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 I AREA II

Project number:
22-00026

Sixth Edition
July 2020

Preface

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

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

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

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

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

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

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

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

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

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

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

TABLE OF CONTENTS

Glossary of Terms, Abbreviations, and Acronyms

ABC – Approved Budget for the Contract.

ARCC – Allowable Range of Contract Cost.

BAC – Bids and Awards Committee.

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

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

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

BIR – Bureau of Internal Revenue.

BSP – Bangko Sentral ng Pilipinas.

CDA – Cooperative Development Authority.

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

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

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

CPI – Consumer Price Index.

DOLE – Department of Labor and Employment.

DTI – Department of Trade and Industry.

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

GFI – Government Financial Institution.

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

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

GOP – Government of the Philippines.

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

LGUs – Local Government Units.

NFCC – Net Financial Contracting Capacity.

NGA – National Government Agency.

PCAB – Philippine Contractors Accreditation Board.

PhilGEPS - Philippine Government Electronic Procurement System.

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

PSA – Philippine Statistics Authority.

SEC – Securities and Exchange Commission.

SLCC – Single Largest Completed Contract.

UN – United Nations.

Section I. Invitation to Bid

Notes on the Invitation to Bid

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

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

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

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

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

d. Any important bid evaluation criteria.

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

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

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

February 8, 2022

Invitation to Bid

No.	Project No.	Project Name	Location	Amount	Duration Cal. Days	Office	Source Fund
Buildings – Small B							
1	21-00157B	Proposed Construction of Hand Washing Facility at Payatas C Elementary School	Payatas	1,278,401.32	60	Engineering Dept.	Special Education Fund
2	22-00020	Proposed Upgrading of Electrical System at San Vicente Elementary School	San Vicente	1,520,269.09	90	Engineering Dept.	Special Education Fund
3	22-00021	Proposed Construction of Hand Washing Facility and Rehabilitation of Day Care Center at District 1 Area V and VI	Balingasa, Manresa and Sta. Tersita	1,935,806.59	60	Engineering Dept.	Engineering Department
4	22-00022	Proposed Construction of Hand Washing Facility and Rehabilitation of Day Care Center at District 1 Area IV	Mariblo and Talayan	3,338,152.13	75	Engineering Dept.	Engineering Department
5	22-00023	Proposed Rehabilitation of Electrical System at Diosdado P. Macapagal Elementary School	Tatalon	3,363,516.00	90	Engineering Dept.	Special Education Fund
6	22-00024	Proposed Construction of Hand Washing Facility and Rehabilitation of Day Care Center at District 1 Area I	Bagong Pag-Asa, Project 6 and Sto. Cristo	3,881,427.69	90	Engineering Dept.	Engineering Department
7	22-00025	Proposed Rehabilitation of Electrical System at Pugad Lawin High School	Bahay Toro	4,405,341.15	120	Engineering Dept.	Special Education Fund
8	22-00026	Proposed Construction of Hand Washing Facility and Rehabilitation of Day Care Center at District 1 Area II	Bahay Toro, Katipunan and San Antonio	6,205,275.26	90	Engineering Dept.	Engineering Department
9	22-00027	Proposed Rehabilitation of of SDEC Building at Barangay Milagrosa	Milagrosa	6,375,076.19	120	Engineering Dept.	Engineering Department
10	22-00028	Proposed Rehabilitation of Electrical System at Pura V. Kalaw Elementary School	Milagrosa	6,421,965.23	120	Engineering Dept.	Special Education Fund
11	22-00029	Proposed Construction of Hand Washing Facility and Rehabilitation of Day Care Center at District 1 Area III	Bungad, Nayon Kanluran, Paltok, Sta. Cruz and Veterans Village	9,489,328.13	90	Engineering Dept.	Engineering Department

12	22-00030	Proposed Rehabilitation of Day Care Center at District 5 / Area VIII (Cluster 1)	Greater Lagro, Fairview and North Fairview	9,857,947.75	90	Engineering Dept.	Engineering Department
13	22-00031	Proposed Construction of Additional two (2) storey and Improvement of Existing two (2) storey Multi-Purpose Livelihood Center, Barangay Kaunlaran, Quezon City	Kaunlaran	24,800,293.60	270	Engineering Dept.	20% CDF
Flood Control – Small B							
14	22-00032	Proposed Rehabilitation of Alley and Construction of Reinforced Concrete Retaining Wall at Odelco Riverside	San Bartolome	9,364,427.28	150	Engineering Dept.	Local Disaster Risk Reduction and Management Fund
Roads – Small B							
18	22-00033	Proposed Rehabilitation of Manhole Covers and Surface Improvement at M. Agoncillo Street	Novaliches Proper	1,262,339.58	60	Engineering Dept.	20% CDF
19	22-00034	Proposed Rehabilitation of Road and Drainage at Tandoc Property Urban HOA, Inc.	Gulod	1,619,893.25	90	Engineering Dept.	20% CDF
19	22-00035	Proposed Rehabilitation (Surface Improvement) at Camarin Avenue	Kaligayahan	2,716,606.23	20	Engineering Dept.	20% CDF

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 ***9 February 2022 (Wednesday)*** 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 **February 16, 2022 - 5:00PM.**

6. The ***QC- BAC- INFRASTRUCTURE & CONSULTANCY*** will hold a Pre-Bid Conference[1] on **February 17, 2022** 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 **March 2, 2022 – 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 **March 2, 2022 - 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.

[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.

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

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 I AREA II,** with Project Identification Number **22-00026.**

[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 **2022** in the amount of **Six Million Two Hundred Five Thousand Two Hundred Seventy-Five Pesos & 26/100 Ctvs. (P 6,205,275.26).**

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 **February 17, 2022, 10:00 A.M. at 2nd Floor, Procurement Department-Bidding Room, Finance Building, Quezon City Hall Compound** and/or we encourage the prospective bidders to join through our **Virtual Conference (ZOOM APP) Meeting ID: 854 9489 0133 Password: 273320**

9. Clarification and Amendment of Bidding Documents

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

10. Documents Comprising the Bid: Eligibility and Technical Components

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

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

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

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

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

11. Documents Comprising the Bid: Financial Component

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

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

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

12. Alternative Bids

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

13. Bid Prices

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

14. Bid and Payment Currencies

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

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

a. Philippine Pesos.

15. Bid Security

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

15.2. The Bid and bid security **in no case shall exceed One Hundred Twenty (120) calendar days from the date of opening of bids, unless duly extended by the bidder upon the request of the Head of the Procuring Entity (HoPE) of the Quezon City Local Government**. Any bid not accompanied by an acceptable bid security shall be rejected by the Procuring Entity as non-responsive.

16. Sealing and Marking of Bids

Each Bidder shall submit one copy of the first and second components of its Bid.

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

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

17. Deadline for Submission of Bids

The Bidders shall submit on the specified date and time and either at its physical address or through online submission as indicated in paragraph **5** of the **IB.**

18. Opening and Preliminary Examination of Bids

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

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

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

19. Detailed Evaluation and Comparison of Bids

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

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

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

20. Post Qualification

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

21. Signing of the Contract

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

Section III. Bid Data Sheet

Notes on the Bid Data Sheet (BDS)

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

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

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

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

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

Bid Data Sheet

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

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

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

Type

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

PROPOSED CONSTRUCTION OF HANDWASHING FACILITY AND REHABILITATION OF SITIO MALIGAYA DAY CARE CENTER II

<table>
<tr><th>Qnty.</th><th>Key Personnel</th><th>General Experience</th><th>Relevant Experience</th></tr>
<tr><td>1</td><td>Project Engineer</td><td>3 years</td><td>3 years</td></tr>
<tr><td>1</td><td>Safety Officer</td><td>3 years</td><td>3 years</td></tr>
<tr><td>1</td><td>Foreman</td><td>3 years</td><td>3 years</td></tr>
<tr><td>9</td><td>Skilled Worker</td><td>3 years</td><td>3 years</td></tr>
<tr><td>1</td><td>Driver</td><td>3 years</td><td>3 years</td></tr>
<tr><td>9</td><td>Laborer</td><td>1 year</td><td>3 months</td></tr>
</table>

PROPOSED CONSTRUCTION OF HANDWASHING FACILITY AND REHABILITATION OF KATIPUNAN DAY CARE CENTER

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

	1	Foreman	3 years	3 years
	4	Skilled Worker	3 years	3 years
	1	Driver	3 years	3 years
	8	Laborer	1 year	3 months

PROPOSED CONSTRUCTION OF HANDWASHING FACILITY AND REHABILITATION OF STO. NIÑO 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
8	Laborer	1 year	3 months

In addition, the bidder must execute an affidavit of undertaking duly notarized stating that the foregoing personnel shall perform work exclusively for the project until its completion. Please see attached bid forms.

10.5 The minimum major equipment requirements are the following:

PROPOSED CONSTRUCTION OF HANDWASHING FACILITY AND REHABILITATION OF SITIO MALIGAYA DAY CARE CENTER II

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

PROPOSED CONSTRUCTION OF HANDWASHING FACILITY AND REHABILITATION OF KATIPUNAN DAY CARE CENTER

Equipment	Capacity	Number of Units
Elf Truck		1

	Scaffolding as needed Power Tools as needed Minor Tools as needed **PROPOSED CONSTRUCTION OF HANDWASHING FACILITY AND REHABILITATION OF STO. NIÑO DAY CARE CENTER** Equipment Capacity Number of Units Elf Truck 1 Scaffolding as needed Power Tools as needed Minor Tools as needed ***In addition, the bidder must execute an affidavit of undertaking duly notarized stating that the foregoing equipment shall be used exclusively for the project until its completion. Please see attached bid forms.***
12	*[Insert Value Engineering clause if allowed.]*
15.1	The bid security shall be in the form of a Bid Securing Declaration with project number, or any of the following forms and amounts: a) The amount of not less than Php 124,105.51 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 310,263.76 or equivalent to five percent (5%) of ABC if bid security is in Surety Bond.
19.2	**Partial bid is not allowed.** The infrastructure project is packaged in a single lot and the lot shall not be divided into sub-lots for the purpose of bidding, evaluation, and contract award.
20	No additional requirement.
21	**Additional Contract Documents relevant to the Project as required:** **1. Construction Schedule and S-curve,** **2. Manpower Schedule,** **3. Construction Methods,** **4. Equipment Utilization Schedule,** **5. PERT/CPM or other acceptable tools of project scheduling, shall be included in the submission of Technical Proposal.**

Section IV. General Conditions of Contract

Notes on the General Conditions of Contract

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

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

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

1. Scope of Contract

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

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

2. Sectional Completion of Works

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

3. Possession of Site

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

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

4. The Contractor's Obligations

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

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

5. Performance Security

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

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

6. Site Investigation Reports

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

7. Warranty

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

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

8. Liability of the Contractor

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

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

9. Termination for Other Causes

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

10. Dayworks

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

11. Program of Work

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

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

12. Instructions, Inspections and Audits

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

13. Advance Payment

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

14. Progress Payments

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

15. Operating and Maintenance Manuals

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

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

Section V. Special Conditions of Contract

Notes on the Special Conditions of Contract

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

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

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

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

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

Special Conditions of Contract

GCC Clause	
2	Completion of work shall be within 90 calendar days
4.1	The Procuring Entity shall give possession of all parts of the Site to the Contractor upon receipt of the Notice to Proceed.
6	The site investigation reports are: *[list here the required site investigation reports.]*
7.2	*[Select one, delete the other.]* *[In case of permanent structures, such as buildings of types 4 and 5 as classified under the National Building Code of the Philippines and other structures made of steel, iron, or concrete which comply with relevant structural codes (e.g., DPWH Standard Specifications), such as, but not limited to, steel/concrete bridges, flyovers, aircraft movement areas, ports, dams, tunnels, filtration and treatment plants, sewerage systems, power plants, transmission and communication towers, railway system, and other similar permanent structures:]* Fifteen (15) years. *[In case of semi-permanent structures, such as buildings of types 1, 2, and 3 as classified under the National Building Code of the Philippines, concrete/asphalt roads, concrete river control, drainage, irrigation lined canals, river landing, deep wells, rock causeway, pedestrian overpass, and other similar semi-permanent structures:]* Five (5) years. *[In case of other structures, such as bailey and wooden bridges, shallow wells, spring developments, and other similar structures:]* Two (2) years.
10	Dayworks are applicable at the rate shown in the Contractor's original Bid.
13	The amount of the advance payment is no more that fifteen percent (15%) of the Contract Price subject to approval by the HOPE and compliance with the conditions under RA 9184 and its IRR.
14	No further instructions.
15.1	The date by which operating and maintenance manuals are required is *thirty (30) days* The date by which "as built" drawings are required as part of final payment
15.2	The amount to be withheld for failing to produce "as built" drawings and/or operating and maintenance manuals by the date required is ten (10%) percent of the contract price.

Section VI. Specifications

Notes on Specifications

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

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

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

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

Sample Clause: Equivalency of Standards and Codes

Wherever reference is made in the Contract to specific standards and codes to be met by the goods and materials to be furnished, and work performed or tested, the provisions of the latest current edition or revision of the relevant standards and codes in effect shall apply, unless otherwise expressly stated in the Contract. Where such standards and codes are

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

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

Republic of the Philippines
Quezon City
CITY ENGINEERING DEPARTMENT
Civic Center Building B, Quezon City Hall Compound, Elliptical Road
Diliman, Central 1100 Quezon City
Trunk line: +63 2 8988 4242

PROJECT TITLE: **PROPOSED CONSTRUCTION OF HAND WASHING FACILITY AND REHABILITATION OF KATIPUNAN DAY CARE CENTER**
LOCATION: **BARANGAY KATIPUNAN, DISTRICT 1, 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. CONCRETE WORK

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

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

c. Materials

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

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

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

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

d. Proportioning and Mixing

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

Cement : Sand : Gravel

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

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

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

e. Forms

i. General – Forms shall be used whatever necessary to confine the concrete and shape it to the required lines, or to insure the concrete of contamination with materials caving from adjacent, excavated surfaces. Forms shall have sufficient strength to withstand the pressure resulting from placement and vibration of the concrete, and shall be maintained rigidly in correct position. Forms shall be sufficiently tight to prevent loss 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 hall be cleaned of encrustations of mortar, the grout or other foreign material

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

f. Placing Reinforcement:

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

g. Conveying and Placing Concrete

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

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

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

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

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

h. Curing

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

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

i. Finishing

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

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

B. MASONRY

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

C. METAL WORK

a. Description

Metal works shall conform to the approved plans and to the Standard Specifications.

b. Reference Standards

Comply with the latest edition of the following as applicable, unless otherwise specified or modified.

1. AMERICAN INSTITUTE OF STEEL CONSTRUCTION (AISC). 1978: Specification for the Design, Fabrication and Erection of Structural Steel for Buildings Code of Standard Practice for Steel Buildings and Bridges, Specification for Architecturally Exposed Structural Steel.
2. AMERICAN WELDING SOCIETY (AWS): Standard Welding Symbols A2 068; Standard Welding Code D1 1-1973 (Rev 1-73 & 2-74) (To govern if in conflict with AISC)
3. RESEARCH COUNCIL ON RIVETED AND BOLTED JOINTS OF THE ENGINEERING FOUNDATION (RCRBJ). Specification for Structural Joists using ASTM A-325-76s Bolts.
4. STRUCTURAL STEEL PAINTING COUNCIL (SSPC): Painting Manual, Vol. 1; Good Painting Practice, Painting Manual, Vol. 2, Systems and Specifications

c. Source Quality Control

Errors of Shop Drawings, fabrication, correct fitting and alignment of the various metal items or component members shall be the responsibility of the Contractor. However, the Contractor shall permit the Architect or an independent inspection agency, if engaged by the Owner, to inspect work in progress in his shop. Such inspections shall not relieve the Contractor of his responsibility to furnish materials and workmanship in accordance with the Contract Documents.

d. Product Delivery, Handling and Storage
Handle and store in such manner as to prevent damage or disfigurement. Store finished items or components above ground on platforms, pallets or other

supports and protect from harmful elements.

e. Protection
The Contractor shall protect any existing work subject to damage during the installation of the specified work and shall adequately protect specified work during installation.

f. Field Quality Control
Facilities shall be provided by the Contractor as needed for the proper inspection of the specified work, including temporary platforms, hoists, protective devices, electric current, etc. Improper workmanship, as determined by the Architect shall be corrected and replaced, at no additional cost to the Owner.

g. Materials
Products shall conform to the respective reference specifications and standards and to the requirements specified herein:

1. STEEL AND IRON: If not specified otherwise, use standard mill finished structural steel shapes or bar iron incompliance with AISC Specifications for Design, Fabrication and Erection of Structural Steel for Buildings.
2. BOLTS, NUTS, STUDS AND RIVETS: ASTM A 307 & A 325
3. SCREWS: Fed. Spec. FF-S-85, Fed. Spec. FF S-92, and Fed. Spec. FF-S-111

h. 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.

i Measurements
Before fabrication, provide necessary field measurements and verify all measurements.

j. Metal 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, angles 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.

k. 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.

l. Shop Fabrication
Fabrication and assembly shall be done in the shop to the greatest extent possible.

m. Submittals
Shop Drawings. Submit along with catalogue, cuts, templates and erection and installation details, indicating thickness, type, grade, type of metal and dimensions. Show construction details, reinforcement, anchorage, and installation with relation to the construction.

n. Qualification of Welders

In accordance with AWS D1.1 with procedures, materials and equipment of the type required for the work.

o. Delivery and Storage
Protect from corrosion, deformation and other types of damage. Store items in an enclosed area free from contact with soil and weather. Contractor shall replace and removed damage items with new items.

p. Welding
Use weldingelectrode E70xx and perform welding, welding inspection aqnd 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 lack welding is permitted. Do not lack weld exposed to connections.) Grind smooth visible weld in finished installation.

q. Metal Purlins
Metal purlins shall be of high grade galvanized steel with minimum tensile strength of 275 MPA.

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

IV. ARCHITECTURAL WORKS

A. 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 peper.

B. **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, 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.

supports and protect from harmful elements.

e. Protection
The Contractor shall protect any existing work subject to damage during the installation of the specified work and shall adequately protect specified work during installation.

f. Field Quality Control
Facilities shall be provided by the Contractor as needed for the proper inspection of the specified work, including temporary platforms, hoists, protective devices, electric current, etc. Improper workmanship, as determined by the Architect shall be corrected and replaced, at no additional cost to the Owner.

g. Materials
Products shall conform to the respective reference specifications and standards and to the requirements specified herein:

1. STEEL AND IRON: If not specified otherwise, use standard mill-finished structural steel shapes or bar iron incompliance with AISC Specifications for Design, Fabrication and Erection of Structural Steel for Buildings.
2. BOLTS, NUTS, STUDS AND RIVETS: ASTM A 307 & A 325
3. SCREWS: Fed. Spec. FF-S 85, Fed. Spec. FF-S-92, and Fed. Spec. FF-S-111

h. 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.

i. Measurements
Before fabrication, provide necessary field measurements and verify all measurements.

j. Metal 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, angles 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.

k. 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.

l. Shop Fabrication
Fabrication and assembly shall be done in the shop to the greatest extent possible

m. Submittals
Shop Drawings. Submit along with catalogue, cuts, templates and erection and installation details, indicating thickness, type, grade, type of metal and dimensions. Show construction details, reinforcement, anchorage, and installation with relation to the construction.

n. Qualification of Welders

In accordance with AWS D1.1 with procedures, materials and equipment of the type required for the work.

o. Delivery and Storage
Protect from corrosion, deformation and other types of damage. Store items in an enclosed area free from contact with soil and weather. Contractor shall replace and removed damage items with new items.

p. Welding
Use weldingelectrode E70xx and perform welding, welding inspection aond 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 lack welding is permitted. Do not lack weld exposed to connections.) Grind smooth visible weld in finished installation.

q. Metal Purlins
Metal purlins shall be of high grade galvanized steel with minimum tensile strength of 275 MPA.

D. 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. All roofing sheets adjacent to concrete hollow block and other masonry walls such as property line firewalls, shall be provided with Gauge 28 pre-painted plain G.I. Flashing to extend to the top and over to the other side of the wall. All fasteners shall be placed at the top of the corrugations of the roofing sheets to prevent water from standing around the fasteners.

IV. ARCHITECTURAL WORKS

A. 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.

B. 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, 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 SITIO MALIGAYA DAY CARE CENTER II**

LOCATION : BARANGAY BAHAY TORO, DISTRICT 1, QUEZON CITY

TECHNICAL SPECIFICATIONS

I. GENERAL REQUIREMENTS

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

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

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

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

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

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

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

H. Mobilization and Demobilization (if applicable)

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

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

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

J. Temporary Facilities and Utilities

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

II. SITE WORKS

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

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

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

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

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

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

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

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

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

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

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

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

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

III. CIVIL / STRUCTURAL WORKS

A. METAL FABRICATION

1 Materials:

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

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

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

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

2. Fabrication:

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

3. Metal Surfaces:

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

4. Construction:

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

5. Welding:

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

B. ROOFING WORKS

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

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

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

IV. ARCHITECTURAL WORKS

A. FLOOR FINISHES

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

B. WALL FINISHES

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

C. PAINTING WORKS

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

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

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

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

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

In addition, the Contractor shall undertake the following:

a. Voids, cracks, nick etc. will be repaired with proper patching material and finished flushed with surrounding surfaces.
b. Marred or damaged shop coats on metal shall be spot primed with appropriate metal primer.
c. Painting and varnishing works shall not be commenced when it is too hot or cold
d. Allow appropriate ventilation during application and drying period
e. All hardware will be fitted and removed or protected prior to painting and varnishing works

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

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

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

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

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

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

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

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

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

D. CEILING FINISHES

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

E. DOORS & WINDOWS

Follow as per approved plan and specifications.

V. SANITARY / PLUMBING WORKS

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

B. Supply, installation and testing of the following:

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

VI. ELECTRICAL WORKS

A CONDUITS, BOXES AND FITTINGS

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

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

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

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

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

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

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

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

9. The contractor shall guarantee the electrical installation are done and in accordance with the approved plans and specifications. The contractor shall guarantee that the electrical systems are free from all grounds and from all defective workmanship and

materials and will remain so for a period of one year from date and acceptance of works. Any defect shall be remedied by the Contractor at his own expense.

B WIRES AND WIRING DEVICES

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

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

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

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

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

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

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

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

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

C. POWER LOAD CENTER, SWITCHGEAR AND PANEL BOARDS

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

I PANEL BOARDS

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

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

   a. Rated for environmental conditions at installed location.

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

      ii. Outdoor Locations: NEMA, Type 3R

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

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

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

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

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

   d. Skirt for Surface-Mounted Panel boards: Same gauge and finish as panel board front with flanges for attachment to panel board, wall, and ceiling or floor.

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

   f. Finishes:

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

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

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

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

3. Incoming Mains Location. Top or Bottom.

4. Phase, Neutral, and Ground Buses:

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

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

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

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

LOCATION : **BARANGAY SAN ANTONIO, DISTRICT 1, 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 than0.381 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 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 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 katsomine that can be mixed into putty consistency, with oil-based primers and paints to fill minor surface dents and imperfections

4 Paint Schedule

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

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

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

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

c Interior Dry Wall

i. 1 coat primer, 2 coats latex paint finish

d Ceiling Boards

i. 1 coat primer, 2 coats latex paint finish

e Slab Soffit

i. 1 coat primer, 2 coats latex paint finish

f Metal / Steel Surfaces

i. 1 coat primer, 2 coats epoxy enamel finish

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

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

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

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

In addition, the Contractor shall undertake the following.

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

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

c. 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 flawed out after application of paint

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

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

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, putted, 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 or the approved Plans complete with transformer, circuit breakers, cabinets and all accessories, completely wired and ready for service.

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

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

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

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

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

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 natal-clad, dead front, free standing, safety type construction and shall have copper busbars of sufficient size, braced to resist allowable root mean square (RMS) symmetrical short circuit stresses, and all necessary accessories. The low-voltage switchgear shall consist of the switchgear housing, secondary metering, main breaker and feeder branch circuit

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

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

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

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

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

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

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

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

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

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

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

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

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

I. PANELBOARDS

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

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

   a. Rated for environmental conditions at installed location

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

      ii. Outdoor Locations. NEMA, Type 3R.

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

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

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

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

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

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

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

   f. Finishes:

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

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

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

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

3. Incoming Mains Location: Top or Bottom.

4. Phase, Neutral, and Ground Buses:

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

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

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

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.

JOHN CHRISTOPHER P. TOMACRUZ
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.]

1 VICINITY MAP SCALE: NTS

2 LOCATION PLAN SCALE: NTS

3 PERSPECTIVE SCALE: NTS

TABLE OF CONTENTS

Republika ng Pilipinas
Lungsod ng Quezon
CITY ENGINEERING DEPARTMENT

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

LOCATION:
BARANGAY KATIPUNAN, DISTRICT I, QUEZON CITY

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

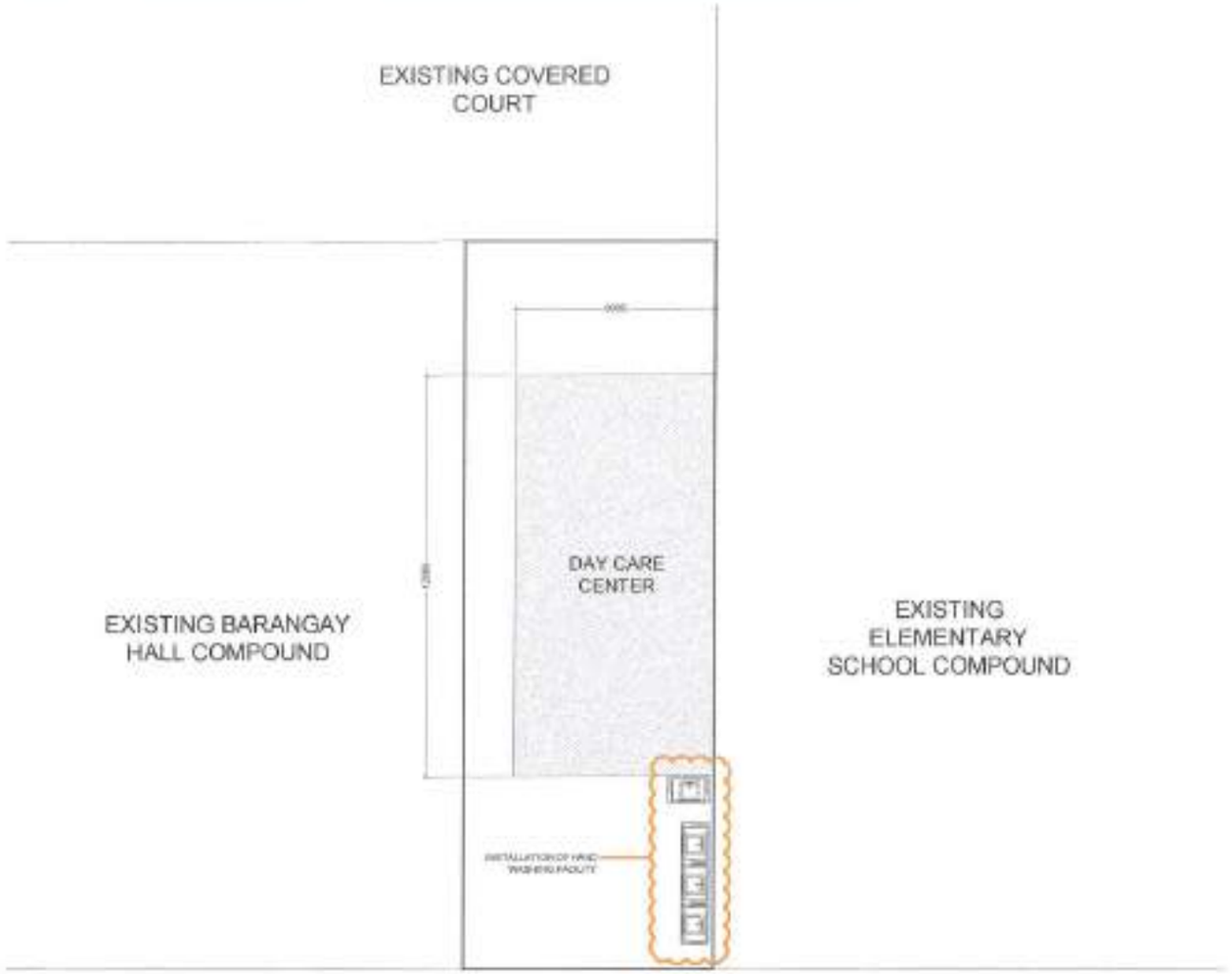
SUBMITTED BY:
ENGR. LEO S. DEL ROSARIO
HEAD - PLANNING & PROGRAMMING DIVISION

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

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

SHEET CONTENT:
VICINITY MAP
LOCATION PLAN
PERSPECTIVE

SHEET NO.
AR-01
01 11



1 SITE DEVELOPMENT PLAN

SCALE: NTS

Republika ng Pilipinas
Lungsod ng Quezon
CITY ENGINEERING DEPARTMENT

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

LOCATION:
BARANGAY KATIPUNAN, DISTRICT 1, QUEZON CITY

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

SUBMITTED BY:
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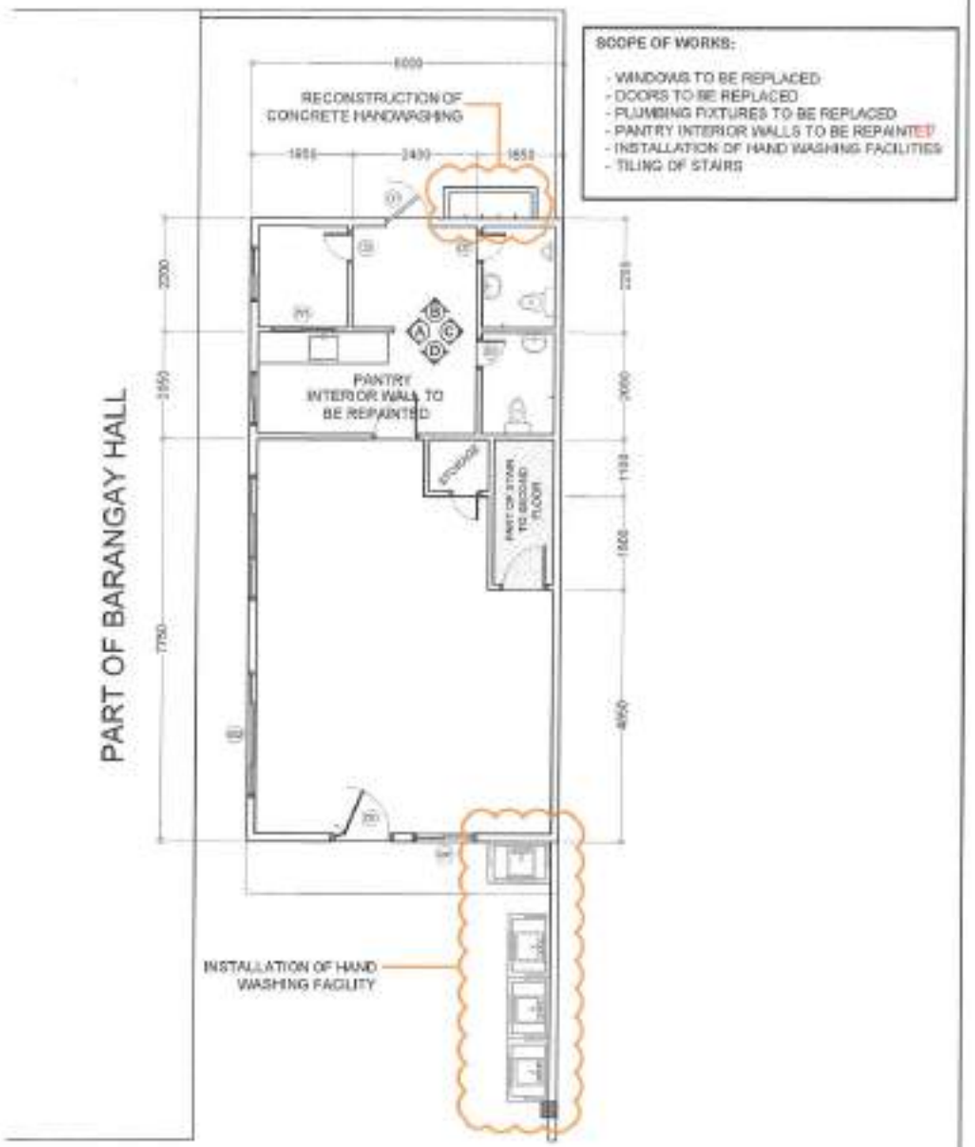
CITY MAYOR, QUEZON CITY

SHEET CONTENT: SITE DEVELOPMENT PLAN

SHEET NO.: AR-02 02 11

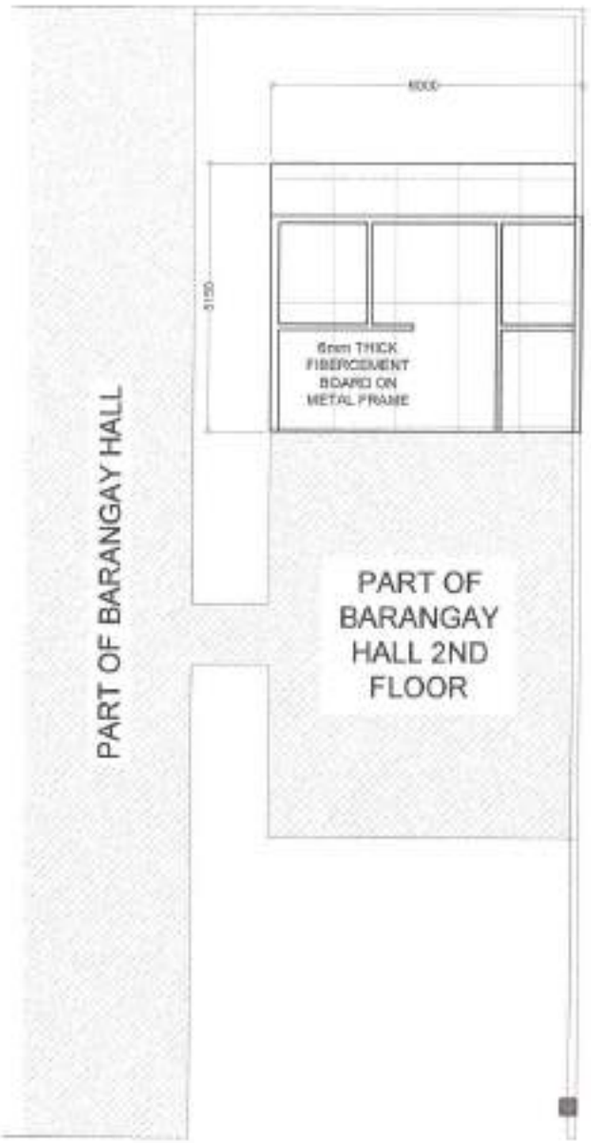
SCOPE OF WORKS:

