



REPUBLIC OF THE PHILIPPINES
Department of Health
NATIONAL CENTER FOR MENTAL HEALTH
Nueve de Febrero Street, Mandaluyong City, Philippines

BIDDING DOCUMENTS

Public Bidding for Infrastructure Project No. 01-2025 - Construction of Two Storey NCMH Psychosocial Rehabilitation and Recovery Training Center for Service Users CY 2025

**NCMH-BIDS AND AWARDS COMMITTEE FOR
INFRASTRUCTURE CY 2025**

June 2025

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BIDS AND AWARDS COMMITTEE



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SECTION I
Invitation to Bid
(INFRA – IB NO. 001 – 2025)

Public Bidding for Infrastructure Project No. 01-2025 - Construction of Two Storey NCMH Psychosocial Rehabilitation and Recovery Training Center for Service Users CY 2025 – 240 Calendar Days

1. The **NATIONAL CENTER FOR MENTAL HEALTH**, through the **GAA CY 2025** intends to apply the sum of **Php 33,944,178.15 (Thirty-Three Million Nine Hundred Forty-Four Thousand One Hundred Seventy-Eight Pesos and 15/100 only)** being the ABC to payments under the contract for the following Projects. Bids received in excess of the ABC shall be automatically rejected at the bid opening.

| PROJECT | APPROVED BUDGET FOR THE CONTRACT (ABC) |
|--|--|
| Public Bidding for Infrastructure Project No. 01-2025 - Construction of Two Storey NCMH Psychosocial Rehabilitation and Recovery Training Center for Service Users CY 2025 | PHP 33,944,178.15 |

2. The **NATIONAL CENTER FOR MENTAL HEALTH** now invites bids for the above Procurement Projects. Completion of the Works is required (**Infrastructure Project No. 01 – 240 Calendar Days**). 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 a non-discretionary **“PASS/FAIL”** criterion as specified in the in the Approved Implementing Rules and Regulations (IRR) of RA 12009.
4. Prospective Bidders may obtain further information from **Procurement Section of the National Center for Mental Health** and check the completeness of the Bidding Documents at the address given below during **8:00AM to 5:00PM**.
5. A complete set of Bidding Documents may be acquired by interested Bidders on **June 19, 2025 – July 09, 2025 (Monday to Friday, 8:00AM – 5:00PM)** from the given address and website below, and upon submission of **LETTER OF INTENT** and

payment of the applicable fee for the Bidding Documents, pursuant to the latest Guidelines issued by the GPPB, in the amount of:

| Approved Budget for the Contract | Maximum Cost of Bidding Documents (in Philippine Peso) |
|--|--|
| 500,000.00 and below | 500.00 |
| More than 500,000.00 up to 1 Million | 1,000.00 |
| More than 1 Million up to 5 Million | 5,000.00 |
| More than 5 Million up to 10 Million | 10,000.00 |
| More than 10 Million up to 50 Million | 25,000.00 |
| More than 50 Million up to 500 Million | 50,000.00 |
| More than 500 Million | 75,000.00 |

6. The **National Center for Mental Health** will hold a **Pre-Bid Conference** on **June 27, 2025, 09:00 AM (Friday)** at the **BAC Conference Room of National Center for Mental Health**, which shall be open to prospective Bidders.
7. Bids must be duly received by the BAC Secretariat through manual submission at the office address indicated below.
8. All Bids must be accompanied by a bid security in any of the acceptable forms and in the amount stated in **ITB** Clause 15.
9. **Bid opening** shall be on **July 10, 2025, 09:00 AM (Thursday)** at the **BAC Conference of National Center for Mental Health**. Late bids shall not be accepted. Bids will be opened in the presence of bidders' representatives who choose to attend the activity.
10. The **National Center for Mental Health** reserves the right to reject any and all bids, declare failure of bidding, or not award the contract at any time prior to contract award in accordance with Sections 64 and 70 of the Approved Implementing Rules and Regulations (IRR) of RA No. 12009, without thereby incurring any liability to the affected bidder or bidders.
11. For further information, please refer to:



RUSSELLE SP. OLASO, MPA

OIC, Procurement Section

Head, BAC Secretariat

Nueve de Febrero St. Brgy. Mauway, Mandaluyong City

Tel: (02) 8531-9001 loc 239, 240, 1823

Telefax: (02) 8531-8318

Email: bacncmh@yahoo.com

Website: www.ncmh.gov.ph

12. You may visit the following websites for downloading of Bidding Documents:
(www.ncmh.gov.ph); www.philgeps.gov.ph (PhilGEPS website using
suppliers/bidders account)

June 17, 2025



JERRY C. RODRIGUEZ, MGM-ESP
Chairperson, NCMH-BAC for Infrastructure Projects CY 2025



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SECTION II

Instructions to Bidders

(INFRA – IB NO. 001 – 2025)

Public Bidding for Infrastructure Project No. 01-2025 - Construction of Two Storey NCMH Psychosocial Rehabilitation and Recovery Training Center for Service Users CY 2025– 240 Calendar Days

1. Scope of Bid

The Procuring Entity, **NATIONAL CENTER FOR MENTAL HEALTH**, invites Bids for the **Public Bidding for Infrastructure Project No. 01-2025 - Construction of Two Storey NCMH Psychosocial Rehabilitation and Recovery Training Center for Service Users CY 2025**, with Project Identification Number **INFRA – IB NO. 001 – 2025**.

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 **GAA 2025** in the amount of **Php 33,944,178.15**
- 2.2. The source of funding is:

NGA, the National Expenditure Program.

3. Bidding Requirements

The Bidding for the Project shall be governed by all the provisions of RA No. 12009 and its Approved 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, and Coercive 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 52.4.2.4 of the Approved IRR of RA No. 12009.

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 52.4.2.4 of the Approved IRR of RA No. 12009.

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 Procuring Entity has prescribed that:

- a. Subcontracting is not allowed.

8. Pre-Bid Conference

The Procuring Entity will hold a pre-bid conference for this Project on **June 27, 2025 (Friday) – 09:00 AM, at the BAC Conference Room of the National Center for Mental Health** as indicated in paragraph 6 of the **IB**.

9. Clarification and Amendment of Bidding Documents

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

10. Documents comprising the Bid: Eligibility and Technical Components

- 10.1. The first envelope shall contain the eligibility and technical documents of the Bid as specified in **Section IX. Checklist of Technical and Financial Documents**.
- 10.2. If the eligibility requirements or statements, the bids, and all other documents for submission to the BAC are in foreign language other than English, it must be accompanied by a translation in English, which shall be authenticated by the appropriate Philippine foreign service establishment, post, or the equivalent office having jurisdiction over the foreign bidder's affairs in the Philippines. For Contracting Parties to the Apostille Convention, only the translated documents shall be authenticated through an apostille pursuant to GPPB Resolution No. 13-2019 dated 23 May 2019. The English translation shall govern, for purposes of interpretation of the bid.
- 10.3. A valid special PCAB License in case of Joint Ventures, 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.

5.5. For Foreign-funded procurement, a ceiling may be applied to bid prices provided the conditions are met under Section 60.2 of the Approved IRR of RA No. 12009.

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 Price

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 shall be valid until **[120 calendar days from the date of Submission and Opening of Bids]**. Any bid not accompanied by an acceptable bid security shall be rejected by the Procuring Entity as non-responsive.

16. Sealing and Marking of Bids

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

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

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

17. Deadline for Submission of Bids

The Bidders shall submit on the specified date and time and either at its physical address or through online submission as indicated in paragraph 7 of the **IB**.

18. Opening and Preliminary Examination of Bids

18.1. 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 58 of the Approved IRR of RA No. 12009 shall prevail.

The preliminary examination of Bids shall be governed by Section 59 of the Approved IRR of RA No. 12009.

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 61.2 of the Approved IRR of RA No. 12009.

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 52.4.2.6 of the Approved IRR of RA No. 12009 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 66.5 of the Approved IRR of RA No. 12009 shall form part of the Contract. Additional Contract documents are indicated in the **BDS**.



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SECTION III
Bid Data Sheet
(INFRA – IB NO. 001 – 2025)

Public Bidding for Infrastructure Project No. 01-2025 - Construction of Two Storey NCMH Psychosocial Rehabilitation and Recovery Training Center for Service Users CY 2025 – 240 Calendar Days

| ITB Clause | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|--|---|----------------------------|---|----------------------------|-----------------------|------------------------------|---|---|-------------------------|------------------------------------|---|---|---|------------------------------------|---|---|---|---------------------|---|---|----------------------------|--|---|---|---|----------------------|---|---|---------------------------|
| 5.2 | <p>For this purpose, contracts similar to the Project refer to contracts which have the same major categories of work, which shall be:</p> <p>a. Public Bidding for Infrastructure Project No. 01-2025 - Construction of Two Storey NCMH Psychosocial Rehabilitation and Recovery Training Center for Service Users CY 2025 – <u>240 Calendar Days</u></p> <p>Completed within <i>three (3) years</i> prior to the deadline for the submission and receipt of bids.</p> | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 7.1 | Subcontracting is not allowed | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 10.3 | Valid Philippine Contractor’s Accreditation Board (PCAB) License and Registration (License Category B: Size Range – Medium A) | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 10.4 | <p>The key personnel must meet the required minimum years of experience set below:</p> <table><tr><th><u>Key Personnel</u></th><th><u>General Experience</u></th><th><u>Relevant Experience</u></th><th><u>Qualifications</u></th></tr><tr><td>1 Project Manager / Engineer</td><td>7</td><td>5</td><td>Licensed Civil Engineer</td></tr><tr><td>1 Professional Electrical Engineer</td><td>7</td><td>5</td><td>Licensed Professional Electrical Engineer</td></tr><tr><td>1 Professional Mechanical Engineer</td><td>7</td><td>5</td><td>Licensed Professional Mechanical Engineer</td></tr><tr><td>1 Sanitary Engineer</td><td>7</td><td>5</td><td>Licensed Sanitary Engineer</td></tr><tr><td>1 Electronics and Communication Engineer</td><td>5</td><td>5</td><td>Licensed Electronics and Communication Engineer</td></tr><tr><td>1 Materials Engineer</td><td>7</td><td>5</td><td>DPWH ACCREDITED MATERIALS</td></tr></table> | <u>Key Personnel</u> | <u>General Experience</u> | <u>Relevant Experience</u> | <u>Qualifications</u> | 1 Project Manager / Engineer | 7 | 5 | Licensed Civil Engineer | 1 Professional Electrical Engineer | 7 | 5 | Licensed Professional Electrical Engineer | 1 Professional Mechanical Engineer | 7 | 5 | Licensed Professional Mechanical Engineer | 1 Sanitary Engineer | 7 | 5 | Licensed Sanitary Engineer | 1 Electronics and Communication Engineer | 5 | 5 | Licensed Electronics and Communication Engineer | 1 Materials Engineer | 7 | 5 | DPWH ACCREDITED MATERIALS |
| <u>Key Personnel</u> | <u>General Experience</u> | <u>Relevant Experience</u> | <u>Qualifications</u> | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1 Project Manager / Engineer | 7 | 5 | Licensed Civil Engineer | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1 Professional Electrical Engineer | 7 | 5 | Licensed Professional Electrical Engineer | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1 Professional Mechanical Engineer | 7 | 5 | Licensed Professional Mechanical Engineer | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1 Sanitary Engineer | 7 | 5 | Licensed Sanitary Engineer | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1 Electronics and Communication Engineer | 5 | 5 | Licensed Electronics and Communication Engineer | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1 Materials Engineer | 7 | 5 | DPWH ACCREDITED MATERIALS | | | | | | | | | | | | | | | | | | | | | | | | | | |

[Handwritten signatures and initials]

| | | | | |
|------|--|--|-----------------|---|
| | | | | ENGINEER II (Attached Certification from DPWH) |
| | 1 Safety Officer | 7 | 5 | With DOLE Accredited COSH Training (At least Safety Officer II w/ Attached Certification) |
| | 1 Foreman | 7 | 5 | N/A |
| 10.5 | The minimum major equipment requirements are the following: | | | |
| | <u>DESCRIPTION</u> | <u>CAPACITY</u> | <u>QUANTITY</u> | |
| | 1. One Bagger Mixer | One Bagger | 2 unit | |
| | 2. Portable Welding Machine | At least 330 A | 3 unit | |
| | 3. Cutting Outfit | N/A | 2 unit | |
| | 4. Concrete Vibrator | At least 5hp | 2 unit | |
| | 5. Plate Compactor | At least 5hp | 2 unit | |
| | 6. Manual Steel Bar Bender | At least 20mm | 2 unit | |
| | 7. Demolition Hammer | N/A | 2 unit | |
| | 8. Dump Truck | At least 6 cu. m | 2 unit | |
| | 9. Utility Truck | At least 1.5 cu. m | 2 unit | |
| | 10. Crawler Excavator | At least 0.75 cu. m Bucket Capacity | 1 unit | |
| | 11. Water Pump | At least 1 HP | 2 unit | |
| | 12. Hammer Drill | At least 500 W | 2 unit | |
| | 13. Cut – Off Machine 14" | At least 2000 W | 2 unit | |
| | 14. Circular Saw 7" | At least 1050 W | 1 unit | |
| | 15. Grinder | At least 500 W | 2 unit | |
| | 16. PPR Fusion Machine | At least 20mm | 2 unit | |
| | 17. Sander Machine | At least 135 W | 2 unit | |
| | 18. Various Hand Tools | N/A | 1 lot | |
| 12 | There is no provision for a value engineering change proposal. | | | |

