST | TOTAL COST |
|----------|--|-------|-------|-----------------|-------------|
| | Accessories | | | | |
| | Angle Valve, Single-Way Stainless Steel | 2.00 | piece | ₱ 300.00 | ₱ 600.00 |
| | Angle Valve, Two-Way Stainless Steel | 1.00 | piece | 350.00 | 350.00 |
| | Flexible Hose, Stainless | 3.00 | piece | 240.00 | 720.00 |
| | Miscellaneous & Consumables | | | | |
| | 1000cc All-Around Sealant | 1.00 | can | 705.00 | 705.00 |
| | 400cc Solvent Cement | 3.00 | can | 413.00 | 1,239.00 |
| | Hacksaw Blade | 4.00 | piece | 80.00 | 320.00 |
| | Teflon Tape | 3.00 | roll | 40.00 | 120.00 |
| | Waste Cloth | 1.00 | kg | 100.00 | 100.00 |
| | | | | | |
| | | | | Material Cost D | ₱ 45,799.00 |
| | | | | Labor Cost D | 16,029.65 |
| | | | | Direct Cost D | ₱ 61,828.65 |
| | | | | | |
| E | Electrical Works | | | | |
| | Roughing-ins | | | | |
| | 20mmØ PVC Pipe | 3.00 | piece | ₱ 120.00 | ₱ 360.00 |
| | Fittings and Accessories | | | | |
| | 20mmØ PVC Adaptor | 4.00 | piece | 12.00 | 48.00 |
| | 20mmØ PVC Flexible Tube | 5.00 | l.m. | 20.00 | 100.00 |
| | 20mmØ PVC Locknut | 4.00 | pair | 10.00 | 40.00 |
| | 50mm x 100mm PVC Utility Box | 1.00 | piece | 36.00 | 36.00 |
| | 100mm x 100mm PVC Junction Box with Cover | 2.00 | piece | 44.00 | 88.00 |
| | Wires and Cables | | | | |
| | 3.5mm² THHN Wire | 20.00 | l.m. | 29.00 | 580.00 |
| | 3.5mm² TW Wire | 10.00 | l.m. | 24.00 | 240.00 |
| | Lighting Fixtures (Energy Efficient) | | | | |
| | 300mm x 1200mm, 1 x 18w LED, Troffer Type, with Comp | 1.00 | set | 2,500.00 | 2,500.00 |
| | 100mm Ø Round Surface Pinlight (Case) | 1.00 | piece | 350.00 | 350.00 |
| | 100mm Ø Round Surface Pinlight LED 9W | 1.00 | piece | 300.00 | 300.00 |
| | Wiring Devices and Other Fixtures | | | | |
| | Aircon Outlet, Multipurpose Outlet 250V/20A | 1.00 | piece | 620.00 | 620.00 |
| | Pipe Hangers & Supports | | | | |
| | Horizontal Layout of Pipe | 3.00 | l.m. | 109.00 | 327.00 |
| | Miscellaneous & Consumables | | | | |
| | 400cc Solvent Cement | 1.00 | can | 413.00 | 413.00 |
| | Electrical Tape | 1.00 | roll | 50.00 | 50.00 |
| | Hacksaw Blade | 1.00 | piece | 70.00 | 70.00 |
| | Masking Tape | 1.00 | roll | 50.00 | 50.00 |
| | Rubber Tape | 1.00 | roll | 190.00 | 190.00 |
| | Torch With Butane | 1.00 | set | 500.00 | 500.00 |
| | | | | | |
| | | | | Material Cost E | ₱ 6,862.00 |
| | | | | Labor Cost E | 2,401.70 |

| ITEM NO. | WORK DESCRIPTION & SCOPE OF WORKS | QTY. | UNIT | UNIT COST | TOTAL COST |
|----------|-----------------------------------|------|------|-------------------|--------------|
| | | | | Direct Cost E | ₱ 9,263.70 |
| | | | | | |
| | | | | Material Cost III | ₱ 159,838.60 |
| | | | | Labor Cost III | 66,439.06 |
| | | | | Direct Cost III | ₱ 226,277.66 |
| | | | | | |

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

SUMMARY

| ITEM NO. | WORK DESCRIPTION AND SCOPE OF WORKS | TOTAL COST |
|---|---|---------------------|
| I | GENERAL REQUIREMENTS | ₱ 40,154.00 |
| II | CONSTRUCTION OF HANDWASHING FACILITY | 27,022.40 |
| III | REHABILITATION OF DAY CARE CENTER | 226,277.66 |
| NOTE: • Strictly enforce Health Protocols relative to the latest applicable DPWH Memorandum | TOTAL DIRECT COST | ₱ 293,454.06 |
| | Overhead, Contingencies and Miscellaneous and Consumables Expenses (OCM) | 44018.11 |
| | Profit | 29,345.41 |
| | VAT | 18,340.88 |
| | TOTAL ESTIMATED COST | ₱ 385,158.46 |

Prepared by:

Checked by:

JOHN CHRISTOPHER P. TOMACRUZ

Planning and Programming Division

JOCELYN A. NAONG

Planning and Programming Division

Recommending Approval:

LEO S. DEL ROSARIO

Head, Planning and Programming Division

Approved by:

ISAGANI R. VERZOSA JR.

OIC, City Engineering Department



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



PROGRAM OF WORK

QUEZON CITY INFRASTRUCTURE PROJECT

PROJECT TITLE :

PROPOSED CONSTRUCTION OF HAND WASHING FACILITY AND REHABILITATION OF GALAS DAY CARE CENTE

LOCATION :

BARANGAY SAN ISIDRO GALAS, DISTRICT 4, QUEZON CITY

SCOPE OF WORK :

I GENERAL REQUIREMENTS

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

II CONSTRUCTION OF HAND WASHING FACILITY

1.) Supply and installation of single sink hand washing stall.

2.) Sanitary/Plumbing Works include installation of roughing-ins, fixtures and accessories.

III REHABILITATION OF DAY CARE CENTER

1.) Site Works include demolition works/removal works, layout and staking, clearing and cleaning for painting preparation.

2.) Civil/Structural Works include concrete works, masonry works, metal works, and roofing works.

3.) Architectural Works include ceiling finishes, painting works, and installation of doors, windows and fabricated materials.

4.) Sanitary/Plumbing Works include installation of roughing-ins, equipment, fixtures and accessories.

5.) Electrical Works include installation of roughing-ins, wirings, devices, fixtures, and accessories.

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

DETAILED COST ESTIMATE

| ITEM NO. | WORK DESCRIPTION & SCOPE OF WORKS | QTY. | UNIT | UNIT COST | TOTAL COST |
|-----------|---|-------|------|----------------------|--------------------|
| I | GENERAL REQUIREMENTS | | | | |
| | Billboard | 1.00 | unit | ₱ 4,644.00 | ₱ 4,644.00 |
| | Clearing, Hauling and Disposal of Construction Materials | 1.00 | t.l. | 3,500.00 | 3,500.00 |
| | Construction Safety and Health | 1.00 | unit | 48,160.00 | 48,160.00 |
| | Temporary Enclosure around the Construction Area (H=2.4m) | 44.00 | l.m. | 730.00 | 32,120.00 |
| | | | | | |
| | | | | Direct Cost I | ₱ 88,424.00 |
| II | CONSTRUCTION OF HAND WASHING FACILITY | | | | |
| A | Hand Washing Facility | | | | |

| ITEM NO. | WORK DESCRIPTION & SCOPE OF WORKS | QTY. | UNIT | UNIT COST | TOTAL COST |
|----------|--|------|------|---------------|--------------|
| | Double Sink Portable Hand Washing Facility | 1.00 | unit | ₱ 221,067.90 | ₱ 221,067.90 |
| | | | | | |
| | | | | Direct Cost A | ₱ 221,067.90 |
| | | | | | |