- WINDOWS TO BE REPLACED
- DOORS TO BE REPLACED
- PLUMBING FIXTURES TO BE REPLACED
- PANTRY INTERIOR WALLS TO BE REPAINTED
- INSTALLATION OF HAND WASHING FACILITIES
- TILING OF STAIRS



1 DAY CARE CENTER FLOOR PLAN

SCALE: 1:100 METERS



2 REFLECTED CEILING PLAN

SCALE: 1:100 METERS

Republika ng Pilipinas
Lungsod ng Quezon
CITY ENGINEERING DEPARTMENT

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

LOCATION:
BARANGAY KATIPUNAN, DISTRICT I, QUEZON CITY

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

SUBMITTED BY:
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RECOMMENDING APPROVAL:
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CHIEF, CITY ENGINEERING DEPARTMENT

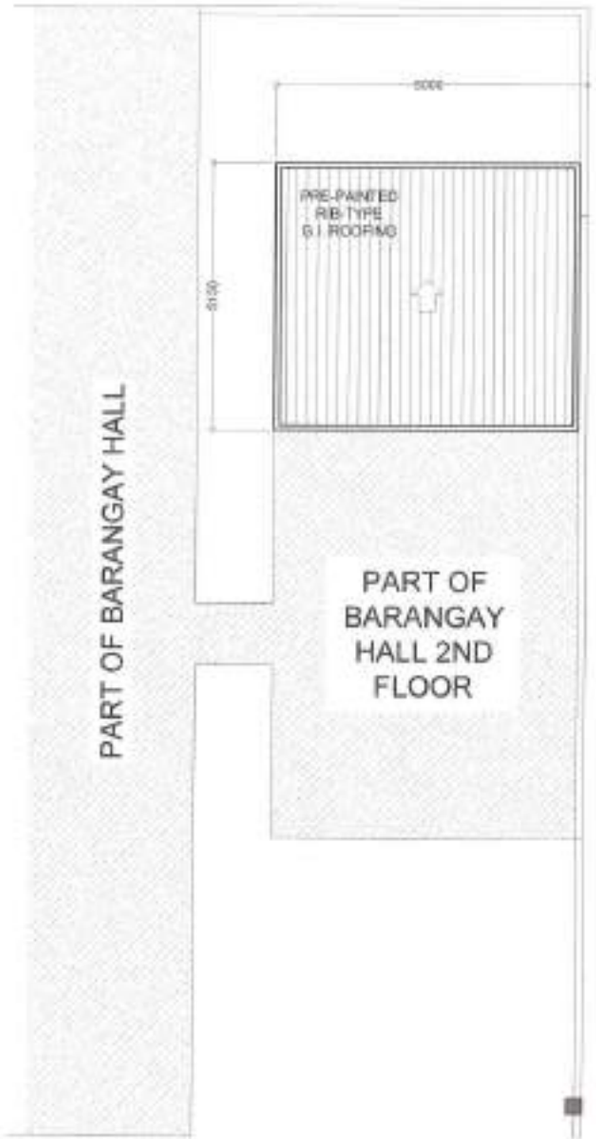
APPROVED BY:
HON. MA. JOSEFINA G. BELMONTE
CITY MAYOR, QUEZON CITY

SHEET CONTENT:
DAY CARE CENTER FLOOR PLAN REFLECTED CEILING PLAN

SHEET NO.
AR-03
03 11

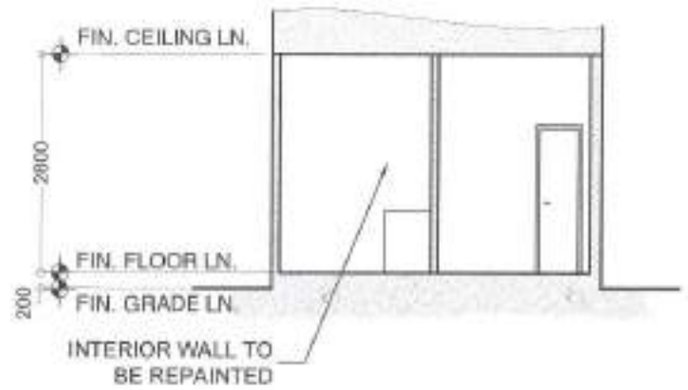
SCOPE OF WORKS:

- REPLACEMENT OF ROOFING



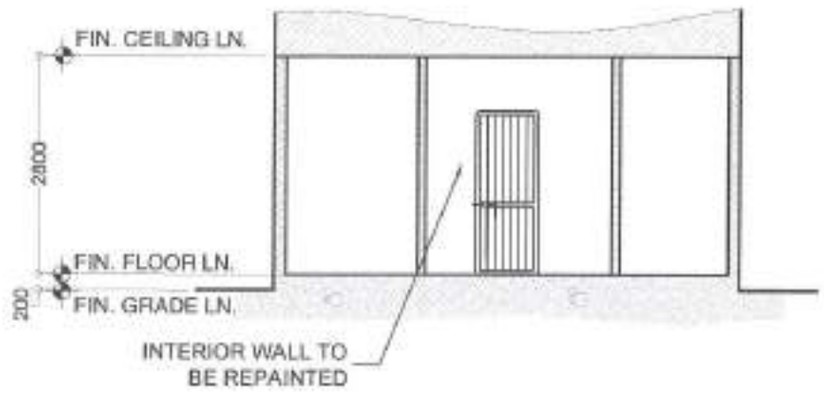
1 DAY CARE CENTER FLOOR PLAN

SCALE: 1:100 METERS



2 SECTION - A ELEVATION

SCALE: 1:100 METERS



3 SECTION - B ELEVATION

SCALE: 1:100 METERS

Republika ng Pilipinas
Lungsod ng Quezon
CITY ENGINEERING DEPARTMENT

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

LOCATION:
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DRAWN BY: EME
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REVISION NO.: 1

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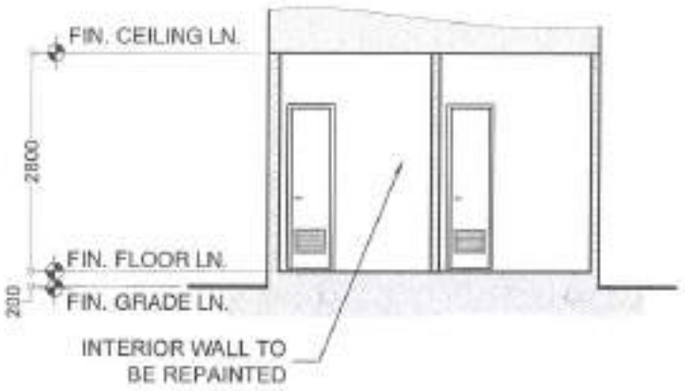
ENGR. LEO S. DEL ROSARIO
HEAD - PLANNING & PROGRAMMING DIVISION

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

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

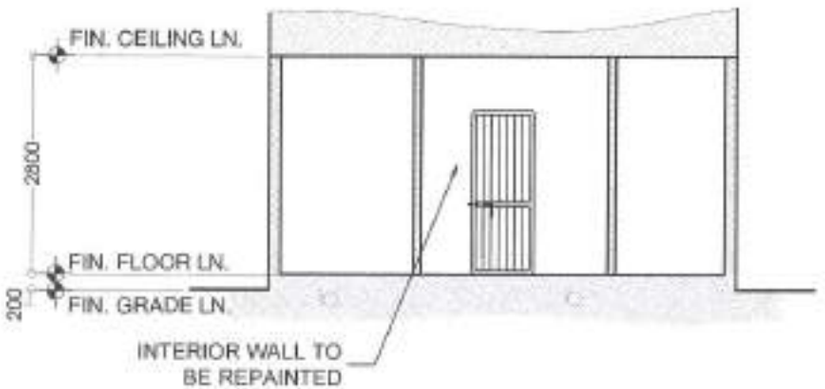
SHEET CONTENT:
DAY CARE CENTER FLOOR PLAN
SECTION - A ELEVATION
SECTION - B ELEVATION

SHEET NO.
AR-04
04 11



1 SECTION - C ELEVATION

SCALE: 1:100 METERS



2 SECTION - D ELEVATION

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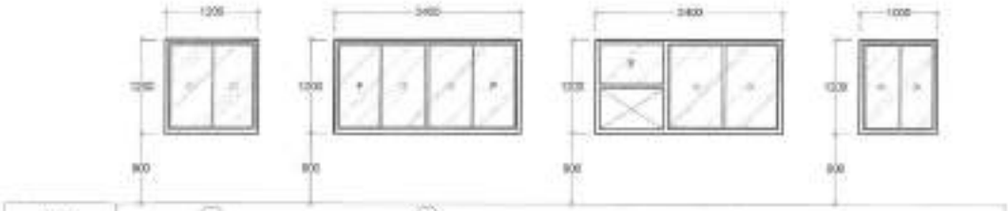


MARK	W1	W2		
REMARKS	POWDER COATED ALUMINUM FRAMED SLIDING GLASS WINDOW	POWDER COATED ALUMINUM FRAMED SLIDING WINDOW WITH FIXED GLASS	POWDER COATED ALUMINUM FRAMED SLIDING WINDOW WITH FIXED GLASS	POWDER COATED ALUMINUM FRAMED SLIDING GLASS WINDOW
SETS	1	1	1	1
LOCATION	DAY CARE CENTER PRIVERY / STORAGE	DAY CARE CENTER	DAY CARE CENTER	PANTRY, STORAGE

MARK	D1	D2	D3	G1
REMARKS	PANEL DOOR 2100mm x 1200mm	PVC DOOR 2100mm x 900mm	FLUSH DOOR 2100mm x 600mm	G.I. PIPE FRAMED WITH 10mmØ ROUND BARS
SETS	1	2	1	1
LOCATION	DAY CARE CENTER	COMFORT ROOM	STORAGE	PANTRY

3 SCHEDULE OF DOORS AND WINDOWS

Republika ng Pilipinas
Lungsod ng Quezon
CITY ENGINEERING DEPARTMENT

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

LOCATION:
BARANGAY KATIPUNAN, DISTRICT 1, QUEZON CITY

DRAWN BY: EMC
DATE: AUG. 10, 2021
CHECKED BY: JR
REVISION NO.: 1

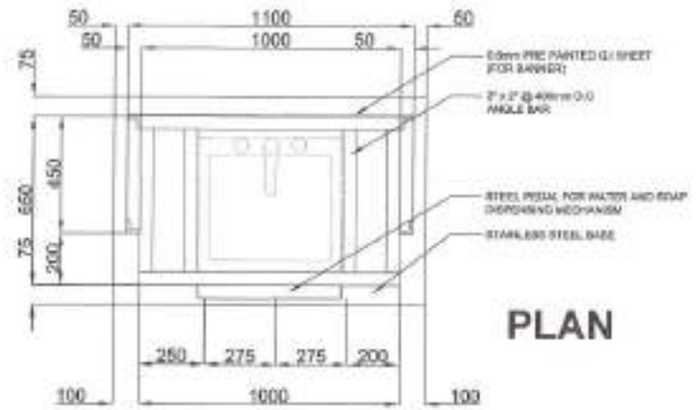
SUBMITTED BY:
ENGR. LEO S. DEL ROSARIO
HEAD - PLANNING & PROGRAMMING DIVISION

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

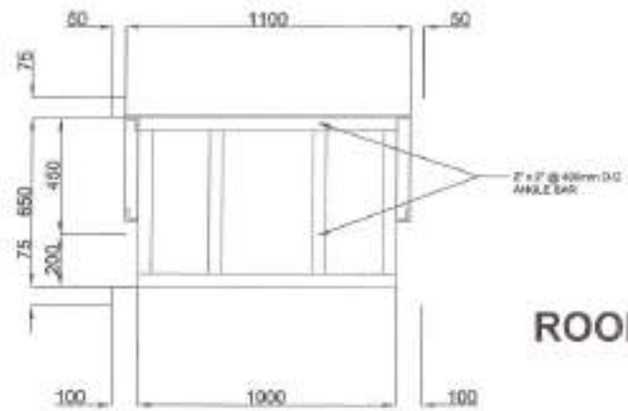
APPROVED BY:
HON. MA. JOSEFINA G. BELMONTE
CITY MAYOR, QUEZON CITY

SHEET CONTENT:
SECTION - C ELEVATION
SECTION - D ELEVATION
SCHEDULE OF DOORS AND WINDOWS

SHEET NO.
AR-05
05 11



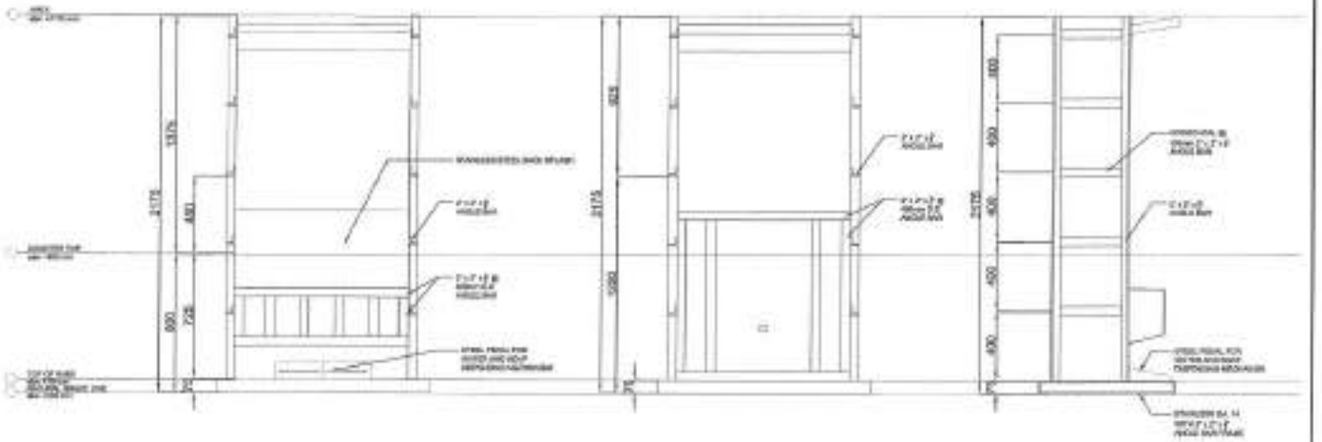
PLAN



ROOF PLAN

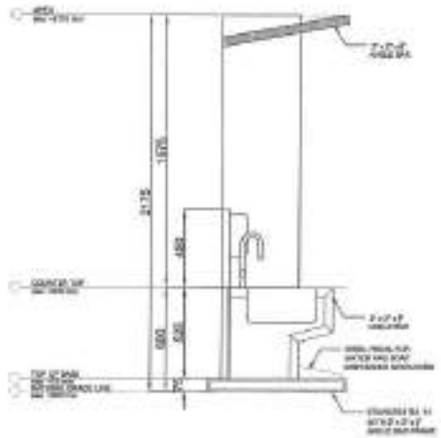
1 SINGLE SINK PORTABLE HAND WASHING STALL PLAN

SCALE: 1:30METERS



2 ELEVATIONS

SCALE: 1:30METERS



3 TYPICAL SECTION

SCALE: 1:30METERS

Republika ng Pilipinas
Lungsod ng Quezon
CITY ENGINEERING DEPARTMENT

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

LOCATION:
BARANGAY KATIPUNAN, DISTRICT 1, QUEZON CITY

DRAWN BY : CMC
DATE : AUG. 10, 2021
CHECKED BY: JRR
REVISION NO. : 1

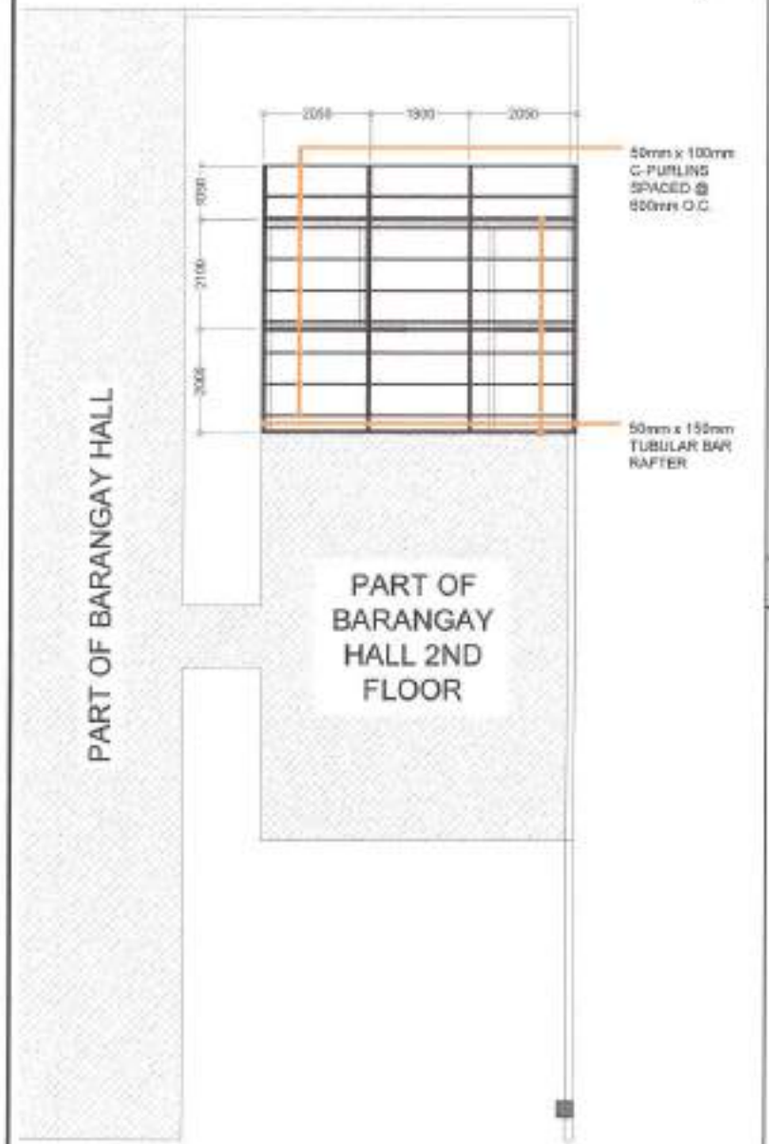
SUBMITTED BY:
ENGR. LEO S. DEL ROSARIO
HEAD , PLANNING &PROGRAMMING DIVISION

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

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

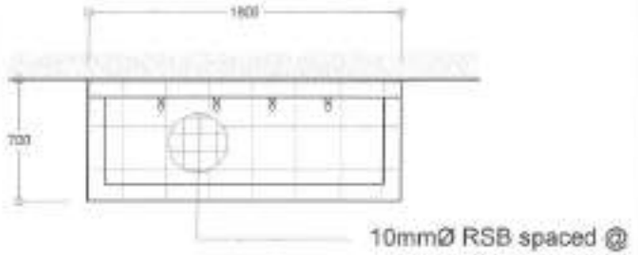
SHEET CONTENT:
SINGLE SINK PORTABLE HAND WASHING STALL PLAN
ELEVATIONS
TYPICAL SECTION

SHEET NO.
ST-01
06 11



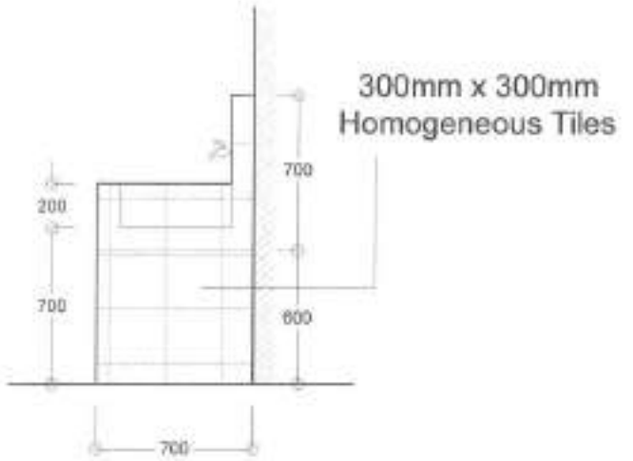
1 ROOF FRAMING PLAN

SCALE: 1:100METERS



2 FLOOR PLAN

SCALE: 1:30METERS

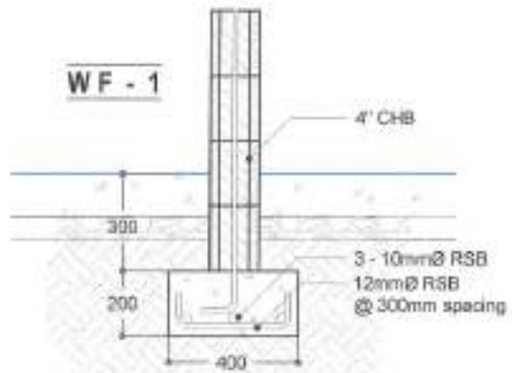


3 SECTION PLAN

SCALE: 1:30METERS

4 FOUNDATION PLAN

SCALE: 1:30METERS



5 WALL FOOTING DETAIL

SCALE: 1:30METERS

Republika ng Pilipinas
Lungsod ng Quezon
CITY ENGINEERING DEPARTMENT

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

LOCATION:
BARANGAY KATIPUNAN, DISTRICT 1, QUEZON CITY

DRAWN BY: RMV
DATE: AUG. 13, 2021
CHECKED BY: JMV
REVISION/S: 1

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

RECOMMENDING APPROVAL:
ENGR. SIMEON R. VERZOSA, JR.
O.I.C. CITY ENGINEERING DEPARTMENT

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

SHEET CONTENT:
ROOF FRAMING PLAN
FLOOR PLAN
SECTION PLAN
FOUNDATION PLAN
WALL FOOTING DETAIL

SHEET NO.
ST-02
07 11

GENERAL NOTES:

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 dimensions 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 in 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 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 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 trade 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.

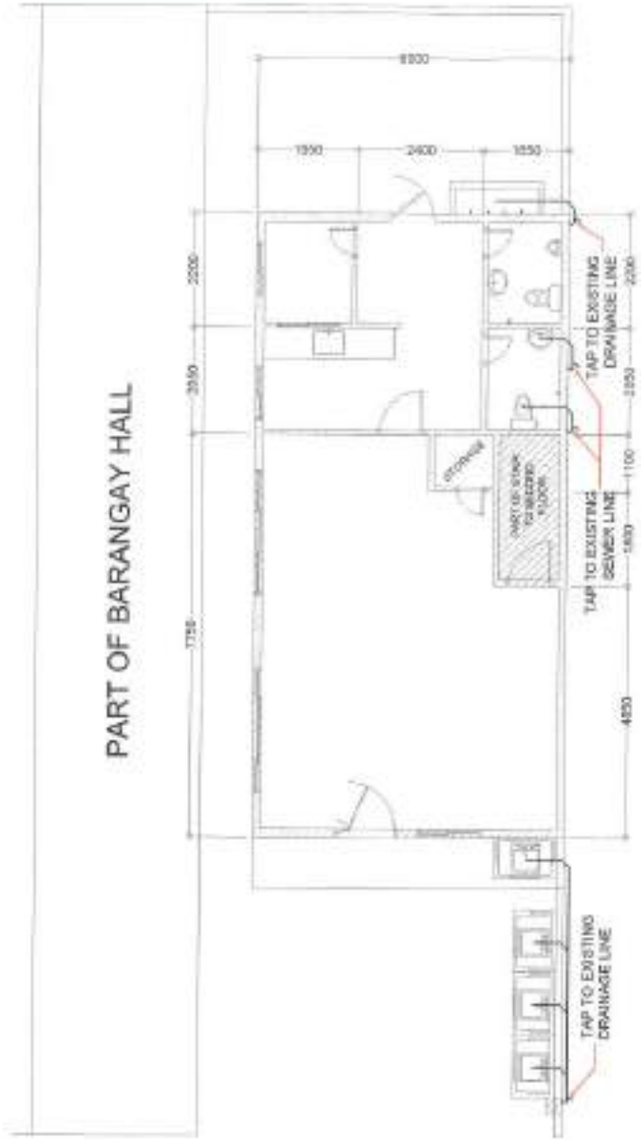
1 GENERAL NOTES

SCALE: NTS

	UNION PATENT
	CHECK VALVE
BS	BUILDING SEWER
BD	BUILDING DRAIN
WT	WASTE LINE
AD/CB	AREA DRAIN / CATCH BASIN
FD	FLOOR DRAIN
Ø	DIAMETER
	WASTE LINE
	WATER LINE
	GATE VALVE
CO	CHECK DRAIN
CO	CLEANOUT
	PIPE DOWN
	PIPE UP
	MID METER
GV	GATE VALVE
	AREA DRAIN / CATCH BASIN
WC	WATER CLOSET
LAV	LAVATORY
MH	MANHOLE
HB	HOSE BIBB
	STORM DRAIN LINE
	VENT LINE
VAC	VENT ABOVE CEILING
CPVC/RCP	CONCRETE PIPE / REINF. CONC. PIPE
VTR	VENT THRU ROOF
	DIRECTION OF FLOW / SLOPE

2 SYMBOLS AND LEGENDS

SCALE: NTS



3 SANITARY LINE LAYOUT

SCALE: 1:100METERS

4 WATER LINE LAYOUT

SCALE: 1:100METERS

Republika ng Pilipinas
Lungsod ng Quezon
CITY ENGINEERING DEPARTMENT

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

LOCATION:
BARANGAY KATIPUNAN, DISTRICT 1, QUEZON CITY

DRAWN BY: RMR
DATE: AUG. 18, 2021
CHECKED BY: JSA
REVISION NO.: 1

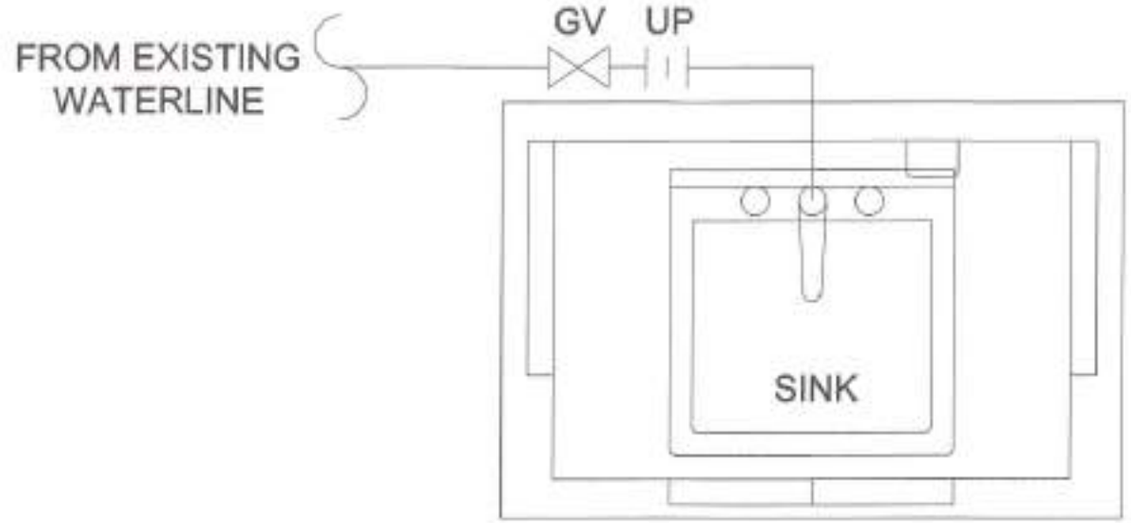
SUBMITTED BY:
ENGR. LEO S. DEL ROSARIO
HEAD - PLANNING & PROGRAMMING DIVISION

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

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

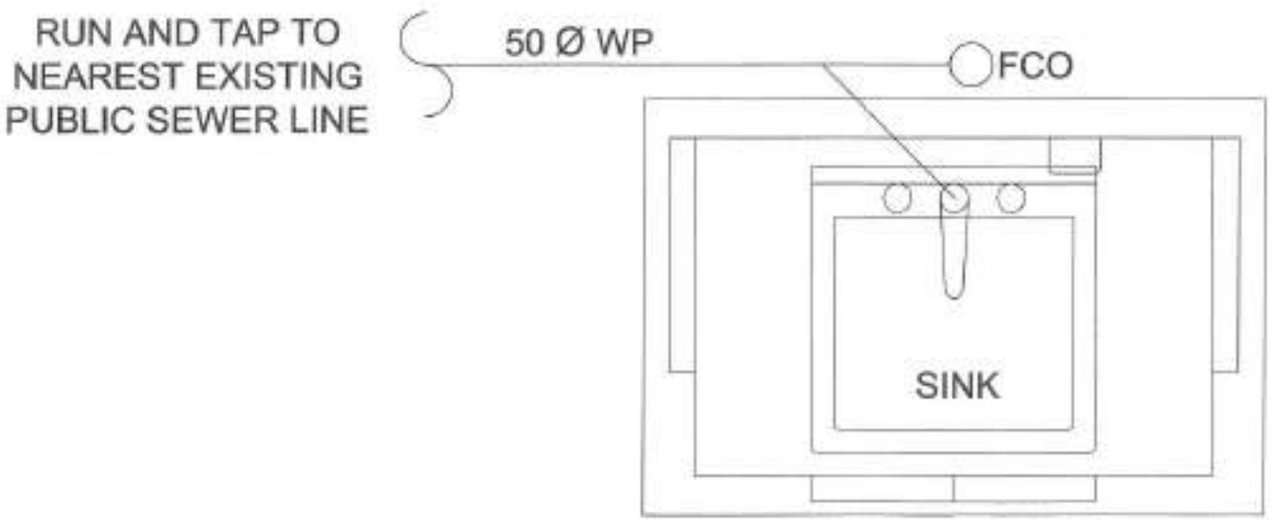
SHEET CONTENT:
GENERAL NOTES
SYMBOLS AND LEGENDS
SANITARY LINE LAYOUT
WATER LINE LAYOUT

SHEET NO.
PL-01
08 11



1 SINGLE SINK PORTABLE HAND WASHING WATER LINE

SCALE: 1:10METERS



2 SINGLE SINK PORTABLE HAND WASHING SEWER LINE

SCALE: 1:10METERS

Republika ng Pilipinas
Lungsod ng Quezon
CITY ENGINEERING DEPARTMENT

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

LOCATION:
BARANGAY KATIPUNAN, DISTRICT 1, QUEZON CITY

DRAWN BY:
DATE: AUG. 10,2021
CHECKED BY:
REVISION NO.: 1

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

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

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

SHEET CONTENT:
SINGLE SINK PORTABLE HAND WASHING WATER LINE
SINGLE SINK PORTABLE HAND WASHING SEWER LINE

SHEET NO.
PL-02
09 11

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

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

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

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

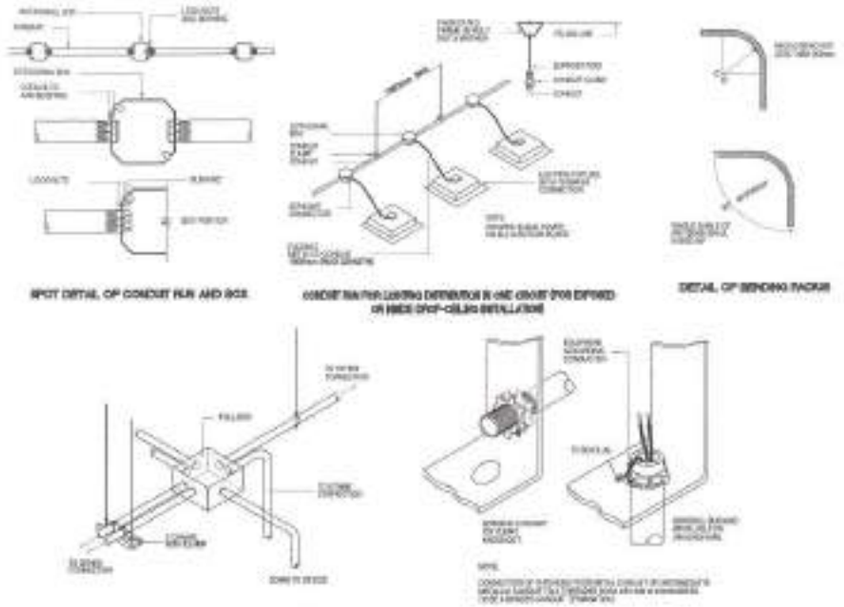
14. BOXES, WIRE, GUTTERS, ENCLOSURE SHALL BE FABRICATED FROM STEEL WITH THICKNESS AS FOLLOWS:

MAXIMUM WIDTH OF THE INSIDE SURFACE STEEL	
UP TO AND 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 760 MM	GA 12 PAINTED WITH METAL PRIMER EPOXY AND TOPCOAT
OVER 760 MM	GA 10 PAINTED WITH METAL PRIMER EPOXY AND TOPCOAT

15. ALL ELECTRICAL WORKS HEREIN SHALL BE EXECUTED BY EXPERIENCED MEN UNDER THE DIRECT SUPERVISION OF A FULL-TIME LICENSED ELECTRICAL ENGINEER AND A DULY ACCREDITED ELECTRICAL CONTRACTOR BY PCAB. WORKS SHALL BE NEATLY PLACED, SECURELY FASTENED AND PROPERLY FINISHED.
16. TYPE OF SERVICE ENTRANCE SHALL BE: SINGLE PHASE, TWO-WIRE PLUS GROUND, 60 HERTZ, 230V AC NOMINAL.
17. CONDUITS IN NO CASE SHALL THERE BE MORE THAN THE EQUIVALENT OF FOUR QUARTER BENDS IN ANY ONE RUN. ALL CONDUIT BENDS SHALL BE FIELD MADE BY USING HYDRAULIC BENDERS. MINIMUM BENDING RADIUS MUST BE IN ACCORDANCE TO THE CODE REQUIREMENTS.
18. UPON COMPLETION OF ELECTRICAL CONSTRUCTION WORK, INSULATION RESISTANCE TEST AND FUNCTIONALITY TEST SHALL BE PERFORMED BY THE CONTRACTOR INCLUSIVE OF THE INSTALLATION TO BE REPORTED IN DETAILS ON FORMS APPROVED BY THE QUEZON CITY ENGINEERING DEPARTMENT REPRESENTATIVE. THE GROUND RESISTANCE FOR ELECTRICAL SYSTEMS SHALL NOT BE MORE THAN 5 OHMS. COMMUNICATION GROUNDING RESISTANCE SHALL NOT EXCEED 3 OHMS.