| 15.1 | The bid security shall be in the form of a Bid Securing Declaration , or any of the following forms and amounts: a. The amount is not less than two percent (2%) of ABC per project, if bid security is in cash, cashier's/manager's check, bank draft/guarantee or irrevocable letter of credit; or b. The amount is not less than five percent (5%) of ABC per project, if bid security in is Surety Bond. | | | | | | | | | | | | | | | | | | | |
|--|---|---------------|---------------|--|--|------|-----|------------|-------------|--|---------------------|--|--|--|--|--|-------|---------------|---------------|--|
| 19.2 | <table><tr><th>ITEM</th><th>QTY</th><th>UNIT PRICE</th><th>TOTAL PRICE</th><th></th></tr><tr><td colspan="5">PUBLIC BIDDING FOR:</td></tr><tr><td>a. Infrastructure Project No. 01-2025 - Construction of Two Storey NCMH Psychosocial Rehabilitation and Recovery Training Center for Service Users CY 2025</td><td>1 Lot</td><td>33,944,178.15</td><td>33,944,178.15</td><td></td></tr></table> | | | | | ITEM | QTY | UNIT PRICE | TOTAL PRICE | | PUBLIC BIDDING FOR: | | | | | a. Infrastructure Project No. 01-2025 - Construction of Two Storey NCMH Psychosocial Rehabilitation and Recovery Training Center for Service Users CY 2025 | 1 Lot | 33,944,178.15 | 33,944,178.15 | |
| ITEM | QTY | UNIT PRICE | TOTAL PRICE | | | | | | | | | | | | | | | | | |
| PUBLIC BIDDING FOR: | | | | | | | | | | | | | | | | | | | | |
| a. Infrastructure Project No. 01-2025 - Construction of Two Storey NCMH Psychosocial Rehabilitation and Recovery Training Center for Service Users CY 2025 | 1 Lot | 33,944,178.15 | 33,944,178.15 | | | | | | | | | | | | | | | | | |
| 20 | <p><i>No need for ECC Licenses as long as they have DOLE Accreditation following the Department Order No. 13</i></p> <p>Within a non-extendable period of five (5) calendar days from receipt by the Bidder of the notice from the BAC that is submitted the Lowest Calculated Bid, the Bidder shall submit its:</p> <ul style="list-style-type: none">a. Certified True Copy (CTC) duly signed by the Authorized Representative - Current and Valid Tax Clearanceb. Certified True Copy (CTC) duly signed by the Authorized Representative- Latest Annual Income Tax Return (with corresponding eFPS Filing Reference Number and successful payment page or its equivalent proof of payment, if applicable).c. Certified True Copy (CTC) duly signed by the Authorized Representative- Certificate of PhilGEPS Registration (Platinum Membership)d. Certified True Copy (CTC) duly signed by the Authorized Representative - Current and Valid Mayor's Permite. Certified True Copy (CTC) duly signed by the Authorized Representative - Notice of Award or Notice to Proceed or Contract issued by the owners, as attachment for the Statement of the Prospective bidder of All Its On Going Government and Private Contracts.f. Certified True Copy (CTC) duly signed by the Authorized Representative - Notice of Award, Contract, Scope of Works and Bill of Quantities (BOQ) or bid proposal Issued by the owners, as attachment for the Single Largest Completed Contract (SLCC) within the past 3 years prior to the date of submission and receipt of bids.g. Certified True Copy (CTC) duly signed by the Authorized Representative - Detailed Unit Price Analysis (DUPA) of ALL ITEMS OF WORKS in the Detailed Estimates. The DUPA shall reflect the construction materials, labor cost and equipment rentals used in coming up with the unit cost of the bid.h. Certified True Copy (CTC) duly signed by the Authorized Representative - Certificate of Performance for Infrastructure related projects [For current and previous (3 years) Contractor of NCMH, it shall be issued by the Head of Procuring Entity / Medical Center Chief II. For non-current Contractor, certificate issued from other government or private agencies are acceptable (at least SATISFACTORY RATING)]. | | | | | | | | | | | | | | | | | | | |
| 21 | Additional Contract Documents relevant to the project that may be required by the | | | | | | | | | | | | | | | | | | | |

Handwritten signatures and initials:

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| | Procuring Entity <u>upon signing of the Contract</u> in accordance to RA No. 12009, such as: <ul style="list-style-type: none"> a. Contract Agreement; b. Bidding Documents; c. Winning bidder's bid, including the Eligibility requirements, Technical and Financial Proposals, and all other documents/statements submitted; d. Performance Security; e. Notice of Award of Contract; f. Construction Schedule and S-Curve; g. Manpower Schedule; h. Construction Methods; i. Equipment Utilization Schedule; j. Construction Safety and Health Program approved by the Department of Labor and Employment; and k. Project Evaluation & Review Technique/ Critical Path Method (PERT/CPM) |
|--|---|

The Eligibility Documents and Technical Proposal combined in one folder and the Financial Proposal in separate Folder (**ORANGE FOLDER**). Each folder with **fastener / shoelace on top or ring bind on left side, with Table of Contents and Tabs (properly labeled according to the checklist for bidders issued).**

**MARKING FOR ELIGIBILITY/TECHNICAL PROPOSALS /
FINANCIAL PROPOSALS**

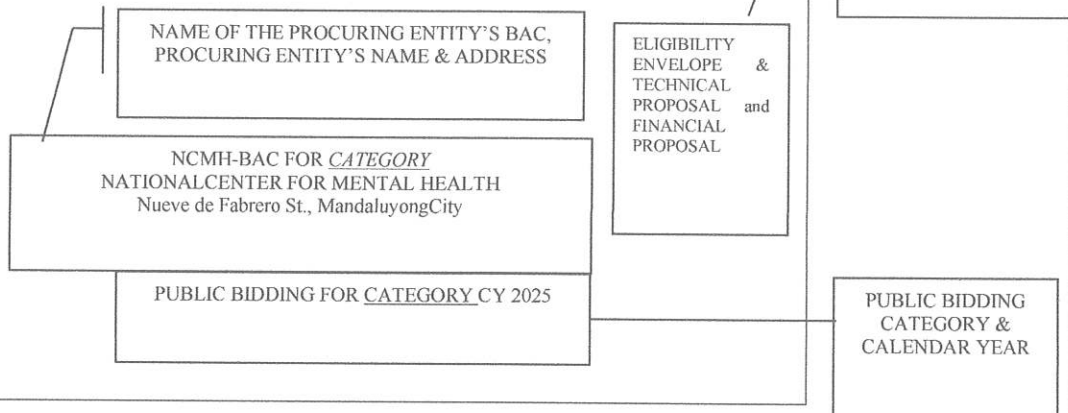
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| <div style="border: 1px solid black; width: 200px; height: 20px; margin-bottom: 5px; display: flex; border-collapse: collapse;"> <div style="width: 20px; height: 100%; border-right: 1px solid black;"></div> <div style="width: 20px; height: 100%; border-right: 1px solid black;"></div> <div style="width: 160px; height: 100%; border-right: 1px solid black;"></div> </div> <p align="right" style="margin-top: 0;">"Copy No. ____"</p> <p style="margin-top: 20px;">NATIONALCENTER FOR MENTAL HEALTH Nueve De Febrero St., MandaluyongCity</p> <p style="margin-top: 20px;">PUBLIC BIDDING FOR (CATEGORY) CY 2025</p> <p style="margin-top: 20px;">ELIGIBILITY DOCUMENTS <u>TECHNICAL PROPOSAL</u> <u>FINANCIAL PROPOSAL</u></p> <p style="margin-top: 20px;">DELA CRUZ COMPANY 143 Pag-ibig St., Quezon City Tel: / Fax:</p> | <div style="border: 1px solid black; padding: 5px; margin-bottom: 10px;"> Indicate here "Original Copy / First Copy or Second Copy of Eligibility Documents & Technical Proposal, and Financial Proposal" </div> <div style="border: 1px solid black; padding: 5px; margin-bottom: 10px;"> PROCURING ENTITY'S NAME & ADDRESS </div> <div style="border: 1px solid black; padding: 5px; margin-bottom: 10px;"> PUBLIC BIDDING CATEGORY & CALENDAR YEAR </div> <div style="border: 1px solid black; padding: 5px; margin-bottom: 10px;"> BID PROPOSAL NAME </div> <div style="border: 1px solid black; padding: 5px;"> NAME, ADDRESS, & CONTACT NOS. (TELEPHONE & FACSIMILE) OF THE BIDDERS </div> |
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gr *fr* & & *pr*

NOTE: Color of Folder is **ORANGE (preferably)**
Color of Envelope is **ORANGE (preferably)**

Note: All tabbing shall be in words / title based on the Checklist.

The Eligibility Documents and Technical Proposal combined in one folder and the Financial Proposal in separate Folder (**ORANGE**). All envelopes shall have the following markings:



MARKINGS FOR ENVELOPES

DELA CRUZ COMPANY
143 Pag-Ibig St., Quezon City
Tel: _____ / Fax: _____
DO NOT OPEN BEFORE: ____/____/____

NAME, ADDRESS & CONTACT NUMBERS (Telephone & Facsimile) OF THE BIDDER, "DO NOT OPEN" LABEL WITH THE DATE & TIME OF THE SUBMISSION & OPENING OF BIDS

fgm *ABV* *8* *8* *pr*



REPUBLIC OF THE PHILIPPINES
Department of Health
NATIONAL CENTER FOR MENTAL HEALTH
Nueve de Febrero Street, Mandaluyong City, Philippines
BIDS AND AWARDS COMMITTEE



Telephone No. 531-9001 loc. 239

Telefax No. 5318318

E-mail: bacncmh@yahoo.com

Website: www.ncmh.gov.ph

SECTION IV
General Conditions of Contract
(INFRA – IB NO. 001 – 2025)

**Public Bidding for Infrastructure Project No. 01-2025 - Construction of
Two Storey NCMH Psychosocial Rehabilitation and Recovery Training
Center for Service Users CY 2025 – 240 Calendar Days**

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. 12009 and its Approved 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 112.1 and 112.2 of the Approved RA No. 12009 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 Section 71.2 of RA No. 12009.

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 68 of the Approved RA No. 12009.
- 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 Report

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 90.2.2 of the Approved RA No. 12009, 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 Section 71.2 of RA No. 12009, 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.



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SECTION V
Special Conditions of Contract
(INFRA – IB NO. 001 – 2025)

**Public Bidding for Infrastructure Project No. 01-2025 - Construction of
Two Storey NCMH Psychosocial Rehabilitation and Recovery Training
Center for Service Users CY 2025 – 240 Calendar Days**

| GCC Clause | |
|------------|--|
| 2 | Sectional completion of works is not applicable. |
| 4.1 | The Procuring Entity shall give possession of the Site to the Contractor within 7 days upon the receipt of the Notice to Proceed (NTP). |
| 6 | <i>The site investigation reports are: site inspection</i> |
| 7.2 | Permanent Structure: Fifteen (15) years. 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 |
| 10 | a. No dayworks are applicable to the contract. |
| 11.1 | The contractor shall submit the Program of Works to the Procuring Entity's representative within ten (10) calendar days of the delivery of the Notice of Award (NOA). |
| 11.2 | The amount to be withheld for the late submission of an updated Program of Work is one percent (1%) of the Progress Billing. |
| 13 | The amount of the advance payment shall not exceed 15% of the total contract price and schedule of payment. |
| 14 | Materials and equipment delivered on the site but not completely put in place shall not be included for payment. |
| | The date by which operating and maintenance manuals are required is on the date of the final inspection |
| 15.1 | The date by which "as built" drawings are required. |
| | (The date by which operating and maintenance manuals and "As-built" drawings are required is thirty (30) days upon completion of the project.) |
| 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 10% of the final Contract Price. |

TERMS OF REFERENCE

I. INTRODUCTION

The **PSYCHOSOCIAL REHABILITATION AND RECOVERY PROGRAM** was established as a strategic initiative of National Center for Mental Health (NCMH) to address the long-term recovery needs of individuals living with chronic mental illness. Recognizing that effective mental Health care goes beyond clinical treatment, this program involves the construction of a 2-storey building that aims to provide a holistic approach to rehabilitation that support patients in regaining functional abilities, fostering social reintegration, and achieving meaning roles within their communities.

II. PROJECT INFORMATION

PSYCHOSOCIAL REHABILITATION AND RECOVERY TRAINING CENTER
TOTAL AREA - 533 SQUARE METER
STRUCTURE - TWO STOREY BUILDING

GROUND FLOOR FEATURES

- Hair Station
- Receiving Area
- Manicure/ Pedicure station
- Arts and Craft room
- Baking/ Food processing
- Tailoring and digital Printing
- Storage – 2

SECOND FLOOR FEATURES

- Staff Office
- Chief office
- Soap Making
- Multi-functional Room
- Locker Area
- Computer Room

III. OBJECTIVES

- Ensure the Construction is completed safely, efficiently, and in compliance with all relevant building codes, environmental standards, and legal regulations.
- Set a clear timeline and budget framework to monitor progress and control costs throughout the duration of the project.
- Promote quality assurance by outlining standards, materials, and workmanship required to meet the intended purpose of the structure.
- Minimize risks and disputes by clearly stating terms for project management. Supervision and contract administration
- To optimize layout and space utilization for both clinical and non-clinical functions such as training, administration and support services.

IV. SCOPE OF WORK

A. GENERAL REQUIREMENTS

1. Mobilization.

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| CONFORME: |
| <i>(Company Name)</i> |
| <i>(Name and Signature of Authorized Representative)</i> |

2. Construction of Temporary Facilities (Barracks, Storage Area, Working/Fabrication Area, Temporary Septic Tank, Site Enclosure & Access and etc.) with Installation of Electrical and Water Temporary Sub - meter Fabrication and installation of Construction billboard.
3. Fabrication and Installation of the required 8 feet by 8 feet Commission of Audit (COA) Billboard w/ backing and stand, Complete with Necessary Accessories
4. Fabrication and Installation of the required 4 feet by 8 feet Project Billboard w/ backing and stand, Complete with Necessary Accessories
5. Installation of the Required Construction Safety Signages on all necessary areas with backing.

B. DEMOLITION WORKS

1. Dismantling of Existing Electrical Post and Demolition of Affected Temporary GI Roof Sheet Fence.
2. Clearing of shrubs and trimming of tree branches affected by the building construction

C. EARTHWORKS

1. Excavation of Adobe Soil to meet the required depth of the building's foundation system, septic tank, cistern tank and line canal.
2. Application of ¾" gravel bedding in footings, strap footings, wall footing and slab on fill.
3. Application of soil poisoning/termite treatment. Note: The contractor shall invite technical personnel from the Planning and Development Section to witness the actual soil treatment.
4. Backfilling of soil on certain areas to meet the required elevation of slab on fill of the main building and building grounds.
5. Soil compaction or improvement prior establishment of foundation elements.