| ITEM NO. | WORK DESCRIPTION & SCOPE OF WORKS | QTY. | UNIT | UNIT COST | TOTAL COST |
|----------|--|-------|-------|------------------|--------------|
| B | Sanitary / Plumbing Works | | | | |
| | Sanitary Line / Sewer Line / Storm Drainage System | | | | |
| | 50mm Ø PVC Pipe with Hub | 3.00 | piece | ₱ 480.00 | ₱ 1,440.00 |
| | 50mm Ø x 50mm Ø Wye | 3.00 | piece | 95.00 | 285.00 |
| | 100mm Ø x 50mm Ø Wye | 3.00 | piece | 110.00 | 330.00 |
| | 50mm Ø x 50mm Ø PVC 1/4 Bend | 4.00 | piece | 40.00 | 160.00 |
| | 50mm Ø x 50mm Ø PVC 1/8 Bend | 4.00 | piece | 30.00 | 120.00 |
| | 50mm Ø x 32mm Ø PVC Tap Tee | 3.00 | piece | 120.00 | 360.00 |
| | 100mm Ø PVC Cleanout | 3.00 | piece | 80.00 | 240.00 |
| | 50mm Ø PVC P-Trap | 3.00 | piece | 125.00 | 375.00 |
| | Waterline System | | | | |
| | 20mm Ø PPR Pipe | 4.00 | piece | 360.00 | 1,440.00 |
| | 20mm Ø x 20mm Ø Equal Tee | 3.00 | piece | 50.00 | 150.00 |
| | 25mm Ø x 20mm Ø Female Threaded Tee | 3.00 | piece | 190.00 | 570.00 |
| | 25mm Ø End Cap | 3.00 | piece | 50.00 | 150.00 |
| | 20mm Ø x 20mm Ø PPR 90° Elbow | 4.00 | piece | 40.00 | 160.00 |
| | 20mm Ø Union Patente | 1.00 | piece | 280.00 | 280.00 |
| | 20mm Ø PPR Coupling | 4.00 | piece | 30.00 | 120.00 |
| | Valves & Appurtenances | | | | |
| | 20mm Ø PPR Gate Valve | 1.00 | piece | 720.00 | 720.00 |
| | Accessories & Hardwares | | | | |
| | Angle Valve, Single-Way, Stainless | 2.00 | piece | 300.00 | 600.00 |
| | Flexible Hose, Stainless | 2.00 | piece | 240.00 | 480.00 |
| | Miscellaneous & Consumables | | | | |
| | 400cc Solvent Cement | 1.00 | can | 413.00 | 413.00 |
| | All Purpose Sealant | 2.00 | can | 705.00 | 1,410.00 |
| | Hacksaw Blade | 2.00 | piece | 80.00 | 160.00 |
| | Teflon Tape | 10.00 | roll | 40.00 | 400.00 |
| | Waste Cloth | 1.00 | kg | 100.00 | 100.00 |
| | | | | | |
| | | | | Material Cost B | ₱ 10,463.00 |
| | | | | Labor Cost B | 3,662.05 |
| | | | | Direct Cost B | ₱ 14,125.05 |
| | | | | | |
| | | | | Material Cost II | ₱ 231,530.90 |
| | | | | Labor Cost II | 3,662.05 |
| | | | | Direct Cost II | ₱ 235,192.95 |
| | | | | | |
| III | REHABILITATION OF DAY CARE CENTER | | | | |
| A | Site Works | | | | |
| | Demolition / Removal Works | | | | |
| | Chipping of Wall (Electrical Works) | 6.00 | sq.m. | ₱ 250.00 | ₱ 1,500.00 |
| | Demolition of Concrete Countertop | 1.00 | cu.m. | 500.00 | 500.00 |
| | Demolition of Dry Wall Partition | 24.00 | sq.m. | 250.00 | 6,000.00 |
| | Removal of Dilapidated Door | 6.00 | set | 250.00 | 1,500.00 |
| | Removal of Dilapidated Window | 10.00 | sq.m. | 250.00 | 2,500.00 |
| | Removal of Water Closet, Kiddy | 2.00 | set | 250.00 | 500.00 |
| | Removal of Wall Hung Lavatory, Kiddy | 2.00 | set | 250.00 | 500.00 |

| ITEM NO. | WORK DESCRIPTION & SCOPE OF WORKS | QTY. | UNIT | UNIT COST | TOTAL COST |
|----------|--|--------|-------|-----------|------------|
| | Removal of Urinal, Kiddy | 1.00 | set | 250.00 | 250.00 |
| | Clearing / Cleaning for Painting Preparation | 300.00 | sq.m. | 20.00 | 6,000.00 |
| | Layout and Staking | 41.00 | sq.m. | 30.00 | 1,230.00 |
| | | | | | |

| ITEM NO. | WORK DESCRIPTION & SCOPE OF WORKS | QTY. | UNIT | UNIT COST | TOTAL COST |
|----------|--|--------|-------|-----------------|-------------|
| | Site Clearing and Preparation | 41.00 | sq.m. | ₱ 20.00 | ₱ 820.00 |
| | Excavation for Structures | 13.00 | cu.m. | 790.00 | 10,270.00 |
| | | | | | |
| | | | | Subtotal | ₱ 31,570.00 |
| | | | | | |
| | Gravel Bedding | 3.00 | cu.m. | ₱ 900.00 | ₱ 2,700.00 |
| | | | | | |
| | | | | Material Cost | ₱ 2,700.00 |
| | | | | Labor Cost | 945.00 |
| | | | | Subtotal | ₱ 3,645.00 |
| | | | | | |
| | Backfill and Compaction | 5.00 | cu.m. | ₱ 455.00 | ₱ 2,275.00 |
| | | | | | |
| | | | | Subtotal | ₱ 2,275.00 |
| | | | | | |
| | | | | Material Cost A | ₱ 2,700.00 |
| | | | | Labor Cost A | 34,790.00 |
| | | | | Direct Cost A | ₱ 37,490.00 |
| | | | | | |
| B | Civil Works / Structural Works | | | | |
| | Concrete Works | | | | |
| | On-Site Mix Concrete, 21MPa, 3/4" Gravel @ 28 days | | | | |
| | Slab-On-Fill | 5.00 | cu.m. | ₱ 4,500.00 | ₱ 22,500.00 |
| | On-Site Mix Concrete, 28MPa, 3/4" Gravel @ 28 days | | | | |
| | Pedestal Footing | 2.00 | cu.m. | 4,700.00 | 9,400.00 |
| | Pedestal | 1.00 | cu.m. | 4,700.00 | 4,700.00 |
| | Reinforcing Steel Bars | | | | |
| | Grade 40 Reinforcing Steel Bars including G.I. Tie Wire # 16 | | | | |
| | 10mmØ Slab-On-Fill | 191.00 | kg | 44.00 | 8,404.00 |
| | 10mmØ Pedestal | 39.00 | kg | 44.00 | 1,716.00 |
| | 12mmØ Pedestal Footing | 88.00 | kg | 44.00 | 3,872.00 |
| | 12mmØ Pedestal | 45.00 | kg | 44.00 | 1,980.00 |
| | Formworks | | | | |
| | Slab-On-Fill | 4.00 | sq.m. | 228.00 | 912.00 |
| | Pedestal Footing | 11.00 | sq.m. | 228.00 | 2,508.00 |
| | Pedestal | 10.00 | sq.m. | 385.00 | 3,850.00 |
| | Scaffoldings / Shoring | | | | |
| | Pedestal | 9.00 | l.m. | 777.00 | 6,993.00 |
| | Masonry Works | | | | |
| | 100mm CHB Laying including Mortar, Reinforcement and Ties | 22.00 | sq.m. | 830.00 | 18,260.00 |
| | Restoration of Wall (Electrical Works) | 6.00 | sq.m. | 309.00 | 1,854.00 |
| | Metal Works | | | | |
| | Left Side Roofing | | | | |
| | 16mm Ø x 300mm Anchor Bolt | 24.00 | piece | 300.00 | 7,200.00 |
| | 50mm x 75mm x 6mm C-Purlins | 371.00 | kg | 55.00 | 20,405.00 |