1 GENERAL NOTES

SCALE: NTS



2 MISCELLANEOUS DETAILS

SCALE: NTS

	REPLACE DUPLEX CONVENIENCE OUTLET TO WEATHERPROOF OUTLET WITH COVER		ADDITIONAL PIN LIGHT 9W (RECESSED)
	REPLACE ACU OUTLET		EXISTING 1X18W SURFACE MOUNTED TROFFER FOR RECESSED
SF1	SELECTOR SWITCH (FAN)		ADDITIONAL ORBIT FAN
S1	SINGLE GANG SWITCH (LIGHTS)		ADDITIONAL CEILING MOUNTED EXHAUST FAN
S2	TWO GANG SWITCH (LIGHTS)		

3 LEGENDS AND SYMBOLS

SCALE: NTS

Republika ng Pilipinas
Lungsod ng Quezon
CITY ENGINEERING DEPARTMENT

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

LOCATION:
BARANGAY KATIPUNAN, DISTRICT 1, QUEZON CITY

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

SUBMITTED BY:
ENGR. LEO S. DEL ROSARIO
HEAD - PLUMBING & FIRE PROTECTION DIVISION

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

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

SHEET CONTENT:
GENERAL NOTES
MISCELLANEOUS DETAILS
SYMBOLS AND LEGENDS

SHEET NO.
EL-01
10 11

2 DAY CARE CENTER LIGHTING LAYOUT

SCALE: 1:100METERS

1 DAY CARE CENTER POWER LAYOUT

SCALE: 1:100METERS

Republika ng Pilipinas
Lungsod ng Quezon
CITY ENGINEERING DEPARTMENT

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

LOCATION:
BARANGAY KATIPUNAN, DISTRICT I, QUEZON CITY

DRAWN BY: RMF | SUBMITTED BY:
DATE: AUG. 13, 2021
CHECKED BY: JRD
REVISION NO.: 1

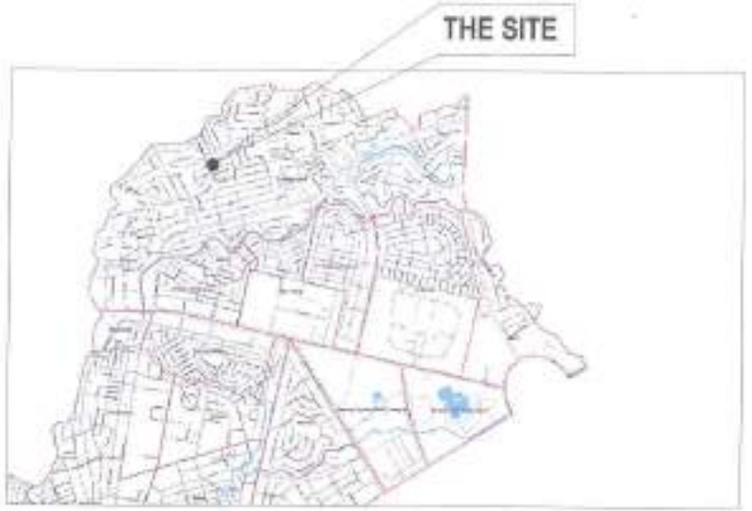
ENGR. LEO S. DEL ROSARIO
HEAD - PLANNING & PROGRAMMING DIVISION

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

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

SHEET CONTENT:
DAY CARE CENTER LIGHTING LAYOUT
DAY CARE CENTER POWER LAYOUT

SHEET NO.
EL-02
11 | 11



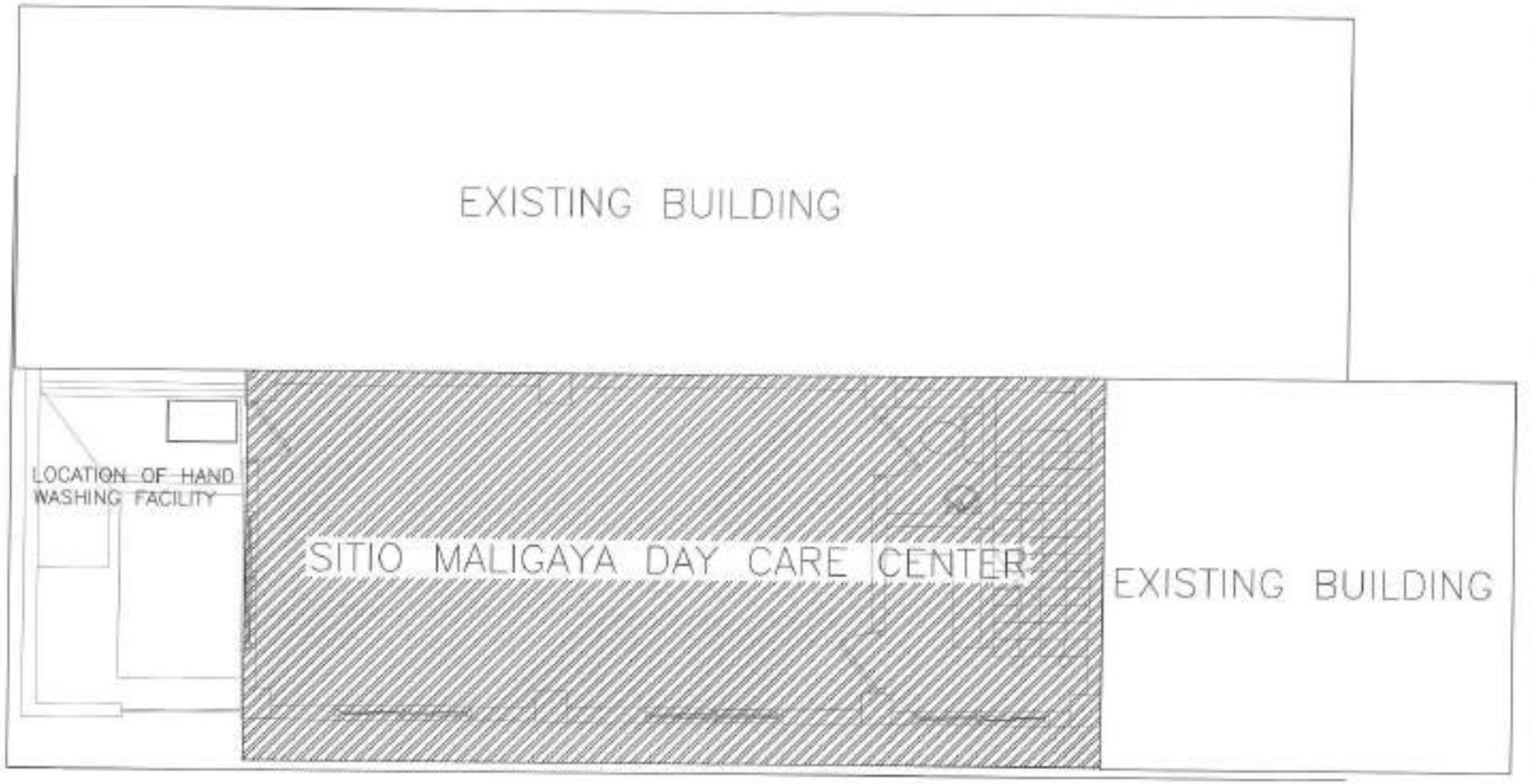
1 LOCATION MAP

2 VICINITY MAP NTS

3 PERSPECTIVE NTS

TABLE OF CONTENTS

Republika ng Pilipinas Lungsod ng Quezon **CITY ENGINEERING DEPARTMENT**	PROJECT TITLE: **PROPOSED CONSTRUCTION OF HAND WASHING FACILITY AND REHABILITATION OF SITIO MALIGAYA DAY CARE CENTER II** LOCATION: BARANGAY SAHAY TORO, DISTRICT I, QUEZON CITY	DRAWN BY: DATE: CHECKED BY: REVISION NO.:	SUBMITTED BY: ENGR. LEO S. DEL ROSARIO HEAD, PLANNING & PROGRAMMING DIVISION	RECOMMENDING APPROVAL: ENGR. ISABANI R. VERZOSA, JR. OIC, CITY ENGINEERING DEPARTMENT	APPROVED BY: HON. MA. JOSEFINA G. BELMONTE CITY MAYOR	SHEET CONTENT: VICINITY MAP LOCATION MAP PERSPECTIVE	SHEET NO.: AR-1 1 20

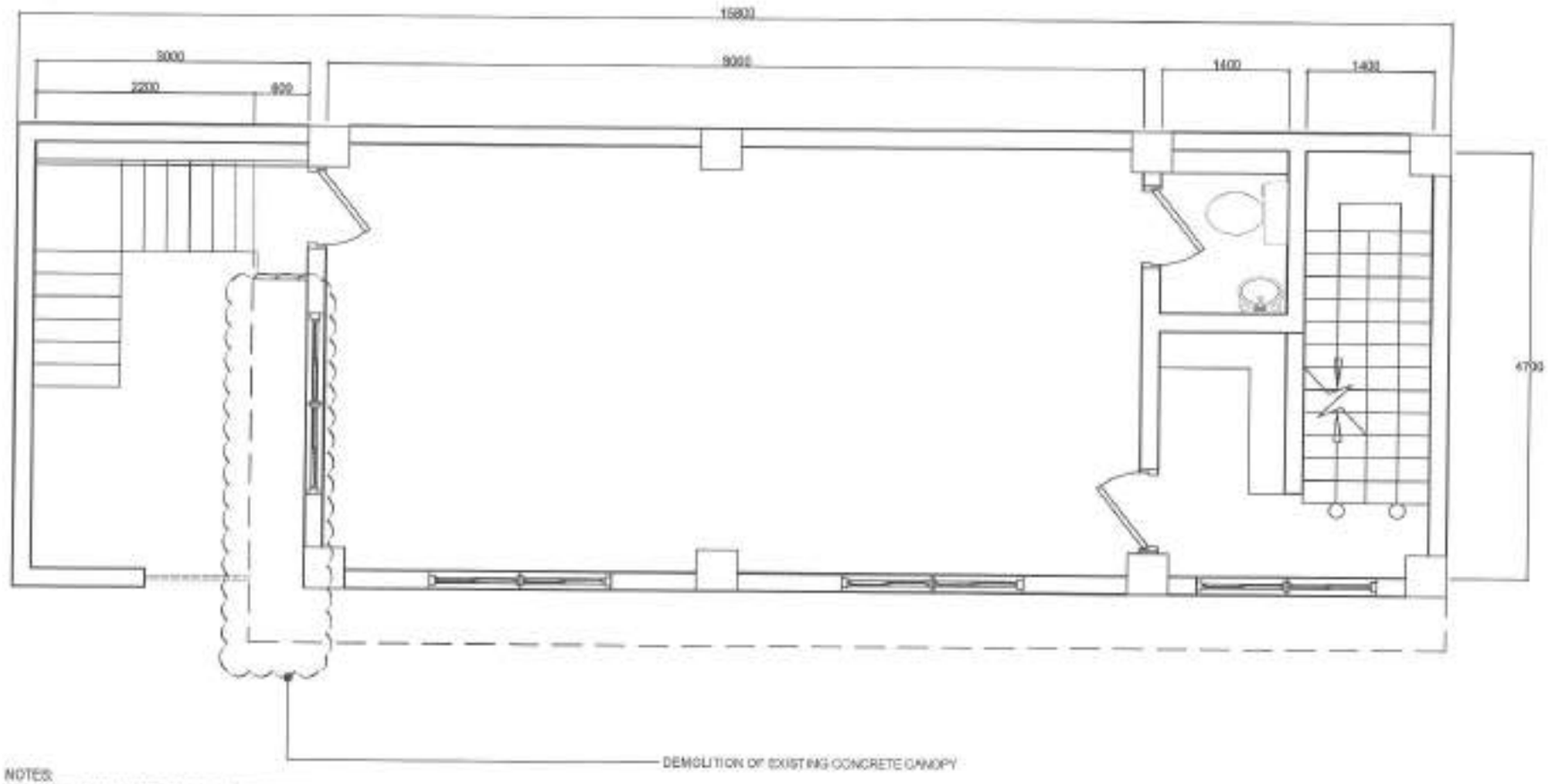


1 SITE DEVELOPMENT PLAN

NOT TO SCALE

Republika ng Pilipinas
Lungsod ng Quezon
CITY ENGINEERING DEPARTMENT

PROJECT TITLE:	DRAWN BY:	SUBMITTED BY:	RECOMMENDING APPROVAL:	APPROVED BY:	SHEET CONTENT	SHEET NO.
PROPOSED CONSTRUCTION OF HAND WASHING FACILITY AND REHABILITATION OF SITIO MALIGAYA DAY CARE CENTER II LOCATION: BARANGAY BAHAY TORO, DISTRICT 1, QUEZON CITY	DATE: CHECKED BY: REVISION NO.:	**ENGR. LEO S. DEL ROSARIO** HEAD, PLANNING & PROGRAMMING DIVISION	**ENGR. ISABANI R. VERZOSA, JR.** OIC-CITY ENGINEERING DEPARTMENT	**HON. MA. JOSEFINA G. BELMONTE** CITY MAYOR	SITE DEVELOPMENT PLAN	AR-2 2 20



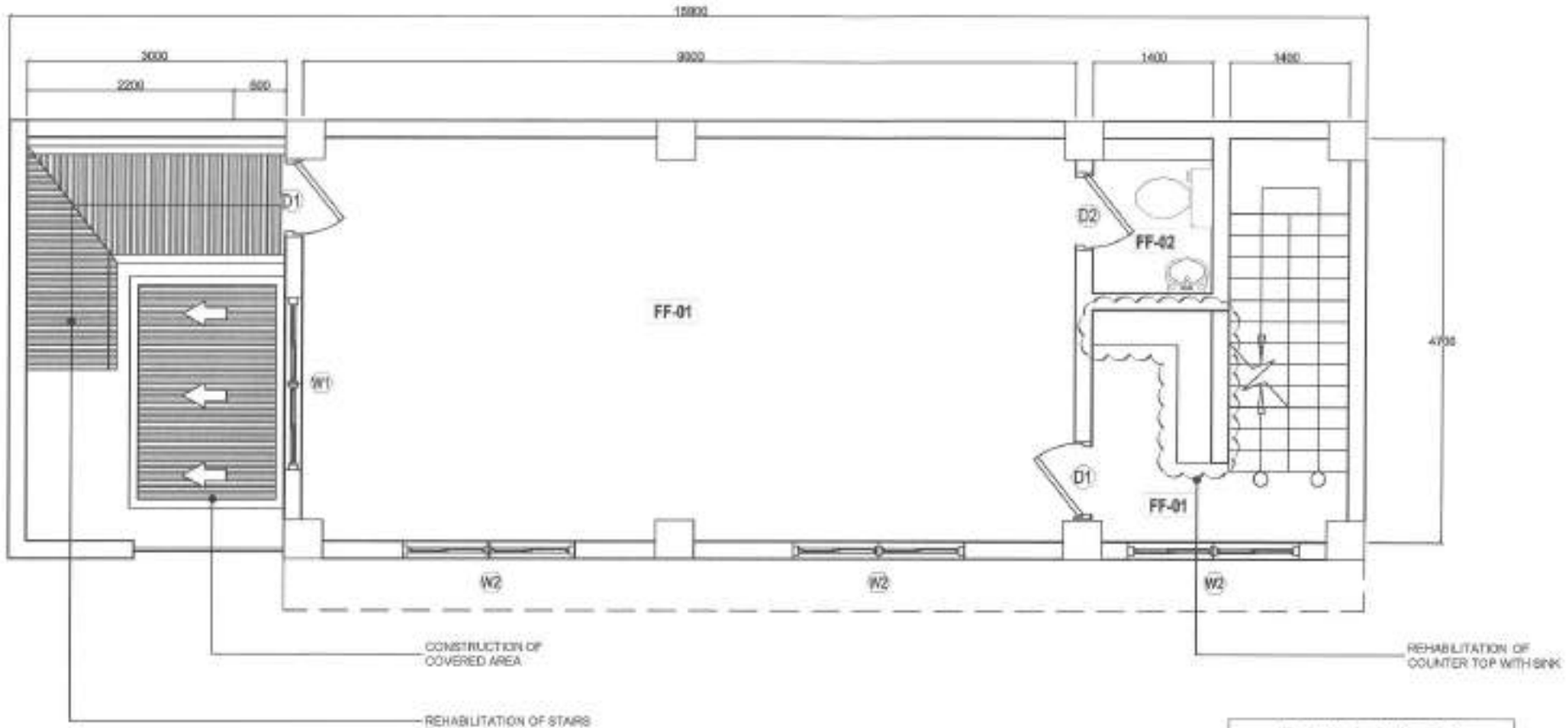
NOTES:
1. VERIFY ALL ACTUAL DIMENSION ON SITE
2. 400mm X 400mm WALL TILES FOR COMFORT ROOMS
3. REPAINTING OF INTERIOR AND EXTERIOR WALL

1 EXISTING SECOND FLOOR

SCALE: 1:50 MTS

Republika ng Pilipinas
Lungsod ng Quezon
CITY ENGINEERING DEPARTMENT

PROJECT TITLE:	DRAWN BY: JCT	SUBMITTED BY:	RECOMMENDING APPROVAL:	APPROVED BY:	SHEET CONTENT	SHEET NO.
PROPOSED CONSTRUCTION OF HAND WASHING FACILITY AND REHABILITATION OF SITIO MALIGAYA DAY CARE CENTER II	DATE:	ENGR. LEO S. DEL ROSARIO	ENGR. ISAGANI R. VERZOSA , JR.	HON. MA. JOSEFINA G. BELMONTE	EXISTING SECOND FLOOR PLAN	AR-3 3 20
LOCATION: BARANGAY BAHAY TORO, DISTRICT 1, QUEZON CITY	DESIGN BY:			CITY MAYOR		
	REVISION NO.:					



NOTES:
1. VERIFY ALL ACTUAL DIMENSION ON SITE
2. 400mm X 400mm WALL TILES FOR COMFORT ROOMS
3. REPAINTING OF INTERIOR AND EXTERIOR WALL

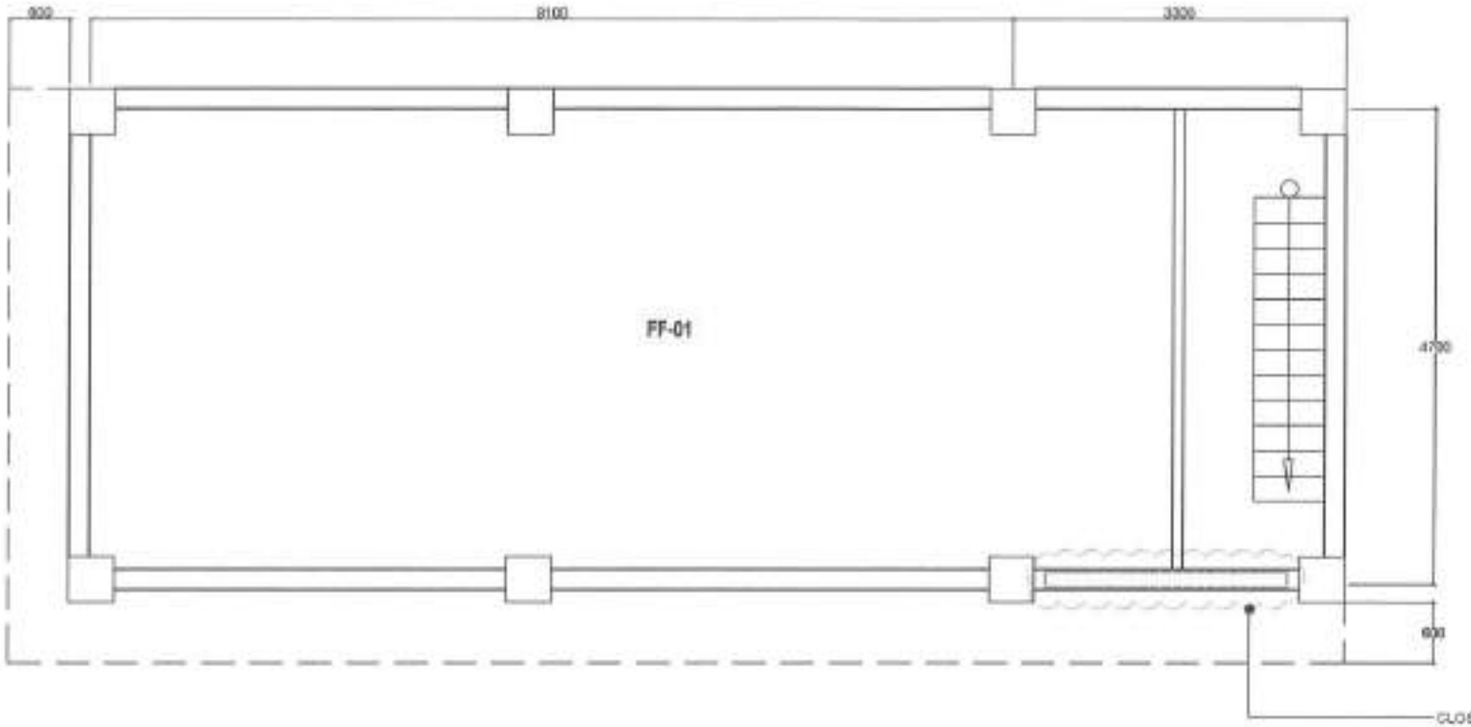
FINISHES	
FF-01	600 x 600mm HOMOGENEOUS FLOOR TILES
FF-02	400 x 400mm HOMOGENEOUS FLOOR TILES

1 PROPOSED SECOND FLOOR

SCALE: 1:50 MTS

Republika ng Pilipinas
Lungsod ng Quezon
CITY ENGINEERING DEPARTMENT

PROJECT TITLE:	DRAWN BY:	SUBMITTED BY:	RECOMMENDING APPROVAL:	APPROVED BY:	SHEET CONTENT	SHEET NO.
PROPOSED CONSTRUCTION OF HAND WASHING FACILITY AND REHABILITATION OF SITIO MALIGAYA DAY CARE CENTER II LOCATION: BARANGAY BAHAY TORO, DISTRICT 1, QUEZON CITY	DATE: CHECKED BY: REVISION NO.:	ENGR. LEO S. DEL ROSARIO HEAD, PLANNING & PROGRAMMING DIVISION	ENGR. SAIGANI R. VERZOSA , JR. OIC-CITY ENGINEERING DEPARTMENT	HON. MA. JOSEFINA G. BELMONTE CITY MAYOR	PROPOSED SECOND FLOOR PLAN	AR-4 4 20



FINISHES	
FF - 01	600 x 600mm HOMOGENEOUS FLOOR TILES
FF - 02	400 x 400mm HOMOGENEOUS FLOOR TILES

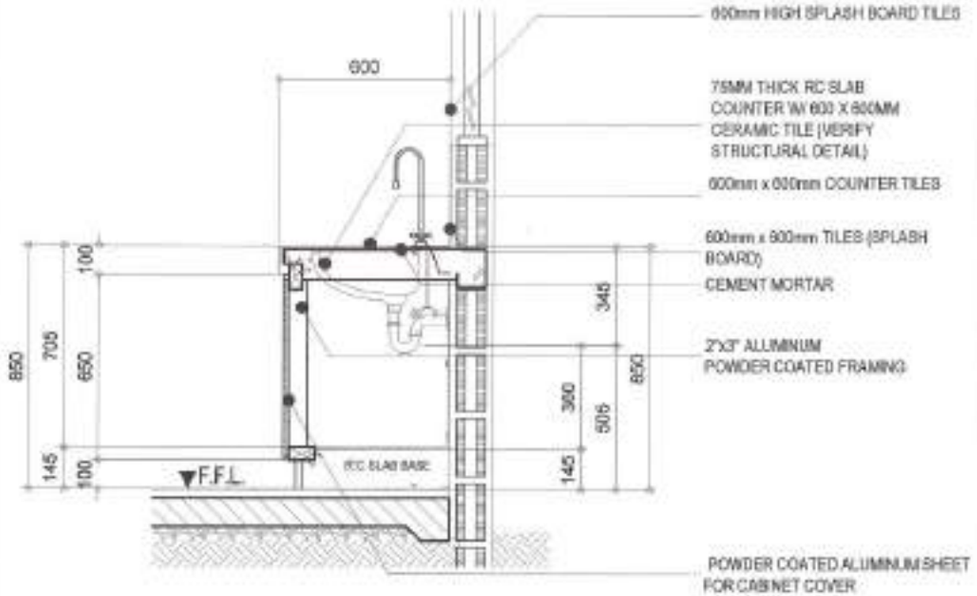
NOTES:
1. VERIFY ALL ACTUAL DIMENSION ON SITE
2. 400mm X 400mm WALL TILES FOR COMFORT ROOMS
3. REPAINTING OF INTERIOR AND EXTERIOR WALL

1 PROPOSED THIRD FLOOR

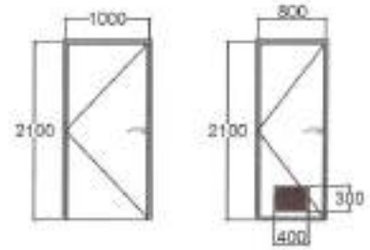
SCALE: 1:50 MTS

Republika ng Pilipinas
Lungsod ng Quezon
CITY ENGINEERING DEPARTMENT

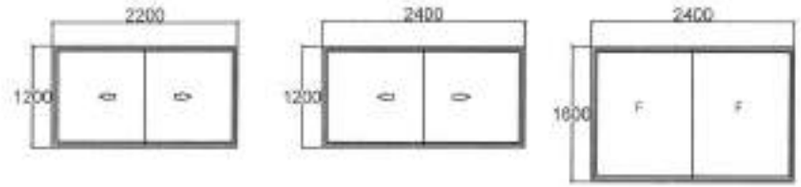
PROJECT TITLE:	DRAWN BY: JCT	SUBMITTED BY:	RECOMMENDING APPROVAL:	APPROVED BY:	SHEET CONTENT	SHEET NO.
PROPOSED CONSTRUCTION OF HAND WASHING FACILITY AND REHABILITATION OF SITIO MALIGAYA DAY CARE CENTER II	DATE:	ENGR. LEO S. DEL ROSARIO HEAD, Planning & Programming Division	ENGR. [illegible] R. VERZOSA , JR. DEPUTY ENGINEERING DEPARTMENT	HON. MA. JOSEFINA G. BELMONTE CITY MAYOR	PROPOSED THIRD FLOOR PLAN	AR-5 5 20
LOCATION: BARANGAY BAHAY TORO, DISTRICT 1, QUEZON CITY	CHECKED BY: JMV REVISION NO.:					



1 **COUNTERTOP DETAIL** NTS



DESIGNATION	①	②
SPECS	SWING TYPE, FLUSH HOLLOW CORE DOOR, PAINTED FINISH (KITTEN WHITE)	SWING TYPE, PVC DOOR, WITH 400mm x 300mm LOUVER, PAINTED FINISH (KITTEN WHITE)
HARDWARE/ GLAZING	COMPLETE ACCESSORIES DOOR KNOB LEVER-TYPE, SATIN STAINLESS FINISH	COMPLETE ACCESSORIES DOOR KNOB LEVER-TYPE SATIN STAINLESS FINISH



DESIGNATION	ⓐ	ⓑ	ⓒ
SPECS	SLIDING WINDOW, 6mm THK CLEAR TEMPERED GLASS ON WHITE COLOR POWDER COATED ALUMINUM FRAMES	SLIDING WINDOW, 6mm THK CLEAR TEMPERED GLASS ON WHITE COLOR POWDER COATED ALUMINUM FRAMES	FIXED WINDOW, 6mm THK CLEAR TEMPERED GLASS ON WHITE COLOR POWDER COATED ALUMINUM FRAMES
HARDWARE/ GLAZING	PROVIDE WITH COMPLETE ACCESSORIES	PROVIDE WITH COMPLETE ACCESSORIES	PROVIDE WITH COMPLETE ACCESSORIES

1 **SCHEDULE OF DOORS AND WINDOWS** SCALE: 1.60 METERS

Republika ng Pilipinas
Lungsod ng Quezon
CITY ENGINEERING DEPARTMENT

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

LOCATION: BARANGAY BAHAY TORO, DISTRICT 1, QUEZON CITY

DRAWN BY:

DATE:

CHECKED BY:

REVISION NO.:

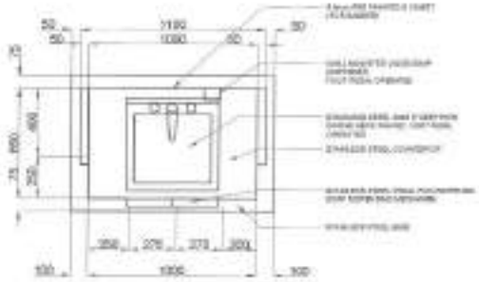
SUBMITTED BY:
ENGR. LEO S. DEL ROSARIO
HEAD, PLANNING & PROGRAMMING DIVISION

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

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

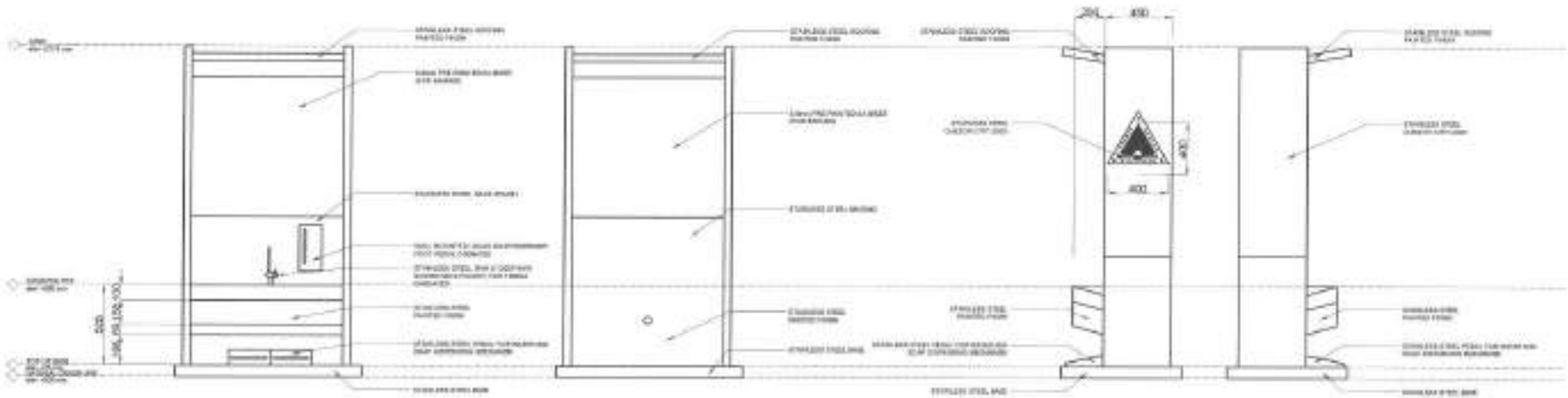
SHEET CONTENT: COUNTERTOP DETAIL, SCHEDULE OF DOORS AND WINDOWS

SHEET NO.: **AR-6** 6 20



PLAN

1 | SINGLE SINK PORTABLE HAND WASHING STALL PLAN — SCALE: 1:30mts



FRONT REAR LEFT SIDE RIGHT SIDE

2 | ELEVATIONS — SCALE: 1:30mts

Republika ng Pilipinas
Lungsod ng Quezon
CITY ENGINEERING DEPARTMENT

PROJECT TITLE:	DRAWN BY:	SUBMITTED BY:	RECOMMENDING APPROVAL:	APPROVED BY:	SHEET CONTENT	SHEET NO.
PROPOSED CONSTRUCTION OF HAND WASHING FACILITY AND REHABILITATION OF SITIO MALIGAYA DAY CARE CENTER II	DATE: August 4, 2021	ENGR. LEO S. DEL ROSARIO HEAD, PLANNING & PROGRAMMING DIVISION	ENGR. ISAGANI R. VERZOSA, JR. OIC-CITY ENGINEERING DEPARTMENT	HON. MA. JOSEFINA G. BELMONTE CITY MAYOR	SINGLE SINK PORTABLE HAND WASHING STALL PLAN ELEVATIONS	AR-7 7 20
LOCATION: BARANGAY BAHAY TORO, DISTRICT I, QUEZON CITY	CHECKED BY:	REVISION NO.:				