D. CONCRETE WORKS

1. Fabrication and Installation of Reinforced Concrete Isolated Footings of the main building as per plan specifications. Concrete design strength is 4500 psi.
2. Fabrication and Installation of Reinforced Concrete Strap Footing of the main building as per plan specifications. Concrete design strength is 4500 psi.
3. Fabrication and Installation of Reinforced Concrete Columns of the main building as per plan specifications. Concrete design strength is 4500 psi.
4. Fabrication and Installation of Reinforced Concrete Tie Beams of the main building as per plan specifications. Concrete design strength is 4500 psi.
5. Fabrication and Installation of Reinforced Concrete Second Floor Beams of the main building as per plan specifications. Concrete design strength is 4500 psi.
6. Fabrication and Installation of Reinforced Concrete Roof Beams of the main building as per plan specifications. Concrete design strength is 4500 psi.
7. Fabrication and Installation of Reinforced Concrete Slab on Grade of the Main Building and Exterior Ground as per plan specifications. Concrete design strength is 3500 psi.
8. Fabrication and Installation of Reinforced Concrete Second Floor Suspended Slab of the Main Building as per plan specifications. Concrete design strength is 4500 psi.
9. Fabrication and Installation of Reinforced Concrete Stairs of the Main Building as per plan specifications. Concrete design strength is 4500 psi.
10. Fabrication and Installation of Reinforced Concrete Lintel Beams of the main building as per plan specifications. Concrete design strength is 3500 psi.
11. Fabrication and Installation of Reinforced Concrete Canopies of the main building as per plan specifications. Concrete design strength is 3500 psi.
12. Fabrication and Installation of Reinforced Concrete PWD Ramps of the main building as per plan specifications. Concrete design strength is 3500 psi.
13. Fabrication and Installation of Reinforced Concrete Masonry Stiffener Columns as per plan specifications. Concrete design strength is 3500 psi.
14. Fabrication and Installation of Façade and Walkway Canopy Reinforced Concrete Pedestals and Footing (3500psi, Class A)

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| CONFORME: |
| (Company Name) |
| (Name and Signature of Authorized Representative) |

E. MASONRY WORKS

1. Construction of Plastered Exterior Masonry Walls as per plan specifications.
2. Construction of Plastered Interior Masonry Walls as per plan specifications.
3. Construction of Tie Beam Masonry Stem Walls as per plan specifications.
4. Construction of Plastered Masonry Plant Box as per plan specifications
5. Construction of Plastered Masonry Parapet Walls as per plan specifications
6. Shall include provisional hardware accessories and materials to complete the required work.

F. STRUCTURAL STEEL AND ROOFING WORKS

1. Fabrication and Installation of Roofing Trusses, Rafters, Purlins and Other Roof Framing Elements that will complete the system of the Main Building.
2. Installation of the Required Roofing Sheet, End wall/Fascia Flashing, Gutters and Spandrel Eaves, Complete with Necessary accessories for the Main Building
3. Fabrication and Installation of Roofing Rafters, Purlins, Tubular Steel Columns, and Other Roof Framing Elements that will Complete the System of the Façade and Covered Walkway Canopy
4. Installation of the Required Roofing Sheet, end wall/Fascia Flashing, Gutters and Spandrel Eaves, Complete with Necessary Accessories for Façade and Covered Walkway Canopy.

G. CEILING SYSTEM WORKS

1. Installation and Fabrication of the Required Suspended PVC Ceiling System at Main Building Interior as per plan specifications, Complete with Necessary Accessories.
2. Installation and Fabrication of the Required Suspended PVC Ceiling System at Façade Canopy and Covered Walkway (Exterior) as per plan specifications, Complete with Necessary Accessories.

H. ELECTRICAL SYSTEM WORKS

1. Installation of Electrical Rough - ins as per plan requirement and specifications.
2. Installation of Electrical Wiring and Conductors as per plan requirement and specifications.
3. Installation of Circuit Protection (Panel Board and Breakers) as per plan requirement and specifications.
4. Installation of Electrical Devices, Lighting Fixtures and Switches as per plan requirement and specifications.
5. Installation of Service Entrance/Main Electrical Supply as per plan requirements and specification, Complete with Necessary Accessories.
6. Installation of Service Drop/Transformer as per plan requirements and specification, Complete with Necessary Accessories.
7. Installation, Supply and Delivery of Generator Set with Automatic Transfer Switch and Wiring, Complete with Necessary Accessories.
8. Supply and Installation of on – Grid/Grid Tie Solar Power System as per plan requirements and specifications with Testing and Commissioning, Complete with Necessary Accessories (SEE ANNEX A FOR FURTHER DETAILS)

I. PLUMBING SYSTEM WORKS

1. Installation of Water Supply Lines, Complete with Necessary Accessories.
2. Installation of Drain, Waste and Vent Lines.
3. Complete with Necessary Accessories.
4. Installation of Plumbing Fixtures (Showers, Toilet, Faucet, Sink, Urinal and etc.), Complete with Necessary Accessories.

J. TILING WORKS

1. Installation of Semi Glossy Vitrified Floor Tiles at Hallways, Receiving Area, Arts and Craft Room, Hair and Manicure/Pedicure Station, Tailoring and Digital Printing Room, Staff Offices, Soap Making Room, Computer Room and Multifunctional Room as per plan specifications, Complete with Necessary Accessories.

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| CONFORME: |
| (Company Name) |
| (Name and Signature of Authorized Representative) |

2. Installation of Non - skid Vitrified Floor Tiles at Baking & Food Processing Area and Storage Rooms as per plan specifications, Complete with Necessary Accessories.
3. Installation of Non - Skid Vitrified Floor Tiles at Stairs (Steps and Landing) as per plan requirements and specifications, Complete with Necessary Accessories.
4. Installation of Non - skid Vitrified Floor Tiles at Comfort Rooms as per plan specifications, Complete with Necessary Accessories.
5. Installation of Vitrified Decorative Wall Tiles at Comfort Rooms as per plan specifications, Complete with Necessary Accessories.
6. Installation of Ceramic Matte Floor Tiles at Façade Entrance and application of concrete finish at PWD Ramp as per plan specifications, Complete with Necessary Accessories.
7. Installation of Outdoor Non - skid Textured Tiles at Covered Walkway as per plan specifications, Complete with Necessary Accessories.
8. Installation of Food Processing and Baking Area Backsplash Tiles as per plan specifications, Complete with Necessary Accessories.

K. PAINTING WORKS

1. Application of Paint Finish on the Exterior Walls of the building.
2. Application of Paint Finish on the Interior Walls of the building.
3. Application of Rust Inhibiting Primer on All Metal Surface (Roof Framing, Window Security Grills and Grill Door).
4. Application of Limewash Paint Finish on the Façade of the Building

L. FABRICATED MATERIALS

1. Fabrication and Installation of Glass Window as per plan requirements and specification, Complete with Necessary Accessories.
2. Fabrication and Installation of Wooden and Glass Door as per plan requirements and specification, Complete with Necessary Accessories.
3. Fabrication and Installation of Food Processing Concrete Countertop for Food Preparation, Cooking and Wash Area, Granite Finish as per plan requirements and specification, Complete with Necessary Accessories.
4. Fabrication and Installation of Comfort Room (PWD) Concrete Countertop for Handwashing, Granite Finish as per plan requirements and specification, Complete with Necessary Accessories.
5. Fabrication and Installation of Pipe Chase as per plan requirements and specification, Complete with Necessary Accessories.
6. Fabrication and Installation of Façade Design as per plan requirements and specification, Complete with Necessary Accessories.
7. Fabrication and Installation of the required Wooden Cabinets as per plan specifications, Complete with Necessary Accessories
8. Fabrication and Installation of the required Salon and Toilet Mirror and other fittings as per plan specifications, Complete with Necessary Accessories.
9. Fabrication and Installation of Accordion Partition with Sound Transmission Control as per plan specifications, Complete with Necessary Accessories.

M. HVAC SYSTEM WORKS

1. Installation of Aircon in designated area as per plan specifications and requirements, Complete with Necessary Accessories.
2. Installation of Exhaust Fans on all Office Comfort Rooms as per plan specifications and requirements, Complete with Necessary Accessories.

N. ETHERNET (WIFI), TELECOMMUNICATIONS AND CCTV SYSTEM WORKS

1. Installation of Ethernet and Telecommunications Wiring and Devices, Complete with Necessary Accessories.
2. Installation of CCTV Wiring and Devices, Complete with Necessary Accessories.

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|---|
| CONFORME: |
| (Company Name) |
| (Name and Signature of Authorized Representative) |

O. FIRE SUPPRESSION AND DETECTION SYSTEM WORKS

1. Supply and Installation of Fire Detection and Alarm System Wiring and Devices as per plan specifications, Complete with Necessary Accessories.
2. Supply and Installation of Fire Sprinkler System (Wet Pipe System) Piping and Devices, Complete with Necessary Accessories.

P. MISCELLANEOUS

1. Fabrication and Installation of High-Grade Acrylic NCMH Logo, Building and Room Identification Signages on all required areas as per plan specifications
2. Fabrication and Installation of Electrical Service Post as per plan specification and requirements, 3500 psi.
3. Supply, Fabrication and Installation of Fall Protection Grab Handrails on All Required Areas (PWD and Comfort Room) as per plan requirements and specification, Complete with Necessary Accessories.
4. Installation of Built in Equipment and Appliances (Heating) as per plan requirements and specification, Complete with Necessary Accessories.
5. Supply, Delivery and Planting of Gardening Growing Plants for Landscaping as per plan specifications.
6. Supply and Installation of Water Storage System as per plan requirements and specification, Complete with Necessary Accessories.

Q. CONSTRUCTION OF SEPTIC TANK AND CONCRETE CANAL

1. Construction of Width = 2 meters x Length = 4 meters x Depth = 2 meters Masonry Septic Tank as per plan specifications.
2. Construction of Width = 1.5 meters x Length = 4 meters x Depth = 2 meters Masonry Leaching Tank as per plan specifications.
3. Installation of the required Septic Tank and Water Tank Piping System, Complete with Necessary Accessories.
4. Construction of Concrete Canal with Concrete Cover (Class B = 3000 psi) and Trench Drain as per plan requirements and Specifications, Complete with Necessary Accessories.

R. CONSTRUCTION OF ONE STOP UTILITY HOUSING AND CISTERN TANK FOR FIRE PROTECTION SYSTEM

1. Construction of a one-stop utility housing designed to accommodate the fire protection pump room, water tank, and generator set. The following outlines the required works:
 - a. Earthworks
 - b. Concrete Works
 - c. Masonry Works
 - d. Structural Steel and Roofing Works
 - e. Ceiling System Works
 - f. Electrical System Works
 - g. Painting Works
 - h. Fabricated Materials

S. PROVISIONAL ITEMS

1. Processing of the Required Permits (DOH Permit to Construct, Building Permit and License to Operate) and Submission of As-Built Plans (Signed and Sealed by the required Professional) upon Project Completion, Complete with all Necessary Attachments.
2. Material Testing of Reinforcing Bars and Hardened Concrete Samples as per the required ASTM Test Method.

T. CLEARING & GRUBBING/ DEMOBILIZATION

1. Site Clearing and Grubbing, Includes Hauling of Debris and Construction Waste Prior Project Turn – Over.
2. Demobilization.

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| CONFORME: |
| (Company Name) |
| (Name and Signature of Authorized Representative) |

ANNEX A

DETAILED SCOPE OF WORK AND TECHNICAL SPECIFICATIONS OF THE PROPOSED PHOTOVOLTAIC SYSTEM (SOLAR POWER SYSTEM)

i. PHOTOVOLTAIC SYSTEM

A. GENERAL

1. Applicable provisions of "General Conditions" govern work under this section.
2. The Contractor shall provide all times, articles, materials, operations or methods listed, mentioned, or scheduled on the drawings and / or specified, including all labor, materials, and incidentals for their completion.
3. All work, materials and equipment to be used in the electrical installations and construction shall be in accordance with the provisions of the latest edition of the Philippine Electrical Code and the pertinent ordinances of the municipality wherein the project is located. All work shall also comply with the rules and regulations of the local power utility company in so far as they are concerned in providing the respective permanent services to the building.
4. Wiring methods shall be PVC moulding for all indoor DC wirings, EMT for exposed DC and AC wirings and PVC for embedded AC wirings.
5. All PVC conduits shall be embedded at least 25 mm deep from wall plaster finish and no conduits shall pass through columns and beams (except for lintel beams and stiffener columns).
6. All joints between length of conduit, between conduit and coupling, fittings shall be sealed against the admission of moisture by method such as taping in combination with insulation compound or sealing devices.
7. Sharp bends in the conductors shall be avoided. Splices and taps shall be made only in boxes.
8. The work throughout shall be executed in the best and most thorough manner.
9. The owner/engineer shall have the authority to reject any work and materials, equipment etc. which in their judgment are not in full accordance or disapproved.

B. SCOPE OF WORK

1. Work included under this Section of the Specification consist in furnishing all labor, tools, equipment, appliances, and materials necessary for complete installation, testing and operation of the Grid Tie/On-Grid Photovoltaic (PV) System in accordance with Specification and all applicable drawings in the contract.
 - a. The PV System Contractor is required to refer to all Architectural, Structural, Mechanical, Fire Protection, and Electrical plans and investigate all possible interference and conditions affecting his work.

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- b. All work shall comply with the pertinent provisions of the Philippine Electrical Code and/or other related International/ Local Codes and Standards and utility requirements.
 - c. PV Panels, Batteries (if Hybrid) and Pure Sine Wave PV System Inverter.
 - d. PV System Supports and Railings
 - e. Electrical Conductors and Rough-ins for both DC and AC systems of the PV System.
 - f. Necessary Electrical Protection, Grounding System and Disconnecting Means for PV system.
 - g. Connection of PV System to Infrastructure's AC Electrical System
 - h. 6 sets of Detailed Electrical Design Drawings & Plans for the provision of the required Solar Power System in 20"x30" Tracing Paper and Blueprint, Sign and Sealed by a Professional Electrical Engineer with Soft Copy.
 - i. Technical Specifications for the provision of the required PV System in A4, Sign and Sealed by a Professional Electrical Engineer with Soft Copy.
 - j. Maintenance manual for PV system.
 - k. Testing and Commissioning with Commissioning Certificate:
 - Polarity Testing
 - Earth Continuity Testing
 - Insulation Resistance Testing
 - Voltage Drop Testing
 - Battery Load Testing (for Hybrid)
 - Earth Leakage Testing
 - Phase Balance Testing (for multiphase)
 - Peak Voltage and Peak Power Testing (for both PV Inverter Input and Output)
 - l. Processing and Payment for all permits necessary to the completion of work ready for service
 - m. Any and all other works involved in providing the complete of the PV system in accordance with the requirement of all applicable laws of the Philippines and all codes and ordinances of the governing agency.
 - n. The Contractor shall submit 2 sets of shop drawings and as- built plans to the Consultant for approval
2. The Contractor is required to refer to all Architectural, Structural, Mechanical and Electrical Plans and Specifications and shall investigate possible interference and condition affecting his work.