| ITEM NO. | WORK DESCRIPTION & SCOPE OF WORKS | QTY. | UNIT | UNIT COST | TOTAL COST |
|----------|--|--------|-------|-----------------|--------------|
| | 50mm x 100mm x 6mm Tubular Bar | 174.00 | kg | 55.00 | 9,570.00 |
| | 100mm x 100mm x 6mm Tubular Bar | 294.00 | kg | 55.00 | 16,170.00 |
| | 150mm x 150mm Base Plate | 7.00 | kg | 55.00 | 385.00 |
| | Rear Side Roofing | | | | |
| | 16mm Ø x 300mm Anchor Bolt | 24.00 | piece | 300.00 | 7,200.00 |
| | 50mm x 75mm x 6mm C-Purlins | 137.00 | kg | 55.00 | 7,535.00 |
| | | | | | |
| | 50mm x 100mm x 6mm Tubular Bar | 90.00 | kg | ₱ 55.00 | ₱ 4,950.00 |
| | 100mm x 100mm x 6mm Tubular Bar | 294.00 | kg | 55.00 | 16,170.00 |
| | 150mm x 150mm Base Plate | 7.00 | kg | 55.00 | 385.00 |
| | Miscellaneous & Consumables | | | | |
| | Acetylene Tank Refill | 2.00 | tank | 1,500.00 | 3,000.00 |
| | Cut Off Blade | 2.00 | piece | 500.00 | 1,000.00 |
| | Grinding Disc Metal | 2.00 | piece | 150.00 | 300.00 |
| | Oxygen tank Refill | 4.00 | tank | 950.00 | 3,800.00 |
| | Welding Rod | 2.00 | box | 3,000.00 | 6,000.00 |
| | Roofing Works | | | | |
| | Pre-Painted Rib-type G.I. Roofing | 41.00 | sq.m. | 650.00 | 26,650.00 |
| | Pre-Painted G.I. End Flashing | 38.00 | l.m. | 270.00 | 10,260.00 |
| | | 41.00 | sq.m. | 250.00 | 10,250.00 |
| | 6mm thick One-Sided Aluminum Foil Thermal Insulation | | | | |
| | 12mm x 300mm Fiber Cement Fascia Board | 38.00 | l.m. | 500.00 | 19,000.00 |
| | Blind Rivets | 157.00 | piece | 3.00 | 471.00 |
| | Tekscrew | 162.00 | piece | 4.00 | 648.00 |
| | Silicon Sealant | 2.00 | tube | 200.00 | 400.00 |
| | | | | | |
| | | | | Material Cost B | ₱ 258,698.00 |
| | | | | Labor Cost B | 90,544.30 |
| | | | | Direct Cost B | ₱ 349,242.30 |
| | | | | | |
| C | Architectural Works | | | | |
| | Ceiling Finishes | | | | |
| | | 83.00 | sq.m. | ₱ 850.00 | ₱ 70,550.00 |
| | 6mm Thick Fiber Cement Board including Metal Framing | | | | |
| | | | | | |
| | | | | Material Cost | ₱ 70,550.00 |
| | | | | Labor Cost | 24,692.50 |
| | | | | Subtotal | ₱ 95,242.50 |
| | | | | | |
| | Installation of Doors | | | | |
| | | 1.00 | set | ₱ 28,560.00 | ₱ 28,560.00 |
| | D1 - (2.10m x 1.60m) Aluminum Framed Powder Coated T | | | | |
| | D2 - (2.10m x 0.60m) PVC Door with Louver | 2.00 | set | 3,443.00 | 6,886.00 |
| | D3 - (2.10m x 0.90m) Panel Door | 3.00 | set | 8,505.00 | 25,515.00 |
| | Door Jambs | | | | |
| | D3 - (2.10m x 0.90m) Panel Door Jamb | 3.00 | set | 2,040.00 | 6,120.00 |

| ITEM NO. | WORK DESCRIPTION & SCOPE OF WORKS | QTY. | UNIT | UNIT COST | TOTAL COST |
|----------|--|-------|-------|-----------|------------|
| | Hardwares and Accessories | | | | |
| | Door Hinges, Heavy Duty Stainless | 15.00 | piece | 200.00 | 3,000.00 |
| | Door Knob, Lever Type, Stainless | 5.00 | piece | 1,000.00 | 5,000.00 |
| | Installation of Windows | | | | |
| | W1 - (1.20m x 1.50m) Aluminum Framed Powder Coated S | 7.00 | set | 15,300.00 | 107,100.00 |
| | W2 - (1.20m x 0.70m) Aluminum Framed Powder Coated S | 1.00 | set | 7,140.00 | 7,140.00 |
| | | | | | |

| ITEM NO. | WORK DESCRIPTION & SCOPE OF WORKS | QTY. | UNIT | UNIT COST | TOTAL COST |
|----------|--|--------|-------|-----------------|--------------|
| | W3 - (0.40m x 0.40m) Aluminum Framed Powder Coated A | 2.00 | set | ₱ 1,360.00 | ₱ 2,720.00 |
| | | | | | |
| | | | | Material Cost | ₱ 192,041.00 |
| | | | | Labor Cost | 38,408.20 |
| | | | | Subtotal | ₱ 230,449.20 |
| | | | | | |
| | Painting Works | | | | |
| | Epoxy Enamel Paint Finish (Steel Members) | 42.00 | sq.m. | ₱ 258.00 | ₱ 10,836.00 |
| | Flat Latex Paint Finish | | | | |
| | Interior Wall | 217.00 | sq.m. | 304.00 | 65,968.00 |
| | Ceiling | 83.00 | sq.m. | 160.00 | 13,280.00 |
| | | | | | |
| | | | | Material Cost | ₱ 90,084.00 |
| | | | | Labor Cost | 31,529.40 |
| | | | | Subtotal | ₱ 121,613.40 |
| | | | | | |
| | Fabricated Materials | | | | |
| | Concrete Counter with Aluminum Cover and Sink | 2.00 | l.m. | ₱ 4,957.00 | ₱ 9,914.00 |
| | Fixed Standing Cabinet with Cover | 6.00 | sq.m. | 5,302.20 | 31,813.20 |
| | | | | | |
| | | | | Material Cost | ₱ 41,727.20 |
| | | | | Labor Cost | 14,604.52 |
| | | | | Subtotal | ₱ 56,331.72 |
| | | | | | |
| | | | | Material Cost C | ₱ 394,402.20 |
| | | | | Labor Cost C | 109,234.62 |
| | | | | Direct Cost C | ₱ 503,636.82 |
| | | | | | |
| D | Sanitary / Plumbing Works | | | | |
| | Sanitary Line / Sewer Line / Storm Drainage System | | | | |
| | 50mm Ø PVC Pipe with Hub | 5.00 | piece | ₱ 480.00 | ₱ 2,400.00 |
| | 50mm Ø x 50mm Ø Wye | 5.00 | piece | 95.00 | 475.00 |
| | 100mm Ø x 50mm Ø Wye | 5.00 | piece | 110.00 | 550.00 |
| | 50mm Ø x 50mm Ø 1/4 Bend | 8.00 | piece | 40.00 | 320.00 |
| | 50mm Ø x 50mm Ø 1/8 Bend | 8.00 | piece | 30.00 | 240.00 |
| | 50mm Ø x 32mm Ø Tap Tee | 5.00 | piece | 120.00 | 600.00 |
| | 100mm Ø Cleanout | 4.00 | piece | 80.00 | 320.00 |
| | 50mm Ø P-Trap | 3.00 | piece | 125.00 | 375.00 |
| | Waterline System | | | | |
| | 20mm Ø PPR Pipe | 8.00 | piece | 360.00 | 2,880.00 |
| | 20mm Ø x 20mm Ø Equal Tee | 5.00 | piece | 50.00 | 250.00 |
| | 20mmØ x 12mm Ø Female Threaded Tee | 5.00 | piece | 160.00 | 800.00 |
| | 25mm Ø End Cap | 5.00 | piece | 50.00 | 250.00 |
| | 20mm Ø x 20mm Ø PPR 90° Elbow | 10.00 | piece | 40.00 | 400.00 |
| | 20mmØ Union Patent | 1.00 | piece | 280.00 | 280.00 |
| | Valve and Appurtenances | | | | |