GENERAL

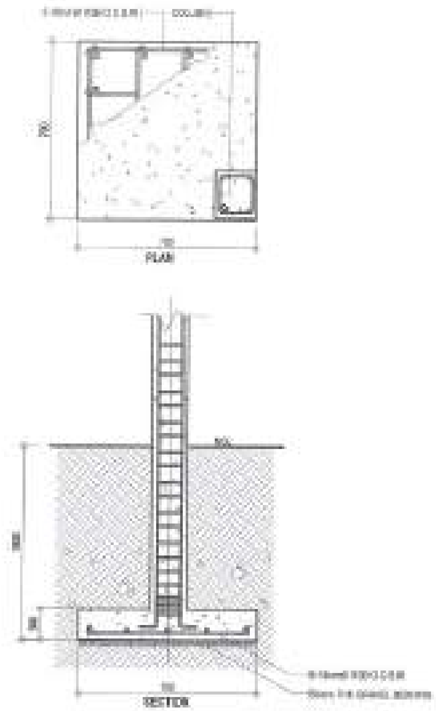
CONCRETE & REINFORCEMENT

STRUCTURAL STEEL AND PLATES

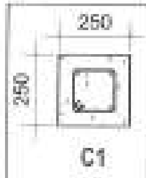
FOUNDATION

MASONRY WALLS

1 GENERAL NOTES NTS

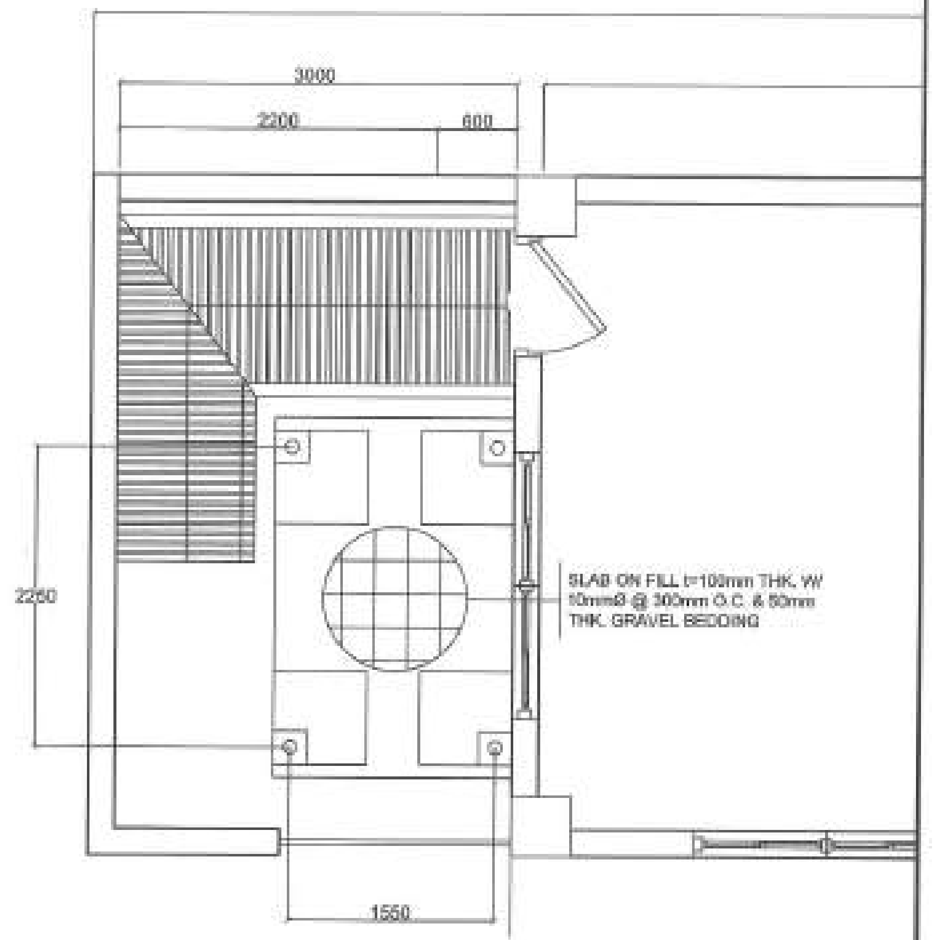


2 COLUMN FOOTING DETAIL NTS



C1	250mm X 250mm 4- 16mm Ø RSB MAIN BARS 10mm Ø RSB TIES SPACED 1@50mm, 200mm @ REST

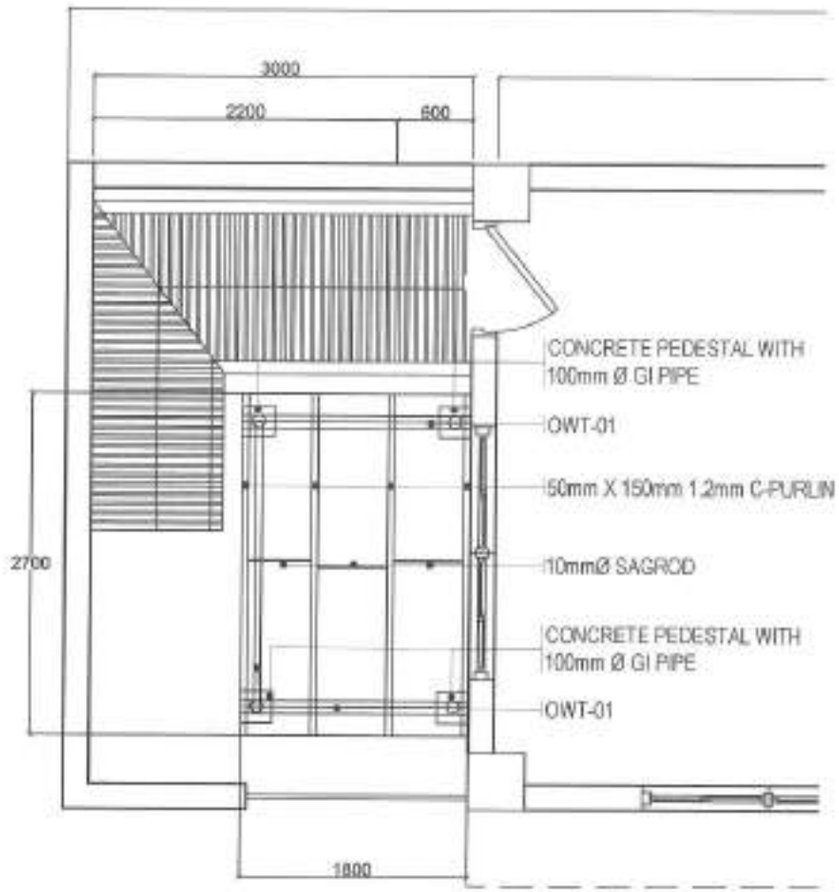
3 SCHEDULE OF COLUMN NTS



NOTES:
1. VERIFY ALL ACTUAL DIMENSION ON SITE

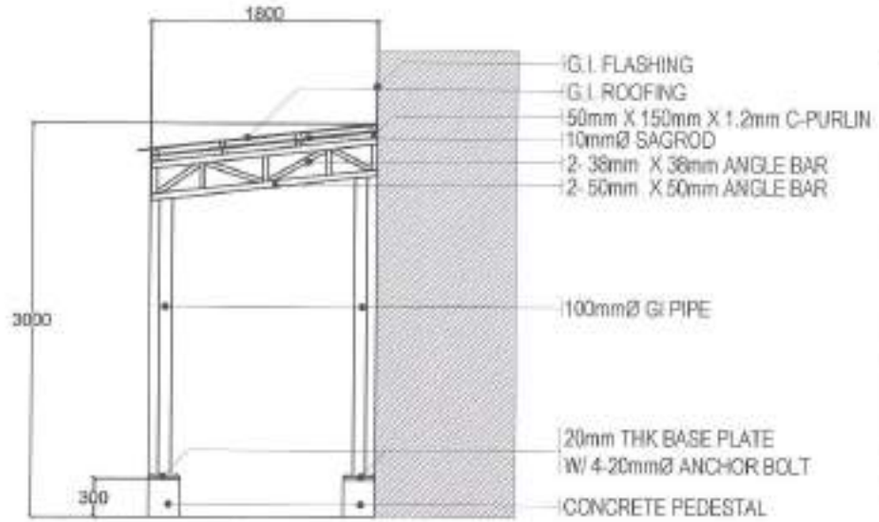
4 COVERED AREA FOUNDATION PLAN SCALE: 1:40 MTS

Republika ng Pilipinas Lungsod ng Quezon CITY ENGINEERING DEPARTMENT	PROJECT TITLE : PROPOSED CONSTRUCTION OF HAND WASHING FACILITY AND REHABILITATION OF SITIO MALIGAYA DAY CARE CENTER II LOCATION : BARANGAY BAHAY TORO, DISTRICT 1, QUEZON CITY	DRAWN BY: DATE: CHECKED BY: REVISION NO.:	SUBMITTED BY: ENGR. LEO S. DEL ROSARIO	RECOMMENDING APPROVAL: ENGR. MAGANI R. VERZOSA , JR.	APPROVED BY: HON. MA. JOSEFINA G. BELMONTE CITY MAYOR	SHEET CONTENT: GENERAL NOTES COLUMN FOOTING DETAIL SCHEDULE OF COLUMN COVERED AREA FOUNDATION PLAN
						SHEET NO. ST-1 8 | 20

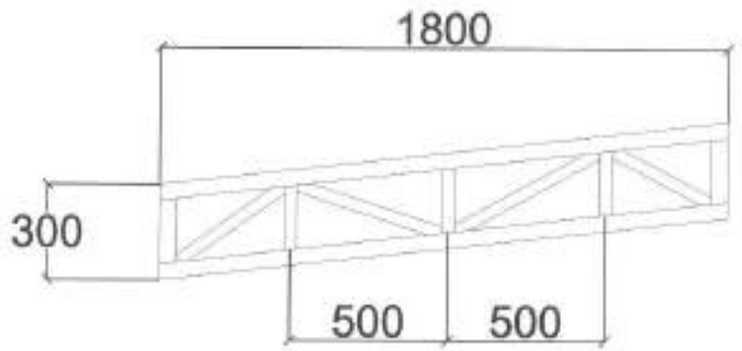


NOTES:
1. VERIFY ALL ACTUAL DIMENSION ON SITE

1 COVERED AREA FRAMING PLAN NTS



2 COVERED AREA SECTION VIEW SCALE: 1:40 MTS



FOR OUTSIDE MEMBERS
2-50mm X 50mm X 6mm ANGLE BAR

FOR INSIDE MEMBERS
2-38mm X 38mm X 6mm ANGLE BAR

3 OPEN WEB TRUSS 1 SCALE: 1:16 MTS

Republika ng Pilipinas
Lungsod ng Quezon
CITY ENGINEERING DEPARTMENT

PROJECT TITLE:
PROPOSED CONSTRUCTION OF HAND WASHING FACILITY AND REHABILITATION OF SITIO MALIGAYA DAY CARE CENTER,B
LOCATION: BARANGAY BANAY TORO, DISTRICT 1, QUEZON CITY

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

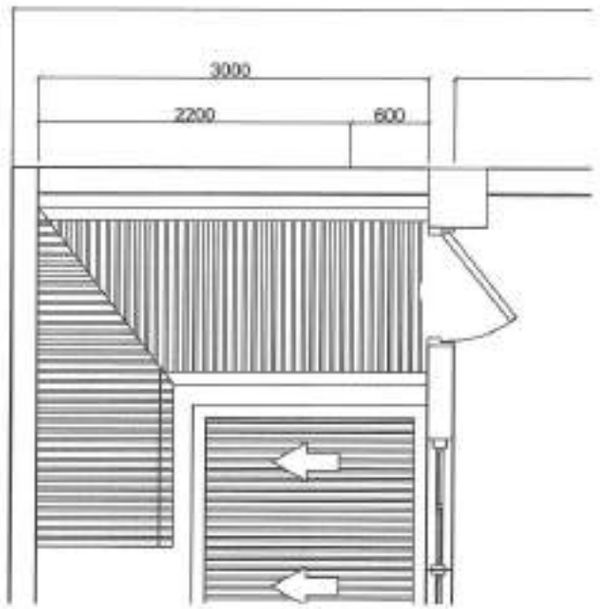
SUBMITTED BY:
ENGR. LEO S. DEL ROSARIO
HEAD, PLANNING & PROGRAMMING DIVISION

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

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

SHEET CONTENT:
COVERED AREA FRAMING PLAN
COVERED AREA SECTION VIEW
OPEN WEB TRUSS 1

SHEET NO.
ST-2
9 20



TOP VIEW

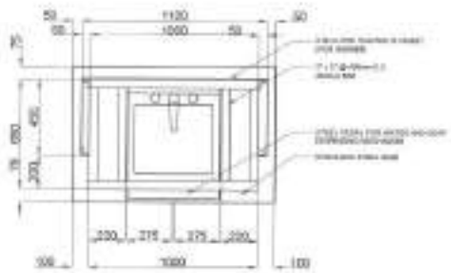
NOTES:
1. VERIFY ALL ACTUAL DIMENSION ON SITE

1 STAIR DETAIL

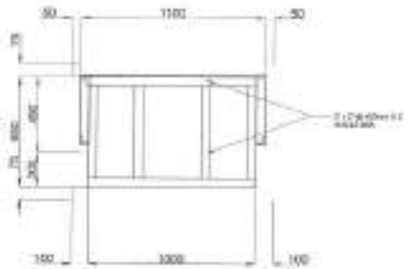
NOT TO SCALE

Republika ng Pilipinas
Lungsod ng Quezon
CITY ENGINEERING DEPARTMENT

PROJECT TITLE:	DRAWN BY:	SUBMITTED BY:	RECOMMENDING APPROVAL:	APPROVED BY:	SHEET CONTENT	SHEET NO.
PROPOSED CONSTRUCTION OF HAND WASHING FACILITY AND REHABILITATION OF SITIO MALIGAYA DAY CARE CENTER II LOCATION: BARANGAY BAHAY TORO, DISTRICT 1, QUEZON CITY	DATE: CHECKED BY: REVISIONS:	ENGR. LEO S. DEL ROSARIO HEAD, PLANNING & PROGRAMMING DIVISION	ENGR. ISAGANI R. VERZOSA, JR. OIC, CITY ENGINEERING DEPARTMENT	HON. MA. JOSEFINA G. BELMONTE CITY MAYOR	STAIR DETAIL	ST-3 10 20



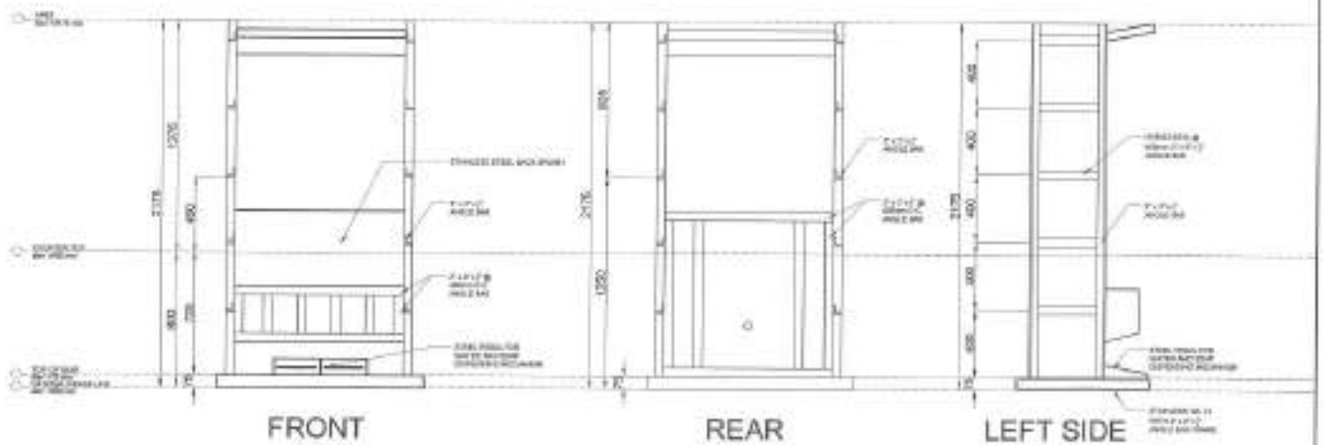
PLAN



ROOF PLAN

1 SINGLE SINK PORTABLE HAND WASHING STALL PLAN

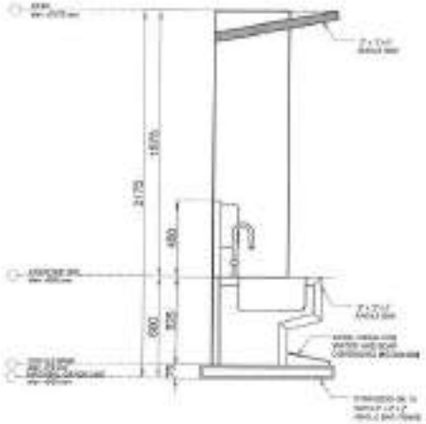
SCALE: 1:30mts



FRONT REAR LEFT SIDE

2 ELEVATIONS

SCALE: 1:30mts



3 TYPICAL SECTION

SCALE: 1:30mts

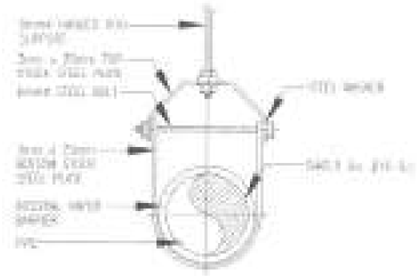
Republika ng Pilipinas
Lungsod ng Quezon
CITY ENGINEERING DEPARTMENT

PROJECT TITLE:	DRAWN BY:	SUBMITTED BY:	RECOMMENDING APPROVAL:	APPROVED BY:	SHEET CONTENT	SHEET NO.
PROPOSED CONSTRUCTION OF HAND WASHING FACILITY AND REHABILITATION OF SITIO MALIGAYA DAY CARE CENTER II LOCATION: BARANGAY BAHAY TORO, DISTRICT 1, QUEZON CITY	DATE: August 4, 2021 CHECKED BY: REVISION NO.:	ENGR. LEO S. DEL ROSARIO HEAD, PLANNING & PROGRAMMING DIVISION	ENGR. ISAGANI R. VERZOSA, JR. OIC, CITY ENGINEERING DEPARTMENT	HON. MA. JOSEFINA G. BELMONTE CITY MAYOR	SINGLE SINK PORTABLE HAND WASHING STALL PLAN ELEVATIONS TYPICAL SECTION	ST-4 11 20

1. [illegible]
2. [illegible]
3. [illegible]
4. [illegible]
5. [illegible]
6. [illegible]
7. [illegible]
8. [illegible]
9. [illegible]
10. [illegible]
11. [illegible]
12. [illegible]
13. [illegible]
14. [illegible]
15. [illegible]
[illegible]
[illegible]
16. [illegible]
17. [illegible]
18. [illegible]

SYMBOL	DESCRIPTION
[illegible]	UNION PATENT
[illegible]	CHECK VALVE
[illegible]	BUILDING SEWER
[illegible]	BUILDING DRAIN
[illegible]	WASTE LINE
[illegible]	AREA DRAIN / CATCH BASIN
[illegible]	FLOOR DRAIN
[illegible]	DIAMETER
[illegible]	WASTE LINE
[illegible]	WATER LINE
[illegible]	GATE VALVE
[illegible]	DECK DRAIN
[illegible]	CLEANOUT
[illegible]	PIPE DOWN
[illegible]	PIPE UP
[illegible]	WELL METER
[illegible]	GATE VALVE
[illegible]	AREA DRAIN / CATCH BASIN
[illegible]	WATER CLOSET
[illegible]	LAVATORY
[illegible]	MANHOLE
[illegible]	HOSE BIBB
[illegible]	STORM DRAIN LINE
[illegible]	VENT LINE
[illegible]	VENT ABOVE CEILING
[illegible]	CONCRETE PIPE / REINF. CONC. PIPE
[illegible]	VENT THRU ROOF
[illegible]	DIRECTION OF FLOW / SLOPE

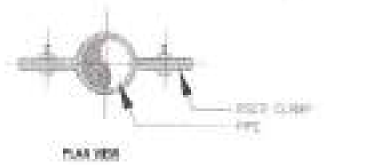
1 GENERAL NOTES & LEGENDS



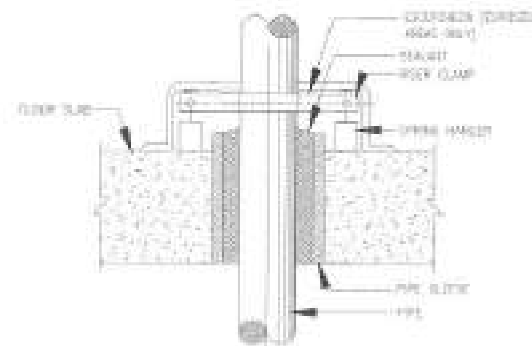
PIPE SIZE (mm)	A (mm)	B (mm)	TOP STEEL	BOTTOM STEEL
[illegible]	8	[illegible]	[illegible]	[illegible]
[illegible]	12	8	[illegible]	[illegible]
[illegible]	15	12	[illegible]	[illegible]
[illegible]	20	12	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	40	[illegible]	[illegible]	[illegible]

2 HANGER DETAIL

SCALE: NTS



PLAN VIEW



3 PIPE SLEEVE DETAIL

SCALE: NTS

Republika ng Pilipinas
Lungsod ng Quezon
CITY ENGINEERING DEPARTMENT

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

LOCATION:
BARANGAY BAHAY TORO, DISTRICT 1, QUEZON CITY

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

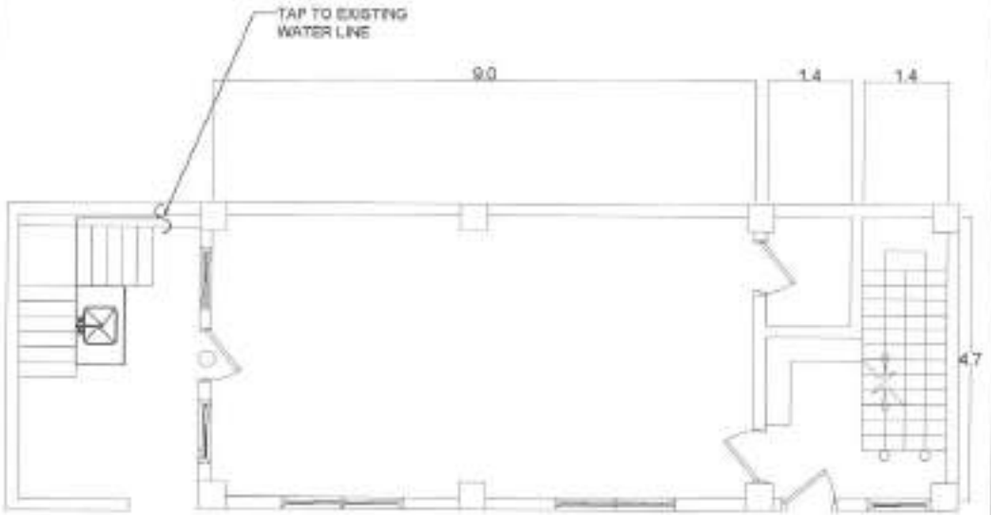
SUBMITTED BY:
ENGR. LEO S. DEL ROSARIO

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

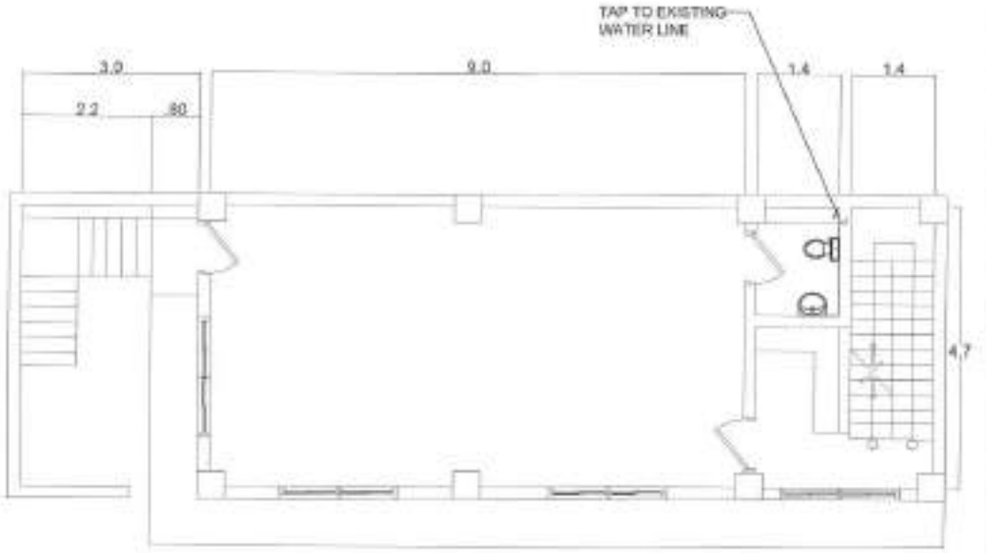
APPROVED BY:
HON. MA. JOSEFINA G. BELMONTE
CITY MAYOR

SHEET CONTENT:
GENERAL NOTES
LEGENDS AND SYMBOLS
HANGER DETAIL
PIPE SLEEVE DETAIL

SHEET NO.
PL-1
12 20



1 GROUND FLOOR WATER LINE SCALE: NTS



2 SECOND FLOOR WATER LINE SCALE: NTS

Republika ng Pilipinas
Lungsod ng Quezon
CITY ENGINEERING DEPARTMENT

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

LOCATION:
BARANGAY BAHAY TORO, DISTRICT 1, QUEZON CITY

DRAWN BY: GUMA
DATE:
CHECKED BY: JMT
REVISION NO.:

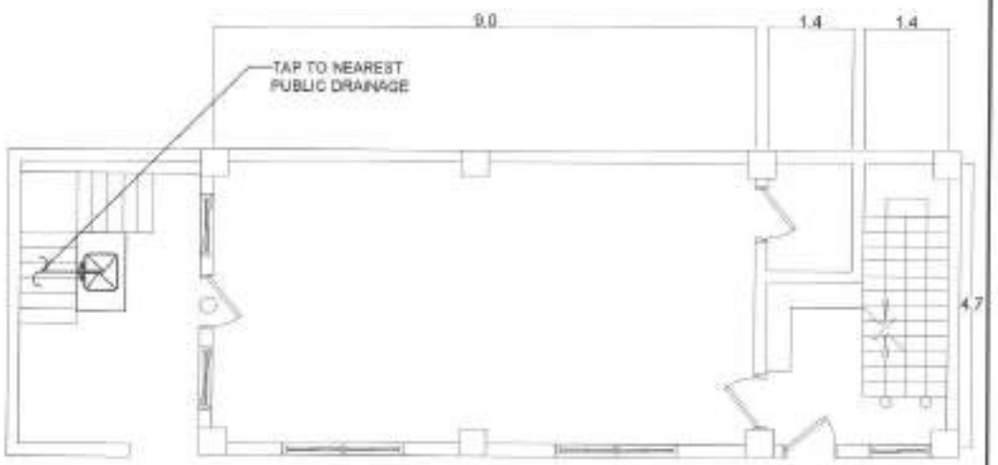
SUBMITTED BY:
ENGR. LEO S. DEL ROSARIO
HEAD, PLANNING & PROGRAMMING DIVISION

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

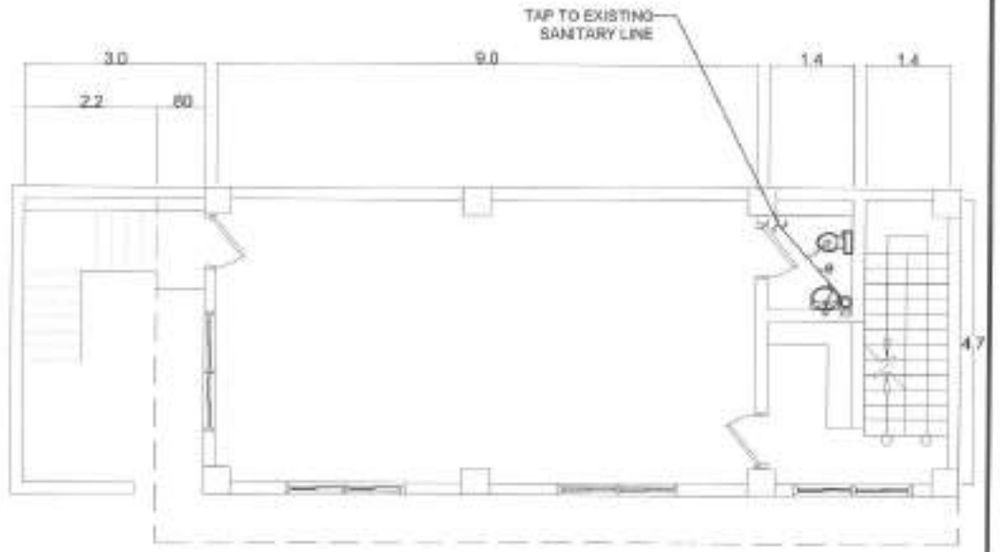
APPROVED BY:
HON. MA. JOSEFINA G. BELMONTE
CITY MAYOR

SHEET CONTENT:
GROUND FLOOR PLAN
SECOND FLOOR PLAN

SHEET NO.
PL-2
13 20



1 GROUND FLOOR SANITARY LINE SCALE: NTS



2 SECOND FLOOR SANITARY LINE SCALE: NTS

Republika ng Pilipinas
Lungsod ng Quezon
CITY ENGINEERING DEPARTMENT

PROJECT TITLE:
PROPOSED CONSTRUCTION OF HAND WASHING FACILITY AND REHABILITATION OF SITIO MALIGAYA DAY CARE CENTER
LOCATION:
BARANGAY BAHAY TORO, DISTRICT 1, QUEZON CITY

DRAWING BY:
DATE:
CHECKED BY:
REVISIONS:

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

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

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

SHEET CONTENT:
GROUND FLOOR PLAN
SECOND FLOOR PLAN

SHEET NO.
PL-3
14 20

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 INLOPES FOR HORIZONTAL DRAINAGE SHALL MAINTAIN 1% MIN. UNLESS OTHERWISE SPECIFIED.
6. SIZES OF WATER SUPPLY PIPES TO FIXTURES SHALL BE IN ACCORDANCE WITH THE MANUFACTURERS INSTRUCTION.
7. THE CONTRACTOR SHALL VERIFY ALL EXISTING UTILITIES AT SITE AND COORDINATE THE WORKS WITH THE SEWER LINE EFFLUENT DISPOSAL POINT AND WATER LINE SERVICE CONNECTING POINT.
8. ALL WATER PIPE AND WATER TANKS SHALL BE THOROUGHLY FLUSHED AND DISINFECTED WITH LIQUID CHLORINE OR HYDROCHLORIDE SOLUTION.
9. ALL WATER PIPES SHALL BE HYDROSTATICALLY TESTED TO A PRESSURE 1-1/2 THE DESIGNED WORKING PRESSURE OF THE SYSTEM.
10. ALL SANITARY AND STORM DRAINAGE PIPES SHALL BE HYDROSTATICALLY TESTED AT LEAST 3.0 MTS. HEAD TO ENSURE THAT THE SYSTEM 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

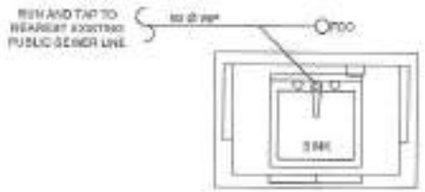
I. SEWER/WASTE AND VENT SYSTEM :

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

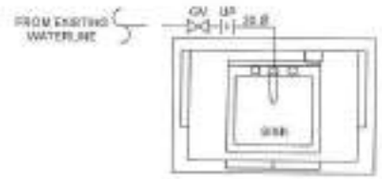
II. WATER DISTRIBUTION SYSTEM :

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

2 LEGENDS AND SYMBOLS



3 SINGLE SINK PORTABLE HANDWASHING SANITARY LINE SCALE 1:30m



5 SINGLE SINK PORTABLE HAND WASHING WATER LINE SCALE 1:30m

Republika ng Pilipinas
Lungsod ng Quezon
CITY ENGINEERING DEPARTMENT

PROJECT TITLE: **PROPOSED CONSTRUCTION OF HAND WASHING FACILITY AND REHABILITATION OF SITIO MALIGAYA DAY CARE CENTER I**	DRAWN BY: CTE	SUBMITTED BY: **ENGR. LEO S. DEL ROSARIO**	RECOMMENDING APPROVAL: **ENGR. ISAGANI R. VERZOSA , JR.**	APPROVED BY: **HON. MA. JOSEFINA G. BELMONTE**	SHEET CONTENT: GENERAL NOTES, LEGENDS & MD SYMBOLS, SINGLE SINK PORTABLE HAND WASHING SANITARY AND WATERLINE LAYOUT	SHEET NO. PL-4
LOCATION: BARANGAY BAHAY TORO, DISTRICT 1, QUEZON CITY	DATE: August 2, 2021					15 20
	CHECKED BY: JAM					
	REVISION NO.					