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3. All materials and equipment to be used in the electrical installations and construction shall be in accordance with the provisions of the latest edition of the Philippine Electrical Code and the pertinent ordinances of the municipality wherein the project is located. All work shall also comply with the rules and regulations of the local power utility company in so far as they are concerned in providing the respective permanent services to the building.

B. APPLICABLE SPECIFICATION CODES, ORDINANCES, PERMITS AND FEES

1. The work covered in this contract it to be installed according to the specs, codes, ordinances and requirements of the following:
 - (i) Philippine Electrical Code
 - (ii) International Electrotechnical Commission (IEC) standards
 - (iii) Department of Energy
 - (iv) Electric Service Provider
 - (v) Ordinances of concerned city or municipality
2. All construction permits and fees required for the work shall be obtained by and at the expense of the contractor. The contractor shall furnish the Owner final certificates of inspection after the completion of the work.
3. The Electrical Contractor shall at his own expense, reproduce the electrical plans to the necessary scale and size, complete them with all the necessary information and requirements as maybe required by the government authorities concerned with the approval of plans.
4. All work shall coordinate and comply with the rules and regulations of the local power utility company in so far as they are concerned in providing the respective permanent services to the building.

ii. BASIC MATERIALS AND METHOD

1. All materials to be used shall be brand new, with trade name, unused, and shall in every case be the best where such standards have been established for the particular type of materials used.
2. All materials to be used shall conform to the standards below. Use of materials shall further be governed by other requirements imposed and shall be subject to test necessary to ascertain their fitness if the Owner so requires:
 1. PVC Conduits for embedded AC wirings Thick wall PVC conduits or approved equal

NOTE:

"Embedded" includes claddings, ceilings etc. and shall not be limited to concrete only.

2. EMT conduits for exposed, indoor and outdoor AC wirings Galvanized coated steel conduits,

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| 3. | Rectangular PVC Moulding for exposed indoor DC wirings | Thick wall rectangular PVC mouldings or approved equal |
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| 4. | PVC Junction Boxes for embedded overhead devices | At least 4"Ø Thick wall PVC junction box with at least 5 holes and cover or approved equal |
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NOTE:

"Embedded" includes claddings, ceilings etc. and shall not be limited to concrete only.

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| 5. | PVC Square Boxes for embedded overhead devices with more than 4 horizontal connections and other appropriately sized electrical devices | At least 4x4" Thick wall PVC square box with at least 12 holes and cover or approved equal |
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NOTE:

"Embedded" includes claddings, ceilings etc. and shall not be limited to concrete only.

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| 6. | PVC Utility Boxes for embedded appropriately sized wall mounted devices, outlets, switches etc. | At least 2x4" Thick wall PVC utility box with at least 7 holes and cover or approved equal |
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NOTE:

"Embedded" includes claddings, ceilings etc. and shall not be limited to concrete only.

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| 7. | Metallic Junction Boxes for exposed overhead devices | At least 4"Ø Gauge 16, junction box with at least 5 holes and cover or approved equal |
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| 8. | Metallic Square Boxes for exposed overhead devices with more than 4 horizontal connections and other appropriately sized electrical | At least 4x4" Gauge 16, square box with at least 12 holes and cover or approved equal |
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devices

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| 9. | Metallic Utility Boxes for exposed appropriately sized wall mounted devices, outlets, switches etc. | At least 2x4" Gauge 16, utility box with at least 7 holes and cover or approved equal |
| 10. | Surface Mounted PVC Junction Boxes for exposed overhead devices | At least 4"Ø Thick wall surface mounted PVC junction box with at least 5 holes and cover or approved equal |
| 11. | Surface Mounted PVC Square Boxes for exposed overhead devices with more than 4 horizontal connections and other appropriately sized electrical devices | At least 4x4" Thick wall surface mounted PVC square box with at least 12 holes and cover or approved equal |
| 12. | Surface Mounted PVC Utility Boxes for exposed appropriately sized wall mounted devices, outlets, switches etc. | At least 2x4" Thick wall surface mounted PVC utility box with at least 7 holes and cover or approved equal |
| 13. | Metallic Fittings, Couplings, Adapter w/ Bushings etc. | Galvanized coated steel fittings, couplings, adapter w/ bushings etc. or stainless steel or approved equal |
| 14. | Electric Meter for Service Entrance | Digital bidirectional electric meter |
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| 15. | Photovoltaic Panels | Monocrystalline silicon photovoltaic panel |
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| 16. | Battery (for Off-Grid and Hybrid PV systems) | Appropriately sized Lithium-ion battery with lowest discharge up to 20% only |
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17. Photovoltaic Power Inverter

Either Off-Grid, On-Grid, Hybrid
pure
sine wave photovoltaic power
inverter

with at least 95% efficiency sized
appropriately with following specs:

Output: 240V, 60 Hz, 3Ø or 1Ø

Features: Graphic LCD and WIFI
monitoring system

**Protective devices shall include the
following but not limited to:** DC

Reverse Polarity Protection, DC
Switch,

DC Surge Protection, Ground Fault

Monitoring, Output Short Circuit

Protection, AC Surge Protection,
String

Fuse Protection, String Fault
Monitoring

and Anti-PID protection.

Others: shall come with user manual
and maintenance manual

3. Alternate Materials: Use of any material, not specified in these specifications may be allowed provided such alternate has been approved by the Owner and provided further that the test, if required, shall be done by an approved agency in accordance with the generally accepted standards
4. Identification of Materials: Each size of conduit, wires or device used in the electrical system shall have cast or stamped or indelibly marked on it the manufacturer's trademark or name, the weight, type and class of product when required by the standards mentioned above.

iii. **WIRING METHODS**

1. Wiring methods shall be rectangular PVC moulding for all indoor DC wirings, EMT for exposed and outdoor DC and AC wirings and PVC for embedded AC wirings.
2. Embedded PVC conduits in concrete walls shall have a depth of not less than 25mm from plaster finish.
3. No conduits shall pass through columns and beams (except for lintel beams and stiffener columns).
4. All joints between length of conduit, between conduit and coupling, fittings shall be sealed against the admission of moisture by method such as taping in combination with insulation compound or sealing devices.

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5. Remove fins and burrs from pipe and fittings. Before placing in position, clean conduits, fittings, valves, and accessories and maintain in a clean condition.
6. Cut conduits accurately to length established at the site and work into place without springing or forcing.
7. Boxes shall be either Metallic or PVC (surface mounted type) for exposed works and pvc for embedded works both with proper fittings and supports
8. Boxes shall also be sealed against the admission of moisture by method such as covering in combination with insulation compound or sealing devices.
9. Sharp bends in the conductors shall be avoided. Splices and taps shall be made only in boxes.
10. All concrete embedded conduits, boxes, enclosures, etc. shall be wrapped in wire mesh.
11. All splices, taps, junction in wires larger than 8.0 sq.mm. shall be done with solderless connectors of suitable sizes and properly insulated with rubber tapes and protected by friction tapes, so that the insulation strength shall at least be equal to the insulation of the conductors they join.

iv. CONDUIT HANGERS

1. Horizontal runs of conduits shall be hung with adjustable iron or malleable iron conduit hangers spaced not over 8 ft. apart
2. Conduits over ceiling line shall be suspended in hangers by use of threaded rod, adjustable iron or malleable iron conduit hangers. Placing of conduit on ceiling is prohibited.

v. DRAWINGS AND SPECIFICATIONS

1. The Electrical Contractor shall check architectural, structural and plumbing plans if necessary to resolve such conflicts. The Electrical Contractor shall notify the architect and secure approval and agreement on necessary adjustments before installation is started.
2. The electrical plans indicate the general layout of the complete electrical system, arrangement of feeders, circuit outlets, switches, controls, panel boards, service equipment and other work. Field verification of the scale dimensions on the plane must be made, since actual locations, distances and levels will be governed by actual field conditions.
3. The contractor shall provide six (6) sets of Detailed Electrical Design Drawings & Plans for the provision of the required Solar Power System in 20"x30" Tracing Paper and Blueprint, Sign and Sealed by a Professional Electrical Engineer with Soft Copy.
4. The contractor shall provide Technical Specifications for the provision of the required PV System in A4, Sign and Sealed by a Professional Electrical Engineer with Soft Copy.

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5. Upon final completion of the work herein described, the electrical contractor shall furnish the Owner two (2) copies of the "As-built" plans for future reference and maintenance purposes.

vi. DEFECTIVE WORK

1. If inspection or test show any defect, such defective work or material shall be replaced by the Contractor and the inspection and test repeated until satisfactory the Architect.
2. All repairs to PV electrical system or damaged electrical system shall be made with new materials at the expense of the Contractor.

V. ROLES AND RESPONSIBILITIES

- a. Project Owner/Consultant:
 1. Provide funding and oversight
 2. Approve major project decisions
 3. Coordinate with regulatory agencies
 4. Provide design drawings and specifications as needed
 5. Conduct Design supervision and site visits regularly.
 6. Ensure aesthetic and functional Integrity of the project
- b. Project Manager/ Engineer/ Contractor:
 1. Oversee daily site operations
 2. Monitor schedule, budget and project activities.
 3. Ensure technical and safety compliance
 4. Execute construction as per approved plans and specifications
 5. Provide materials, labor, and equipment needed to implement the project.
 6. Maintain safety and quality standards
- c. Site Rules- Do's and Don'ts for Construction in a Mental Health Facility

DO's

 1. Respect patient privacy and dignity at all times. Keep noise and disruptions to a minimum level.
 2. Wear valid identification or uniforms when on site and follow the facility protocols.
 3. Use designated pathways and work zones to avoid patient-access area unless specifically authorized
 4. Coordinate with hospital staff for any activity that may affect patient care, access or utilities.
 5. Secure all tools, equipment, and materials at the end of each workday to prevent patient access
 6. Maintain a clean, organized, and hazard-free workspace throughout the project
 7. Adhere to infection control and sanitation protocols, especially in occupied buildings
 8. Follow noise, odor, and dust control measure to minimize sensory triggers for patient
 9. Report immediately any incidents, safety risks, or unusual behavior to facility security or staff.

DON'TS

 1. Do not interact with patients unless specifically authorized by facility staff
 2. Do not play loud music, shout, or use offensive language on site
 3. Do not bring unauthorized personnel into the facility or work zone.
 4. Do not use flammable materials, power tools, or loud machinery during sensitive hours unless coordinated
 5. Do not smoke, drink alcohol, use prohibited substances anywhere on the premises

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6. Do not photograph or film any part of the facility or its patients without written approval
7. Do not make design or execution changes without formal approval
8. Do not enter patient wards or therapy areas without escort or clearance from the proper authorities.

d. Manpower

List of Key Personnel

| KEY PERSONNEL | | GENERAL EXPERIENCE (YEARS) | RELEVANT EXPERIENCE (YEARS) | QUALIFICATIONS |
|---------------|--|----------------------------------|-----------------------------------|--|
| 1 | PROJECT MANAGER/ENGINEER | 7 | 5 | - LICENSED CIVIL ENGINEER |
| 1 | PROFESSIONAL ELECTRICAL ENGINEER | 7 | 5 | - LICENSED PROFESSIONAL ELECTRICAL ENGINEER |
| 1 | PROFESSIONAL MECHANICAL ENGINEER | 7 | 5 | - LICENSED PROFESSIONAL MECHANICAL ENGINEER |
| 1 | SANITARY ENGINEER | 7 | 5 | - LICENSED SANITARY ENGINEER |
| 1 | ELECTRONICS AND COMMUNICATION ENGINEER | 5 | 5 | - LICENSED ELECTRONICS AND COMMUNICATION ENGINEER |
| 1 | MATERIALS ENGINEER | 7 | 5 | - DPWH ACCREDITED MATERIALS ENGINEER II (Attached Certification from DPWH) |
| 1 | SAFETY OFFICER | 7 | 5 | - WITH DOLE ACCREDITED COSH TRAINING (ATLEAST SAFETY OFFICER II w/ Attached Certification) |
| 1 | FOREMAN | 7 | 5 | |

The deployment of skilled and unskilled laborers for the project will be subject to the evaluation and approval of the Planning and Development Section (PDS) and the Security Office. Only those who meet the necessary requirements and submit the proper

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- documentation will be allowed to enter to the facility. As part of the clearance process, all employee is required to submit a photocopy of one (1) valid government-issued ID to both the (PDS) and the security office for proper identification and record-keeping
- e. Reporting / Statement of Work Accomplishment (SWA)

The contractor is required to actively participate in all scheduled coordination meeting to ensure proper communication and alignment with the project team and stakeholders. Additionally, the contractor must regularly submit a (SWA) to report on progress and completed activities. If necessary, the contractor shall also revise and update the S-curve reflect any changes in the project timeline, milestone, or work sequencing, subject to review and approval by the (PDS)

f. Logistics

1. Temporary Facility (Storage and Barracks)
 - a. Only the identified area shall be used for the placement of temporary facilities
 - b. The Contractor shall ensure that the latrine is located and used exclusively within the designated temporary facility.
2. Utilities
 - a. The Contractor shall provide electric and water meter prior to implementation of the project.
 - b. Only the designated personnel of NCMH are authorized to install the water and electrical meters.
3. Equipment and Materials
 - a. Staging of equipment and materials shall be confined to the identified area only.
 - b. A copy of the Delivery receipt shall be provided to the Planning and Development Office for documentation.