| ITEM NO. | WORK DESCRIPTION & SCOPE OF WORKS | QTY. | UNIT | UNIT COST | TOTAL COST |
|----------|--|-------|-------|-----------------|-------------|
| | 20mmØ Gate Valve PPR | 1.00 | piece | 720.00 | 720.00 |
| | Fixtures (Water Efficient) | | | | |
| | Bidet, Heavy-Duty, Stainless Steel (Water Efficient) | 2.00 | unit | 450.00 | 900.00 |
| | Floor Drain, 100mm x 100mm Stainless Steel | 2.00 | piece | 150.00 | 300.00 |
| | Grease Trap, 5GPM, Heavy Duty, Stainless | 1.00 | set | 5,400.00 | 5,400.00 |
| | Kitchen Sink, Single, Stainless | 1.00 | piece | 4,800.00 | 4,800.00 |
| | Kitchen Sink Faucet, Lever Type (Water Efficient) | 1.00 | piece | 650.00 | 650.00 |
| | Lavatory, Wall Hung, Kiddy | 2.00 | unit | ₱ 3,500.00 | ₱ 7,000.00 |
| | Lavatory Faucet, Lever Type, Stainless, Heavy Duty (Water Efficient) | 2.00 | set | 450.00 | 900.00 |
| | Urinal, Flush Valve, Kiddy (Water Efficient) | 1.00 | unit | 8,800.00 | 8,800.00 |
| | Water Closet, Tank Type, Kiddy (Water Efficient) | 2.00 | unit | 5,475.00 | 10,950.00 |
| | Accessories & Hardwares | | | | |
| | Angle Valve, Single-Way, Stainless | 6.00 | piece | 300.00 | 1,800.00 |
| | Angle Valve, Two-Way, Stainless | 2.00 | piece | 350.00 | 700.00 |
| | Flexible Hose, Stainless | 8.00 | piece | 240.00 | 1,920.00 |
| | Miscellaneous & Consumables | | | | |
| | 400cc Solvent Cement | 3.00 | can | 413.00 | 1,239.00 |
| | All Purpose Sealant | 1.00 | can | 705.00 | 705.00 |
| | Hacksaw Blade | 1.00 | piece | 80.00 | 80.00 |
| | Teflon Tape | 15.00 | roll | 40.00 | 600.00 |
| | Waste Cloth | 3.00 | kg | 100.00 | 300.00 |
| | | | | | |
| | | | | Material Cost D | ₱ 57,904.00 |
| | | | | Labor Cost D | 20,266.40 |
| | | | | Direct Cost D | ₱ 78,170.40 |
| | | | | | |
| E | Electrical Works | | | | |
| | Roughing-ins | | | | |
| | 20mmØ PVC Pipe | 50.00 | piece | ₱ 120.00 | ₱ 6,000.00 |
| | Fittings and Accessories | | | | |
| | 20mmØ PVC Adaptor | 90.00 | piece | 12.00 | 1,080.00 |
| | 20mmØ PVC Flexible Tube | 30.00 | l.m. | 20.00 | 600.00 |
| | 20mmØ PVC Locknut | 90.00 | pair | 10.00 | 900.00 |
| | 50mm x 100mm PVC Utility Box | 15.00 | piece | 36.00 | 540.00 |
| | 100mm x 100mm PVC Junction Box with Cover | 24.00 | piece | 44.00 | 1,056.00 |
| | 100mm x 100mm PVC Utility Box (Pullbox) | 6.00 | piece | 44.00 | 264.00 |
| | Wires and Cables | | | | |
| | 3.5mm² THHN Wire | 2.00 | roll | 4,110.00 | 8,220.00 |
| | 3.5mm² TW Wire | 1.00 | roll | 3,370.00 | 3,370.00 |
| | Lighting Devices | | | | |
| | 300mm x 1200mm, 1 x 18w LED, Troffer Type with Complete | 2.00 | set | 2,500.00 | 5,000.00 |
| | 600mm x 1200mm, 2 x 18w LED, Troffer Type with Complete | 8.00 | set | 3,500.00 | 28,000.00 |
| | 100mm Ø Round Surface Pinlight (case) | 8.00 | piece | 350.00 | 2,800.00 |
| | 100mm Ø Round Surface Pinlight LED 9W | 8.00 | piece | 300.00 | 2,400.00 |
| | 100mm Ø Round Recessed Pinlight (case) | 3.00 | piece | 600.00 | 1,800.00 |

| ITEM NO. | WORK DESCRIPTION & SCOPE OF WORKS | QTY. | UNIT | UNIT COST | TOTAL COST |
|----------|--|-------|-------|-------------------|----------------|
| | 100mm Ø Round Recessed Pinlight LED 9W | 3.00 | piece | 300.00 | 900.00 |
| | Wiring Devices and Other Fixtures | | | | |
| | Orbit Fan with Selector Switch | 5.00 | piece | 4,000.00 | 20,000.00 |
| | Outlet with Grounding, Two Gang | 8.00 | piece | 335.00 | 2,680.00 |
| | Switch With Plate and Cover, One Gang | 5.00 | piece | 180.00 | 900.00 |
| | Switch With Plate and Cover, Three Gang | 2.00 | piece | 300.00 | 600.00 |
| | Weatherproof Plate Cover | 8.00 | piece | 395.00 | 3,160.00 |
| | Pipe Hangers & Supports | | | | |
| | Horizontal Layout of Pipe | 50.00 | l.m. | 109.00 | 5,450.00 |
| | Miscellaneous & Consumables | | | | |
| | 400cc Solvent Cement | 2.00 | can | 413.00 | 826.00 |
| | Electrical Tape | 5.00 | roll | 50.00 | 250.00 |
| | G.I. Tie Wire Ga. 16 (for Cable Pulling) | 2.00 | kg | 90.00 | 180.00 |
| | Hacksaw Blade | 5.00 | piece | 70.00 | 350.00 |
| | Masking Tape | 1.00 | roll | 50.00 | 50.00 |
| | Pulling Lubricant | 1.00 | can | ₱ 4,037.00 | ₱ 4,037.00 |
| | Rubber Tape | 1.00 | roll | 190.00 | 190.00 |
| | Torch With Butane | 2.00 | set | 500.00 | 1,000.00 |
| | | | | | |
| | | | | Material Cost E | ₱ 102,603.00 |
| | | | | Labor Cost E | 35,911.05 |
| | | | | Direct Cost E | ₱ 138,514.05 |
| | | | | | |
| | | | | Material Cost III | ₱ 813,607.20 |
| | | | | Labor Cost III | 293,446.37 |
| | | | | Direct Cost III | ₱ 1,107,053.57 |
| | | | | | |

| ITEM NO | | WORK DESCRIPTION AND SCOPE OF WORKS | TOTAL COST |
|---|---------------------------------------|---|--|
| I | GENERAL REQUIREMENTS | | ₱ 88,424.00 |
| II | CONSTRUCTION OF HAND WASHING FACILITY | | 235,192.95 |
| III | REHABILITATION OF DAY CARE CENTER | | 1,107,053.57 |
| NOTE: • Strictly enforce Health Protocols relative to the latest applicable DPWH Memorandum | | <p style="text-align: right;">TOTAL DIRECT COST</p> <p>Overhead, Contingencies and Miscellaneous and Consumables Expenses (OCM)</p> <p style="text-align: right;">Profit</p> <p style="text-align: right;">VAT</p> | <p>₱ 1,430,670.52</p> <p>214600.58</p> <p>143,067.05</p> <p>89,416.91</p> |

| ITEM NO. | WORK DESCRIPTION & SCOPE OF WORKS | QTY. | UNIT | UNIT COST | TOTAL COST |
|----------|-----------------------------------|------|------|-----------------------------|-----------------------|
| | | | | TOTAL ESTIMATED COST | ₱ 1,877,755.06 |

Prepared by:

Checked by:

JOHN CHRISTOPHER P. TOMACRUZ

Planning and Programming Division

JOCELYN A. NAONG

Planning and Programming Division

Recommending Approval:

LEO S. DEL ROSARIO

Head, Planning and Programming Division

Approved by:

ISAGANI R. VERZOSA JR.

OIC, City Engineering Department



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



PROGRAM OF WORK

QUEZON CITY INFRASTRUCTURE PROJECT

PROJECT TITLE :

PROPOSED CONSTRUCTION OF HAND WASHING FACILITY AND REHABILITATION OF SANTOL DAY CARE CEN

LOCATION :

BARANGAY SANTOL, DISTRICT 4, QUEZON CITY

SCOPE OF WORK :

I GENERAL REQUIREMENTS

1.) General Requirements include billboard, construction safety and health, hauling and disposal of construction materia

II CONSTRUCTION OF HAND WASHING FACILITY

1.) Supply and installation of single sink handwashing stall.