1 GENERAL NOTES — NOT TO SCALE

1. ALL ELECTRICAL WORKS SHALL BE DONE IN ACCORDANCE WITH THE PROVISIONS OF THE LATEST EDITION OF THE PHILIPPINE ELECTRICAL CODE, THE LAWS AND ORDINANCES OF THE LOCAL CODE ENFORCING AUTHORITIES AND THE REQUIREMENTS OF THE LOCAL POWER AND TELEPHONE UTILITY COMPANY.
2. THE CONTRACTOR SHALL SECURE ALL PERMITS AND PAY ALL FEES REQUIRED FOR THE WORK AND SHALL FURNISH THE OWNER THROUGH THE ENGINEERS, FINAL CERTIFICATES OF ELECTRICAL INSPECTION AND APPROVAL FROM PROPER GOVERNMENT AUTHORITIES FOR COMPLETION OF WORK.
3. ALL EMBEDDED BRANCH CIRCUITS SHALL BE PVC CONDUITS AND FOR EXPOSED INSTALLATION SHALL BE ARE SUPPORTED BY CONDUIT CLAMPS EVERY 750 MILIMETERS.
4. PULL BOXES SHALL BE PROVIDED BY THE CONTRACTOR WHENEVER NECESSARY TO FACILITATE WIRE PULLING EVEN IF THERE 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/OWNER'S REP AND MUST BE REFLECTED ON THE "AS-BUILT" PLAN.
5. ALL POWER OUTLETS AND SWITCHES SHALL BE GROUNDING TYPE WITH PARALLEL SLOTS FOR 230 V.
6. PROVIDE GROUND FAULT CURRENT INTERRUPTER CIRCUIT BREAKER FOR LOADS MARKED "GFCI" ON THE PLAN.
7. ALL METALLIC CONDUITS, CABINETS AND EQUIPMENT SHALL BE PROPERLY GROUNDED AND BONDED.
8. UNLESS OTHERWISE NOTED, MOUNTING HEIGHT FOR WALL MOUNTED DEVICES SHALL BE AS FOLLOWS:

   RECEPTACLE OUTLET - 150 MM AFF, 100MM ABOVE WORKING COUNTER.
   TELEPHONE OUTLET - 300 MM AFF
   CATV OUTLET - 300 MM AFF
   LIGHTING SWITCH - 1400 MM AFF
   PANELBOARD - 1800 MM AFF

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

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

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

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

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

2 SCHEDULE OF LOADS — NOT TO SCALE

LPP
LOCATION: GROUND FLOOR

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

CKT NO.	LOAD DESCRIPTION	VOLTS	VA	AMP.	AT	SIZE OF WIRES	SIZE OF CONDUITS
1	GF LIGHTING OUTLET	230	900	3.91	20	2-3.5mm², THHN COPPER WIRE 1-3.5mm² TW GROUND WIRE	IN 20mmø PVC PIPE
2	2F AND 3F LIGHTING OUTLET	230	1500	6.52	20	2-3.5mm², THHN COPPER WIRE 1-3.5mm² TW GROUND WIRE	IN 20mmø PVC PIPE
3	GF CONVENIENCE OUTLET	230	1080	4.70	30	2-5.5mm², THHN COPPER WIRE 1-3.5mm² TW GROUND WIRE	IN 20mmø PVC PIPE
4	2F AND 3F CONVENIENCE OUTLET	230	1800	7.83	30	2-5.5mm², THHN COPPER WIRE 1-3.5mm² TW GROUND WIRE	IN 20mmø PVC PIPE
5	2.5HP AIRCONDITIONING UNIT (WINDOW TYPE)	230	2760	12.00	50	2-5.5mm², THHN COPPER WIRE 1-3.5mm² TW GROUND WIRE	IN 25mmø PVC PIPE
6	SPARE	230			30		
			8040	34.96			

COMPUTATION:

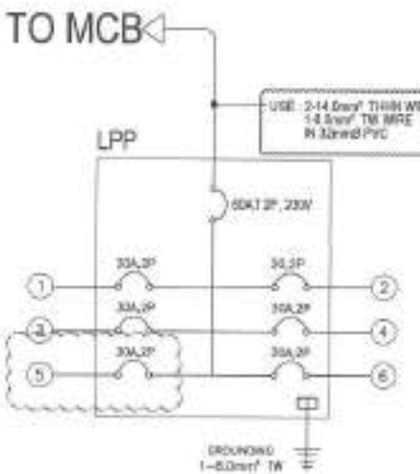
$IT = \frac{8040}{230V} + (8.35*12)$

$IT = 37.06\ AMP$

OVER CURRENT PROTECTION:
USE : 60AT, 2P, 230V MOULDED CASE CIRCUIT BREAKER IN NEMA 1

MAIN FEEDER:
USE : 2 - 14.0mm² THHN & 1-8.0mm² TW GROUND WIRE IN 32mmø PVC PIPE

3 PANEL BOARD DETAIL — NOT TO SCALE



4 LEGENDS AND SYMBOLS — NOT TO SCALE

	ADDITIONAL AIRCONDITIONING UNIT
	LED TUBE LIGHT BOX TYPE (FOR REPLACEMENT)
	PINLIGHT (FOR REPLACEMENT)
	EXISTING CEILING FAN

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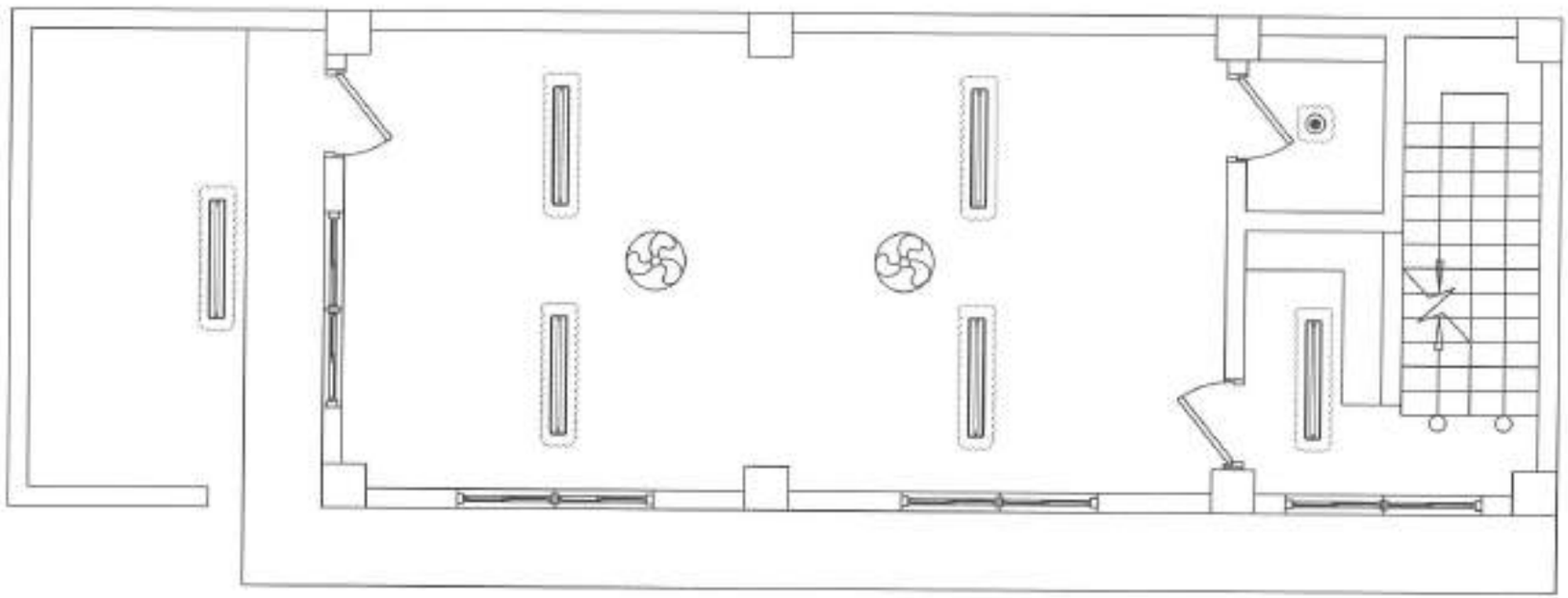
CITY ENGINEERING DEPARTMENT

PROJECT TITLE: **PROPOSED CONSTRUCTION OF HAND WASHING FACILITY AND REHABILITATION OF SITIO MALIGAYA DAY CARE CENTER II**	DRAWN BY: GBV	SUBMITTED BY: **ENGR. LEO S. DEL ROSARIO** HEAD, PLANNING & PROGRAMMING DIVISION	RECOMMENDING APPROVAL: **ENGR. GAGANI R. VERZOSA, JR.** OIC, CITY ENGINEERING DEPARTMENT	APPROVED BY: **HON. MA. JOSEFINA G. BELMONTE** CITY MAYOR	SHEET CONTENT: AS SHOWN	SHEET NO.: EL-1 16 20
LOCATION: BARANGAY BAHAY TORO, DISTRICT 1, QUEZON CITY	DATE:	CHECKED BY:	REVISION NO.:			



1 SECOND FLOOR LIGHTING LAYOUT

SCALE : 1 : 100 MTS

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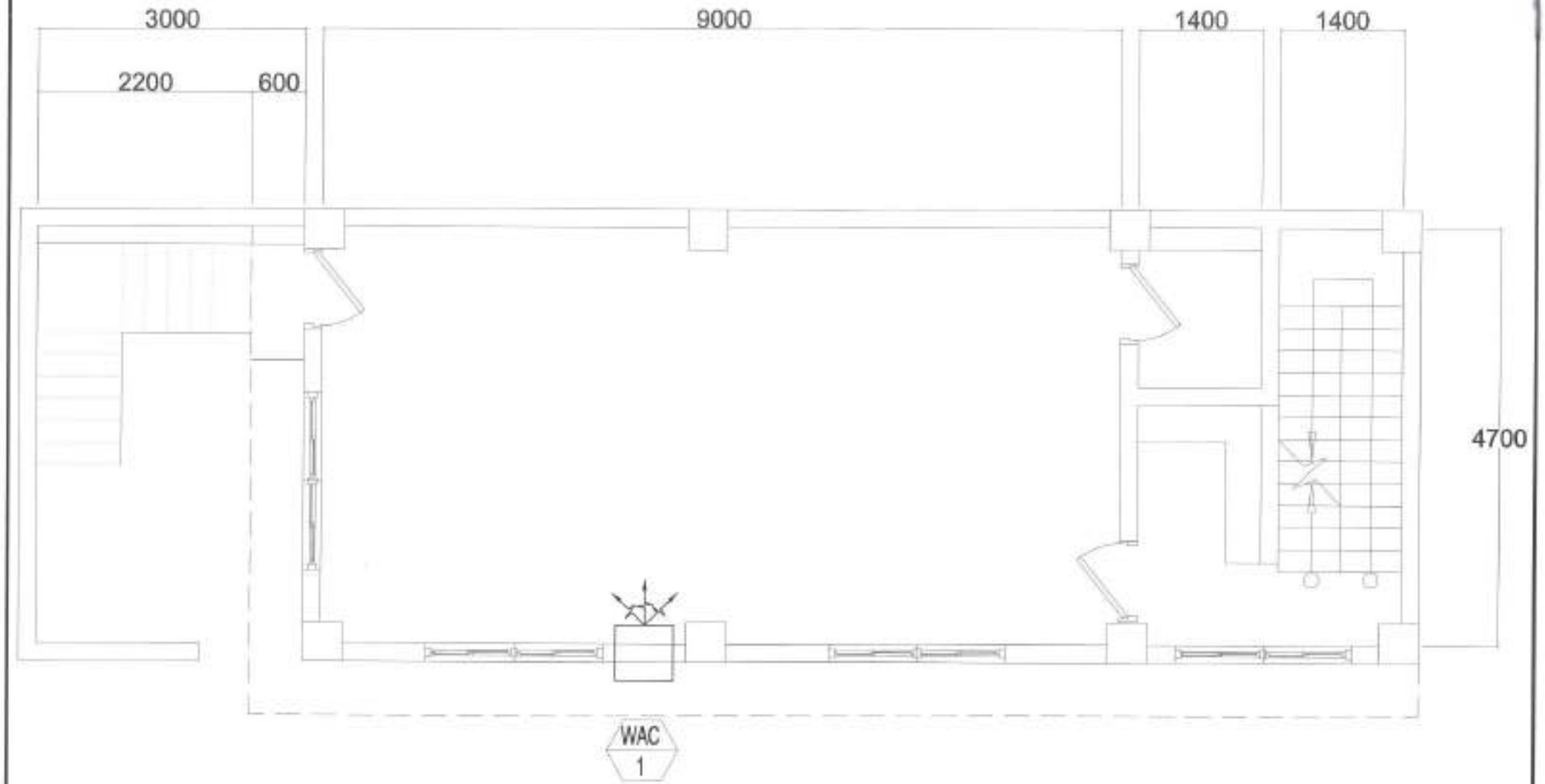
CITY ENGINEERING DEPARTMENT

PROJECT TITLE:	DRAWN BY:	SUBMITTED BY:	RECOMMENDING APPROVAL:	APPROVED BY:	SHEET CONTENT	SHEET NO.
PROPOSED CONSTRUCTION OF HAND WASHING FACILITY AND REHABILITATION OF SITIO MALIGAYA DAY CARE CENTER II	DATE:	ENGR. LEO S. DEL ROSARIO	ENGR. ISAGANI R. VERZOSA , JR.	HON. MA. JOSEFINA G. BELMONTE CITY MAYOR	AS SHOWN	EL-2 17 20
LOCATION: BARANGAY BAHAY TORO, DISTRICT 1, QUEZON CITY	DESIGNED BY:					
	REVISION NO.:					



1 **SECOND FLOOR AIRCONDITIONING LAYOUT**

SCALE : NTS

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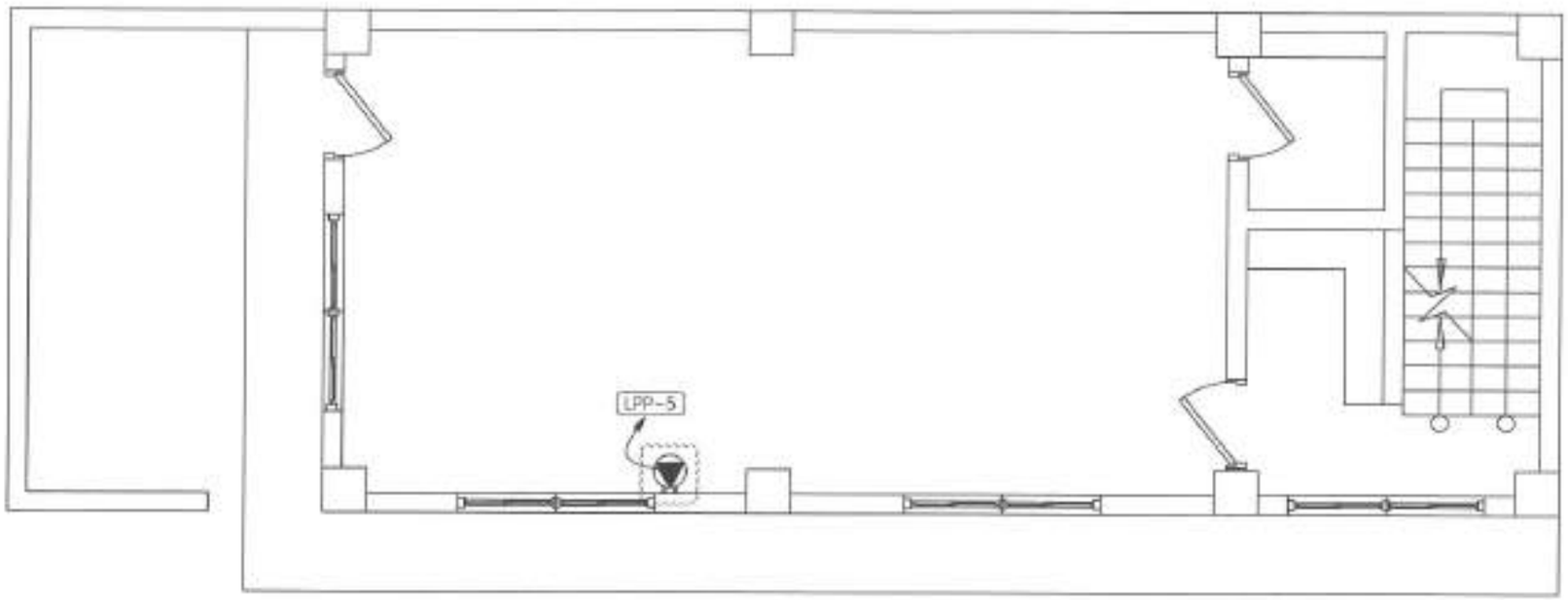
PROJECT TITLE:	DRAWN BY:	SUBMITTED BY:	RECOMMENDING APPROVAL:	APPROVED BY:	SHEET CONTENT	SHEET NO.
PROPOSED CONSTRUCTION OF HAND WASHING FACILITY AND REHABILITATION OF SITIO MALIGAYA DAY CARE CENTER II LOCATION: BARANGAY BAHAY TORO, DISTRICT 1, QUEZON CITY	DATE: CHECKED BY: REVISION NO.:	ENGR. LEO S. DEL ROSARIO HEAD, PLANNING & PROGRAMMING DIVISION	ENGR. EAGANI R. VERZOSA , JR. OIC-CITY ENGINEERING DEPARTMENT	HON. MA. JOSEFINA G. BELMONTE CITY MAYOR	SECOND FLOOR PLAN	ME-1 2020



1 SECOND FLOOR POWER LAYOUT

SCALE : 1 : 100 MTS

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Lungsod ng Quezon
CITY ENGINEERING DEPARTMENT

PROJECT TITLE :	DRAWN BY:	SUBMITTED BY:	RECOMMENDING APPROVAL:	APPROVED BY:	SHEET CONTENT	SHEET NO.
PROPOSED CONSTRUCTION OF HAND WASHING FACILITY AND REHABILITATION OF SITIO MALIGAYA DAY CARE CENTER LOCATION : BARANGAY BAHAY TORO, DISTRICT 1, QUEZON CITY	DATE: CHECKED BY: REVISION NO. :	ENGR. LEO S. DEL ROSARIO HEAD, PLANNING PROGRAMMING DIVISION	ENGR. REGANI R. VERZOSA , JR. OIC-CITY ENGINEERING DEPARTMENT	HON. MA.JOSEFINA G. BELMONTE CITY MAYOR	AS SHOWN	EL-3 18 20

1 GENERAL NOTES

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.

2 LEGENDS & SYMBOLS

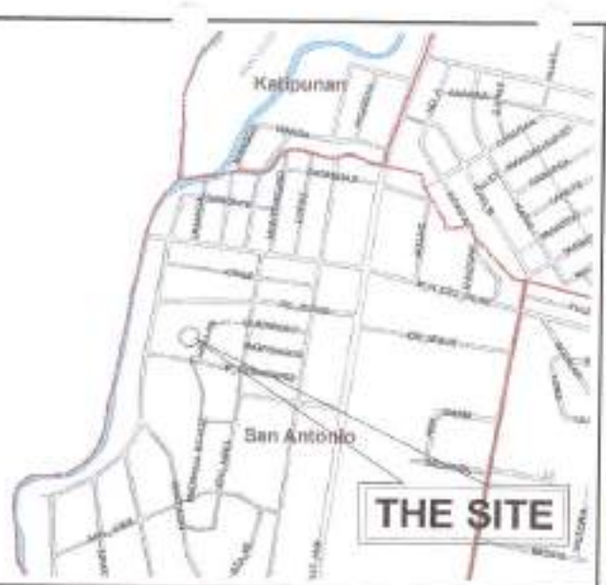
- EQUIPMENT DESIGNATION
- RP — REFRIGERANT PIPE
- WALL MOUNTED INDOOR UNIT
- WINDOW TYPE AIR CONDITIONER
- AIR COOLED CONDENSING UNIT
- ELBOW UP
- ELBOW DOWN
- FCU — FAN COIL UNIT

3 SCHEDULE OF EQUIPMENT

WINDOW TYPE AIR-CONDITIONER
AIR-COOLED CONDENSING UNITS

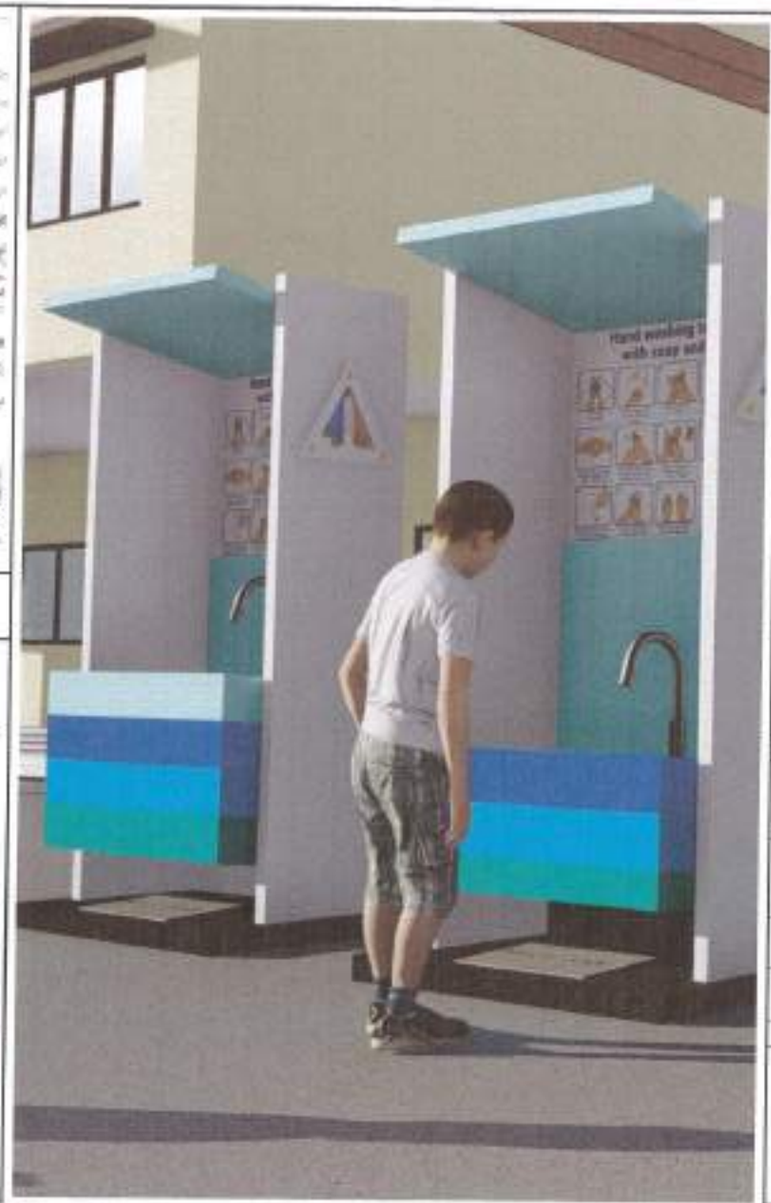
DESIGNATION	LOCATION	QUANTITY	COOLING CAPACITY		AIR CIRCULATION	POWER INPUT WATTS	ELECTRICAL SUPPLY			REMARKS
			HP	KJ/HR			VOLTS	PHASE	HERTZ	
WIC 1	AS SHOWN ON PLANS	1 SET	2.0 HP	25,500	910 CFM	2,350	230.0	1Ø	60.0	REMOVABLE INTAKE GRILLE, EASY TO CLEAN ANTIBAC FILTER, W MECHANICAL ON/OFF TIMER

Republika ng Pilipinas Lungsod ng Quezon CITY ENGINEERING DEPARTMENT	PROJECT TITLE: PROPOSED CONSTRUCTION OF HAND WASHING FACILITY AND REHABILITATION OF SITIO MALIGAYA DAY CARE CENTER LOCATION: BARANGAY SAHAY TORO, DISTRICT 1, QUEZON CITY	DRAWN BY: DATE: CHECKED BY: REVISION NO.:	SUBMITTED BY: ENGR. LEO S. DEL ROSARIO HEAD, PLANNING & PROGRAMMING DIVISION	RECOMMENDING APPROVAL: ENGR. ISAGANI R. VERZOSA, JR. OIC-CITY ENGINEERING DEPARTMENT	APPROVED BY: HON. MA. JOSEFINA G. BELMONTE CITY MAYOR	SHEET CONTENT GENERAL NOTES LEGENDS AND SYMBOLS PLAN SCHEDULE	SHEET NO. ME-1 19 20



1 VICINITY MAP

2 LOCATION MAP



3 PERSPECTIVE

NOT TO SCALE

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Republika ng Pilipinas
Lungsod ng Quezon
CITY ENGINEERING DEPARTMENT

PROJECT TITLE:
PROPOSED CONSTRUCTION OF HAND WASHING FACILITY AND REHABILITATION OF STO. NIÑO DAY CARE CENTER

LOCATION: BARANGAY SAN ANTONIO, DISTRICT I, QUEZON CITY

DRAWN BY:

DATE:

CHECKED BY:

REVISION NO.:

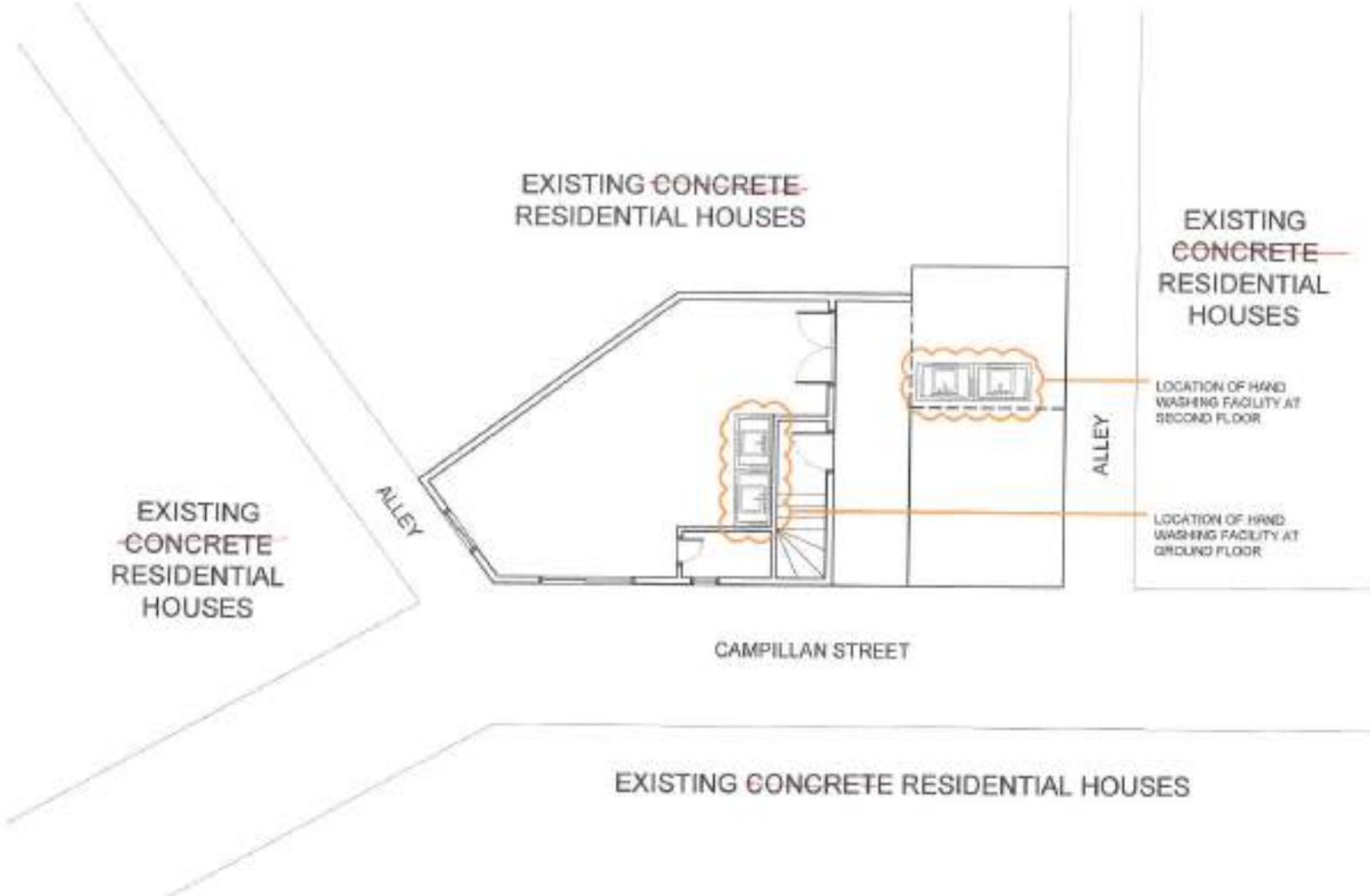
SUBMITTED BY:
ENGR. LEO S. DEL ROSARIO
HEAD, PLANNING & PROGRAMMING DIVISION

RECOMMENDING APPROVAL:
ENGR. ISAGANI R. VERZOSA, JR.
O.E. C... DEPARTMENT

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

SHEET CONTENT:
VICINITY MAP
LOCATION MAP
PERSPECTIVE

SHEET NO.:
AR-01
1 | 14



1 SITE DEVELOPMENT PLAN

NOT TO SCALE

Republika ng Pilipinas
Lungsod ng Quezon
CITY ENGINEERING DEPARTMENT

PROJECT TITLE:
PROPOSED CONSTRUCTION OF HAND WASHING FACILITY AND REHABILITATION OF STO. NIÑO DAY CARE CENTER

LOCATION: BARANGAY SAN ANTONIO, DISTRICT I, QUEZON CITY

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

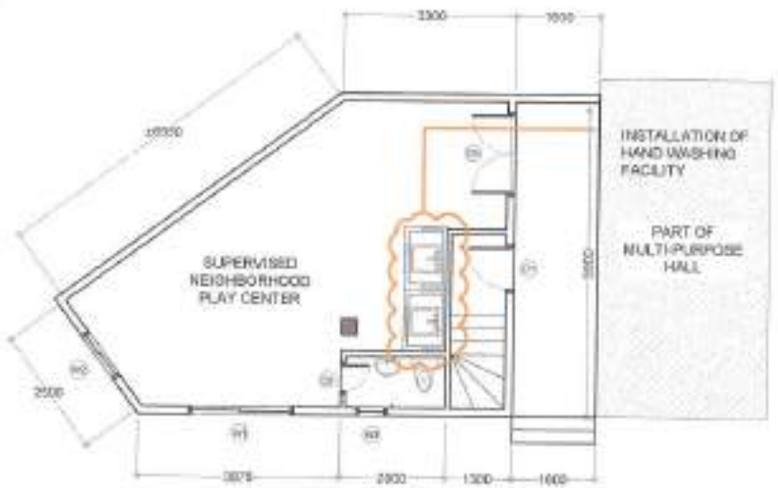
SUBMITTED BY:
ENGR. LEO S. DEL ROSARIO
HEAD, PLANNING & PROGRAMMING DIVISION

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

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

SHEET CONTENT:
SITE DEVELOPMENT PLAN

SHEET NO.:
AR-02
2 | 14

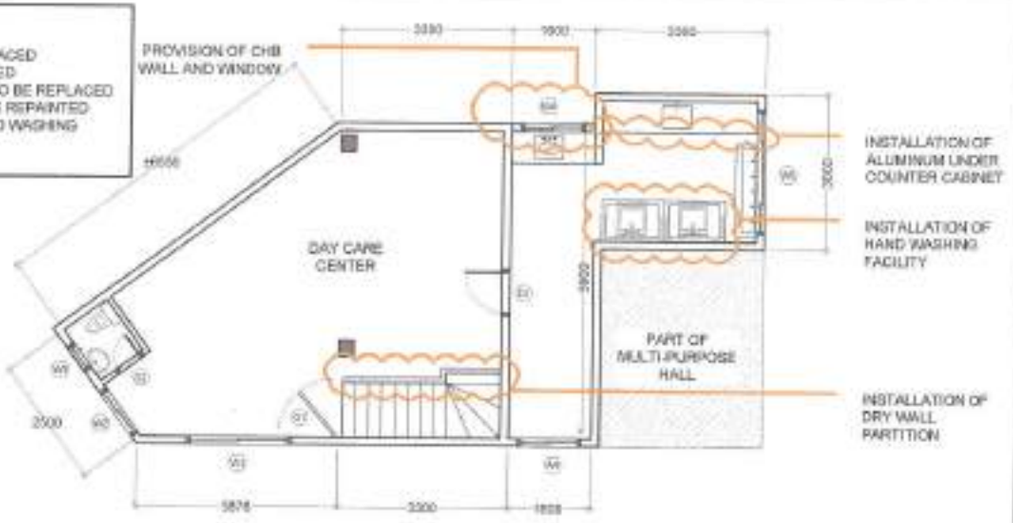


1 GROUND FLOOR PLAN

SCALE: 1:100 METERS

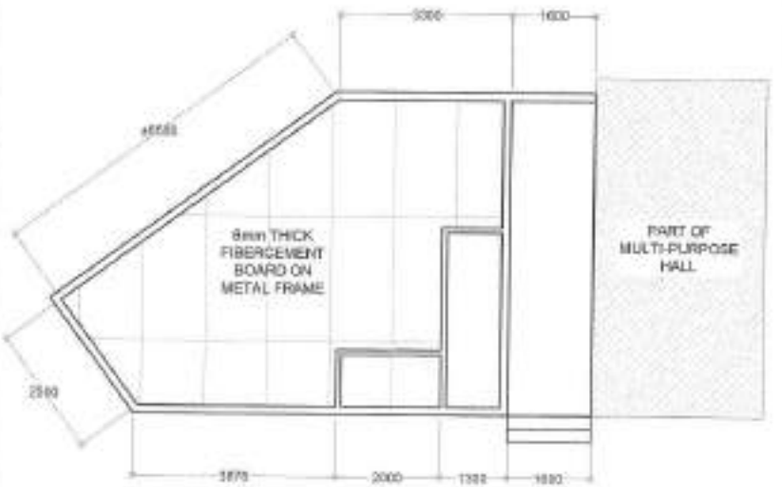
SCOPE OF WORKS:

- WINDOWS TO BE REPLACED
- DOORS TO BE REPLACED
- PLUMBING FIXTURES TO BE REPLACED
- INTERIOR WALLS TO BE REPAINTED
- INSTALLATION OF HAND WASHING FACILITIES



2 SECOND FLOOR PLAN

SCALE: 1:100 METERS



3 GROUND FLOOR REFLECTED CEILING PLAN

SCALE: 1:100 METERS

SCOPE OF WORKS:

- REPLACEMENT OF CEILING

4 SECOND FLOOR REFLECTED CEILING PLAN

SCALE: 1:100 METERS

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CITY ENGINEERING DEPARTMENT

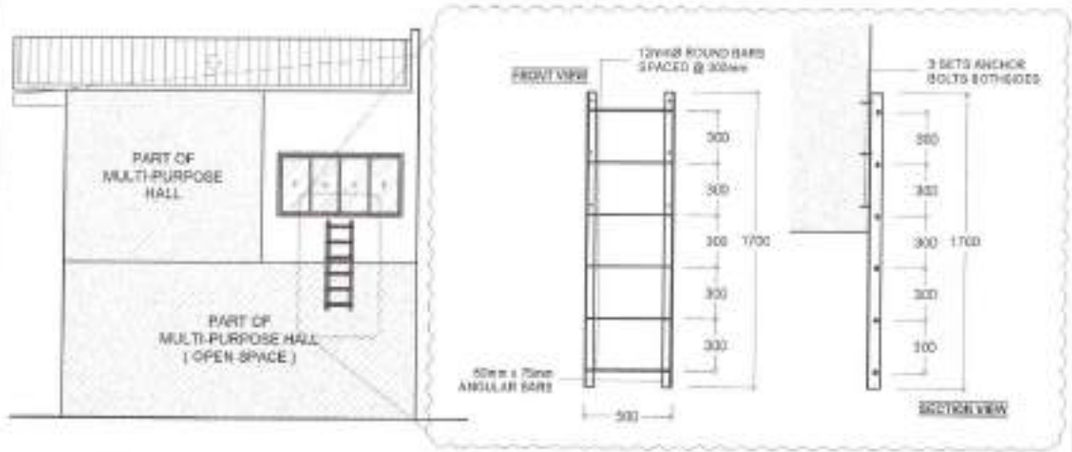
PROJECT TITLE: PROPOSED CONSTRUCTION OF HAND WASHING FACILITY AND REHABILITATION OF STO. NIÑO DAY CARE CENTER	DRAWN BY:	SUBMITTED BY: ENGR. LEO S. DEL ROSARIO, HEAD, PLANNING & PROGRAMMING DIVISION	RECOMMENDING APPROVAL: ENGR. ISAGANI R. VERZOSA, JR., OIC, CITY ENGINEERING DEPARTMENT	APPROVED BY: HON. MA. JOSEFINA G. BELMONTE, CITY MAYOR, QUEZON CITY	SHEET CONTENT:	SHEET NO.
LOCATION: BARANGAY SAN ANTONIO, DISTRICT I, QUEZON CITY	DATE: 07/27/2021					AR-03 3 | 14
	CHECKED BY: JAR					
	REVISION NO.:					

SCOPE OF WORKS:

- REPLACEMENT OF ROOFING
- REPLACEMENT OF GUTTER AND STORM DRAIN SYSTEM

1 ROOF PLAN

SCALE: 1:100 METERS



2 FIRE EXIT DETAIL

SCALE: 1:30 METERS

MARK	W1	W2	W3	W4	
REMARKS	POWDER COATED ALUMINUM FRAMED SLIDING GLASS WINDOW	POWDER COATED ALUMINUM FRAMED SLIDING GLASS WINDOW	POWDER COATED ALUMINUM FRAMED AWNING GLASS WINDOW	POWDER COATED ALUMINUM FRAMED SLIDING GLASS WINDOW	POWDER COATED ALUMINUM FRAMED SLIDING GLASS WINDOW WITH TINTED GLASS
QTY.	2	3	2	2	1
LOCATION	DAY CARE CENTER, SW	DAY CARE CENTER, SW	COMFORT ROOM	PANTRY	OFFICE

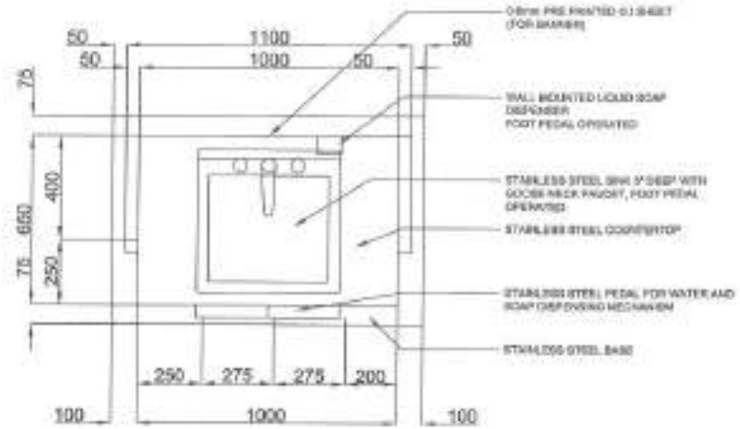
MARK	D1	D2	D3	D1
REMARKS	PANEL DOOR 2100mm x 900mm	PVC DOOR 2100mm x 900mm	POWDER COATED ALUMINUM FRAMED GLASS DOOR 2x900mm x 1400mm	G.I. FIRE DOOR WITH 75mmØ ROUND BARS
QTY.	2	3	1	1
LOCATION	DAY CARE CENTER	COMFORT ROOM	PWD	STAIRS

3 SCHEDULE OF DOORS AND WINDOWS

SCALE: 1:50 METERS

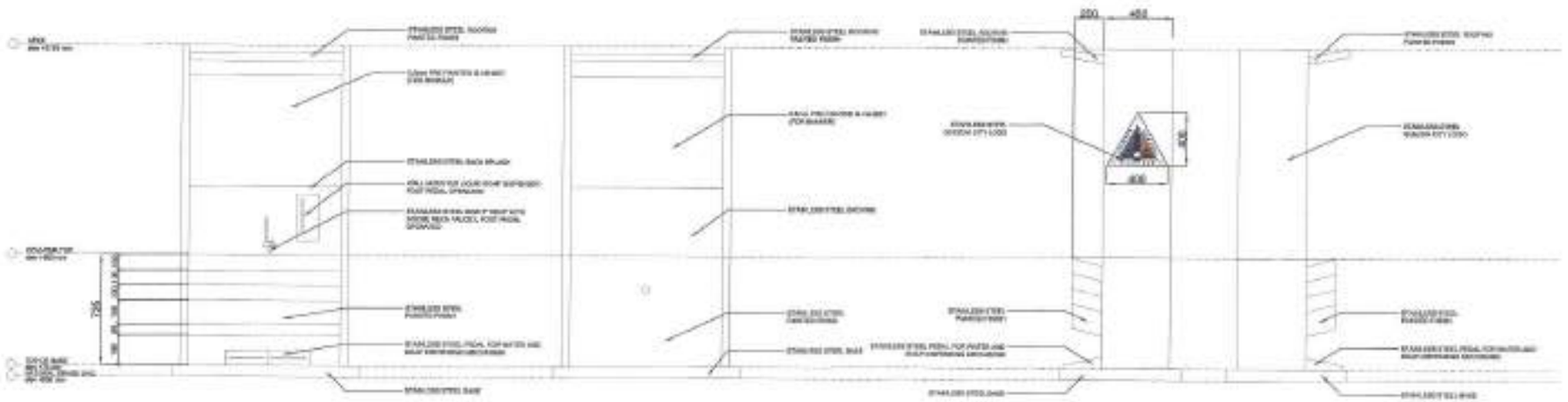
Republika ng Pilipinas
Lungsod ng Quezon
CITY ENGINEERING DEPARTMENT

PROJECT TITLE: PROPOSED CONSTRUCTION OF HAND WASHING FACILITY AND REHABILITATION OF STO. NIÑO DAY CARE CENTER	DRAWN BY: EABG	SUBMITTED BY: ENGR. LEO S. DEL ROSARIO, HEAD, PLANNING & PROGRAMMING DIVISION	RECOMMENDING APPROVAL: ENGR. ISAGANI R. VERZOSA, JR., OIC CITY ENGINEERING DEPARTMENT	APPROVED BY: HON. MA. JOSEFINA G. BELMONTE, CITY MAYOR, Quezon City	SHEET CONTENT: ROOF PLAN, FIRE EXIT DETAILS, SCHEDULE OF DOORS AND WINDOWS	SHEET NO.: AR-04, 4 | 14
LOCATION: BARANGAY SAN ANTONIO, DISTRICT I, QUEZON CITY	DATE: 07/07/2021					
	CHECKED BY: JR					
	REVISION NO.					



1 SINGLE SINK PORTABLE HAND WASHING STALL PLAN

SCALE: 1:60 METERS



2 ELEVATIONS

SCALE: 1:30 METERS

Republika ng Pilipinas
Lungsod ng Quezon
CITY ENGINEERING DEPARTMENT

PROJECT TITLE:
PROPOSED CONSTRUCTION OF HAND WASHING FACILITY AND REHABILITATION OF STD. NIÑO DAY CARE CENTER

LOCATION: BARANGAY SAN ANTONIO, DISTRICT I, QUEZON CITY

DRAWN BY: JMG
DATE: 07/07/2021
CHECKED BY: JMC
REVISION NO.:

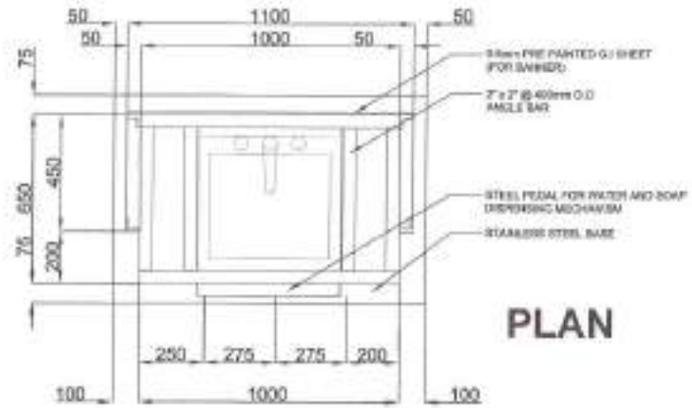
SUBMITTED BY:
ENGR. LEO S. DEL ROSARIO
HEAD, PLANNING PROGRAMMING DIVISION

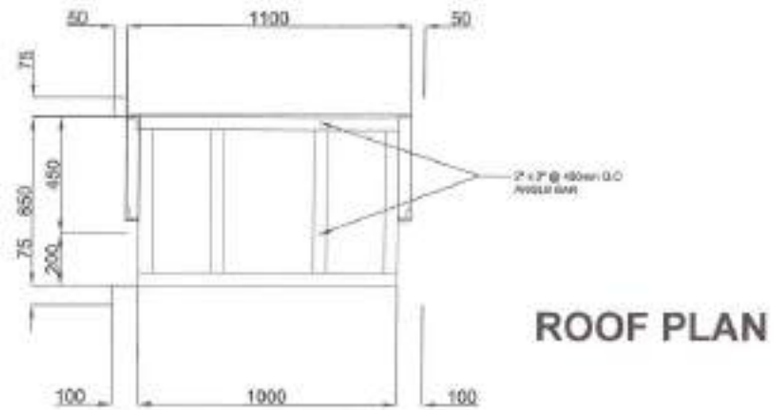
RECOMMENDING APPROVAL:
ENGR. GRACIAM R. VERZOSA, JR.
OIC, CITY ENGINEERING DEPARTMENT

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

SHEET CONTENT:
SINGLE SINK PORTABLE HAND WASHING STALL PLAN ELEVATIONS

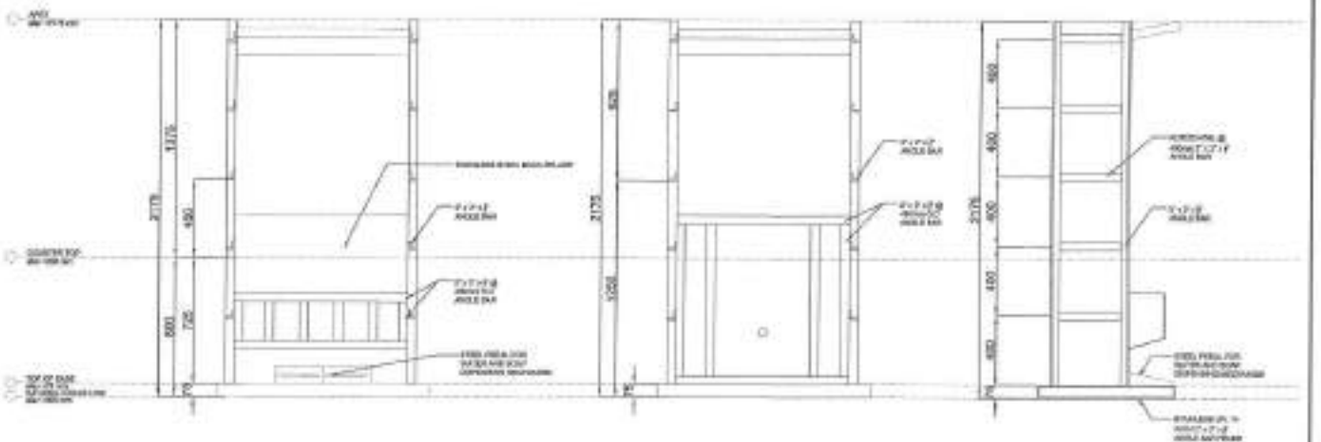
SHEET NO.:
AR-05
5 | 14





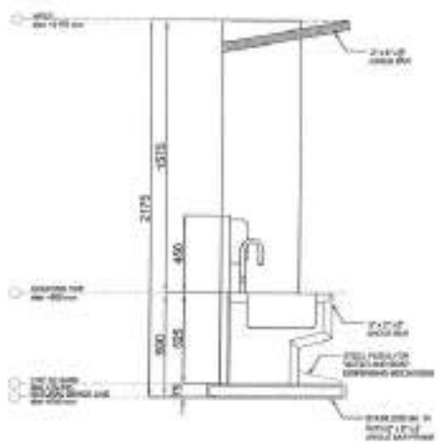
1 SINGLE SINK PORTABLE HAND WASHING STALL PLAN

SCALE: 1:20 METERS



2 ELEVATIONS

SCALE: 1:30 METERS



3 TYPICAL SECTION

SCALE: 1:30 METERS

Republika ng Pilipinas
Lungsod ng Quezon
CITY ENGINEERING DEPARTMENT

PROJECT TITLE:
PROPOSED CONSTRUCTION OF HAND WASHING FACILITY AND REHABILITATION OF STO. NIÑO DAY CARE CENTER

LOCATION: BARANGAY SAN ANTONIO, DISTRICT I, QUEZON CITY

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

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

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

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

SHEET CONTENT:
SINGLE SINK PORTABLE HANDWASHING STALL PLAN ELEVATIONS TYPICAL SECTION

SHEET NO.:
ST-01
6 | 14

GENERAL NOTES:

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 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 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.

—+—	UNION PATENT	——◁	PIPE UP
—▷—	CHECK VALVE	mm	MILLIMETER
SS	SEWER LINE	GV	GATE VALVE
BD	BUILDING DRAIN		AREA DRAIN / CATCH BASIN
FT	WASTE LINE	WC	WATER CLOSET
ADD CB	AREA DRAIN / CATCH BASIN	LAV	LAVATORY
FD	FLOOR DRAIN	MH	MANHOLE
ø	DIAMETER	HB	HOSE BIBB
———	WASTE LINE	SDL SDC	STORM DRAIN LINE
———	WATER LINE	— —	VENT LINE
—▷—	GATE VALVE	VAC	VENT ABOVE CEILING
DD	DECK DRAIN	CP / RCP	CONCRETE PIPE / REINF. CONC. PIPE
CO	CLEANOUT	VTR	VENT THRU ROOF
——◁	PIPE DOWN	▭▷	DIRECTION OF FLOW / SLOPE

1 GENERAL NOTES

2 GROUND FLOOR SANITARY LAYOUT SCALE: 1:100 METERS

3 GROUND 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 STO. NIÑO DAY CARE CENTER

LOCATION: BARANGAY SAN ANTONIO, DISTRICT I, QUEZON CITY

DRAWN BY: [illegible] DATE:
DATE: 03/24/2021
CHECKED BY: JAM
REVISION NO.:

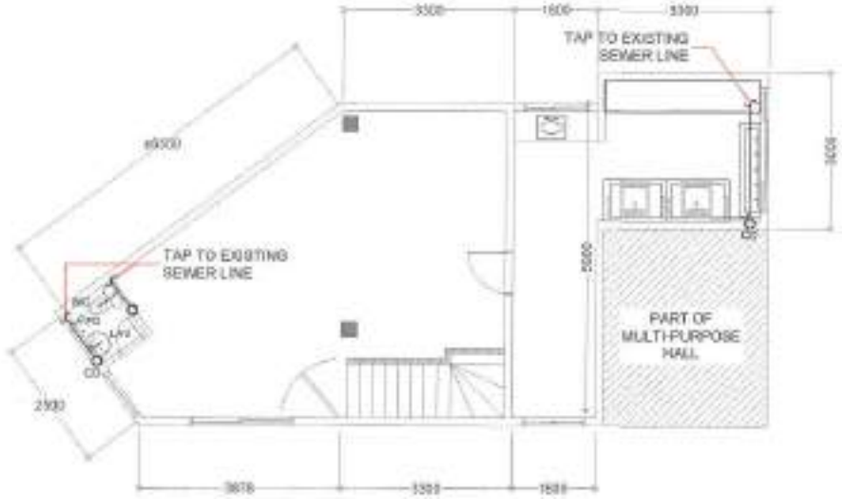
SUBMITTED BY:
ENGR. LEO S. DEL ROSARIO
HEAD, PLANNING & PROGRAMMING SECTION

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

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

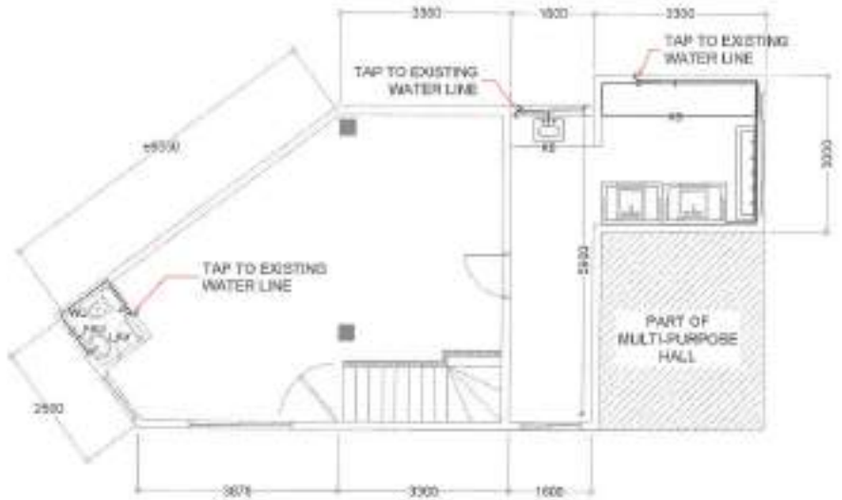
SHEET CONTENT:
GENERAL NOTES
GROUND FLOOR SANITARY LAYOUT
GROUND FLOOR WATER LINE LAYOUT

SHEET NO.:
PL-01
7 / 14



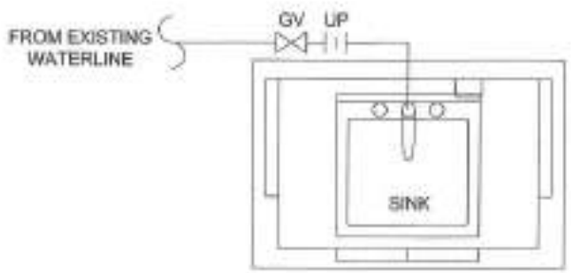
1 SECOND FLOOR SANITARY LAYOUT

SCALE: 1:100 METERS



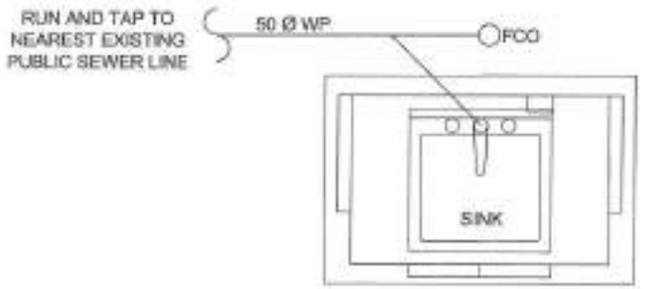
2 SECOND FLOOR WATER LINE LAYOUT

SCALE: 1:100 METERS



3 SINGLE SINK PORTABLE HAND WASHING WATER LINE

SCALE: 1:20 METERS



4 SINGLE SINK PORTABLE HAND WASHING SANITARY LINE

SCALE: 1:20 METERS

Republika ng Pilipinas
Lungsod ng Quezon
CITY ENGINEERING DEPARTMENT

PROJECT TITLE: PROPOSED CONSTRUCTION OF HAND WASHING FACILITY AND REHABILITATION OF STO. NIÑO DAY CARE CENTER	DRAWN BY:	SUBMITTED BY: ENGR. LEO S. DEL ROSARIO, HEAD, PLANNING & PROGRAMMING DIVISION	RECOMMENDING APPROVAL: ENGR. ISAGANI R. VERZOSA, JR., OIC, CITY ENGINEERING DEPARTMENT	APPROVED BY: HON. MA. JOSEFINA G. BELMONTE, CITY MAYOR, QUEZON CITY	SHEET CONTENT: SECOND FLOOR SANITARY LAYOUT; SECOND FLOOR WATER LINE LAYOUT; SINGLE SINK PORTABLE HAND WASHING WATER LINE; SINGLE SINK PORTABLE HAND WASHING SANITARY LINE	SHEET NO. PL-02
LOCATION: BARANGAY SAN ANTONIO, DISTRICT I, QUEZON CITY	DATE: 03/03/2021					8 / 14
	CHECKED BY: JRA					
	REVISION NO.:					

1. ALL ELECTRICAL WORKS SHALL BE DONE IN ACCORDANCE WITH THE PROVISIONS OF THE LATEST EDITION OF THE PHILIPPINE ELECTRICAL CODE, THE LAWS AND ORDINANCES OF THE LOCAL CODE ENFORCING AUTHORITIES AND THE REQUIREMENTS OF THE LOCAL POWER AND TELEPHONE UTILITY COMPANY.
2. THE CONTRACTOR SHALL SECURE ALL PERMITS AND PAY ALL FEES REQUIRED FOR THE WORK AND SHALL FURNISH THE OWNER THROUGH THE ENGINEERS, FINAL CERTIFICATES OF ELECTRICAL INSPECTION AND APPROVAL FROM PROPER GOVERNMENT AUTHORITIES FOR COMPLETION OF WORK.
3. ALL EMBEDDED BRANCH CIRCUITS SHALL BE PVC CONDUITS AND FOR EXPOSED INSTALLATION SHALL BE RIGID SUPPORTED BY CONDUIT CLAMPS EVERY 200 MILIMETERS.
4. PULL BOXES SHALL BE PROVIDED BY THE CONTRACTOR WHENEVER NECESSARY TO FACILITATE WIRE PULLING EVEN IF THESE ARE NOT INDICATED ON THE PLANS. SIZING OF ALL PULLBOXES SHALL BE COMPUTED BASED ON THE CODE REQUIREMENTS. SUBMIT SHOP DRAWINGS TO THE ENGINEER FOR APPROVAL PRIOR TO FABRICATION. LOCATION OF PULLBOXES SHALL BE APPROVED BY THE ARCHITECT/ENGINEER AND MUST BE REFLECTED ON THE "AS-BUILT" PLAN.
5. ALL POWER OUTLETS AND SWITCHES SHALL BE GROUNDING TYPE WITH PARALLEL SLOTS FOR 220 V.
6. PROVIDE GROUND FAULT CURRENT INTERRUPTER CIRCUIT BREAKER FOR LOADS MARKED "GFCI" ON THE PLANS.
7. ALL METALLIC CONDUITS, CABINETS AND EQUIPMENT SHALL BE PROPERLY GROUNDED AND BONDED.
8. UNLESS OTHERWISE NOTED, MOUNTING HEIGHT FOR WALL MOUNTED DEVICES SHALL BE AS FOLLOWS:

   RECEPTACLE OUTLET - 300 MM AFF., 150MM ABOVE WORKING COUNTER.
   TELEPHONE OUTLET - 300 MM AFF
   CATV OUT LET - 300 MM AFF
   LIGHTING SWITCH - 1400 MM AFF
   PANELBOARD - 1600 MM AFF

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

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

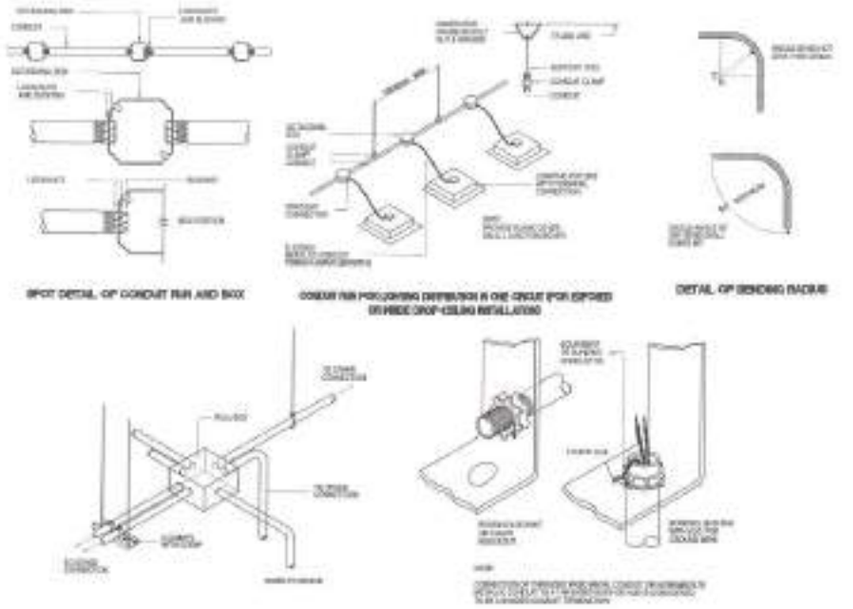
14. BOXES, WIRE, GUTTERS, ENCLOSURE SHALL BE FABRICATED FROM STEEL WITH THICKNESS AS FOLLOWS:
    MAXIMUM WIDTH OF THE WIDEST SURFACE (MM)

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

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

1 GENERAL NOTES

NOT TO SCALE



2 MISCELLANEOUS DETAILS

NOT TO SCALE

	EXISTING DUPLEX CONVENIENCE OUTLET		ADDITIONAL 150W RECESSED TROFFER TYPE		CIRCUIT HOMERUN
	ADDITIONAL DUPLEX CONVENIENCE OUTLET TO WEATHERPROOF OUTLET WITH COVER		ADDITIONAL PIN LIGHT 9W (RECESSED)		PANEL BOARD
	REPLACE DUPLEX CONVENIENCE OUTLET TO WEATHERPROOF OUTLET WITH COVER		SELECTOR SWITCH (FAN)		KILOWATT-HOUR METER
	ADDITIONAL CEILING FAN		SINGLE GANG SWITCH (LIGHTS)		SERVICE ENTRANCE
	ADDITIONAL CEILING MOUNTED EXHAUST FAN		THREE GANG SWITCH (LIGHTS)		ENCLOSED CIRCUIT BREAKER
	ADDITIONAL FIXLIGHT 9W (SURFACE MOUNT)		THREE WAY SWITCH (LIGHTS)		

3 LEGENDS AND SYMBOLS

NOT TO SCALE

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Lungsod ng Quezon
CITY ENGINEERING DEPARTMENT

PROJECT TITLE:	DRAWN BY:	SUBMITTED BY:	RECOMMENDING APPROVAL:	APPROVED BY:	SHEET CONTENT: / SHEET NO:
PROPOSED CONSTRUCTION OF HAND WASHING FACILITY AND REHABILITATION OF STO. NIÑO DAY CARE CENTER	DATE:	ENGR. LEO S. DEL ROSARIO HEAD - PLANNING & PROGRAMMING DIVISION	ENGR. ISAGANI R. VERZOSA, JR. OIC, CITY ENGINEERING DEPARTMENT	HON. MA. JOSEFINA G. BELMONTE CITY MAYOR, QUEZON CITY	GENERAL NOTES, MISCELLANEOUS DETAILS, LEGENDS AND SYMBOLS EL-01 9 | 14
LOCATION: BARANGAY SAN ANTONIO, DISTRICT I, QUEZON CITY	REVISION NO.:				

LIGHTING POWER PANEL (LPP)

LOCATION: GROUND FLOOR

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

CKT NO.	LOAD DESCRIPTION	VOLTS	VA	AMP	AT	SIZE OF	
						WIRES	CONDUITS
1	10-LIGHTING OUTLET 3-SPRAY FAN	230	1450	6.30	20	2-3.5mm² THHN COPPER WIRE 1-3.5mm² TW GROUND WIRE	IN 20mmØ PVC PIPE
2	3-LIGHTING OUTLET 1-EXHAUST FAN, 1-EXHAUST FAN	230	560	2.43	20	2-3.5mm² THHN COPPER WIRE 1-3.5mm² TW GROUND WIRE	IN 20mmØ PVC PIPE
3	10-LIGHTING OUTLET 3-SPRAY FAN	230	1150	5.00	20	2-3.5mm² THHN COPPER WIRE 1-3.5mm² TW GROUND WIRE	IN 20mmØ PVC PIPE
4	5-CONVENIENCE OUTLET	230	900	3.91	20	2-3.5mm² THHN COPPER WIRE 1-3.5mm² TW GROUND WIRE	IN 20mmØ PVC PIPE
5	9-CONVENIENCE OUTLET	230	1620	7.04	20	2-3.5mm² THHN COPPER WIRE 1-3.5mm² TW GROUND WIRE	IN 20mmØ PVC PIPE
6	2.5HP AIRCONDITIONING UNIT (SPLIT TYPE)	230	3910	17.0	30	2-3.5mm² THHN COPPER WIRE 1-3.5mm² TW GROUND WIRE	IN 25mmØ PVC PIPE
7	2.5HP AIRCONDITIONING UNIT (SPLIT TYPE)	230	3910	17.0	30	2-3.5mm² THHN COPPER WIRE 1-3.5mm² TW GROUND WIRE	IN 25mmØ PVC PIPE
8	SPARE	230	–	–	30	–	–
			13500	58.70			

COMPUTATION :

$$IT = \frac{13500}{230V} + (0.25 * IT)$$

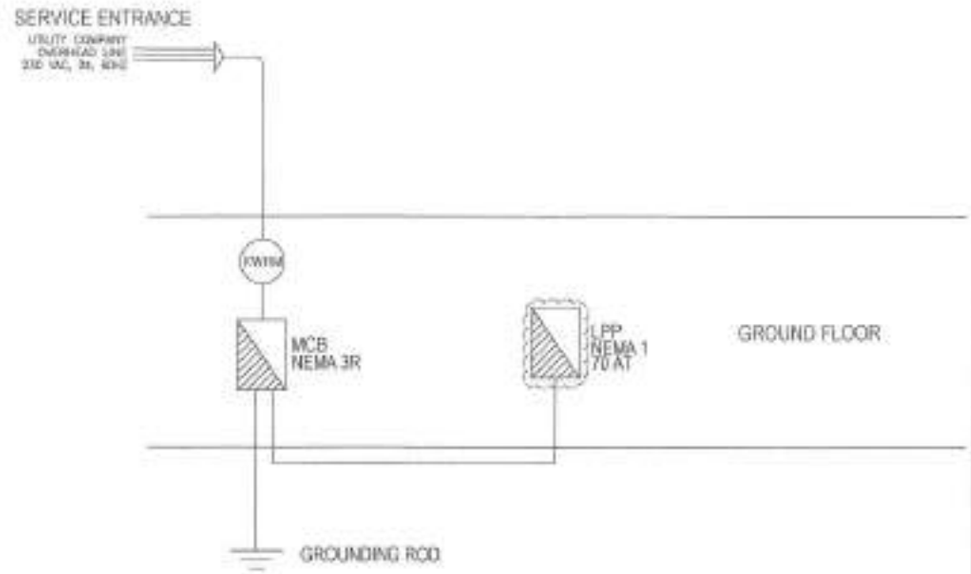
IT = 62.95 AMP.