VI. PROJECT DELIVERABLES

- a. Site Preparation
 1. Cleared, graded, and leveled construction site
 2. Erosion control and temporary drainage system
 3. Site hoarding, Signage, and access control
 4. Construction Permit application
- b. Civil and Structural Works
 1. Completed Foundation and Substructure such as footings, and slabs)
 2. Superstructure such as columns, beams, floors, walls, and roof
 3. Load-bearing and non-load-bearing masonry or concrete elements
- c. Building Envelope
 1. Roofing system with insulation, drainage, and waterproofing
 2. Exterior wall finishes and cladding
 3. Weather-sealed door and windows
- d. Mechanical, Electrical, and Plumbing (MEP) Installation
 1. Electrical wiring, switchboards, outlets, and lighting system (all required equipment's for the design)
 2. Plumbing and sanitary system, including fixtures and drainage (all required equipment's for the design)
 3. Fire detection and suppression system such as smoke alarms, sprinklers, and extinguishers (all required equipment's for the design)
 4. HVAC system (all required equipment's for the design)
- e. Safety and Accessibility provisions
 1. Emergency exits, staircase, and ramps
 2. Handrails, guardrails, and non-slip surfaces

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3. Accessible toilets and signage compliant with local accessibility laws
- f. External works
 1. Site grading and landscaping
 2. Pathways, driveways, and parking areas
 3. Perimeter fencing or walls
 4. Drainage and stormwater management system
- g. Testing, Commissioning, and Documentation
 1. Testing and commissioning of electrical, plumbing, structural and mechanical systems
 2. Submission of as-built drawings
 3. Handover of warranties and compliance certificates
 4. Operation and Maintenance manuals
 5. Final Completion and occupancy permit
 6. The contractor must secure the building permit upon receiving the NOA

VII. PAYMENT SCHEME

- a. The Payment Scheme for Infrastructure follows the 5th Edition of the Philippine Bidding Documents (PBDs). In addition, the NCMH requires the following documents:
 1. Warranty Certificate
 2. Property Acknowledgement Receipt (PAR)
 3. Certificate of Acceptance of Equipment from MMS
 4. Certificate of Waste Material Report from Engineering
 5. Warranty Bond

VIII. PROJECT TIMELINE

The total duration of the project is **Two Hundred Forty (240) calendar days**. Starting Seven (7) days Upon receiving the Notice to Proceed (NTP)

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REPUBLIC OF THE PHILIPPINES
Department of Health
NATIONAL CENTER FOR MENTAL HEALTH
Nueve de Febrero Street, Mandaluyong City, Philippines
BIDS AND AWARDS COMMITTEE



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Section VI
Specification
(INFRA – IB NO. 001 – 2025)

**Public Bidding for Infrastructure Project No. 01-2025 - Construction of
Two Storey NCMH Psychosocial Rehabilitation and Recovery Training
Center for Service Users CY 2025 – 240 Calendar Days**

INSTRUCTION: Bidders must state here either “Comply” or “Not Comply” against each of the individual parameters of each Specification stating the corresponding performance parameter of the equipment offered. Statements of “Comply” or “Not Comply” must be supported by evidence in a Bidders Bid and cross-referenced to that evidence. Evidence shall be in the form of manufacturer’s un-amended sales literature, unconditional statements of specification and compliance issued by the manufacturer, samples, independent test data etc., as appropriate. A statement that is not supported by evidence or is subsequently found to be contradicted by the evidence presented will render the Bid under evaluation liable for rejection. A statement either in the Bidders statement of compliance or the supporting evidence that is found to be false either during Bid evaluation, post-qualification or the execution of the Contract may be regarded as fraudulent and render the Bidder or supplier liable for prosecution subject to the provisions of ITB Clause 3.1(a) (ii) and/or GCC Clause 2.1(a)(ii).

| Technical Specifications Particulars | Requirements | Statement of Compliance |
|--|---|-------------------------|
| 1. Application of the Infrastructure Project No. 01-2025 - Construction of Two Storey NCMH Psychosocial Rehabilitation and Recovery Training Center for Service Users CY 2025 | SCOPE OF WORKS A. GENERAL REQUIREMENTS 1. Mobilization. 2. Construction of Temporary Facilities (Barracks, Storage Area, Working/Fabrication Area, Temporary Septic Tank, Site Enclosure & Access and etc.) with Installation of Electrical and Water Temporary Sub - meter Fabrication and installation of Construction billboard. 3. Fabrication and Installation of the required 8 feet by 8 feet Commission of Audit (COA) Billboard w/ backing and stand, Complete with Necessary Accessories 4. Fabrication and Installation of the required 4 feet by 8 feet Project Billboard w/ backing and stand, Complete with Necessary Accessories. | |

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| | 5. Installation of the Required Construction Safety Signages on all necessary areas with backing. | |
| | B. DEMOLITION WORKS <ol style="list-style-type: none"> 1. Dismantling of Existing Electrical Post and Demolition of Affected Temporary GI Roof Sheet Fence. 2. Clearing of shrubs and trimming of tree branches affected by the building construction. | |
| | C. EARTHWORKS <ol style="list-style-type: none"> 1. Excavation of Adobe Soil to meet the required depth of the building's foundation system, septic tank, cistern tank and line canal. 2. Application of ¾" gravel bedding in footings, strap footings, wall footing and slab on fill. 3. Application of soil poisoning/termite treatment. Note: The contractor shall invite technical personnel from the Planning and Development Section to witness the actual soil treatment. 4. Backfilling of soil on certain areas to meet the required elevation of slab on fill of the main building and building grounds. 5. Soil compaction or improvement prior establishment of foundation elements. | |
| | D. CONCRETE WORKS <ol style="list-style-type: none"> 1. Fabrication and Installation of Reinforced Concrete Isolated Footings of the main building as per plan specifications. Concrete design strength is 4500 psi. 2. Fabrication and Installation of Reinforced Concrete Strap Footing of the main building as per plan specifications. Concrete design strength is 4500 psi. 3. Fabrication and Installation of Reinforced Concrete Columns of the main building as per plan specifications. Concrete design strength is 4500 psi. 4. Fabrication and Installation of Reinforced Concrete Tie Beams of the main building as per plan specifications. Concrete design strength is 4500 psi. | |

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| | <ol style="list-style-type: none"> 5. Fabrication and Installation of Reinforced Concrete Second Floor Beams of the main building as per plan specifications. Concrete design strength is 4500 psi. 6. Fabrication and Installation of Reinforced Concrete Roof Beams of the main building as per plan specifications. Concrete design strength is 4500 psi. 7. Fabrication and Installation of Reinforced Concrete Slab on Grade of the Main Building and Exterior Ground as per plan specifications. Concrete design strength is 3500 psi. 8. Fabrication and Installation of Reinforced Concrete Second Floor Suspended Slab of the Main Building as per plan specifications. Concrete design strength is 4500 psi. 9. Fabrication and Installation of Reinforced Concrete Stairs of the Main Building as per plan specifications. Concrete design strength is 4500 psi. 10. Fabrication and Installation of Reinforced Concrete Lintel Beams of the main building as per plan specifications. Concrete design strength is 3500 psi. 11. Fabrication and Installation of Reinforced Concrete Canopies of the main building as per plan specifications. Concrete design strength is 3500 psi. 12. Fabrication and Installation of Reinforced Concrete PWD Ramps of the main building as per plan specifications. Concrete design strength is 3500 psi. 13. Fabrication and Installation of Reinforced Concrete Masonry Stiffener Columns as per plan specifications. Concrete design strength is 3500 psi. 14. Fabrication and Installation of Façade and Walkway Canopy Reinforced Concrete Pedestals and Footing (3500psi, Class A). | |
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| | E. MASONRY WORKS <ol style="list-style-type: none"> 1. Construction of Plastered Exterior Masonry Walls as per plan specifications. 2. Construction of Plastered Interior Masonry Walls as per plan specifications. 3. Construction of Tie Beam Masonry Stem Walls as per plan specifications. 4. Construction of Plastered Masonry Plant Box as per plan specifications 5. Construction of Plastered Masonry Parapet Walls as per plan specifications 6. Shall include provisional hardware accessories and materials to complete the required work. | |
| | F. STRUCTURAL STEEL AND ROOFING WORKS <ol style="list-style-type: none"> 1. Fabrication and Installation of Roofing Trusses, Rafters, Purlins and Other Roof Framing Elements that will complete the system of the Main Building. 2. Installation of the Required Roofing Sheet, End wall/Fascia Flashing, Gutters and Spandrel Eaves, Complete with Necessary accessories for the Main Building. 3. Fabrication and Installation of Roofing Rafters, Purlins, Tubular Steel Columns, and Other Roof Framing Elements that will Complete the System of the Façade and Covered Walkway Canopy. 4. Installation of the Required Roofing Sheet, End-wall/Fascia Flashing, Gutters and Spandrel Eaves, Complete with Necessary Accessories for Façade and Covered Walkway Canopy. | |
| | G. CEILING SYSTEM WORKS <ol style="list-style-type: none"> 1. Installation and Fabrication of the Required Suspended PVC Ceiling System at Main Building Interior as per plan specifications, Complete with Necessary Accessories. 2. Installation and Fabrication of the Required Suspended PVC Ceiling System at Façade Canopy and Covered Walkway (Exterior) as per plan | |

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| | specifications, Complete with Necessary Accessories. | |
| | H. ELECTRICAL SYSTEM WORKS <ol style="list-style-type: none"> 1. Installation of Electrical Rough - ins as per plan requirement and specifications. 2. Installation of Electrical Wiring and Conductors as per plan requirement and specifications. 3. Installation of Circuit Protection (Panel Board and Breakers) as per plan requirement and specifications. 4. Installation of Electrical Devices, Lighting Fixtures and Switches as per plan requirement and specifications. 5. Installation of Service Entrance/Main Electrical Supply as per plan requirements and specification, Complete with Necessary Accessories. 6. Installation of Service Drop/Transformer as per plan requirements and specification, Complete with Necessary Accessories. 7. Installation, Supply and Delivery of Generator Set with Automatic Transfer Switch and Wiring, Complete with Necessary Accessories. 8. Supply and Installation of On – Grid/ Grid Tie Solar Power System as per plan requirements and specifications with Testing and Commissioning, Complete with Necessary Accessories (SEE ANNEX A FOR FURTHER DETAILS). | |
| | I. PLUMBING SYSTEM WORKS <ol style="list-style-type: none"> 1. Installation of Water Supply Lines, Complete with Necessary Accessories. 2. Installation of Drain, Waste and Vent Lines. 3. Complete with Necessary Accessories. 4. Installation of Plumbing Fixtures (Showers, Toilet, Faucet, Sink, Urinal and etc.), Complete with Necessary Accessories. | |
| | J. TILING WORKS <ol style="list-style-type: none"> 1. Installation of Semi Glossy Vitrified Floor Tiles at Hallways, Receiving Area, Arts and Craft Room, Hair and Manicure/Pedicure Station, Tailoring | |

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| | <p>and Digital Printing Room, Staff Offices, Soap Making Room, Computer Room and Multifunctional Room as per plan specifications, Complete with Necessary Accessories.</p> <ol style="list-style-type: none"> 2. Installation of Non - skid Vitrified Floor Tiles at Baking & Food Processing Area and Storage Rooms as per plan specifications, Complete with Necessary Accessories. 3. Installation of Non - Skid Vitrified Floor Tiles at Stairs (Steps and Landing) as per plan requirements and specifications, Complete with Necessary Accessories. 4. Installation of Non - skid Vitrified Floor Tiles at Comfort Rooms as per plan specifications, Complete with Necessary Accessories. 5. Installation of Vitrified Decorative Wall Tiles at Comfort Rooms as per plan specifications, Complete with Necessary Accessories. 6. Installation of Ceramic Matte Floor Tiles at Façade Entrance and application of concrete finish at PWD Ramp as per plan specifications, Complete with Necessary Accessories. 7. Installation of Outdoor Non - skid Textured Tiles at Covered Walkway as per plan specifications, Complete with Necessary Accessories. 8. Installation of Food Processing and Baking Area Backsplash Tiles as per plan specifications, Complete with Necessary Accessories. | |
| | <p>K. PAINTING WORKS</p> <ol style="list-style-type: none"> 1. Application of Paint Finish on the Exterior Walls of the building. 2. Application of Paint Finish on the Interior Walls of the building. 3. Application of Rust Inhibiting Primer on All Metal Surface (Roof Framing, Window Security Grills and Grill Door). 4. Application of Limewash Paint Finish on the Façade of the Building. | |
| | <p>L. FABRICATED MATERIALS</p> <ol style="list-style-type: none"> 1. Fabrication and Installation of Glass Window as per plan requirements and | |

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| | <p>specification, Complete with Necessary Accessories.</p> <ol style="list-style-type: none"> 2. Fabrication and Installation of Wooden and Glass Door as per plan requirements and specification, Complete with Necessary Accessories. 3. Fabrication and Installation of Food Processing Concrete Countertop for Food Preparation, Cooking and Wash Area, Granite Finish as per plan requirements and specification, Complete with Necessary Accessories. 4. Fabrication and Installation of Comfort Room (PWD) Concrete Countertop for Handwashing, Granite Finish as per plan requirements and specification, Complete with Necessary Accessories. 5. Fabrication and Installation of Pipe Chase as per plan requirements and specification, Complete with Necessary Accessories. 6. Fabrication and Installation of Façade Design as per plan requirements and specification, Complete with Necessary Accessories. 7. Fabrication and Installation of the required Wooden Cabinets as per plan specifications, Complete with Necessary Accessories. 8. Fabrication and Installation of the required Salon and Toilet Mirror and other fittings as per plan specifications, Complete with Necessary Accessories. 9. Fabrication and Installation of Accordion Partition with Sound Transmission Control as per plan specifications, Complete with Necessary Accessories. | |
| | <p>M. HVAC SYSTEM WORKS</p> <ol style="list-style-type: none"> 1. Installation of Aircon in designated area as per plan specifications and requirements, Complete with Necessary Accessories. 2. Installation of Exhaust Fans on all Office Comfort Rooms as per plan specifications and requirements, Complete with Necessary Accessories. | |

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| | <p>N. ETHERNET (WIFI), TELECOMMUNICATIONS AND CCTV SYSTEM WORKS</p> <ol style="list-style-type: none"> 1. Installation of Ethernet and Telecommunications Wiring and Devices, Complete with Necessary Accessories. 2. Installation of CCTV Wiring and Devices, Complete with Necessary Accessories. | |
| | <p>O. FIRE SUPPRESSION AND DETECTION SYSTEM WORKS</p> <ol style="list-style-type: none"> 1. Supply and Installation of Fire Detection and Alarm System Wiring and Devices as per plan specifications, Complete with Necessary Accessories. 2. Supply and Installation of Fire Sprinkler System (Wet Pipe System) Piping and Devices, Complete with Necessary Accessories. | |
| | <p>P. MISCELLANEOUS</p> <ol style="list-style-type: none"> 1. Fabrication and Installation of High-Grade Acrylic NCMH Logo, Building and Room Identification Signages on all required areas as per plan specifications 2. Fabrication and Installation of Electrical Service Post as per plan specification and requirements, 3500 psi. 3. Supply, Fabrication and Installation of Fall Protection Grab Handrails on All Required Areas (PWD and Comfort Room) as per plan requirements and specification, Complete with Necessary Accessories. 4. Installation of Built in Equipment and Appliances (Heating) as per plan requirements and specification, Complete with Necessary Accessories. | |
| | <ol style="list-style-type: none"> 5. Supply, Delivery and Planting of Gardening Growing Plants for Landscaping as per plan specifications. 6. Supply and Installation of Water Storage System as per plan requirements and specification, | |