2.) Sanitary/Plumbing Works include installation of roughing-ins, fixtures and accessories.

III REHABILITATION OF DAY CARE CENTER

1.) Site Works include demolition of existing concrete countertop, removal works, cleaning and clearing for painting prep

2.) Architectural Works include wall, floor, and ceiling finishes, installation of door hardware, fabricated materials, letter

3.) Sanitary/Plumbing Works include installation of sewerline / storm drainage system, waterline, fixtures and accessories

5.) Electrical Works include installation of roughing-ins, fixtures and accessories.

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

DETAILED COST ESTIMATE

| ITEM NO. | WORK DESCRIPTION & SCOPE OF WORKS | QTY. | UNIT | UNIT COST | TOTAL COST |
|-----------|---|-------|------|----------------------|--------------------|
| I | GENERAL REQUIREMENTS | | | | |
| | Billboard | 1.00 | unit | ₱ 4,644.00 | ₱ 4,644.00 |
| | Clearing, Hauling and Disposal of Construction Materials | 1.00 | t.l. | 3,500.00 | 3,500.00 |
| | Construction Safety and Health | 1.00 | unit | 44,280.00 | 44,280.00 |
| | Temporary Enclosure around the Construction Area (H=2.4m) | 18.00 | l.m. | 730.00 | 13,140.00 |
| | | | | | |
| | | | | Direct Cost I | ₱ 65,564.00 |
| II | CONSTRUCTION OF HAND WASHING FACILITY | | | | |
| A | Hand Washing Facility | | | | |

| ITEM NO. | WORK DESCRIPTION & SCOPE OF WORKS | QTY. | UNIT | UNIT COST | TOTAL COST |
|----------|--|------|------|---------------|--------------|
| | Single Sink Portable Hand Washing Facility | 5.00 | unit | ₱ 167,956.20 | ₱ 839,781.00 |
| | | | | | |
| | | | | Direct Cost A | ₱ 839,781.00 |
| | | | | | |

| ITEM NO. | WORK DESCRIPTION & SCOPE OF WORKS | QTY. | UNIT | UNIT COST | TOTAL COST |
|----------|--|--------|-------|------------------|--------------|
| B | Sanitary / Plumbing Works | | | | |
| | Sewer Line / Storm Drainage System | | | | |
| | Roughing-Ins | | | | |
| | 50 mm Ø, PVC Pipe with Hub | 2.00 | piece | ₱ 480.00 | ₱ 960.00 |
| | 75 mm Ø, PVC Pipe with Hub | 2.00 | piece | 630.00 | 1,260.00 |
| | 100 mm Ø, PVC Pipe with Hub | 5.00 | piece | 840.00 | 4,200.00 |
| | 50mm Ø, 1/8 Bend | 5.00 | piece | 40.00 | 200.00 |
| | 100mm Ø, 1/8 Bend | 2.00 | piece | 120.00 | 240.00 |
| | 75mm Ø, 1/4 Bend | 2.00 | piece | 80.00 | 160.00 |
| | 100mm Ø x 50mm Ø, Wye | 5.00 | piece | 120.00 | 600.00 |
| | 100mm Ø, Coupling | 5.00 | piece | 70.00 | 350.00 |
| | 100mm Ø, Cleanout with Adapter | 1.00 | piece | 90.00 | 90.00 |
| | Waterline System | | | | |
| | Roughing-Ins | | | | |
| | 20mm Ø, Pipe PPR | 3.00 | piece | ₱ 360.00 | ₱ 1,080.00 |
| | 20mm Ø, Elbow | 4.00 | piece | 40.00 | 160.00 |
| | 20mm Ø, Coupling | 3.00 | piece | 30.00 | 90.00 |
| | Valves and Appurtenances | | | | |
| | 20mm Ø Gate Valve, PPR | 2.00 | piece | 792.00 | 1,584.00 |
| | Miscellaneous & Consumables | | | | |
| | 400cc Solvent Cement | 1.00 | can | ₱ 413.00 | ₱ 413.00 |
| | All-Around Sealant | 1.00 | can | 705.00 | 705.00 |
| | Hacksaw Blade | 1.00 | piece | 80.00 | 80.00 |
| | Teflon Tape | 1.00 | rolls | 40.00 | 40.00 |
| | Waste Cloth | 1.00 | kgs | 100.00 | 100.00 |
| | | | | | |
| | | | | Material Cost B | ₱ 12,312.00 |
| | | | | Labor Cost B | 4,309.20 |
| | | | | Direct Cost B | ₱ 16,621.20 |
| | | | | | |
| | | | | Material Cost II | ₱ 852,093.00 |
| | | | | Labor Cost II | 4,309.20 |
| | | | | Direct Cost II | ₱ 856,402.20 |
| | | | | | |
| III | REHABILITATION OF DAY CARE CENTER | | | | |
| A | Site Works | | | | |
| | Removal / Demolition Works | | | | |
| | Removal of Existing Ceiling | 49.00 | sq.m. | ₱ 250.00 | ₱ 12,250.00 |
| | Removal of Existing Tiles | 33.00 | sq.m. | 200.00 | 6,600.00 |
| | Removal of Lavatory, Wall Hung | 2.00 | set | 250.00 | 500.00 |
| | Removal of Urinal | 2.00 | set | 250.00 | 500.00 |
| | Removal of Water Closet | 2.00 | set | 250.00 | 500.00 |
| | Demolition of Concrete Countertop | 1.00 | cu.m. | 500.00 | 500.00 |
| | Chipping of Wall (Electrical Works) | 6.00 | sq.m. | 250.00 | 1,500.00 |
| | Clearing / Cleaning for Painting Preparation | 487.00 | sq.m. | 20.00 | 9,740.00 |
| | | | | | |
| | | | | Direct Cost A | ₱ 32,090.00 |
| | | | | | |
| B | Civil Works / Structural Works | | | | |

| ITEM NO. | WORK DESCRIPTION & SCOPE OF WORKS | QTY. | UNIT | UNIT COST | TOTAL COST |
|----------|--|------|------|-----------------|------------|
| | Restoration of Wall (Electrical Works) | 6.00 | sq.m | 309.00 | 1,854.00 |
| | | | | | |
| | | | | Material Cost B | ₱ 1,854.00 |
| | | | | Labor Cost B | 648.90 |
| | | | | Direct Cost B | ₱ 2,502.90 |
| | | | | | |

| ITEM NO. | WORK DESCRIPTION & SCOPE OF WORKS | QTY. | UNIT | UNIT COST | TOTAL COST |
|----------|--|--------|-------|-----------------|--------------|
| C | Architectural Works | | | | |
| | Floor Finishes | | | | |
| | 400mm x 400mm, Non-Skid Homogenous Floor Tiles | 11.00 | sq.m. | ₱ 1,110.00 | ₱ 12,210.00 |
| | Floor Topping Preparation for Tile Works | 11.00 | sq.m. | 309.00 | 3,399.00 |
| | Wall Finishes | | | | |
| | 400mm x 400mm, Homogenous Wall Tiles | 24.00 | sq.m. | 1,110.00 | 26,640.00 |
| | Ceiling Finishes | | | | |
| | 6mm Thick Fiber Cement Board including Metal Framing | 51.00 | sq.m. | 850.00 | 43,350.00 |
| | Letterings | | | | |
| | Stainless Steel Signage (200mm x 150mm) | | | | |
| | "SANTOL DAY CARE CENTER" | 19.00 | piece | 2,240.00 | 42,560.00 |
| | | | | | |
| | | | | Material Cost | ₱ 128,159.00 |
| | | | | Labor Cost | 44,855.65 |
| | | | | Subtotal | ₱ 173,014.65 |
| | Installation of Door Hardware | | | | |
| | Hardware and Accessories | | | | |
| | Door Knob, Lever Type, Stainless | 1.00 | piece | ₱ 1,000.00 | ₱ 1,000.00 |
| | | | | | |
| | | | | Material Cost | ₱ 1,000.00 |
| | | | | Labor Cost | 200.00 |
| | | | | Subtotal | ₱ 1,200.00 |
| | Painting Works | | | | |
| | Elastomeric Paint Finish | | | | |
| | Exterior Wall | 174.00 | sq.m. | ₱ 390.00 | ₱ 67,860.00 |
| | Flat Latex Paint Finish | | | | |
| | Interior Wall | 209.00 | sq.m. | 304.00 | 63,536.00 |
| | Ceiling | 121.00 | sq.m. | 160.00 | 19,360.00 |
| | Fabricated Materials | | | | |
| | Shelves | 4.00 | sq.m | 4,188.90 | 16,755.60 |
| | | | | | |
| | | | | Material Cost | ₱ 167,511.60 |
| | | | | Labor Cost | 58,629.06 |
| | | | | Subtotal | ₱ 226,140.66 |
| | | | | | |
| | | | | Material Cost C | ₱ 296,670.60 |
| | | | | Labor Cost C | 103,684.71 |
| | | | | Direct Cost C | ₱ 400,355.31 |
| | | | | | |