OVER CURRENT PROTECTION:
USE : 70AT, 2P, 230V MOULDED CASE CIRCUIT BREAKER IN NEMA 1

MAIN FEEDER:
USE : 2 - 14.0mm² THHN & 1-8.0mm² TW GROUND WIRE IN 32mmØ PVC PIPE

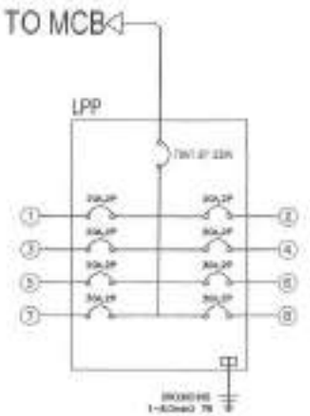
1 SCHEDULE OF LOADS

NOT TO SCALE



2 SINGLE LINE DIAGRAM

NOT TO SCALE



3 PANEL BOARD DETAIL

NOT TO SCALE

Republika ng Pilipinas
Lungsod ng Quezon
CITY ENGINEERING DEPARTMENT

PROJECT TITLE:
PROPOSED CONSTRUCTION OF HAND WASHING FACILITY AND REHABILITATION OF STO. NIÑO DAY CARE CENTER

LOCATION: BARANGAY SAN GREGORIO, DISTRICT I, QUEZON CITY

DRAWN BY: [illegible]
DATE: 07/07/2021
CHECKED BY: JDV
REVISION NO.:

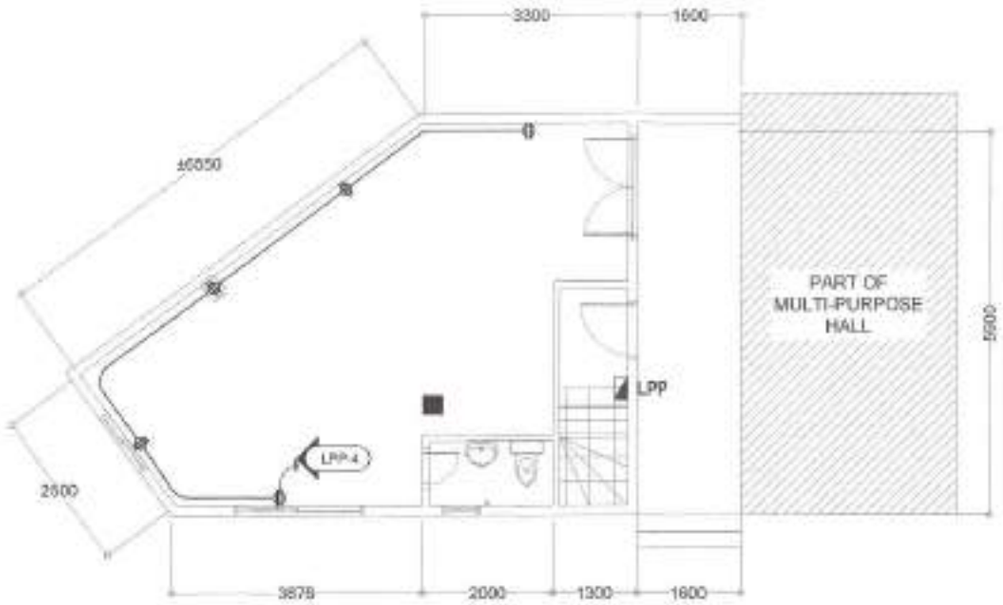
SUBMITTED BY:
ENGR. LEO S. DEL ROSARIO
HEAD, PLUMBING & PEST MANAGEMENT DIVISION

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

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

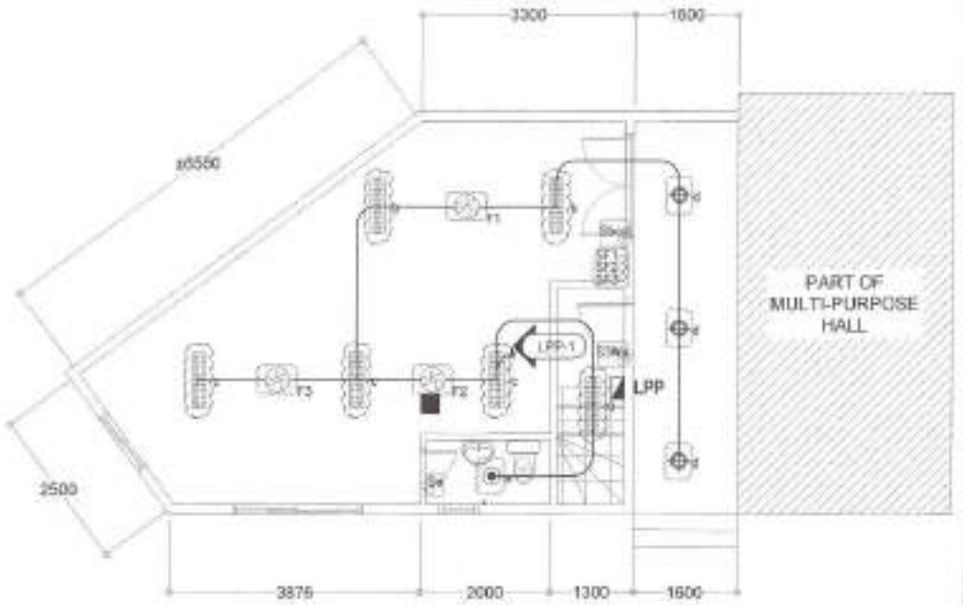
SHEET CONTENT:
SCHEDULE OF LOADS, SINGLE LINE DIAGRAM, PANEL BOARD DETAILS

SHEET NO.:
EL-02
10 | 14



1 GROUND FLOOR POWER LAYOUT

SCALE 1 :50 MTS



2 GROUND FLOOR LIGHTING LAYOUT

SCALE 1 :50 MTS

Republika ng Pilipinas
Lungsod ng Quezon
CITY ENGINEERING DEPARTMENT

PROJECT TITLE:
PROPOSED CONSTRUCTION OF HAND WASHING FACILITY AND REHABILITATION OF STO. NIÑO DAY CARE CENTER

LOCATION: BARANGAY SAN ANTONIO, DISTRICT II, QUEZON CITY

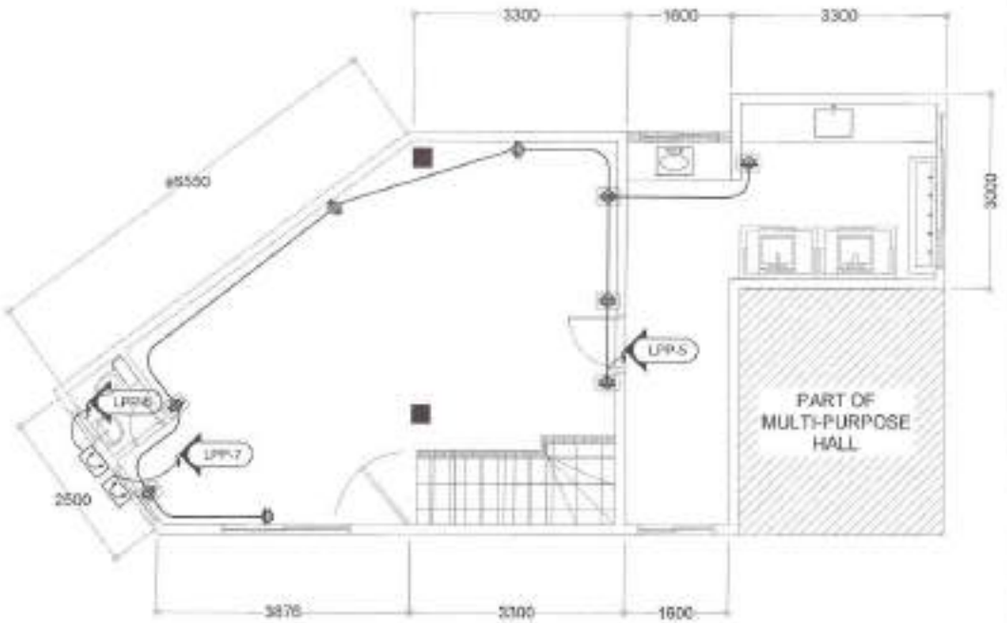
DRAWN BY:
DATE: 01/07/2021
CHECKED BY:
REVISION NO.:

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

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

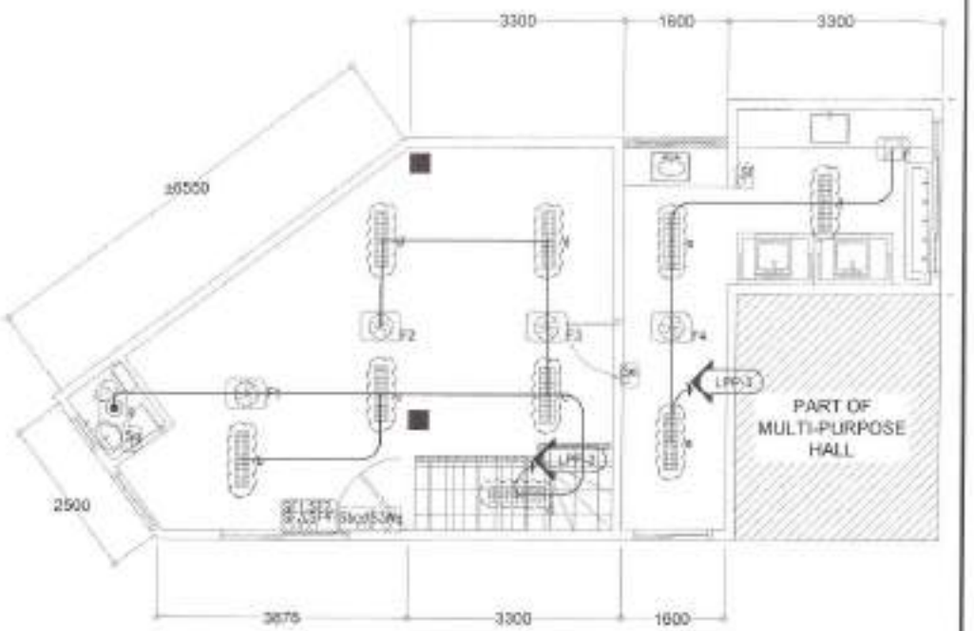
APPROVED BY:
HON. MA. JOSEFINA G. BELMONTE
CITY MAYOR - QUEZON CITY

SHEET CONTENT:
SHEET NO.:
EL-03
11 | 14



1 SECOND FLOOR POWER LAYOUT

SCALE 1:80 MTS



2 SECOND FLOOR LIGHTING LAYOUT

SCALE 1:80 MTS

Republika ng Pilipinas
Lungsod ng Quezon
CITY ENGINEERING DEPARTMENT

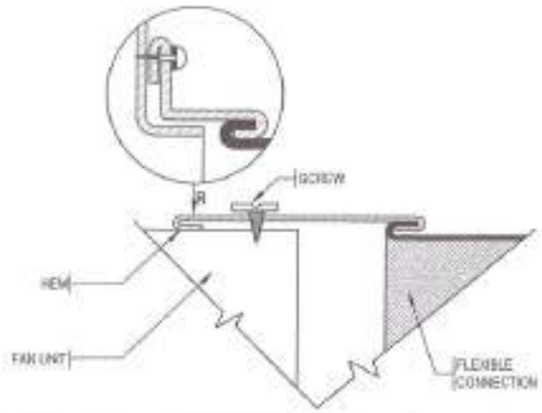
PROJECT TITLE:	DRAWN BY:	SUBMITTED BY:	RECOMMENDING APPROVAL:	APPROVED BY:	SHEET CONTENT:	SHEET NO.
PROPOSED CONSTRUCTION OF HAND WASHING FACILITY AND REHABILITATION OF STO. NIÑO DAY CARE CENTER	DATE: 07/27/2021	ENGR. LEO S. DEL ROSARIO HEAD, PLANNING & PROGRAMMING DIVISION	ENGR. ISAGANI R. VERZOSA, JR. OIC, CITY ENGINEERING DEPARTMENT	HON. MA. JOSEFINA G. BELMONTE CITY MAYOR, QUEZON CITY	DAY CARE LEVEL 2 FLOOR LAYOUT DAY CARE CENTER LIGHTING LAYOUT	EL-04 12 | 14
LOCATION: BARANGAY 666, ANTIPOLO DISTRICT I, QUEZON CITY	CHECKED BY: JRC					
	REVISION NO.:					

1. ALL MECHANICAL WORKS SHALL BE DONE IN ACCORDANCE WITH THE LATEST REQUIREMENTS OF THE NATIONAL BUILDING CODE, PSME CODE AND THE RULES AND REGULATIONS OF QUEZON CITY.
2. THE SCOPE OF WORK SHALL INCLUDE ALL WORKS DESCRIBED IN PLANS.
3. THE WORKS SHALL BE EXECUTED IN CLOSE COORDINATION WITH ALL OTHER TRADES. ALL AIRCONDITIONED SPACES SHALL BE MAINTAINED AT 24°C DB AND 50% RH.
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 HE 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. ALL PIPE EQUIPMENT CONDENSATE DRAIN SHALL BE CONNECTED TO THE NEAREST FLOOR DRAIN / AD./CB.
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.

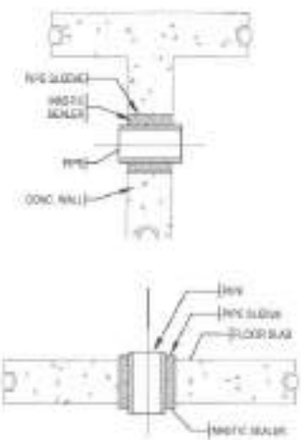
1 GENERAL NOTES

- EQUIPMENT DESIGNATION
- REFRIGERANT PIPE
- WALL MOUNTED INDOOR UNIT
- WINDOW TYPE AIR CONDITIONER
- AIR COOLED CONDENSING UNIT
- ELBOW UP
- ELBOW DOWN
- FCU - FAN COIL UNIT
- TAG - TRANSFER AIR GRILLE

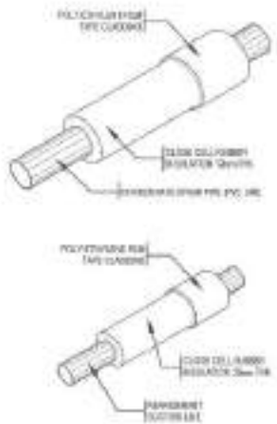
2 LEGENDS & SYMBOLS



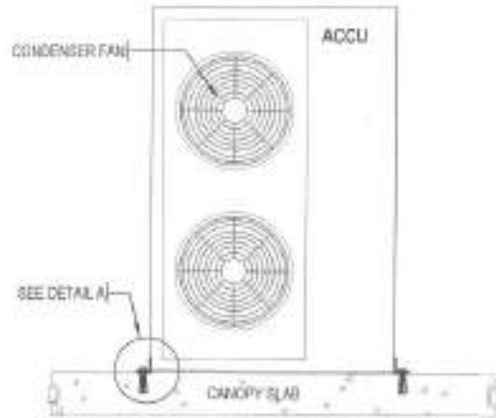
3 FLEXIBLE CONNECTION DETAIL

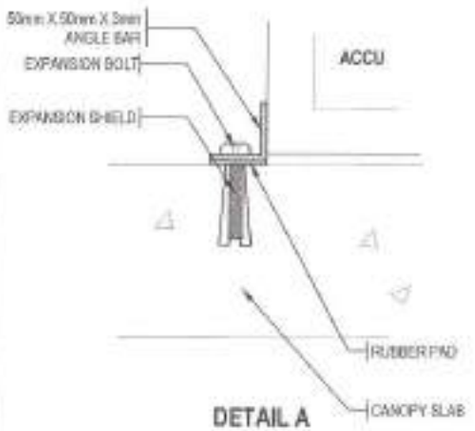


4 PIPE SLEEVES DET.



5 REFRIGERANT / DRAIN PIPE INSULATION DET.





DETAIL A

6 ACCU MOUNTING DETAIL

Republika ng Pilipinas
Lungsod ng Quezon
CITY ENGINEERING DEPARTMENT

PROJECT TITLE:
PROPOSED CONSTRUCTION OF HAND WASHING FACILITY AND REHABILITATION OF STO. NIÑO DAY CARE CENTER
LOCATION: BARANGAY SAN ANTONIO, DISTRICT I, QUEZON CITY

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

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

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

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

SHEET CONTENT:
GENERAL NOTES
LEGENDS & SYMBOLS
FLEXIBLE CONNECTION DETAIL
PIPE SLEEVES DETAIL
REFRIGERANT / DRAIN PIPE INSULATION DETAIL
ACCU MOUNTING DETAIL

SHEET NO.:
ME-01
13 | 14

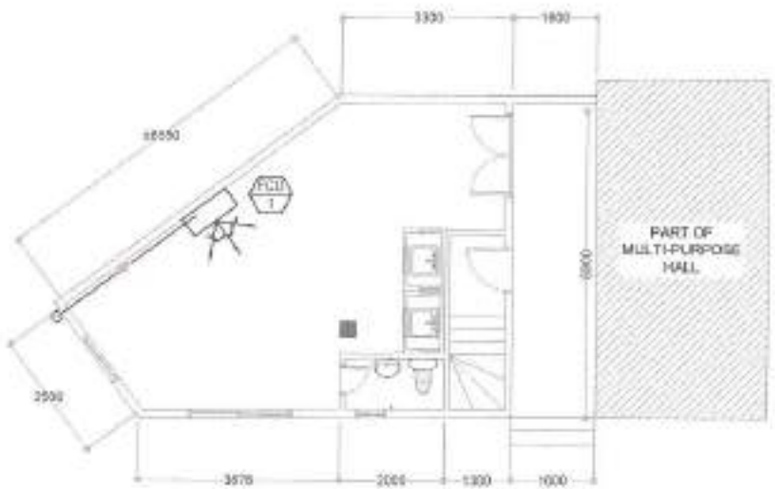
SPLIT TYPE AIR-CONDITIONER
AIR-COOLED CONDENSING UNITS

DESIGNATION		LOCATION	QUANTITY	HP RATING	COOLING CAPACITY	AIR CIRCULATION	POWER INPUT WATTS	ELECTRICAL SUPPLY			REFRIGERANT PIPE		REMARKS
OUTDOOR	INDOOR							VOLTS	PHASE	HERTZ	LIQUID, cu.m	GAS, cu.m	
ACCU 1	FCU 1	AS SHOWN ON PLANS	2 SET	2.5 HP	21,600 KJ/H	600 CFM	2,200 W	230.0	1Ø	60.0	6.35	15.88	FAN COIL UNIT SHALL BE WALL MOUNTED TYPE. CONTRACTOR SUPPLY AND INSTALL

EXHAUST FAN

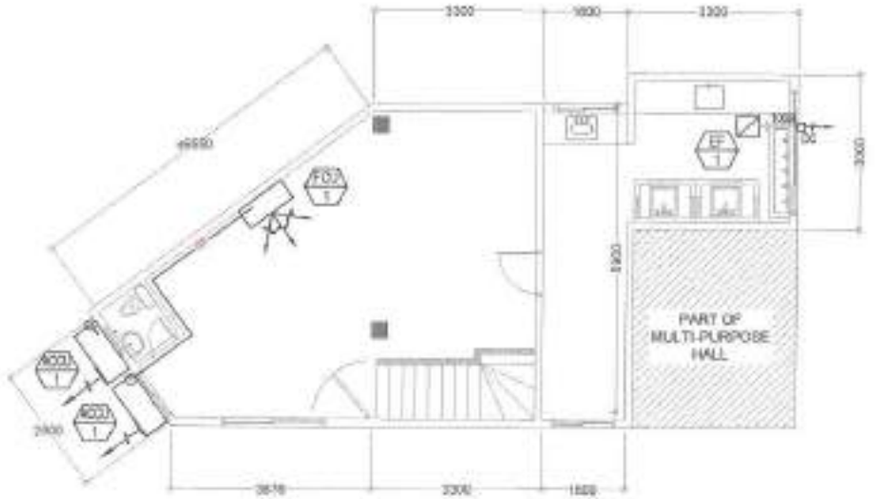
DESIGNATION	LOCATION	QUANTITY	TYPE	AIR VOLUME CMH	POWER INPUT WATTS	ELECTRICAL SUPPLY			REMARKS
						VOLTS	PHASE	HERTZ	
EF 1	AS SHOWN ON PLANS	1 SETS	CEILING MOUNTED	140-150	20	230.0	1Ø	60.0	UNITS SHALL BE EQUIPPED WITH DISCHARGE OUTLET, TAPERED OUT ADAPTER, ONE-TOUCH SPRING TYPE LOUVER & AN ADAPTER CONTAINING A REVERSE FLOW PREVENTION SHUTTER

1 AIRCONDITIONING SYSTEM SCHEDULE



2 GROUND FLOOR AIRCONDITIONING LAYOUT

SCALE: 1:100 METERS



3 SECOND FLOOR AIRCONDITIONING AND VENTILATION 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 STO. NIÑO DAY CARE CENTER

LOCATION: BARANGAY SAN ANTONIO, DISTRICT I, QUEZON CITY

DRAWN BY:

DATE:

CHECKED BY:

REVISION NO.:

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

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

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

SHEET CONTENT:
SCHEDULE OF AIRCONDITIONING LAYOUT & VENTILATION LAYOUT

SHEET NO.:
ME-02
14 | 14

Section VIII. Bill of Quantities

Notes on the Bill of Quantities

Objectives

The objectives of the Bill of Quantities are:

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

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

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

Daywork Schedule

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

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

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

Provisional Sums

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

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

Signature Box

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

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

PROJECT TITLE : PROPOSED CONSTRUCTION F HAND WASHING FACILITY AND REHABILITATION OF DAY CARE CENTER AT DISTRICT 1 AREA II

LOCATION : BARANGAY BAHAY TORO, KATIPUNAN 7 SAN ANTONIO, DISTRICT 1, QUEZON CITY

PROJECT NO. : 22 - 00026

DURATION : Ninety (90) Calendar Days

BREAKDOWN OF COST

ITEM NO.	ITEM OF WORK (DESCRIPTION)	MATERIALS COST	LABOR COST	INDIRECT COST	AGGREGATE COST
	SITIO MALIGAYA DAY CARE CENTER, BARANGAY BAHAY TORO				
I	GENERAL REQUIREMENTS				
II	CONSTRUCTION OF HAND WASHING FACILITY				
III	REHABILITATION OF DAY CARE CENTER				
	KATIPUNAN DAY CARE CENTER, BARANGAY PROJECT 6				
I	GENERAL REQUIREMENTS				
II	CONSTRUCTION OF HAND WASHING FACILITY				
III	REHABILITATION OF DAY CARE CENTER				
	STO NIÑO DAY CARE CENTER, BARANGAY STO. CRISTO				
I	GENERAL REQUIREMENTS				
II	CONSTRUCTION OF HAND WASHING FACILITY				
III	REHABILITATION OF DAY CARE CENTER				

T O T A L C O S T ₱ _____

LUMP SUM BID IN WORDS : _____

_____

Contractor : _____

BILL OF QUANTITIES

(Building Construction/Rehabilitation Project)

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

LOCATION : BARANGAY BAHAY TORO, DISTRICT 1, QUEZON CITY

PROJECT NO. : 22 - 00026

SCOPE OF WORK :

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

II Construction of Hand Washing Facility

a Supply and installation of single sink handwashing stall.

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

III Rehabilitation of Day Care center

a Site Works include removal works, cleaning and clearing for painting preparation and dismantling of lighting power panel.

b Civil/Structural Works include metal works and roofing works.

c Architectural Works ceiling finishes, installation of doors and windows, and painting works.

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

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

f Mechanical Works include installation of roughing-ins, wires and cables, fixtures and accessories.

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

ITEM NO.	WORK DESCRIPTION & SCOPE OF WORKS	QTY.	UNIT	UNIT COST	TOTAL COST
I	**GENERAL REQUIREMENTS**				
	Billboard	1	unit	₱	₱
	Clearing, Hauling and Disposal of Construction Materials and Debris	2	t.l.		
	Construction Safety and Health	1	unit		
	Scaffolding (Rental)	123	sq. m		
	Temporary Enclosure around the Construction Area (H=2.4m)	45	l.m.		
				Direct Cost I	₱
II	**CONSTRUCTION OF HAND WASHING FACILITY**				
A	Hand Washing Facility				
	Single Sink Portable Hand Washing Facility	1	unit	₱	₱
				Subtotal A	₱
B	Sanitary / Plumbing Works				
	Sewer Line / Storm Drainage System				
	Roughing-Ins				
	50mm Ø, Pipe PVC	1	piece	₱	₱
	100mm Ø, Pipe PVC	4	piece		
	50mm Ø, P-Trap	1	piece		

ITEM NO.	WORK DESCRIPTION & SCOPE OF WORKS	QTY.	UNIT	UNIT COST	TOTAL COST
	50mm Ø, 1/8 bend	5	piece		
	100mm Ø, 1/8 bend	3	piece		
	75mm Ø, 1/4 Bend	3	piece		
	100mm Ø, 1/4 bend	2	piece		
	100mm Ø x 75mm Ø, Tee Reducer	2	piece		
	100mm Ø x 50mm Ø, Wye	1	piece		
	Waterline System				
	Roughing-Ins				
	20mm Ø, Pipe PPR	3	piece		
	20mm Ø, Tee Equal	1	piece		
	20mm Ø, Elbow	3	piece		
	20mm Ø, Coupling	3	piece		
	Valves and Appurtenances				
	20mm Ø Gate Valve, PPR	1	piece		
	Miscellaneous & Consumables				
	400cc Solvent Cement	2	can		
	Hacksaw Blade	1	piece		
	Teflon Tape	1	roll		
	Waste Cloth	1	kg		
				Material Cost B	₱
				Labor Cost B	
				Direct Cost B	₱
				Material Cost II	₱
				Labor Cost II	
				Direct Cost II	₱
III	**REHABILITATION OF DAY CARE CENTER**				
A	**Site Works**				
	Site Clearing and Preparation	15	sq.m.	₱	₱
	Layout and Staking	15	sq.m.		
	Excavation for Structures				
	Footing	3	cu. m		
	Ground	1	cu. m		
	Soil Treatment	3	sq.m.		
	Gravel Bedding	1	cu. m		
				Material Cost	₱
				Labor Cost	
				Direct Cost	₱
	Backfill and compaction	3	cu. m	₱	₱
				Subtotal	₱
	Demolition Works				

ITEM NO.	WORK DESCRIPTION & SCOPE OF WORKS	QTY.	UNIT	UNIT COST	TOTAL COST
	Removal of Canopy	3	sq.m.	₱	₱
	Removal of Railing	9	l.m		
	Chipping of Tiles	120	sq. m		
	Removal of Doors	3	piece		
	Removal of Windows	12	sq. m		
	Cleaning/Clearing for Painting Preparation	510	sq. m		
				Subtotal	₱
				Material Cost A	₱
				Labor Cost A	
				Subtotal A	₱
B	**Civil Works / Structural Works**				
	Concreting				
	On Site Mix Concrete				
	Column Footing	1	cu. m	₱	₱
	Ground	1	cu. m		
	Pedestal	1	cu. m		
	Reinforcing Steel Bar				
	Grade 40 Reinforcing Steel Bars Including G.I. Tire Wire # 26				
	10mmØ Reinforcing Steel Bars				
	Column Ties	43	kg		
	Ground	24	kg		
	Grade 60 Reinforcing Steel Bars Including G.I. Tire Wire # 26				
	16mmØ Reinforcing Steel Bars				
	Column Footing	80	kg		
	Column	40	kg		
	Formworks				
	Column Footing	2	sq. m		
	Column	2	sq. m		
	Scaffolding and Shoring				
	Column	4	l.m		
	Masonry Works				
	Plastering of Door and Window Openings	42	l.m		
	Thermal and Moisture Protection				
	Cementitious Capiliary Type Waterproofing (Toilet)	5	sq. m		
	Metal Works				
	Fire Exit Railing				
	50mmx100mmx4mm Tubular Bar	164	kg		
	50mmx150mmx1.2mm C Purlin	39	kg		
	50mmØ G.I. Pipe	251	kg		
	12mm Square Bar	216	kg		
	Waiting Area				
	50mmx50mmx6mm Angle Bar	64	kg		
	38mmx38mmx6mm Angle Bar	73	kg		
	50mmx150mmx1.2mm C Purlin	27	kg		

ITEM NO.	WORK DESCRIPTION & SCOPE OF WORKS	QTY.	UNIT	UNIT COST	TOTAL COST
	100mmØ G.I. Pipe	176	kg		
	10mmØ Sagrod	6	kg		
	20mm thick Base Plate	42	kg		
	20mmØ Anchor Bolt	16	kg		
	Miscellaneous and Consumables				
	Acetylene Tank Refill	2	tank		
	Assorted Metal Drill Bit	5	piece		
	Cut Off Blade	5	piece		
	Grinding Disc Metal	5	piece		
	Oxygen Tank Refill	4	tank		
	Welding Rod	2	box		
	Roofing Works				
	Pre-Painted Rib-type G.I. Roofing	11	sq. m		
	Pre-Painted G.I. End Flashing	19	lm		
	12mm x 30mm Fascia Board	20	lm		
	Tekscew	378	piece		
	Blind Rivets	97	piece		
	Silicon Sealant	10	tube		
				Material Cost B	₱
				Labor Cost B	
				Direct Cost B	₱
C	**Architectural Works**				
	Floor Finishes				
	400mm x 400mm Homogeneous Floor Tiles	3	sq.m.	₱	₱
	600mm x 600mm Homogeneous Floor Tiles	113	sq.m.		
	Floor Topping for Preparation of Tiles	115	sq.m.		
	Wall Finishes				
	400mm x 400mm Homogeneous Wall Tiles	11	sq.m.		
	Painting Works				
	Flat Latex Paint Finish (Interior Wall and Partitions)	170	sq.m.		
	Flat Latex Paint Finish (Ceiling)	60	sq.m.		
	Elastomeric Paint Finish (Exterior Wall and Perimeter Fence)	133	sq.m.		
	Epoxy Enamel Paint Finish (Steel Surface)	74	sq.m.		
				Material Cost	₱
				Labor Cost	
				Subtotal	₱
	Fabricated Materials				
	Countertop Tiles and Aluminum Cover (Outside)	3	l.m		
				Material Cost	₱
				Labor Cost	
				Subtotal	₱
				Material Cost C	₱
				Labor Cost C	

ITEM NO.	WORK DESCRIPTION & SCOPE OF WORKS	QTY.	UNIT	UNIT COST	TOTAL COST
				Subtotal C	₱
D	**Plumbing/Sanitary Works**				
	Sewer Line / Storm Drainage System				
	Roughing-ins				
	50mm Ø, Pipe PVC	1	piece	₱	₱
	75mm Ø, Pipe PVC	3	piece		
	100mm Ø, Pipe PVC	1	piece		
	50mm Ø, P-Trap	1	piece		
	75mm Ø, P-Trap	1	piece		
	50mm Ø, 1/8 Bend	5	piece		
	75mm Ø, 1/8 Bend	1	piece		
	100mm Ø, 1/8 Bend	3	piece		
	75mm Ø, 1/4 Bend	3	piece		
	100mm Ø, 1/4 Bend	1	piece		
	100mm Ø x 75mm Ø, Tee Rreducer	4	piece		
	100mm Ø x 50mm Ø, Wye	1	piece		
	100mm Ø x 75mm Ø, Wye	1	piece		
	100mm Ø x 100mm Ø, Wye	1	piece		
	100mm Ø, Cleanout with Adapter	1	piece		
	Water Line System				
	Roughing-ins				
	20mm Ø, Pipe PPR	1	piece		
	20mm Ø, Tea Equal	2	piece		
	20mm Ø, Elbow	3	piece		
	20mm Ø, Coupling	1	piece		
	20mm Ø, Female Elbow, Threaded	2	piece		
	Valves and Appurtenances				
	20mm Ø Gate Valve PPR	1	piece		
	Fixture				
	Floor Drain, 100mm x 100mm, Stainless Steel	1	piece		
	Bidet with Accessories, Stainless (Water Efficient)	1	piece		
	Lavatory Faucet Lever Type, Stainless Steel Heavy Duty (Water Efficient)	1	piece		
	Lavatory Wall Hung, Kiddy	1	piece		
	Water Closet, Kiddy, Tank Type w/ Accessories (Water Efficient)	1	piece		
	Accessories				
	Flexible Hose, Stainless Steel	2	piece		
	Single Way Angle Valve, Stainless Steel	1	piece		
	Two Way Angle Valve, Stainless Steel	1	piece		
	Miscellaneous & Consumables				
	400cc Solvent Cement	2	can		
	Hacksaw Blade	1	piece		
	Teflon Tape	1	roll		
	Waste Cloth	1	kg		

ITEM NO.	WORK DESCRIPTION & SCOPE OF WORKS	QTY.	UNIT	UNIT COST	TOTAL COST
				Material Cost D	₱
				Labor Cost D	
				Subtotal D	₱
E	**Electrical Works**				
	Roughing-ins				
	20mm Ø, Pipe PVC	30	piece	₱	₱
	25mm Ø, Pipe PVC	50	piece		
	Fittings & Accessories				
	20mm Ø PVC Adaptor	4	piece		
	20mm Ø PVC Locknut & Bushing	4	piece		
	25mm Ø PVC Adaptor	4	piece		
	25mm Ø PVC Locknut & Bushing	4	piece		
	50mm x 100mm PVC Utility Box	10	piece		
	100mm x 100mm PVC Pull Box	20	piece		
	Wires and Cables				
	3.5mm² THHN Wire	120	l.m		
	5.5mm² THHN Wire	60	l.m		
	Wiring Devices and Other Fixture				
	18W LED Bulb	1	piece		
	Aircon Outlet, Multipurpose outlet 250V/20A	1	piece		
	E27 Receptacle Ceiling Mounted	1	piece		
	Switch w/ Plate and Cover, Single gang	1	set		
	T8, 18W LED Tube Light, Box Type	6	piece		
	Panelboard				
	LPP				
	Additional Branch: 1-30AT, 2P, 230V, BOLT-ON	1	piece		
	Miscellaneous and Consumables				
	400cc Solvent Cement	1	can		
	Electrical Tape	1	roll		
	Hacksaw Blade	1	piece		
	Torch with Butane	1	set		
				Material Cost E	₱
				Labor Cost E	
				Subtotal E	₱
F	**Mechanical Works**				
	Airconditioning System				
	Condensate Water Drainage System				
	Roughing-Ins				
	20mm Ø x 3m uPVC Pipe	1	piece	₱	₱
	20mm Ø uPVC Elbow	3	piece		
	Insulation				
	20mm Ø x 12nm Thick Rubber Foam Insulation	1	l.m		
				Material Cost	₱
				Labor Cost	

ITEM NO.	WORK DESCRIPTION & SCOPE OF WORKS	QTY.	UNIT	UNIT COST	TOTAL COST
				Subtotal	₱
	Equipment and Accessories				
	Window- Type Air Conditioning Unit				
	WAC 1 - Window-Type Airconditioner 2.5hp, 2.0 TR, 610cfm, 2350W, 230/1/60	1	unit		
				Material Cost	₱
				Labor Cost	
				Subtotal	₱
	Pipe Hangers and Supports				
	Condensate Water Drainage System Support	3	l.m		
	Miscellaneous and Consumables	1	can		
	400cc Solvent Cement	1	piece		
	Hacksaw Blade	1	kg		
	Waste Cloth				
				Material Cost	₱
				Labor Cost	
				Subtotal	₱
				Material Cost F	₱
				Labor Cost F	
				Subtotal F	₱
				Material Cost III	₱
				Labor Cost III	
				Subtotal III	₱

SUMMARY

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

NOTE: • Strictly enforc Protocols relative to the latest applicable DPWH Memorandum	**TOTAL DIRECT COST** Overhead, Contingencies and Miscellaneous and Consumables Expenses (OCM) Profit VAT	₱
	TOTAL ESTIMATED COST	₱

BILL OF QUANTITIES

(Building Construction/Rehabilitation Project)

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

LOCATION : BARANGAY KATIPUNAN, DISTRICT 1, QUEZON CITY

PROJECT NO. : 22 - 00026

SCOPE OF WOI

I GENERAL REQUIREMENTS

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

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 removal works, cleaning and clearing for painting preparation and dismantling of lighting power panel.

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

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

4.) 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.

6.) Mechanical Works include installation of roughing-ins, wires and cables, fixtures and accessories.