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| | Complete with Necessary Accessories. | |
| | Q. CONSTRUCTION OF SEPTIC TANK AND CONCRETE CANAL <ol style="list-style-type: none"> 1. Construction of Width = 2 meters x Length = 4 meters x Depth = 2 meters Masonry Septic Tank as per plan specifications. 2. Construction of Width = 1.5 meters x Length = 4 meters x Depth = 2 meters Masonry Leaching Tank as per plan specifications. 3. Installation of the required Septic Tank and Water Tank Piping System, Complete with Necessary Accessories. 4. Construction of Concrete Canal with Concrete Cover (Class B = 3000 psi) and Trench Drain as per plan requirements and Specifications, Complete with Necessary Accessories. | |
| | R. CONSTRUCTION OF ONE STOP UTILITY HOUSING AND CISTERN TANK FOR FIRE PROTECTION SYSTEM <ol style="list-style-type: none"> 1. Construction of a one-stop utility housing designed to accommodate the fire protection pump room, water tank, and generator set. The following outlines the required works: <ol style="list-style-type: none"> a. Earthworks b. Concrete Works c. Masonry Works d. Structural Steel and Roofing Works e. Ceiling System Works f. Electrical System Works g. Painting Works h. Fabricated Materials | |
| | S. PROVISIONAL ITEMS <ol style="list-style-type: none"> 1. Processing of the Required Permits (DOH Permit to Construct, Building Permit and License to Operate) and Submission of As Built Plans (Signed and Sealed by the required Professional) upon Project Completion, Complete with all Necessary Attachments. | |

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| | 2. Material Testing of Reinforcing Bars and Hardened Concrete Samples as per the required ASTM Test Method. | |
| | T. CLEARING & GRUBBING/ DEMOBILIZATION 1. Site Clearing and Grubbing, Includes Hauling of Debris and Construction Waste Prior Project Turn – Over. 2. Demobilization. | |
| CONFORME: | | |
| <i>(Company Name)</i> | | |

ANNEX A

DETAILED SCOPE OF WORK AND TECHNICAL SPECIFICATIONS OF THE PROPOSED PHOTOVOLTAIC SYSTEM (SOLAR POWER SYSTEM)

I. PHOTOVOLTAIC SYSTEM

A. GENERAL

1. Applicable provisions of “General Conditions” govern work under this section.
2. The Contractor shall provide all times, articles, materials, operations or methods listed, mentioned, or scheduled on the drawings and / or specified, including all labor, materials, and incidentals for their completion.
3. All work, materials and equipment to be used in the electrical installations and construction shall be in accordance with the provisions of the latest edition of the Philippine Electrical Code and the pertinent ordinances of the municipality wherein the project is located. All work shall also comply with the rules and regulations of the local power utility company in so far as they are concerned in providing the respective permanent services to the building.
4. Wiring methods shall be PVC moulding for all indoor DC wirings, EMT for exposed DC and AC wirings and PVC for embedded AC wirings.
5. All PVC conduits shall be embedded at least 25 mm deep from wall plaster finish and no conduits shall pass through columns and beams (except for lintel beams and stiffener columns).
6. All joints between length of conduit, between conduit and coupling, fittings shall be sealed against the admission of moisture by method such as taping in combination with insulation compound or sealing devices.
7. Sharp bends in the conductors shall be avoided. Splices and taps shall be made only in boxes.
8. The work throughout shall be executed in the best and most thorough manner.
9. The owner/engineer shall have the authority to reject any work and materials, equipment etc. which in their judgment are not in full accordance or disapproved.

B. SCOPE OF WORK

1. Work included under this Section of the Specification consist in furnishing all labor, tools, equipment, appliances, and materials necessary for complete installation, testing and operation of the Grid Tie/On-Grid Photovoltaic (PV) System in accordance with Specification and all applicable drawings in the contract.
 - a. The PV System Contractor is required to refer to all Architectural, Structural, Mechanical, Fire Protection, and Electrical plans and investigate all possible interference and conditions affecting his work.
 - b. All work shall comply with the pertinent provisions of the Philippine Electrical Code and/or other related International/ Local Codes and Standards and utility requirements.
 - c. PV Panels, Batteries (if Hybrid) and Pure Sine Wave PV System Inverter.
 - d. PV System Supports and Railings
 - e. Electrical Conductors and Rough-ins for both DC and AC systems of the PV System.
 - f. Necessary Electrical Protection, Grounding System and Disconnecting Means for PV system.
 - g. Connection of PV System to Infrastructure's AC Electrical System
 - h. 6 sets of Detailed Electrical Design Drawings & Plans for the provision of the required Solar Power System in 20"x30" Tracing Paper and Blueprint, Sign and Sealed by a Professional Electrical Engineer with Soft Copy.
 - i. Technical Specifications for the provision of the required PV System in A4, Sign and Sealed by a Professional Electrical Engineer with Soft Copy.
 - j. Maintenance manual for PV system.
 - k. Testing and Commissioning with Commissioning Certificate:
 - Polarity Testing

- Earth Continuity Testing
 - Insulation Resistance Testing
 - Voltage Drop Testing
 - Battery Load Testing (for Hybrid)
 - Earth Leakage Testing
 - Phase Balance Testing (for multiphase)
 - Peak Voltage and Peak Power Testing (for both PV Inverter Input and Output)
- l. Processing and Payment for all permits necessary to the completion of work ready for service
 - m. Any and all other works involved in providing the complete of the PV system in accordance with the requirement of all applicable laws of the Philippines and all codes and ordinances of the governing agency.
 - n. The Contractor shall submit 2 sets of shop drawings and as-built plans to the Consultant for approval
2. The Contractor is required to refer to all Architectural, Structural, Mechanical and Electrical Plans and Specifications and shall investigate possible interference and condition affecting his work.
 3. All materials and equipment to be used in the electrical installations and construction shall be in accordance with the provisions of the latest edition of the Philippine Electrical Code and the pertinent ordinances of the municipality wherein the project is located. All work shall also comply with the rules and regulations of the local power utility company in so far as they are concerned in providing the respective permanent services to the building.

C. APPLICABLE SPECIFICATION CODES, ORDINANCES, PERMITS AND FEES

- a) The work covered in this contract it to be installed according to the specs, codes, ordinances and requirements of the following:
 - (i) Philippine Electrical Code
 - (ii) International Electrotechnical Commission (IEC) standards
 - (iii) Department of Energy
 - (iv) Electric Service Provider
 - (v) Ordinances of concerned city or municipality

- b) All construction permits and fees required for the work shall be obtained by and at the expense of the contractor. The contractor shall furnish the Owner final certificates of inspection after the completion of the work.
- c) The Electrical Contractor shall at his own expense, reproduce the electrical plans to the necessary scale and size, complete them with all the necessary information and requirements as maybe required by the government authorities concerned with the approval of plans.
- d) All work shall coordinate and comply with the rules and regulations of the local power utility company in so far as they are concerned in providing the respective permanent services to the building.

II. BASIC MATERIALS AND METHOD

- a. All materials to be used shall be brand new, with trade name, unused, and shall in every case be the best where such standards have been established for the particular type of materials used.
- b. All materials to be used shall conform to the standards below. Use of materials shall further be governed by other requirements imposed and shall be subject to test necessary to ascertain their fitness if the Owner so requires:

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| 1. | PVC Conduits for embedded AC wirings | Thick wall PVC conduits or approved equal |
| | NOTE: "Embedded" includes claddings, ceilings etc. and shall not be limited to concrete only. | |
| 2. | EMT conduits for exposed, indoor and outdoor AC wirings | Galvanized coated steel conduits, stainless steel or approved equal |
| 3. | Rectangular PVC Moulding for exposed indoor DC wirings | Thick wall rectangular PVC mouldings or approved equal |
| 4. | PVC Junction Boxes for embedded overhead devices | At least 4"Ø Thick wall PVC junction box with at least 5 holes and cover or |

approved equal

NOTE:

“Embedded” includes claddings, ceilings etc. and shall not be limited to concrete only.

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| 5. | PVC Square Boxes for embedded overhead devices with more than 4 horizontal connections and other appropriately sized electrical devices | At least 4x4” Thick wall PVC square box with at least 12 holes and cover or approved equal |
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NOTE:

“Embedded” includes claddings, ceilings etc. and shall not be limited to concrete only.

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| 6. | PVC Utility Boxes for embedded appropriately sized wall mounted devices, outlets, switches etc. | At least 2x4” Thick wall PVC utility box with at least 7 holes and cover or approved equal |
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NOTE:

“Embedded” includes claddings, ceilings etc. and shall not be limited to concrete only.

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| 7. | Metallic Junction Boxes for exposed overhead devices | At least 4”Ø Gauge 16, junction box with at least 5 holes and cover or approved equal |
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| 8. | Metallic Square Boxes for exposed overhead devices with more than 4 horizontal connections and other | At least 4x4” Gauge 16, square box with at least 12 holes and cover or approved equal |
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| | appropriately sized electrical devices | |
| 9. | Metallic Utility Boxes for exposed appropriately sized wall mounted devices, outlets, switches etc. | At least 2x4" Gauge 16, utility box with at least 7 holes and cover or approved equal |
| 10. | Surface Mounted PVC Junction Boxes for exposed overhead devices | At least 4"Ø Thick wall surface mounted PVC junction box with at least 5 holes and cover or approved equal |
| 11. | Surface Mounted PVC Square Boxes for exposed overhead devices with more than 4 horizontal connections and other appropriately sized electrical devices | At least 4x4" Thick wall surface mounted PVC square box with at least 12 holes and cover or approved equal |
| 12. | Surface Mounted PVC Utility Boxes for exposed appropriately sized wall mounted devices, outlets, switches etc. | At least 2x4" Thick wall surface mounted PVC utility box with at least 7 holes and cover or approved equal |
| 13. | Metallic Fittings, Couplings, Adapter w/ Bushings etc. | Galvanized coated steel fittings, couplings, adapter w/ bushings etc. or stainless steel or approved equal |

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| 14. | Electric Meter for Service Entrance | Digital bidirectional electric meter |
| 15. | Photovoltaic Panels | Monocrystalline silicon photovoltaic panel |
| 16. | Battery (for Off-Grid and Hybrid PV systems) | Appropriately sized Lithium-ion battery with lowest discharge up to 20% only |
| 17. | Photovoltaic Power Inverter | <p>Either Off-Grid, On-Grid, Hybrid pure sine wave photovoltaic power inverter with at least 95% efficiency sized appropriately with following specs:</p> <p>Output: 240V, 60 Hz, 3Ø or 1Ø</p> <p>Features: Graphic LCD and WIFI monitoring system</p> <p>Protective devices shall include the following but not limited to: DC Reverse Polarity Protection, DC Switch, DC Surge Protection, Ground Fault Monitoring, Output Short Circuit Protection, AC Surge Protection, String Fuse Protection, String Fault Monitoring and Anti-PID protection.</p> <p>Others: shall come with user manual and maintenance manual</p> |

- c. Alternate Materials: Use of any material, not specified in these specifications may be allowed provided such alternate has been approved by the Owner and

provided further that the test, if required, shall be done by an approved agency in accordance with the generally accepted standards

- d. Identification of Materials: Each size of conduit, wires or device used in the electrical system shall have cast or stamped or indelibly marked on it the manufacturer's trademark or name, the weight, type and class of product when required by the standards mentioned above.

III. WIRING METHODS

- a. Wiring methods shall be rectangular PVC moulding for all indoor DC wirings, EMT for exposed and outdoor DC and AC wirings and PVC for embedded AC wirings.
 - b. Embedded PVC conduits in concrete walls shall have a depth of not less than 25mm from plaster finish.
 - c. No conduits shall pass through columns and beams (except for lintel beams and stiffener columns).
 - d. All joints between length of conduit, between conduit and coupling, fittings shall be sealed against the admission of moisture by method such as taping in combination with insulation compound or sealing devices.
 - e. Remove fins and burrs from pipe and fittings. Before placing in position, clean conduits, fittings, valves, and accessories and maintain in a clean condition.
 - f. Cut conduits accurately to length established at the site and work into place without springing or forcing.
 - g. Boxes shall be either Metallic or PVC (surface mounted type) for exposed works and pvc for embedded works both with proper fittings and supports
 - h. Boxes shall also be sealed against the admission of moisture by method such as covering in combination with insulation compound or sealing devices.
 - i. Sharp bends in the conductors shall be avoided. Splices and taps shall be made only in boxes.
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- j. All concrete embedded conduits, boxes, enclosures, etc. shall be wrapped in wire mesh.
 - k. All splices, taps, junction in wires larger than 8.0 sq.mm. shall be done with solderless connectors of suitable sizes and properly insulated with rubber tapes

and protected by friction tapes, so that the insulation strength shall at least be equal to the insulation of the conductors they join.

IV. CONDUIT HANGERS

- a. Horizontal runs of conduits shall be hung with adjustable iron or malleable iron conduit hangers spaced not over 8 ft. apart
- b. Conduits over ceiling line shall be suspended in hangers by use of threaded rod, adjustable iron or malleable iron conduit hangers. Placing of conduit on ceiling is prohibited.

V. DRAWINGS AND SPECIFICATIONS

- a. The Electrical Contractor shall check architectural, structural and plumbing plans if necessary to resolve such conflicts. The Electrical Contractor shall notify the architect and secure approval and agreement on necessary adjustments before installation is started.
- b. The electrical plans indicate the general layout of the complete electrical system, arrangement of feeders, circuit outlets, switches, controls, panel boards, service equipment and other work. Field verification of the scale dimensions on the plane must be made, since actual locations, distances and levels will be governed by actual field conditions.
- c. The contractor shall provide six (6) sets of Detailed Electrical Design Drawings & Plans for the provision of the required Solar Power System in 20"x30" Tracing Paper and Blueprint, Sign and Sealed by a Professional Electrical Engineer with Soft Copy.
- d. The contractor shall provide Technical Specifications for the provision of the required PV System in A4, Sign and Sealed by a Professional Electrical Engineer with Soft Copy.
- e. Upon final completion of the work herein described, the electrical contractor shall furnish the Owner two (2) copies of the "As-built" plans for future reference and maintenance purposes.

VI. DEFECTIVE WORK

- a. If inspection or test show any defect, such defective work or material shall be replaced by the Contractor and the inspection and test repeated until satisfactory the Architect.
- b. All repairs to PV electrical system or damaged electrical system shall be made with new materials at the expense of the Contractor.



with new materials at the expense of the Contractor.