| ITEM NO. | WORK DESCRIPTION & SCOPE OF WORKS | QTY. | UNIT | UNIT COST | TOTAL COST |
|----------|---|-------|-------|-----------------|-------------|
| D | Sanitary / Plumbing Works | | | | |
| | Sewer Line / Storm Drainage System | | | | |
| | Roughing-Ins | | | | |
| | 50 mm Ø, PVC Pipe with Hub | 2.00 | piece | ₱ 480.00 | ₱ 960.00 |
| | 75 mm Ø, PVC Pipe with Hub | 6.00 | piece | 630.00 | 3,780.00 |
| | 100mm Ø, PVC Pipe with Hub | 5.00 | piece | 840.00 | 4,200.00 |
| | 50mm Ø, P-Trap | 7.00 | piece | 125.00 | 875.00 |
| | 75mm Ø, P-Trap | 2.00 | piece | 195.00 | 390.00 |
| | 50mm Ø, 1/8 Bend | 8.00 | piece | 40.00 | 320.00 |
| | 75mm Ø, 1/8 Bend | 3.00 | piece | 80.00 | 240.00 |
| | 100mm Ø, 1/8 Bend | 4.00 | piece | 120.00 | 480.00 |
| | 75mm Ø, 1/4 Bend | 6.00 | piece | 80.00 | 480.00 |
| | 75mm Ø x 75mm Ø, Tee | 6.00 | piece | 115.00 | 690.00 |
| | 100mm Ø x 75mm Ø, Tee | 6.00 | piece | 182.00 | 1,092.00 |
| | 100mm Ø x 50mm Ø, Wye | 8.00 | piece | 120.00 | 960.00 |
| | 100mm Ø x 75mm Ø, Wye | 3.00 | piece | 150.00 | 450.00 |
| | 100mm Ø x 100mm Ø, Wye | 4.00 | piece | 155.00 | 620.00 |
| | 100mm Ø, Coupling | 5.00 | piece | 70.00 | 350.00 |
| | 100mm Ø, Cleanout with Adapter | 3.00 | piece | 90.00 | 270.00 |
| | Waterline System | | | | |
| | Roughing-Ins | | | | |
| | 20mm Ø, Pipe PPR | 2.00 | piece | 360.00 | 720.00 |
| | 20mm Ø, Elbow | 13.00 | piece | 40.00 | 520.00 |
| | 20mm Ø, Coupling | 2.00 | piece | 30.00 | 60.00 |
| | 20mm Ø, Tee Equal | 3.00 | piece | 60.00 | 180.00 |
| | 20mm Ø, Female Threaded, Tee | 6.00 | piece | 120.00 | 720.00 |
| | 25mm Ø x 20mm Ø, Reducer | 1.00 | piece | 30.00 | 30.00 |
| | 25mm Ø, Union Patente | 1.00 | piece | 400.00 | 400.00 |
| | Valves and Appurtenances | | | | |
| | 20mm Ø Gate Valve, PPR | 3.00 | piece | 792.00 | 2,376.00 |
| | Fixtures | | | | |
| | Bidet with Complete Accessories, (Water Efficient) | 2.00 | set | 450.00 | 900.00 |
| | Floor Drain, 100mm x 100mm | 3.00 | set | 150.00 | 450.00 |
| | Lavatory Kiddie Wall Hung | 2.00 | set | 3,500.00 | 7,000.00 |
| | Lavatory Faucet Lever Type, Stainless (Water Efficient) | 2.00 | set | 450.00 | 900.00 |
| | Urinal Kiddie, Flush Type (Water Efficient) | 2.00 | set | 8,800.00 | 17,600.00 |
| | Water Closet Kiddie, Tank Type w/ Accessories (Water Efficient) | 2.00 | set | 5,475.00 | 10,950.00 |
| | Accessories | | | | |
| | Angle Valve, Single-Way, Stainless | 6.00 | piece | 300.00 | 1,800.00 |
| | Angle Valve, Two-Way, Stainless | 2.00 | piece | 350.00 | 700.00 |
| | Flexible Hose, Stainless | 8.00 | piece | 240.00 | 1,920.00 |
| | Miscellaneous & Consumables | | | | |
| | 400cc Solvent Cement | 4.00 | can | 413.00 | 1,652.00 |
| | All-Around Sealant | 2.00 | can | 705.00 | 1,410.00 |
| | Hacksaw Blade | 2.00 | piece | 80.00 | 160.00 |
| | Teflon Tape | 3.00 | rolls | 40.00 | 120.00 |
| | Waste Cloth | 1.00 | kgs | 100.00 | 100.00 |
| | | | | | |
| | | | | Material Cost D | ₱ 66,825.00 |
| | | | | Labor Cost D | 23,388.75 |

| ITEM NO. | WORK DESCRIPTION & SCOPE OF WORKS | QTY. | UNIT | UNIT COST | TOTAL COST |
|----------|-----------------------------------|------|------|---------------|-------------|
| | | | | Direct Cost D | ₱ 90,213.75 |
| | | | | | |

| ITEM NO. | WORK DESCRIPTION & SCOPE OF WORKS | QTY. | UNIT | UNIT COST | TOTAL COST |
|----------|---|-------|-------|-------------------|--------------|
| E | Electrical Works | | | | |
| | Roughing-ins | | | | |
| | 20mmØ PVC Pipe | 50.00 | piece | ₱ 120.00 | ₱ 6,000.00 |
| | Fittings and Accessories | | | | |
| | 20mmØ PVC Adaptor | 98.00 | piece | 12.00 | 1,176.00 |
| | 20mmØ PVC Flexible Tube | 25.00 | lm | 20.00 | 500.00 |
| | 20mmØ PVC Locknut | 98.00 | pair | 10.00 | 980.00 |
| | 50mm x 100mm PVC Utility Box | 13.00 | piece | 36.00 | 468.00 |
| | 100mm x 100mm PVC Junction Box with Cover | 23.00 | piece | 44.00 | 1,012.00 |
| | 100mm x 100mm PVC Utility Box (Pullbox) | 6.00 | piece | 44.00 | 264.00 |
| | Wires and Cables | | | | |
| | 3.5mm² THHN Wire | 2.00 | roll | 4,110.00 | 8,220.00 |
| | 3.5mm² TW Wire | 1.00 | roll | 3,370.00 | 3,370.00 |
| | Lighting Fixtures (Energy Efficient) | | | | |
| | 600mm x 1200mm, 2 x 18w LED, Troffer Type, with Complete Accessories, Recessed Type | 15.00 | set | 3,500.00 | 52,500.00 |
| | 100mm Ø Round Recessed Pinlight (case) | 5.00 | piece | 600.00 | 3,000.00 |
| | 100mm Ø Round Recessed Pinlight LED 9W | 5.00 | piece | 300.00 | 1,500.00 |
| | Wiring Devices and Other Fixtures | | | | |
| | Orbit Fan with Selector Switch | 3.00 | piece | 4,000.00 | 12,000.00 |
| | Outlet with Grounding, Two Gang | 10.00 | piece | 335.00 | 3,350.00 |
| | Switch With Plate and Cover, Single Gang | 2.00 | piece | 180.00 | 360.00 |
| | Switch With Plate and Cover, Three Gang | 1.00 | piece | 300.00 | 300.00 |
| | Pipe Hangers & Supports | | | | |
| | Horizontal Layout of Pipe | 50.00 | lm | 109.00 | 5,450.00 |
| | Miscellaneous & Consumables | | | | |
| | 400cc Solvent Cement | 2.00 | can | 413.00 | 826.00 |
| | Electrical Tape | 5.00 | roll | 50.00 | 250.00 |
| | G.I. Tie Wire Ga. 16 (for cable pulling) | 2.00 | kg | 90.00 | 180.00 |
| | Hacksaw Blade | 5.00 | piece | 70.00 | 350.00 |
| | Masking Tape | 1.00 | roll | 50.00 | 50.00 |
| | Pulling Lubricant | 1.00 | can | 4,037.00 | 4,037.00 |
| | Rubber Tape | 1.00 | roll | 190.00 | 190.00 |
| | Torch With Butane | 2.00 | set | 500.00 | 1,000.00 |
| | | | | | |
| | | | | Material Cost E | ₱ 107,333.00 |
| | | | | Labor Cost E | 37,566.55 |
| | | | | Direct Cost E | ₱ 144,899.55 |
| | | | | | |
| | | | | Material Cost III | ₱ 472,682.60 |
| | | | | Labor Cost III | 197,378.91 |
| | | | | Direct Cost III | ₱ 670,061.51 |
| | | | | | |