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

ITEM NO.	WORK DESCRIPTION & SCOPE OF WORKS	QTY.	UNIT	UNIT COST	TOTAL COST
I	**GENERAL REQUIREMENTS**				
	Billboard	1	unit	₱	₱
	Clearing, Hauling and Disposal of Construction Materials and Debris	2	t.l.		
	Construction Safety and Health	1	unit		
	Temporary Enclosure around the Construction Area (H=2.4m)	15	l.m.		
				Direct Cost I	₱
II	**CONSTRUCTION OF HAND WASHING FACILITY**				
A	Hand Washing Facility				
	Single Sink Portable Hand Washing Facility	4	unit	₱	₱
				Direct Cost A	₱
B	Sanitary / Plumbing Works				
	Sanitary Line / Sewer Line / Storm Drainage System				
	50mm Ø PVC Pipe with Hub	2	piece	₱	₱
	50mm Ø x 50mm Ø Wye	3	piece		
	50mm Ø x 50mm Ø PVC 1/8 Bend	5	piece		
	Waterline System				
	25mm Ø PPR Pipe	4	piece		

ITEM NO.	WORK DESCRIPTION & SCOPE OF WORKS	QTY.	UNIT	UNIT COST	TOTAL COST
	25mm Ø x 25mm Ø PPR 90° Elbow	8	piece		
	25mm Ø PPR Coupling	6	piece		
	25mm Ø x 20mm Ø PPR Reducer	4	piece		
	32mm Ø x 25mm Ø PPR Reducer	4	piece		
	Valves & Appurtenances				
	20mm Ø PPR Gate Valve	4	piece		
				Material Cost B	₱
				Labor Cost B	
				Direct Cost B	₱
				Material Cost II	₱
				Labor Cost II	
				Direct Cost II	₱
III	**REHABILITATION OF DAY CARE CENTER**				
A	Site Works				
	Dismantling of Lighting Power Panel	1	assy	₱	₱
	Removal of Dilapidated Ceiling	33	sq.m.		
	Removal of Dilapidated Door	4	unit		
	Removal of Dilapidated Window	12	sq.m.		
	Removal of Water Closet, Kiddy	1	set		
	Removal of Wall Hung Lavatory, Kiddy	1	set		
	Removal of Roof	32	sq.m.		
	Clearing / Cleaning for Painting Preparation	139	sq.m.		
				Direct Cost A	₱
B	Civil Works / Structural Works				
	Metal Works				
	G1 - Steel Gate				
	25mmØ G.I. Pipe	20	kg	₱	₱
	12mm Square Bar	15	kg		
	Cylindrical Hinge, Heavy Duty	3	piece		
	Barrel Bolt (Steel Gate)	1	piece		
	Miscellaneous & Consumables				
	Acetylene Tank Refill	1	tank		
	Cut Off Blade	1	piece		
	Grinding Disc Metal	1	piece		
	Oxygen tank Refill	1	tank		
	Welding Rod	1	box		
	Roofing Works				
	Pre-Painted Rib-type G.I. Roofing	32	sq.m.		
	Pre-Painted G.I. End Flashing	18	l.m.		
	Pre-Painted G.I. Gutter	7	l.m.		
	6mm thick One-Sided Aluminum Foil Thermal Insulation	32	sq.m.		
	12mm x 300mm Fiber Cement Fascia Board	8	l.m.		

ITEM NO.	WORK DESCRIPTION & SCOPE OF WORKS	QTY.	UNIT	UNIT COST	TOTAL COST
	Blind Rivets	10	piece		
	Tekscrew	142	piece		
	Silicon Sealant	6	tube		
				Material Cost B	₱
				Labor Cost B	
				Direct Cost B	₱
C	Architectural Works				
	Ceiling Finishes				
	6mm Thick Fiber Cement Board including Metal Framing	33	sq.m.	₱	₱
				Material Cost	₱
				Labor Cost	
				Subtotal	₱
	Installation of Doors				
	D1 - (1.20m x 2.10m) Panel Door	1	set	₱	₱
	D2 - (0.60m x 2.10m) PVC Door with Louver	2	set		
	D3 - (0.60m x 1.90m) Flush Door	1	set		
	Door Jambs				
	D1 - (1.20m x 2.10m) Panel Door Wooden Jamb	1	set		
	D3 - (0.60m x 1.90m) Flush Door Wooden Jamb	2	set		
	Hardwares and Accessories				
	Door Hinges, Heavy Duty Stainless	12	piece		
	Door Knob, Lever Type, Stainless	4	piece		
	Installation of Windows				
	W1 - 1.20m x 1.20m Powder Coated Aluminum Framed Sliding Glass Window	2	set		
	W2 - 1.20m x 2.40m Powder Coated Aluminum Framed Sliding Glass Window	1	set		
	W3 - 1.20m x 2.40m Powder Coated Aluminum Framed Sliding Window with Fixed Glass	1	set		
	W4 - 1.20m x 1.00m Powder Coated Aluminum Framed Sliding Glass Window	2	set		
				Material Cost	₱
				Labor Cost	
				Subtotal	₱
	Painting Works				
	Epoxy Enamel Paint Finish				
	Steel Gate	2	sq.m.	₱	₱
	Flat Latex Paint Finish				
	Interior Wall	139	sq.m.		
	Ceiling	33	sq.m.		
				Material Cost	₱
				Labor Cost	
				Subtotal	₱

ITEM NO.	WORK DESCRIPTION & SCOPE OF WORKS	QTY.	UNIT	UNIT COST	TOTAL COST
				Material Cost C	₱
				Labor Cost C	
				Direct Cost C	₱
D	Sanitary / Plumbing Works				
	Sewer Line / Storm Drainage System				
	100mm Ø, PVC Pipe with Hub	2	piece	₱	₱
	75mm Ø, PVC Pipe with Hub	2	piece		
	50mm Ø, PVC Pipe with Hub	4	piece		
	100mm Ø x 100mm Ø, Wye	3	piece		
	100mm Ø x 75mm Ø, Wye	2	piece		
	100mm Ø x 50mm Ø, Wye	2	piece		
	75mm Ø x 50mm Ø, Tee	3	piece		
	50mm Ø, 1/4 Bend	5	piece		
	100mm Ø, 1/8 Bend	5	piece		
	75mm Ø, 1/8 Bend	3	piece		
	50mm Ø, 1/8 Bend	3	piece		
	P-Trap 40mm Ø	2	piece		
	P-Trap 32mm Ø	2	piece		
	Coupling 100mm Ø	3	piece		
	Waterline (Water Efficient)				
	25mm Ø, PPR Pipe	2	piece		
	20mm Ø, PPR Pipe	5	piece		
	25mm Ø, Tee Equal	3	piece		
	20mm Ø, Tee Equal	10	piece		
	20mm Ø, End Cap	10	piece		
	25mm Ø, 90 Deg Elbow	3	piece		
	20mm Ø, 90 Deg Elbow	20	piece		
	20mm Ø x 1/2: Ø, Female Thread Tee	10	piece		
	25mm Ø, Coupling	3	piece		
	Fixtures				
	Bidet with Accessories, Stainless (Water Efficient)	1	set		
	Hose Bibb, Lever Type, Stainless, Heavy Duty (Water Efficient)	7	piece		
	Kitchen Sink Faucet, Stainless (Water Efficient)	1	piece		
	Lavatory Faucet, Lever Type, Stainless Steel Heavy Duty (Water Efficient)	1	piece		
	Lavatory Wall Hung, Kiddy	1	set		
	Water Closet, Tank Type, Kiddy w/ Accessories (Water Efficient)	1	set		
	Accessories				
	Angle Valve, Single-Way Stainless Steel	2	piece		
	Angle Valve, Two-Way Stainless Steel	1	piece		
	Flexible Hose, Stainless	3	piece		
	Miscellaneous & Consumables				

ITEM NO.	WORK DESCRIPTION & SCOPE OF WORKS	QTY.	UNIT	UNIT COST	TOTAL COST
	400cc Solvent Cement	1	can		
	All-Around Sealant	1	can		
	Hacksaw Blade	3	piece		
	Teflon Tape	3	roll		
	Waste Cloth	1	kg		
				Material Cost D	₱
				Labor Cost D	
				Direct Cost D	₱
E	Electrical Works				
	Roughing-ins				
	20mmØ PVC Pipe	30	piece	₱	₱
	Fittings and Accessories				
	20mmØ PVC Adaptor	26	piece		
	20mmØ PVC Flexible Tube	15	l.m.		
	20mmØ PVC Locknut and Bushing	26	pair		
	50mm x 100mm PVC Utility Box	11	piece		
	100mm x 100mm PVC Junction Box with Cover	8	piece		
	Wires and Cables				
	3.5mm² THHN Wire	1	roll		
	3.5mm² TW Wire	100	l.m.		
	Lighting Devices				
	100mm Ø Round Recessed Pinlight (case)	4	piece		
	100mm Ø Round Recessed Pinlight LED 9W	4	piece		
	Wiring Devices and Other Fixtures				
	Aircon Outlet, Multipurpose Outlet 250V/20A	1	piece		
	Orbit Fan with Selector Switch	1	piece		
	Outlet with Grounding, Two-gang	5	piece		
	Switch with Plate and Cover, One Gang	4	piece		
	Switch with Plate and Cover, Two Gang	1	piece		
	Weatherproof Plate Cover	5	piece		
	Pipe Hangers & Supports				
	Horizontal Layout of Pipe	30	l.m.		
	Miscellaneous & Consumables				
	400cc Solvent Cement	2	can		
	Electrical Tape	1	roll		
	G.I. Tie Wire Ga. 16 (for Cable Pulling)	1	kg		
	Hacksaw Blade	4	piece		
	Masking Tape	1	roll		
	Pulling Lubricant	1	can		
	Rubber Tape	1	roll		
	Torch w/ Butane	1	set		
				Material Cost E	₱
				Labor Cost E	
				Direct Cost E	₱

ITEM NO.	WORK DESCRIPTION & SCOPE OF WORKS	QTY.	UNIT	UNIT COST	TOTAL COST
				Material Cost III	₱
				Labor Cost III	
				Direct Cost III	₱

SUMMARY

ITEM NO	WORK DESCRIPTION AND SCOPE OF WORKS	TOTAL COST
I	GENERAL REQUIREMENTS	₱
II	CONSTRUCTION OF HAND WASHING FACILITY	
III	REHABILITATION OF DAY CARE CENTER	
NOTE: • Strictly enforce Health Protocols relative to the latest applicable DPWH Memorandum	**TOTAL DIRECT COST** Overhead, Contingencies and Miscellaneous and Consumables Expenses (OCM) Profit VAT	₱
	TOTAL ESTIMATED COST	₱

BILL OF QUANTITIES
(Building Construction/Rehabilitation Project)

PROJECT TITLE : PROPOSED CONSTRUCTION OF HAND WASHING FACILITY AND REHABILITATION OF STO. NIÑO DAY CARE CENTER

LOCATION : BARANGAY SAN ANTONIO, DISTRICT 1, QUEZON CITY

PROJECT NO. : 22 - 00026

SCOPE OF WO

I GENERAL REQUIREMENTS

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

II CONSTRUCTION OF HAND WASHING FACILITY

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

2.) Site works include chipping of walls (sanitary / plumbing works).

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

III REHABILITATION OF DAY CARE CENTER

1.) Site Works include removal works, cleaning and clearing for painting preparation, chipping of wall for electrical works, and

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

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

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

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

6.) Mechanical Works include installation of roughing-ins, equipment, fixtures and accessories.

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

ITEM NO.	WORK DESCRIPTION & SCOPE OF WORKS	QTY.	UNIT	UNIT COST	TOTAL COST
I	**GENERAL REQUIREMENTS**				
	Billboard	1	unit	₱	₱
	Clearing, Hauling and Disposal of Construction Materials and Debris	2	t.l.		
	Construction Safety and Health	1	unit		
	Scaffolding (Rental)	132	sq.m		
	Temporary Enclosure around the Construction Area (H=2.4m)	28	l.m.		
				Direct Cost I	₱
II	**CONSTRUCTION OF HAND WASHING FACILITY**				
A	Hand Washing Facility				
	Single Sink Portable Hand Washing Facility	4	unit	₱	₱
				Direct Cost A	₱
B	Site Works				
	Chipping of Wall (Sanitary / Plumbing Works)	1	sq.m.	₱	₱
				Material Cost B	₱
				Labor Cost B	
				Direct Cost B	₱

ITEM NO.	WORK DESCRIPTION & SCOPE OF WORKS	QTY.	UNIT	UNIT COST	TOTAL COST
C	Sanitary / Plumbing Works				
	Sanitary Line / Sewer Line / Storm Drainage System				
	50mm Ø PVC Pipe with Hub	4	piece	₱	₱
	50mm Ø x 50mm Ø PVC 1/4 Bend	8	piece		
	Waterline System				
	25mm Ø PPR Pipe	3	piece		
	25mm Ø x 25mm Ø PPR 90° Elbow	12	piece		
	25mm Ø PPR Coupling	6	piece		
	25mm Ø x 20mm Ø PPR Reducer	4	piece		
	32mm Ø x 25mm Ø PPR Reducer	4	piece		
	Valves & Appurtenances				
	20mm Ø PPR Gate Valve	4	piece		
	Miscellaneous & Consumables				
	400cc Solvent Cement	1	can		
	All-Around Sealant	1	can		
	Hacksaw Blade	2	piece		
	Teflon Tape	4	roll		
	Waste Cloth	1	kg		
				Material Cost C	₱
				Labor Cost C	
				Direct Cost C	₱
				Material Cost II	₱
				Labor Cost II	
				Direct Cost II	₱
III	**REHABILITATION OF DAY CARE CENTER**				
A	Site Works				
	Chipping of Wall (Electrical Works)	12	sq.m.	₱	₱
	Dismantling of Lighting Power Panel	1	assy		
	Removal of Dilapidated Ceiling	139	sq.m.		
	Removal of Dilapidated Door	5	unit		
	Removal of Dilapidated Window	13	sq.m.		
	Removal of Water Closet	1	set		
	Removal of Water Closet, Kiddy	1	set		
	Removal of Wall Hung Lavatory	2	set		
	Removal of Roof	106	sq.m.		
	Removal of Gutter	24	l.m.		
	Clearing / Cleaning for Painting Preparation	372	sq.m.		
				Direct Cost A	₱
B	Civil Works / Structural Works				
	Masonry Works				
	150mm CHB Laying including Mortar, Reinforcement and Two-Face Plastering (Enclosure of Pantry)	5	sq.m.	₱	₱

ITEM NO.	WORK DESCRIPTION & SCOPE OF WORKS	QTY.	UNIT	UNIT COST	TOTAL COST
	Restoration of Wall (Electrical Works)	13	sq.m.		
	Metal Works				
	G1 - Steel Gate				
	25mmØ G.I. Pipe	22	kg		
	12mm Square Bar	23	kg		
	Cylindrical Hinge, Heavy Duty	3	piece		
	Barrel Bolt (Steel Gate)	1	piece		
	Fire Exit				
	50mm x 75mm Angular Bar	16	kg		
	12mmØ Round Bar	3	kg		
	Anchor Bolt	6	piece		
	Miscellaneous & Consumables				
	Acetylene Tank Refill	1	tank		
	Cut Off Blade	1	piece		
	Grinding Disc Metal	1	piece		
	Oxygen tank Refill	1	tank		
	Welding Rod	1	box		
	Roofing Works				
	Pre-Painted Rib-type G.I. Roofing	106	sq.m.		
	Pre-Painted G.I. End Flashing	55	l.m.		
	Pre-Painted G.I. Gutter	24	l.m.		
	6mm thick One-Sided Aluminum Foil Thermal Insulation	106	sq.m.		
	12mm x 300mm Fiber Cement Fascia Board	24	l.m.		
	Blind Rivets	32	piece		
	Tekscrew	508	piece		
	Silicon Sealant	6	tube		
				Material Cost B	₱
				Labor Cost B	
				Direct Cost B	₱
C	Architectural Works				
	Wall Finishes and Partition				
	6mm Thick Double Wall Fiber Cement Board including Metal Framing	11	sq.m.	₱	₱
	Ceiling Finishes				
	6mm Thick Fiber Cement Board including Metal Framing	139	sq.m.		
				Material Cost	₱
				Labor Cost	
				Subtotal	₱
	Installation of Doors				
	D1 - (0.90m x 2.10m) Panel Door	2	set	₱	₱
	D2 - (0.60m x 2.10m) PVC Door with Louver	2	set		
	D3 - (1.60m x 2.10m) Glass Door	1	set		
	Door Jambs				

ITEM NO.	WORK DESCRIPTION & SCOPE OF WORKS	QTY.	UNIT	UNIT COST	TOTAL COST
	D1 - (0.90m x 2.10m) Panel Door Wooden Jamb	2	set		
	Hardwares and Accessories				
	Door Hinges, Heavy Duty Stainless	12	piece		
	Door Knob, Lever Type, Stainless	4	piece		
	Vertical Door Handle, Stainless Steel Hairline Finish	1	pair		
	Installation of Windows				
	W1 - (1.20m x 2.00m) Powder Coated Aluminum Framed Sliding Glass Window	2	set		
	W2 - (1.20m x 1.00m) Powder Coated Aluminum Framed Sliding Glass Window	2	set		
	W3 - (0.60m x 0.60m) Powder Coated Aluminum Framed Awning Glass Window	2	set		
	W4 - (1.20m x 1.20m) Powder Coated Aluminum Framed Sliding Glass Window	2	set		
	W5 - (1.20m x 2.40m) Powder Coated Aluminum Framed Sliding Glass Window	1	set		
				Material Cost	₱
				Labor Cost	
				Subtotal	₱
	Painting Works				
	Epoxy Enamel Paint Finish				
	Steel Gate	2	sq.m.	₱	₱
	Flat Latex Paint Finish				
	Interior Wall	372	sq.m.		
	Ceiling	100	sq.m.		
	Fabricated Materials				
	Undercounter Aluminum Cabinet Cover	4	l.m.		
				Material Cost	₱
				Labor Cost	
				Subtotal	₱
				Material Cost C	₱
				Labor Cost C	
				Direct Cost C	₱
D	Sanitary / Plumbing Works				
	Sewer Line / Storm Drainage System				
	100mm Ø, PVC Pipe with Hub	7	piece	₱	₱
	75mm Ø, PVC Pipe with Hub	3	piece		
	50mm Ø, PVC Pipe with Hub	9	piece		
	100mm Ø x 100mm Ø, Wye	5	piece		
	100mm Ø x 75mm Ø, Wye	3	piece		
	100mm Ø x 50mm Ø, Wye	4	piece		
	75mm Ø x 50mm Ø, Tee	7	piece		
	50mm Ø, 1/4 Bend	14	piece		
	100mm Ø, 1/8 Bend	9	piece		

ITEM NO.	WORK DESCRIPTION & SCOPE OF WORKS	QTY.	UNIT	UNIT COST	TOTAL COST
	75mm Ø, 1/8 Bend	5	piece		
	50mm Ø, 1/8 Bend	6	piece		
	Cleanout 100mm Ø	7	piece		
	P-Trap 100mm Ø	7	piece		
	P-Trap 50mm Ø	3	piece		
	P-Trap 40mm Ø	3	piece		
	P-Trap 32mm Ø	3	piece		
	Coupling 100mm Ø	7	piece		
	Waterline (Water Efficient)				
	25mm Ø, PPR Pipe	3	piece		
	20mm Ø, PPR Pipe	10	piece		
	25mm Ø, Tee Equal	2	piece		
	20mm Ø, Tee Equal	10	piece		
	20mm Ø, End Cap	9	piece		
	25mm Ø, 90 Deg Elbow	5	piece		
	20mm Ø, 90 Deg Elbow	22	piece		
	20mm Ø x 1/2: Ø, Female Thread Tee	9	piece		
	25mm Ø, Coupling	4	piece		
	Fixtures				
	Bidet with Accessories, Stainless (Water Efficient)	2	set		
	Floor Drain, 100mm x 100mm Stainless Steel	2	piece		
	Hose Bibb, Lever Type, Stainless, Heavy Duty (Water Efficient)	7	piece		
	Kitchen Sink Faucet, Stainless (Water Efficient)	2	piece		
	Lavatory Faucet, Lever Type, Stainless Steel Heavy Duty (Water Efficient)	2	piece		
	Lavatory Wall Hung	1	set		
	Lavatory, Wall Hung, Kiddy	1	set		
	Water Closet, Tank Type w/ Accessories (Water Efficient)	1	set		
	Water Closet, Tank Type, Kiddy w/ Accessories (Water Efficient)	1	set		
	Accessories				
	Angle Valve, Single-Way Stainless Steel	4	piece		
	Angle Valve, Two-Way Stainless Steel	2	piece		
	Flexible Hose, Stainless	6	piece		
	Miscellaneous & Consumables				
	400cc Solvent Cement	4	can		
	All-Around Sealant	2	can		
	Hacksaw Blade	3	piece		
	Teflon Tape	6	roll		
	Waste Cloth	2	kg		
				Material Cost D	₱
				Labor Cost D	
				Direct Cost D	₱
E	Electrical Works				

ITEM NO.	WORK DESCRIPTION & SCOPE OF WORKS	QTY.	UNIT	UNIT COST	TOTAL COST
	Roughing-ins				
	20mmØ PVC Pipe	70	piece	₱	₱
	25mmØ PVC Pipe	30	piece		
	Fittings and Accessories				
	20mmØ PVC Adaptor	88	piece		
	25mmØ PVC Adaptor	6	piece		
	20mmØ PVC Flexible Tube	60	l.m.		
	25mmØ PVC Flexible Tube	10	l.m.		
	20mmØ PVC Locknut and Bushing	88	pair		
	25mmØ PVC Locknut and Bushing	6	pair		
	50mm x 100mm PVC Utility Box	25	piece		
	100mm x 100mm PVC Junction Box with cover	35	piece		
	100mm x 100mm PVC Utility Box (Pullbox)	5	piece		
	Wires and Cables				
	3.5mm² THHN Wire	3	roll		
	5.5mm² THHN Wire	1	roll		
	3.5mm² TW Wire	2	roll		
	Wiring Devices and other fixtures				
	300mm x 1200mm, 1 x 18w LED, Troffer Type, w/ Complete Accessories, Recessed Type	15	set		
	100mm Ø Round Surfaced Pinlight (Case)	3	piece		
	100mm Ø Round Surfaced Pinlight LED 9W	3	piece		
	100mm Ø Round Recessed Pinlight (case)	2	piece		
	100mm Ø Round Recessed Pinlight LED 9W	2	piece		
	EF 1 - Duct Mounted Ceiling Ventilation Fan 100 cfm / 15 w / 230 V / 1 ϕ	1	piece		
	Wiring Devices and other fixtures				
	Orbit Fan with Selector Switch	7	piece		
	Switch w/ Plate & Cover, One Gang	4	piece		
	Switch w/ Plate & Cover, Three Gang	2	piece		
	Switch w/ Plate & Cover, Three Way	2	piece		
	Weatherproof Plate Cover	14	piece		
	Outlet with Grounding, Two-Gang	14	piece		
	Panelboard				
	Lighting Power Panel (LPP)				
	Main: 70AT, 2P, 230V, 18 KAIC, MCCB Branches: 3-30AT, 2P, 230V, Bolt-on Branches: 5-20AT, 2P, 230V, Bolt-on Enclosure: NEMA 1 with Ground Terminals	1	assy		
	Enclosed Circuit Breaker (ECB)				
	Main: 30AT, 2P, 230V, Bolt-on Enclosure: NEMA 3 with Ground Terminals	2	assy		
	Pipe Hangers & Supports				
	Horizontal Layout of Pipe	50	l.m.		
	Miscellaneous & Consumables				
	400cc Solvent Cement	3	can		

ITEM NO.	WORK DESCRIPTION & SCOPE OF WORKS	QTY.	UNIT	UNIT COST	TOTAL COST
	Electrical Tape	7	roll		
	G.I. Tie Wire Ga. 16 (for cable pulling)	3	kg		
	Hacksaw Blade	6	piece		
	Masking Tape	1	roll		
	Pulling Lubricant	1	can		
	Rubber Tape	1	roll		
	Torch w/ Butane	4	set		
				Material Cost E	₱
				Labor Cost E	
				Direct Cost E	₱
F	Mechanical Works				
	Refrigerant Pipe System				
	Roughing-Ins				
	6.35mm Ø Copper Coil Tubing	15	piece	₱	₱
	15.88mm Ø Copper Coil Tubing	15	piece		
	Insulation				
	6.35mm Ø x 20mm thick Rubber Foam Insulation	15	piece		
	15.88mm Ø x 20mm thick Rubber Foam Insulation	15	piece		
	Condensate Water Drainage System				
	Roughing-Ins				
	25mm Ø x 3m uPVC Pipe	3	piece		
	25mm Ø uPVC Elbow	9	piece		
	Ventilation System				
	100mm Ø PVC Pipe	1	piece		
	100mm Ø Air Vent Cap	1	piece		
				Material Cost	₱
				Labor Cost	
				Subtotal	₱
	Split-type Air Conditioning Unit				
	Wall Mounted Fan Coil Unit, Inverter Type, 2.5 hp, 6 KW (21,600 KJ/h) Cooling Capacity,600 cfm, 1780W, 230/1/60, 6.35mm (1/4") Ø L, 15.88mm (5/8") Ø G	2	unit	₱	₱
				Material Cost	₱
		Labor Cost with Technical Supervision			
				Subtotal	₱
	Pipe Hangers and Supports				
	ACCU Support	2	unit	₱	₱
	Condensate Water Drainage System Support	3	l.m.		
	Refrigerant Pipe System Support	15	l.m.		
	Vibration Isolator	8	piece		
	Miscellaneous & Consumables				
	400cc Solvent Cement	1	can		
	25mm wide x 50m long Polyethylene Tape	3	roll		

ITEM NO.	WORK DESCRIPTION & SCOPE OF WORKS	QTY.	UNIT	UNIT COST	TOTAL COST
	50mm x 10m Duct Tape	2	roll		
	Brazing Rod (10pcs/box)	2	box		
	Waste Cloth	1	kg		
				Material Cost	₱
				Labor Cost	
				Subtotal	₱
				Material Cost F	₱
				Labor Cost F	
				Direct Cost F	₱
				Material Cost III	₱
				Labor Cost III	
				Direct Cost III	₱

SUMMARY

ITEM NO	WORK DESCRIPTION AND SCOPE OF WORKS	TOTAL COST
I	GENERAL REQUIREMENTS	₱
II	CONSTRUCTION OF HAND WASHING FACILITY	
III	REHABILITATION OF DAY CARE CENTER	
NOTE: • Strictly enforce Health Protocols relative to the latest applicable DPWH Memorandum	**TOTAL DIRECT COST** Overhead, Contingencies and Miscellaneous and Consumables Expenses (OCM) Profit VAT	₱
	TOTAL ESTIMATED COST	₱

Section IX. Checklist of Technical and Financial Documents

Notes on the Checklist of Technical and Financial Documents

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

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

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

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

Checklist of Technical and Financial Documents

I. TECHNICAL COMPONENT ENVELOPE

Class "A" Documents

Legal Documents

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

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

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

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

Technical Documents

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

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

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

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

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

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

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

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

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

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

Additional Technical Requirements:

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

Financial Documents

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

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

Class "B" Documents

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

II. FINANCIAL COMPONENT ENVELOPE

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

Other documentary requirements under RA No. 9184

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

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

☐ (r) Cash Flow by Quarter.

Bid Form for the Procurement of Infrastructure Projects

[shall be submitted with the Bid]

BID FORM

Date : _____

Project Identification No. : _____

To: [name and address of Procuring Entity]

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

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

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

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

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

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

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

g. If our Bid is accepted, we commit to obtain a Performance Security in the amount of *[insert percentage amount]* percent of the Contract Price for the due performance of the Contract, or a Performance Securing Declaration in lieu of the the allowable forms of Performance Security, subject to the terms and conditions of issued GPPB guidelines[1] for this purpose;

h. We are not participating, as Bidders, in more than one Bid in this bidding process, other than alternative offers in accordance with the Bidding Documents;

i. We understand that this Bid, together with your written acceptance thereof included in your notification of award, shall constitute a binding contract between us, until a formal Contract is prepared and executed; and

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

---

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

k. We likewise certify/confirm that the undersigned, is the duly authorized representative of the bidder, and granted full power and authority to do, execute and perform any and all acts necessary to participate, submit the bid, and to sign and execute the ensuing contract for the [Name of Project] of the [Name of the Procuring Entity].

l. We acknowledge that failure to sign each and every page of this Bid Form, including the Bill of Quantities, shall be a ground for the rejection of our bid.

Name: _____

Legal Capacity: _____

Signature: _____

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

Date: _____

Bid Securing Declaration Form

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

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

BID SECURING DECLARATION
Project Identification No.: *[Insert number]*

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

I/We, the undersigned, declare that:

1. I/We understand that, according to your conditions, bids must be supported by a Bid Security, which may be in the form of a Bid Securing Declaration.

2. I/We accept that: (a) I/we will be automatically disqualified from bidding for any procurement contract with any procuring entity for a period of two (2) years upon receipt of your Blacklisting Order; and, (b) I/we will pay the applicable fine provided under Section 6 of the Guidelines on the Use of Bid Securing Declaration, within fifteen (15) days from receipt of the written demand by the procuring entity for the commission of acts resulting to the enforcement of the bid securing declaration under Sections 23.1(b), 34.2, 40.1 and 69.1, except 69.1(f),of the IRR of RA No. 9184; without prejudice to other legal action the government may undertake.

3. I/We understand that this Bid Securing Declaration shall cease to be valid on the following circumstances:

   a. Upon expiration of the bid validity period, or any extension thereof pursuant to your request;
   b. I am/we are declared ineligible or post-disqualified upon receipt of your notice to such effect, and (i) I/we failed to timely file a request for reconsideration or (ii) I/we filed a waiver to avail of said right; and
   c. I am/we are declared the bidder with the Lowest Calculated Responsive Bid, and I/we have furnished the performance security and signed the Contract.

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

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

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

Omnibus Sworn Statement (Revised)

[shall be submitted with the Bid]

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

AFFIDAVIT

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

1. *[Select one, delete the other:]*

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

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

2. *[Select one, delete the other:]*

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

   [If a partnership, corporation, cooperative, or joint venture:] I am granted full power and authority to do, execute and perform any and all acts necessary to participate, submit the bid, and to sign and execute the ensuing contract for [Name of the Project] of the [Name of the Procuring Entity], as shown in the attached [state title of attached document showing proof of authorization (e.g., duly notarized Secretary's Certificate, Board/Partnership Resolution, or Special Power of Attorney, whichever is applicable;)];

3. [Name of Bidder] is not "blacklisted" or barred from bidding by the Government of the Philippines or any of its agencies, offices, corporations, or Local Government Units, foreign government/foreign or international financing institution whose blacklisting rules have been recognized by the Government Procurement Policy Board, **by itself or by relation, membership, association, affiliation, or controlling interest with another blacklisted person or entity as defined and provided for in the Uniform Guidelines on Blacklisting;**

4. Each of the documents submitted in satisfaction of the bidding requirements is an authentic copy of the original, complete, and all statements and information provided therein are true and correct;

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

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

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

   [If a partnership or cooperative:] None of the officers and members of *[Name of Bidder]* is related to the Head of the Procuring Entity, members of the Bids and Awards Committee (BAC), the Technical Working Group, and the BAC Secretariat, the head of the Project

Management Office or the end-user unit, and the project consultants by consanguinity or affinity up to the third civil degree;

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

7. *[Name of Bidder]* complies with existing labor laws and standards; and

8. *[Name of Bidder]* is aware of and has undertaken the responsibilities as a Bidder in compliance with the Philippine Bidding Documents, which includes:

   a. Carefully examining all of the Bidding Documents;
   b. Acknowledging all conditions, local or otherwise, affecting the implementation of the Contract;
   c. Making an estimate of the facilities available and needed for the contract to be bid, if any; and
   d. Inquiring or securing Supplemental/Bid Bulletin(s) issued for the *[Name of the Project].*

9. *[Name of Bidder]* did not give or pay directly or indirectly, any commission, amount, fee, or any form of consideration, pecuniary or otherwise, to any person or official, personnel or representative of the government in relation to any procurement project or activity.

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

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

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

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

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

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

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

CONTRACT AGREEMENT

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

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

NOW THIS AGREEMENT WITNESSETH AS FOLLOWS:

1. In this Agreement, words and expressions shall have the same meanings as are respectively assigned to them in the Conditions of Contract hereinafter referred to.

2. The following documents as required by the 2016 revised Implementing Rules and Regulations of Republic Act No. 9184 shall be deemed to form and be read and construed as part of this Agreement, *viz.*:

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

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

   Bid form, including all the documents/statements contained in the Bidder's bidding envelopes, as annexes, and all other documents submitted (*e.g.*, Bidder's response to request for clarifications on the bid), including corrections to the bid, if any, resulting from the Procuring Entity's bid evaluation;

   c. Performance Security;

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

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

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

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

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

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

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

for: *for:*

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

Acknowledgment

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

Performance Securing Declaration (Revised)

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

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

PERFORMANCE SECURING DECLARATION

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

I/We, the undersigned, declare that:

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

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

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

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

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

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

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

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

LIST OF ALL ON-GOING GOVERNMENT AND PRIVATE CONTRACTS

NAME OF CONTRACTOR: _____

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

PHOTOCOPY ADDITIONAL FORMS, IF NECESSARY

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

NAME OF CONTRACTOR: _____

PROJECT TITLE: _____

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

PHOTOCOPY ADDITIONAL FORMS, IF NECESSARY

SINGLE LARGEST COMPLETED CONTRACT SIMILAR TO THE CONTRACT TO BE BID

NAME OF CONTRACTOR: _____

PROJECT TITLE: _____

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

PHOTOCOPY ADDITIONAL FORMS, IF NECESSARY

LIST OF MAJOR EQUIPMENT TO BE USED FOR THE PROJECT

NAME OF CONTRACTOR: _____

PROJECT TITLE: _____

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

PHOTOCOPY ADDITIONAL FORMS, IF NECESSARY

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

NAME OF CONTRACTOR: _____

PROJECT TITLE: _____

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

PHOTOCOPY ADDITIONAL FORMS, IF NECESSARY

COMPUTATION OF NET FINANCIAL CONTRACTING CAPACITY (NFCC)

NAME OF BIDDER: _____

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

NOTES:

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

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

REPUBLIC OF THE PHILIPPINES)

_____) S. S.

AFFIDAVIT OF UNDERTAKING

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

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

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

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

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

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

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

AFFIANT FURTHER SAYETH NAUGHT.

_____

Affiant

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

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

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

_____

Notary Public


Republic of the Philippines
gppb
Government Procurement Policy Board