REPUBLIC OF THE PHILIPPINES
Department of Health
NATIONAL CENTER FOR MENTAL HEALTH
Nueve de Febrero Street, Mandaluyong City, Philippines
BIDS AND AWARDS COMMITTEE



Telephone No. 531-9001 loc. 239

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Website: www.ncmh.gov.ph

General Technical Specifications **(INFRA – IB NO. 001 – 2025)**

Public Bidding for Infrastructure Project No. 01-2025 - Construction of Two Storey NCMH Psychosocial Rehabilitation and Recovery Training Center for Service Users CY 2025 – 240 Calendar Days

1.0 GENERAL REQUIREMENTS

1.1 Scope of Work

The contractor shall furnish all materials, equipment, transportation, tools, supplies plant, labor and suspension required to complete satisfactorily the construction of the proposed subject project as shown on the drawings and specifications.

The contractor shall coordinate his work with all parties (implementing section/end-users) to ensure proper phasing of the approved schedule of work based from their submitted PERT – CPM.

1.2 Mobilization and Demobilization

The contractor upon receipt of the notice to proceed shall immediately mobilize and transport his plant, equipment, materials and employees to the site and demobilize or remove the same at the completion of subproject.

1.3 Contractors Field Office and Facilities

1.3.1 Security

The Contractor shall provide sufficient security in the construction site to prevent illegal entry or work damaged during nights; holidays and other period when work is not executed; and during working hours. The Contractor shall take ample precautions against fire by keeping away flammable materials, and ensure that such materials are properly handled and stored. Fires shall not be built within the area of construction, except when permitted by the Project Manager.

Identification cards of construction workers and engineers and other staff shall be supplied by the contractor. It should be worn at all times inside the NCMH compound.

1.4 Compliance with Contract Requirements

1.4.1 Control of On Site Construction

Prior to start of any definable feature of the work, the Contractor must perform the necessary inspection to include as follows:

- (1) Review of Contract Documents to make sure that material, equipment and products have been tested, submitted and approved.
- (2) Physical examination of materials and equipment to assure its conformity to the specification, plans, shop drawing and other data.
- (3) As soon as the work has been started, the Contractor shall conduct initial inspection to check and review the workmanship in compliance with the contract requirements for a particular item of work.
- (4) The Contractor shall perform these inspections on a regular basis to assure continuing compliance with the contract requirements until completion of a particular type of work.

1.4.2 Pre-Construction Meetings

Prior to the start of construction, Contractor's material men whose presence is required must attend pre construction meetings as directed for the purpose of discussing the execution of work. In this conference the contractor determines the necessary precautions in mitigating the effect of construction on environmental aspect and medical services.

1.4.3 Progress Meetings

Progress meetings shall be called upon by the following for the purpose of discussing the implementation of the work:

- (1) When called upon by the Project Manager of NCMH or his representative for the purpose of discussing the execution of work. Contractor's material men whose presence is necessary or requested must attend progress meetings. Each of such meeting shall be held at the time and place designated by the Project Manager or his representative. Decisions and instructions agreed in these meetings should be binding and conclusive on the contract. Minutes of these meetings shall be recorded and reasonable number of copies shall be furnished to the Contractor for distribution to various materials men and vendors involved.
- (2) The Contractor may also call for a progress meeting for the purpose of coordinating, expediting and scheduling the work. In such meeting Contractor's material men or vendors, whose presence is necessary or requested to attend.

1.4.4 Progress Report

The Contractor shall prepare and submit progress reports to the project manager every 15 days after the start of the project up to its completion, showing the work completed, work remaining to be done, status of construction equipment and materials at the site.

1.4.5 Survey Data

~~The Contractor shall layout his work from established base lines and benchmark indicated in the drawing and shall be responsible for all measurement in connection therewith. The Contractor shall furnish, at his own expense, all stakes, templates, platforms, equipment, tools, materials and labor as may be required in laying out any part of the work, out of established base lines and bench mark. If shall be the responsibility of the Contractor to maintain and preserve all stakes and other marks until he is authorized to remove them. If the Contractor through his negligence prior to~~

the authorized removal destroys such marks, they shall be replaced at the expense of the Contractor.

1.4.6 Shop Drawing

The Contractor shall submit and furnish shop drawings and samples accompanied with the provision of the Conditions of Contract. The term "Shop Drawing" as used herein shall be understood to include detailed design calculations, construction drawings, lists, graphs supplemental specifications and others.

- (1) Transmittal forms shall be filled out in typewritten or ink with no alterations or inter line actions unless initialized dates before submittal. Shop drawings shall be submitted as the same size as the contract drawing when practicable, but in no case it shall exceed dimension of the contract drawings. The Contractor shall make preliminary check of all shop drawings for compliance with the contract documents and he shall stamp each print with statement of compliance with the requirements. The contractor may authorize his supplier to deal with the Project Manager with regard to the shop drawings, however ultimate responsibility for accuracy and completeness in the submittal shall remain with the Contractor.
- (2) The said shop drawing and transmittal shall be submitted at time sufficiently early, to allow review of the same by the Project Manager and to accommodate the rate of construction progress required under the contract. The contractor shall submit print copies of show drawing with transmittal forms, and copies of brochures with transmittal forms as required by the Project Manager.
- (3) Any shop drawing and samples submitted not accompanied by transmittal forms of where all applicable items on the forms are not completed would be returned for resubmission. The Project Manager who will check and evaluate mentioned shop drawing would retain print copy for his file and return the rest to the Contractor with notation. Returned show drawing marked "No Exceptions Taken" or "Make Corrections Noted", means formal revision of said drawings will not be required. If it is remarked "Amend Resubmit" or "Rejected-Resubmit", the Contractor shall revise said drawing and shall submit revised drawing to the Project Manager.
- (4) The Project Manager shall process the submission and indicate the appropriate action on the shop drawing and transmittal forms. Construction of an item shall not commence before the Project Manager has reviewed the pertinent shop drawing and returned it to the Contractor, marked as mentioned above. Revisions indicated on shop drawing shall be considered as changes necessary to meet the requirements of the contract drawings and specifications, and shall not be taken as the bases of claims of extra work. The Contractor shall have no claim for damages or extension of time due to any delay, resulting from having Contractors make the required revisions, unless review by the Project Manager was delayed beyond reasonable period of time and unless the Contractor can establish that such delay in revision in delay of the project.

- (5) Resubmitted procedure shall follow the same procedure as the initial submittal.

1.4.7 Construction Photographs

The Contractor shall take photographs during the process of the work once a month, all taken where directed by the Project Manager. At the completion of the project final

photographs shall be sent to the NCMH project in charge. The photographs shall be neatly labeled, dated and identified in a little box in the lower right hand corner, showing the date of exposure, project name, location and direction of view or may take using geotag application. The contractor shall take photographs of the existing condition of the site before commencement of work to ensure such status. Any damage on the site/area due to contractor's on-going work shall be restored at his own expense. All photograph files shall be retained by the Contractor until completion of the work at which time they shall become the property of the NCMH.

1.4.8 Cleaning-up

The Contractor shall at all times keep the construction area, including storage used by him, free from accumulations of waste material or rubbish. All construction wastes should be brought out by the contractor with approved request/gate pass from the hospital authority. Upon completion of construction, the contractor shall restore all areas that were damaged and affected by the construction works and leave the site and premises clean, neat and workmanlike conditions satisfactory to NCMH.

1.4.9 Documents to be submitted

The Contractor shall submit the following documents prior to final payment and before issuance of final certificate of payment in accordance with the provisions of the conditions contract.

- (1) The guarantee required by the Conditions of Contract and any other extended guarantees stated in the technical sections of the specifications.
- (2) A set of As-Built drawing shall be submitted showing accurate record of changes or deviations from the contract documents and the shop drawings indicating the work as actually installed. Records shall be arranged in order, in accordance with various sections of the specifications and properly indexed with certifications of endorsement thereof, that each of the revised print of drawings and specifications are complete and accurate. Prior to the application for final payment, and as a condition to its approval by the Project Manager of NCMH, the Contractor shall deliver the records, drawings and specifications arranged in proper order, indexed and endorsed herein specified.

1.5 Method of Measurement and Basis of Payment

Cost incurred in providing and maintaining Contractor's field office, temporary light and power, temporary toilet, water and security services, including cost of mobilization and demobilization, and cost incurred in the compliance of contract requirements shall not be measured and paid separately, same shall be deemed to be included in the cost of other items work, as part of the Contractor's construction overheads.

2.0 SITE WORK

2.1 Scope of Work

The section includes site clearing, earthwork and site drainage and utilities construction of septic tank in accordance with the drawing and specification.

2.2 Applicable Documents

The latest edition of the following Standards and Specifications shall form part of these specifications:

ASTM American Society for Testing and Materials.

- C131 Resistance to Abrasion of Small Size Coarse Aggregate by use of the Los Angeles Machine.
 - D698 Moisture-Density Relations of Soils using 5.5 lb. (2.5 kg) Rammer and 12 in (304.8 mm) Drop
 - D1556 Density of Soil in place by the Sand Cone Method
 - D1557 Moisture-Density Relations of Soils using 10 lb. (4.5 kg) Rammer and 18 in (457 mm) Drop.
 - D2487 Classification of Soils for Engineering Purposes
 - C-14 Concrete Sewer, Storm Drain and Culvert Pipe.
 - C-76/C-497 Class II Reinforced Concrete pipes
 - A-74 Cast Iron Soil Pipes and Fittings
- Other pipes shall conform to the latest ASTM requirements.

2.3 Material Requirements:

2.3.1 Selected Fill Material

Selected fill materials shall consist of pit run gravel, disintegrated rock, sand and or other similar materials. The material shall not contain more than 35% passing the No. 200 sieve; and fraction of the material passing the No. 40 sieve shall have a liquid limit not greater than 35 and plasticity index not greater than 12.

2.3.2 Gravel Fill

Gravel fill shall consist of hard durable particles or fragments of stones or gravel. It shall be clean and free from vegetable matters, lumps or balls of clay and other deleterious material. The proportion of the material passing the 0.075 mm (No. 200) sieve shall not be greater than 0.66 (two thirds) of the fraction passing the 0.425 mm (No. 40) sieve. The fraction passing the 0.425 mm (No. 40) sieve shall have a liquid limit of not more than 25 plasticity index of not more than 6 as determined by AASHTO T89 and T90. Gravel bedding 100 mm (4") in depth or as shown on the drawing shall be placed, spread and compacted through tamping and underneath footing, slabs, on fill and slabs on grade.

2.3.3 Base and Sub-Base Course

Aggregate sub-base shall consist of pit run gravel, talus rock, disintegrated granite, sand, shale cinders, coral or other similar materials, or additional filler for blending, selected under the direction of the Consultant. The maximum dimension of any particle shall not be greater than two-thirds of the required thickness of the layer in which it is to be placed. Over-sized materials if present shall be removed at the pit by screens, or hand picking. If necessary, to obtain proper uniformity, mixing shall blend additional filler. The fraction to aggregate sub-base materials including any additional filler passing the 0.075 mm (No. 200) sieve shall not be more than two-thirds (2/3) of that passing the 0.425 mm (No. 40) sieve. The fraction passing the 0.425-mm sieve shall have a liquid limit not greater than 25 and plasticity index of not more than 6.

2.3.4 Concrete for Site Work

Concrete materials for the site work shall be in accordance with Section 3, concrete, of these specifications. Cement shall be proportioned as follows:

| <u>Description of Structure</u> | <u>Compressive Strength</u> |
|---------------------------------|-----------------------------|
| 1.) For sidewalks, walkways, | 1.72 Mpa (2500 psi) at 28 |

2.4 Construction Requirements

2.4.1 Earthwork

1. Site Demolition

All superficial obstructions shall be demolished and removed from the site to disposal areas approved by the Consultant.

2. Filling and Backfilling

Fill and backfill materials shall consist of suitable materials from excavation or from approved borrow areas, and shall be free from roots, wood scraps, vegetations, and other extraneous materials and from large clods of earth or stones greater than 100 mm. No fill material shall be placed until the surface to be filled has been approved.

(a) Filling and Backfilling for Structures and Trenches

Filling around structures shall be placed as the construction work progress, insofar practicable. Backfilling of trenches shall progress as rapidly as construction and testing will permit. In backfilling pipe trenches, approved backfill shall be compacted in 200 mm layers to a depth of 150 mm over the pipe and the remainder of the trench depth shall be backfilled and compacted in 300 mm layers; for trenches under road pavements and concrete floor slabs, the backfill shall be placed and compacted in 200 mm layers to the top of the trench.

(b) Embankment Construction

Before placing fill material, the surface upon which it will be placed shall scarified to insure good bonding between the existing surface and the fill material. Where embankments are to be constructed on sloping ground with slopes steeper than 1 vertical to 4 horizontals, the new fill shall be cut into or benched as the embankment is brought up in layers in such a manner that the embankment material will bond with the existing surface. The size of each bench shall be subject to approval and shall depend on the equipment to be used.

3. Equipment

Equipment used in the performance of the work shall be subject to approval of the project manager. The quality of compaction equipment shall be adequate to assure thorough uniform compaction as rapidly as material is placed. In all areas not accessible to rollers or compactors, the fill shall be compacted with mechanical hand tampers.

4. Compaction

In fill areas, the top 200mm shall be compacted to a density of at least 95 percent of maximum density and the remaining depth of fill to not less than 90 percent of maximum density; except that under ramps pavements and concrete floor slabs, compaction shall not be less than 85 percent of the maximum density for the entire depth of fill. Unless otherwise indicated where the existing sub-grade in cuts have a density of less than 95 percent, all materials to a depth of 150mm or to such greater depth as maybe specified, shall be compacted not less than 95 percent of the maximum density. Soil moisture during compacting shall be controlled between 80 and 110

percent of optimum moisture content determined in accordance with AASHTO Method T99-84.

5. Disposal of Surplus Excavated Materials

Any surplus material from the excavation and grading operations shall be disposed and spread in spoil areas designated by the Project Manager except for the materials classed as rubbish and debris, which shall be deposited in the spoil areas shall be graded to a reasonably uniform surface.

2.4.2 Soil Poisoning and Termite Control

This item shall consist of furnishing and applying soil treatment for termite control.

At the time soil poisoning is to be applied, the soil to be treated shall be in friable condition with low moisture content so as to allow uniform distribution of the toxicant agents. Toxicant shall be applied at least twelve (12) hours prior to placement of concrete, which shall be in contact with treated materials.

Treatment of the soil on the exterior sides of the foundation walls, grade beams and similar structures shall be done prior to final grading and planting or landscaping work to avoid disturbance of the toxicant barriers by such operations.

Areas to be covered by concrete slab shall be treated before placement of granular fill used as capillary water barrier at a rate of 12 liters per square meter with Type 1 working solution after it has been compacted and set to required elevation.