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

SUMMARY

| ITEM NO. | WORK DESCRIPTION AND SCOPE OF WORKS | TOTAL COST |
|---|--|-----------------------|
| I | GENERAL REQUIREMENTS | ₱ 65,564.00 |
| II | CONSTRUCTION OF HAND WASHING FACILITY | 856,402.20 |
| III | REHABILITATION OF DAY CARE CENTER | 670,061.51 |
| NOTE: • Strictly enforce Health Protocols relative to the latest applicable DPWH Memorandum | TOTAL DIRECT COST | ₱ 1,592,027.71 |
| | Overhead, Contingencies and Miscellaneous and Consumables Expenses (OCM) | 238804.16 |
| | Profit | 159,202.77 |
| | VAT | 99,501.73 |
| | TOTAL ESTIMATED COST | ₱ 2,089,536.37 |

Prepared by:

Checked by:

JOHN CHRISTOPHER P. TOMACRUZ

Planning and Programming Division

JOCELYN A. NAONG

Planning and Programming Division

Recommending Approval:

LEO S. DEL ROSARIO

Head, Planning and Programming Division

Approved by:

ISAGANI R. VERZOSA JR.

OIC, City Engineering Department



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



PROGRAM OF WORK

QUEZON CITY INFRASTRUCTURE PROJECT

PROJECT TITLE : PROPOSED REHABILITATION OF STO NIÑO 1 DAY CARE CENTER

LOCATION : BARANGAY STO. NIÑO, DISTRICT 4, QUEZON CITY

SCOPE OF WORK :

- 1 General Requirements include billboard, construction safety and health, and clearing and hauling and disposal of construction mater
- 2 Site Works include demolition works/removal works and cleaning and clearing for painting preparation.
- 3 Civil/Structural Works include masonry works.
- 4 Architectural Works include painting works, installation of fabricated materials and replacement of door knobs.
- 5 Sanitary/Plumbing Works include installation of roughing-ins, fixtures and accessories.
- 6 Electrical Works include installation of roughing-ins, wirings, devices, fixtures, panel board and accessories.
- 7 All necessary testing and commisioning shall be performed in accordance to standards.

DETAILED COST ESTIMATE

| ITEM NO. | WORK DESCRIPTION & SCOPE OF WORKS | QTY. | UNIT | UNIT COST | TOTAL COST |
|------------|---|--------|-------|--------------------------|--------------------|
| I | GENERAL REQUIREMENTS | | | | |
| | Billboard | 1.00 | unit | ₱ 4,644.00 | ₱ 4,644.00 |
| | | 1.00 | t.l. | 3,500.00 | 3,500.00 |
| | Clearing, Hauling and Disposal of Construction Materials and Debris | | | | |
| | Construction Safety and Health | 1.00 | unit | 28,560.00 | 28,560.00 |
| | | | | | |
| | | | | Direct Cost I | ₱ 36,704.00 |
| II | SITE WORKS | | | | |
| | Demolition Works | | | | |
| | Chipping of Wall (Electrical Works) | 4.00 | sq.m. | ₱ 250.00 | ₱ 3,000.00 |
| | Removal of Water Closet, Kiddy | 1.00 | set | 250.00 | 250.00 |
| | Removal of Wall Hung Lavatory, Kiddy | 1.00 | set | 250.00 | 250.00 |
| | Cleaning and Clearing for Painting Preparation | 220.00 | sq.m. | 20.00 | 4,400.00 |
| | | | | | |
| | | | | Direct Cost II | ₱ 7,900.00 |
| III | CIVIL / STRUCTURAL WORKS | | | | |
| | Masonry Works | | | | |
| | 100mm CHB Laying including Mortar, Reinforcement and Two-Face | 1.00 | sq.m. | ₱ 830.00 | ₱ 830.00 |
| | 50mm Thick Concrete Topping with Plain Cement Finish | 4.00 | sq.m. | 381.00 | 1,524.00 |
| | Restoration of Wall (Electrical Works) | 4.00 | sq.m | 309.00 | 3,708.00 |
| | | | | | |
| | | | | Material Cost III | ₱ 6,062.00 |
| | | | | Labor Cost III | 2,121.70 |
| | | | | Direct Cost III | ₱ 8,183.70 |
| | | | | | |

| ITEM NO. | WORK DESCRIPTION & SCOPE OF WORKS | QTY. | UNIT | UNIT COST | TOTAL COST |
|----------|-----------------------------------|------|------|---------------|------------|
| IV | ARCHITECTURAL WORKS | | | | |
| | Hardwares and Accessories | | | | |
| | Door Knob, Lever Type, Stainless | 5.00 | set | ₱ 1,000.00 | ₱ 5,000.00 |
| | | | | | |
| | | | | Material Cost | ₱ 5,000.00 |
| | | | | Labor Cost | 1,000.00 |
| | | | | Subtotal | ₱ 6,000.00 |
| | | | | | |

| ITEM NO. | WORK DESCRIPTION & SCOPE OF WORKS | QTY. | UNIT | UNIT COST | TOTAL COST |
|----------|--|--------|-------|------------------|--------------|
| | Painting Works | | | | |
| | Flat Latex Paint Finish | | | | |
| | Interior Wall | 172.00 | sq.m. | ₱ 304.00 | ₱ 52,288.00 |
| | Slab Soffit | 48.00 | sq.m. | 304.00 | 14,592.00 |
| | | | | Material Cost | ₱ 66,880.00 |
| | | | | Labor Cost | 23,408.00 |
| | | | | Subtotal | ₱ 90,288.00 |
| | Fabricated Materials | | | | |
| | Fixed Hanging Cabinet | 5.00 | sqm | ₱ 5,302.20 | ₱ 26,511.00 |
| | | | | Material Cost | ₱ 26,511.00 |
| | | | | Labor Cost | 9,278.85 |
| | | | | Subtotal | ₱ 35,789.85 |
| | | | | Material Cost IV | ₱ 98,391.00 |
| | | | | Labor Cost IV | 33,686.85 |
| | | | | Direct Cost IV | ₱ 132,077.85 |
| V | SANITARY / PLUMBING WORKS | | | | |
| | Sewer Line / Storm Drainage System | | | | |
| | 75mm Ø, PVC Pipe with Hub | 1.00 | piece | ₱ 630.00 | ₱ 630.00 |
| | 50mm Ø, PVC Pipe with Hub | 5.00 | piece | 480.00 | 2,400.00 |
| | 100mm Ø x 100mm Ø, Wye | 1.00 | piece | 140.00 | 140.00 |
| | 100mm Ø x 75mm Ø, Wye | 1.00 | piece | 135.00 | 135.00 |
| | 100mm Ø x 50mm Ø, Wye | 3.00 | piece | 110.00 | 330.00 |
| | 75mm Ø x 50mm Ø, Tee | 4.00 | piece | 130.00 | 520.00 |
| | 50mm Ø, 1/4 Bend | 8.00 | piece | 40.00 | 320.00 |
| | 100mm Ø, 1/8 Bend | 2.00 | piece | 80.00 | 160.00 |
| | 75mm Ø, 1/8 Bend | 2.00 | piece | 60.00 | 120.00 |
| | 50mm Ø, 1/8 Bend | 6.00 | piece | 30.00 | 180.00 |
| | Cleanout 100mm Ø | 1.00 | piece | 80.00 | 80.00 |
| | P-Trap 100mm Ø | 1.00 | piece | 280.00 | 280.00 |
| | P-Trap 50mm Ø | 1.00 | piece | 125.00 | 125.00 |
| | P-Trap 40mm Ø | 1.00 | piece | 140.00 | 140.00 |
| | P-Trap 32mm Ø | 1.00 | piece | 130.00 | 130.00 |
| | Waterline (Water Efficient) | | | | |
| | 25mm Ø, PPR Pipe | 1.00 | piece | 620.00 | 620.00 |
| | 20mm Ø, PPR Pipe | 3.00 | piece | 360.00 | 1,080.00 |
| | 20mm Ø, Tee Equal | 2.00 | piece | 50.00 | 100.00 |
| | 20mm Ø, End Cap | 2.00 | piece | 40.00 | 80.00 |
| | 20mm Ø, 90 Deg Elbow | 4.00 | piece | 40.00 | 160.00 |
| | 20mm Ø x 15mm Ø, Female Thread Tee | 2.00 | piece | 160.00 | 320.00 |
| | 25mm Ø, Coupling | 2.00 | piece | 40.00 | 80.00 |
| | Fixtures | | | | |
| | Bidet with Accessories, Stainless (Water Efficient) | 1.00 | set | 450.00 | 450.00 |
| | Floor Drain, 100mm x 100mm Stainless Steel | 1.00 | piece | 150.00 | 150.00 |
| | Grease Trap, 5GPM, Heavy Duty, with Accessories | 1.00 | set | 5,400.00 | 5,400.00 |
| | Hose Bibb, Lever Type, Stainless, Heavy Duty (Water Efficient) | 6.00 | piece | 310.00 | 1,860.00 |
| | Kitchen Sink Faucet, Stainless, Heavy Duty (Water Efficient) | 1.00 | set | 650.00 | 650.00 |
| | Kitchen Sink Single Tub, Stainless | 1.00 | set | 4,800.00 | 4,800.00 |
| | | 1.00 | set | 450.00 | 450.00 |
| | Lavatory Faucet, Lever Type, Stainless, Heavy Duty (Water Efficient) | | | | |
| | Lavatory Wall Hung, Kiddy | 1.00 | set | 3,000.00 | 3,000.00 |
| | Water Closet, Kiddy, Tank Type (Water Efficient) | 1.00 | set | 5,475.00 | 5,475.00 |

| ITEM NO. | WORK DESCRIPTION & SCOPE OF WORKS | QTY. | UNIT | UNIT COST | TOTAL COST |
|----------|---|------|-------|-----------|------------|
| | Accessories | | | | |
| | Angle Valve, Single-Way Stainless Steel | 2.00 | piece | 300.00 | 600.00 |
| | Angle Valve, Two-Way Stainless Steel | 1.00 | piece | 350.00 | 350.00 |
| | Flexible Hose, Stainless | 3.00 | piece | 240.00 | 720.00 |
| | | | | | |

| ITEM NO. | WORK DESCRIPTION & SCOPE OF WORKS | QTY. | UNIT | UNIT COST | TOTAL COST |
|-----------|---------------------------------------|-------|-------|-------------------------|--------------------|
| | Miscellaneous & Consumables | | | | |
| | 400cc Solvent Cement | 1.00 | can | 413.00 | 413.00 |
| | All-Around Sealant | 1.00 | can | 705.00 | 705.00 |
| | Hacksaw Blade | 1.00 | piece | 80.00 | 80.00 |
| | Teflon Tape | 1.00 | roll | 40.00 | 40.00 |
| | Waste Cloth | 1.00 | kg | 100.00 | 100.00 |
| | | | | | |
| | | | | Material Cost V | ₱ 33,373.00 |
| | | | | Labor Cost V | 11,680.55 |
| | | | | Direct Cost V | ₱ 45,053.55 |
| | | | | | |
| VI | ELECTRICAL WORKS | | | | |
| | Roughing-ins | | | | |
| | 20mmØ PVC Pipe | 10.00 | piece | ₱ 120.00 | ₱ 1,200.00 |
| | Fittings and Accessories | | | | |
| | 20mmØ PVC Adaptor | 8.00 | piece | 12.00 | 96.00 |
| | 20mmØ PVC Locknut and Bushing | 8.00 | pair | 18.00 | 144.00 |
| | 50mm x 100mm PVC Utility Box | 4.00 | piece | 36.00 | 144.00 |
| | Wires and Cables | | | | |
| | 3.5mm² THHN Wire | 60.00 | l.m. | 29.00 | 1,740.00 |
| | 3.5mm² TW Wire | 30.00 | l.m. | 24.00 | 720.00 |
| | Lighting Devices (Energy Efficient) | | | | |
| | T8, 18w LED Tube light | 4.00 | piece | 1,050.00 | 4,200.00 |
| | 100mm Ø Round Surface Pinlight LED 9W | 1.00 | piece | 300.00 | 300.00 |
| | Wiring Devices and Other Fixtures | | | | |
| | Switch With Plate and Cover, One Gang | 1.00 | piece | 180.00 | 180.00 |
| | Outlet with Grounding, Two Gang | 4.00 | piece | 335.00 | 1,340.00 |
| | Weatherproof Plate Cover | 4.00 | piece | 395.00 | 1,580.00 |
| | Wall Fan | 2.00 | set | 3,000.00 | 6,000.00 |
| | Pipe Hangers & Supports | | | | |
| | Horizontal Layout of Pipe | 10.00 | l.m. | 109.00 | 1,090.00 |
| | Miscellaneous & Consumables | | | | |
| | 400cc Solvent Cement | 1.00 | can | 413.00 | 413.00 |
| | Electrical Tape | 1.00 | roll | 50.00 | 50.00 |
| | Hacksaw Blade | 1.00 | piece | 70.00 | 70.00 |
| | Masking Tape | 1.00 | roll | 50.00 | 50.00 |
| | Rubber Tape | 1.00 | roll | 190.00 | 190.00 |
| | Torch With Butane | 1.00 | set | 500.00 | 500.00 |
| | | | | | |
| | | | | Material Cost VI | ₱ 20,007.00 |
| | | | | Labor Cost VI | 7,002.45 |
| | | | | Direct Cost VI | ₱ 27,009.45 |
| | | | | | |

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

SUMMARY

| ITEM NO | WORK DESCRIPTION AND SCOPE OF WORKS | TOTAL COST |
|---|--|---------------------|
| I | GENERAL REQUIREMENTS | ₱ 36,704.00 |
| II | SITE WORKS | 7,900.00 |
| III | CIVIL / STRUCTURAL WORKS | 8,183.70 |
| IV | ARCHITECTURAL WORKS | 132,077.85 |
| V | SANITARY / PLUMBING WORKS | 45,053.55 |
| VI | ELECTRICAL WORKS | 27,009.45 |
| NOTE: • Strictly enforce Health Protocols relative to the latest applicable DPWH Memorandum | TOTAL DIRECT COST | ₱ 256,928.55 |
| | Overhead, Contingencies and Miscellaneous and Consumables Expenses (OCM) | 38,539.28 |
| | Profit | 25,692.86 |
| | VAT | 16,058.03 |
| | TOTAL ESTIMATED COST | ₱ 337,218.72 |

Prepared by:

Checked by:

ALEXIS M. DIZON

Planning and Programming Division

JOCELYN A. NAONG

Planning and Programming Division

Recommending Approval:

LEO S. DEL ROSARIO

Head, Planning and Programming Division

Approved by:

ISAGANI R. VERZOSA JR.

OIC, City Engineering Department

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 sheet indicating the unit prices of construction materials, labor rates, and equipment 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 guidelines¹ 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/manufacture/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

Page _____ of _____

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

Page _____ of _____

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) |
|------|------------------------|------------|------------------|--|---|
| | | | | | |

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. |
|------|----------|-----|---------------------------|---------------------------------------|---------------------------------------|------------|---------|
| | | | | | | | |

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 YET 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