1. MATERIAL REQUIREMENTS

Termite control chemicals or toxicants shall be able to immediately exterminate termites or create barriers to discourage entry of subterranean termites into the building areas. The toxicants maybe classified into the following types and according to use.

1.1 Type I Liquid Termite Concentrate

This type of toxicant shall be specified for drenching soil beneath foundations of the proposed buildings. The concentrate shall be diluted with water in the proportion of 1 liter of concentrate materials to 65 liters of water or as specified by the manufacturer.

1.2 Type II Liquid Termicide Ready Mixed Solution

This type of toxicants that comes in ready mixed solution shall be used as wood preservative by drenching wood surfaces to the point of run-off.

2. CONSTRUCTION REQUIREMENTS

Before any termite control work is started, the contractor shall undertake thorough examination of the site so that the appropriate method for soil poisoning can be applied. The Contractor shall coordinate with other related trades through the Engineer to avoid delay that may arise during the different phases of application of the termite control chemicals.

2.1 Soil Poisoning and Termite Control Treatment

2.1a When soil show termite infestation, this method shall be applied. The building area shall be thoroughly drenched with Type 1 working solution at the rate of 24 liters per square meter.

When Powder Termicide is to be applied to eradicate subterranean termites, careful application and precaution shall be given considering that this toxicant is fatal to animal and human lives.

2.1b Prior to application of soil poisoning chemical, the soil to be treated shall be in friable condition with low moisture content so as to allow uniform distribution of the toxicant agents. Toxicant shall be applied at least twelve (12) hours prior to placement of concrete, which shall be in contact with treated materials.

2.1c Treatment of the soil on the exterior sides of the foundation walls, grade beam and similar structures shall be done prior to the final grading and planting or landscaping work to avoid disturbance of the toxicant barriers by such operations.

2.1d Areas to be covered by concrete slab shall be treated before placement of granular fill used as capillary water barrier at a rate of 12 liters per square meter with Type I working solution after it has been compacted and set to required elevation.

2.1e Where the application of wood preservative is necessary, the Contractor shall use Type II working solution as recommended by the manufacturer.

All wood materials not pressure treated shall be treated with Type II ready mixed solution as herein called for or as directed by the supervising Architect or Engineer.

2.1f The Contractor shall give in Service Guarantee covering the treatment of termite infestation or the repetition of the above stated termite control services without extra cost to the Owner if any infestation of recurrence or infestation occurs during the guarantee period of one year.

2.4 Method of Measurement and Basis of Payment

Measurement of accomplished quantities shall be of the ff. methods:

(1) Lump sum payment shall be provided for the following:

- a. Site demolition and clearing shall be deemed to include the cost of salvaging of materials, preservation, storage and disposal.
- b. Construction of septic tank holding and water storage tank (including reservoir and piping) shall be considered to include the cost of excavation and backfilling, bedding, forms and false work, curing, fasteners and incidentals to complete each item of work.
- c. Subsurface waste water infiltration system shall be deemed to include the cost of excavation, disposal, gravel filter, silt barrier, overflow and distribution pipes and incidental works to complete this item.

(2) The volume of structural excavation to be paid for shall be the number of cubic meters measured in original position of material acceptably excavated in conformity with the plans or as directed by the Payment of quantities accomplished shall be deemed to include the cost of disposal of excess and unsuitable materials, shoring, bracing, water control works and other operations necessary to complete this item.

(3) The volume of backfill materials from excavation; fill materials from common borrow; top soiling; construction of embankment; sub-base and base course preparations; and

compacted gravel fill bedding to be paid for shall be the number of cubic meters measured in the final position of materials actually provided and installed to include where applicable, furnishing, placing, spreading and compaction in accordance with the plans and specifications and disposal of excess and unsuitable materials, if any.

- (4) The work item for soil treatment is as stipulated in Sub-Section 2. Soil Poisoning, shall be measured and paid for per square meter area of works accomplished and accepted. Payment of work accomplished shall be made based on dimensions shown in the drawings and stipulated in the specifications.

The quantities measured as provided above shall be paid for at the contract unit price for each of the pay item, which price and payment shall be full compensation for furnishing and placing all materials, labor, equipment, tools and incidentals necessary to complete the work.

3.0 **CONCRETE**

3.1 **Scope of Work**

The work includes construction of concrete structures complete in accordance with the standard specifications and conformity with the lines, grades, thickness and typical cross-section shown on the plan.

3.2 **Reference Standards**

The latest edition of the following standards shall be from apart of this specification:

| | |
|--------------------------------|--|
| ACI | American Concrete Institute |
| 211-01 | Standard Practice for Selecting Proportions for Normal and Heavyweight Concrete |
| 301 | Concrete, Structural for Building |
| 309R | Standard Practice for Consolidation of Concrete |
| 318 | Building Code Requirements for Reinforced Concrete |
| AASHTO | American Association of State Highway and Transport Officials |
| M173 | Concrete Joint Sealer, Hot-Poured Elastic Type Performed Expansion Joint Filler Concrete |
| ASTM | American Society for Testing Materials |
| C33 | Concrete Aggregates |
| C31 | Standard Practice for Making, Curing Concrete Test Specimen in the Field |
| C39 | Comprehensive Strength of Cylindrical Concrete Specimen |
| C42 | Obtaining and Testing Drilled Cores and Sawed Beams of Concrete |
| C94 | Standard Specification for Ready-Mixed Concrete |
| C143 | Standard Test Method for Slump of Portland Cement Concrete |
| C150 | Portland Cement, Specification for |
| C309 | Liquid Membrane-Forming Compounds for Curing Concrete |
| DPWH Blue Book Vol. III (1995) | |

3.3 **Material Requirement**

3.3.1 General

Concrete shall be composed of Portland cement; fine and coarse aggregates, water and admixture as specified all thoroughly mixed and brought to proper consistency, uniformity and temperature for final placement.

3.3.2 Cement

Concrete shall be Portland cement of a brand approved by the Project Manager and conforming to ASTM Specification C150, Type I or Type II.

3.3.3 Water

Water shall be clean and free from injurious amounts of oils, acids, alkalies, salts, organic materials, or other substances that may be deleterious to concrete or steel.

3.3.4 Admixtures

Admixtures shall be subject to prior approval by the Project Manager. The admixtures shall be capable of maintaining essentially the same composition and performance throughout the work.

3.3.5 Fine Aggregates

Fine aggregates shall consist of natural sand, manufactured sand, or a combination thereof. If the fine aggregate shall be a combination of separately processed sizes, or if batching shall result in a combination of natural and manufactured sand, the different components shall be batched separately. Fine aggregates shall consist of hard, tough, durable, uncoated particles. The specified percentages of fines in the sand may be obtained either by the processing of natural sand or by the production of suitably graded manufactured sand. The shape of particles shall be generally rounded or cubical and reasonably free from flat or elongated pieces. The use of beach sand shall be prohibited. The fine aggregate shall conform to the following specific requirements:

| <u>Std</u> | <u>Sieve Designation</u> <u>U.S Std., Square Mesh</u> | <u>Cumulative Percentage by</u> <u>Weight Passing</u> |
|-------------|--|--|
| 9.5 mm | 3/8 | 100 |
| 4.75 mm | No.4 | 95-100 |
| 2.36 mm | No.8 | 80-100 |
| 1.18 mm | No.16 | 45-80 |
| 300 microns | No. 50 | 10-30 |
| 150 microns | No.100 | 2-10 |

In addition to the grading limits shown above, the fine aggregates, as delivered to the mixer, shall have a fineness modulus not less than 2.3 more than 3.0 and during normal operations, the grading of the fine aggregate shall be controlled so that the fineness modulus of at least nine (9) out of ten (10) test samples of fine aggregate as delivered to the mixer shall not vary by more than 0.20 from the average fineness modulus can be determined by dividing 100 the sum of the cumulative percentages retained on U.S. Standard Sieves Nos. 4, 8, 16, 50 and 100.

3.3.6 Coarse Aggregates

Coarse aggregate shall consist of washed gravel, crushed stone or rock, or a combination thereof conforming to ASTM C33. The coarse aggregate, as delivered to the batching plant, shall have uniform and stable moisture content. The approval of deposits shall not be construed as constituting the approval of all materials taken from

the deposits, and the Contractor shall be held responsible for the specified quality of all such materials used in the work. Coarse aggregate shall consist of hard, tough, durable, clean and uncoated particles. All foreign materials and dust shall be removed by adequate shall be generally rounded or cubical, and the coarse aggregate shall be reasonably free from flat and elongated particles. A thin, flat and elongated particle can be as defined as a particle having a maximum dimension greater than five times the minimum dimension. The coarse aggregate shall be graded from fine too coarse. It shall be separated into size groups.

The grading of the aggregate within the separated size groups as delivered to the mixer shall be as follows:

| Sieve Sizes Std (MM) | Percent by Weight | | Passing Individual 1-1/2 Size |
|-------------------------|--------------------|--------|----------------------------------|
| | U.S Std., Sq. Mesh | ¾ Size | |
| 50 | 2" | | 100 |
| 37.5 | 1-1/2" | | 90-100 |
| 25 | 1" | 100 | 20-55 |
| 19 | ¾" | 90-100 | 0-15 |
| 9.5 | 3/8" | 20-55 | 0-5 |
| 4.75 | No. 4 | 0-10 | |

Use 19-mm (3/4") coarse aggregate for slab on grade, columns, beams, suspended slabs and tie beams.

Use 38 mm (1 ½") coarse for footings

3.3.7 Reinforcing Steel

Reinforcing steel shall be locally manufactured, deformed billet steel bars conforming to Philippine Standard, Grade 275, Intermediate grade (40, 000 psi).

3.3.8 Forms

Concrete form shall be wood, plywood, steel or other suitable materials. Form surfaces requiring standard or special finish shall be plywood or a non-absorptive hand pressed fiberboard or other suitable materials. Plywood shall not be less than 12 mm thick and shall be free from irregularities, dents and sags. Forms shall be coated with non-staining form coating compound such as form oil of the approved make.

3.3.9 Storage of Materials

(1) Cement

Cement in bags shall be stored in a suitable weatherproof structure as airtight as practicable. Floors shall be elevated above the ground, sufficient to prevent the absorption of moisture. Bags shall be stocked close together to reduce circulation of air but shall not be stocked against outside walls. The manner of storage shall permit easy access for inspection and identification of each shipment. Cement that has been stored for so long that there may be doubt of its quality shall be tested by standard mortar tests to determine its suitability for use, and shall not be used without approval of the Project Manager.

(2) Aggregates

Aggregate shall be stored in such a manner as to avoid the inclusion of foreign materials. Aggregates of different sizes shall be stored in separate piles. Stockpiles of coarse aggregate shall be built in horizontal layers not exceeding 1200 mm in depth to avoid segregation. Should the coarse aggregate become segregated, it shall be remixed to conform to the grading requirements. Sufficient stockpiles shall be maintained at all times to permit continuous placement of concrete at the rate specified.

(3) Reinforcing Steel

Reinforcing steel shall be stored in a manner to avoid excessive rusting or being coated with grease, oil, dirt and other objectionable materials.

3.4 Construction Requirements

3.4.1 Concrete Proportion

The proportion of all materials in concrete shall be subject to the approval of the Project Manager. The Contractor shall employ at his own expense an approved testing laboratory, which shall design the mix proportions in accordance with ACI 211.01. Strength requirements shall be 20.7 Mpa (3000 psi) for footing, columns, beams, slabs and stairs lavatory counter, wash basin; 17.2 Mpa (2500 psi) for ramp, slab on grade, water meter box, grease trap; and 13.8 Mpa (2000 psi) for lean concrete or as required by the Project Manager. The adequacy of this test shall be verified by a test on a minimum of 6 cylinders; 3 tested at 7 days, 3 at 38 days, in accordance with ASTM C39.

If, at any time during construction, the concrete resulting from the approved mix design proves to be unsatisfactory for any reason such as too much water, lack of sufficient plasticity to prevent segregation, honeycomb, etc., or insufficient strength, the Contractor shall notify the testing laboratory and the Project Manager. The laboratory shall modify the design, subject to the approval of the Project Manager until satisfactory concrete is obtained.

3.4.2 Concrete Samples and Testing

Sampling and testing of concrete shall be done by and at the expense of the Contractor. Throughout the period that the concrete is being poured into cylinder shall be taken from fresh concrete from the forms.

The tests shall be made for each 10 cu. m. of concrete or fraction thereof for each portion of structure as may required by the Project Manager as follows:

1. Compression Tests:

At least two (2) sets of samples consisting of three (3) concrete cylinder specimens per set shall be made. Fresh concrete shall be placed inside standard 150 x 300 mm cylindrical mould in three (3) separate equal layers and rodded separately with 25 strokes with a 16 mm diameter. Surface shall be leveled with trowel and samples are to be labeled to identify the class, strength of concrete, date taken and part of structure samples are taken. The samples shall be cured in accordance with ASTM C31.

One set of cylinders shall be tested at the age of seven (7) days, and one set at the age of twenty-eight (28) days, in accordance with ASTM C39. Additional cylinder samples may be molded in reserve for further tests, if the results of the twenty-eight (28)-day-test do not meet the requirements.

2. Slump Tests

Slump tests shall be performed to determine the consistency or workable fluidity of freshly mixed concrete in the field. At least two slump tests shall be made and the sample of concrete from which the test specimens are made shall be representative of the entire batch and shall conform to the procedures as specified in ASTM C143.

Freshly mixed concrete shall be placed in the slump cone 100 x 200 mm x 300 mm in three (3) equal layers. Each layer shall be rodded with 25 strokes of the 16-mm diameter tamping rod with the tamping end rounded to a hemispherical tip of the same diameter. The mould shall be leveled and lifted at once and then measure the slump action immediately by getting the difference in height between the height of the mould and the top of the slumped concrete.

The slump tests shall be performed to determine the consistency or workable fluidity of freshly mixed concrete in the field. At least two slump tests shall be made and the sample of concrete from which test specimens are made shall be representative of the entire batch and shall conform to the procedures as specified in ASTM C143.

The slump for vibrated concrete shall be 50 mm minimum and 100 mm maximum, provided that the required strength of concrete is obtained.

3. Test Reports

The testing laboratory shall submit four (4) copies of its report which are to include as far as applicable, the following items: Location of pour in the structure, concrete design mix number, concrete design strength, type and manufacturer of cement, amount of any admixture used, slump tests, date of sampling, cylinder application number, days cured in the field, days cured in the laboratory, age and time of testing, crushing stress, type of failure, who made the samples, who shipped the samples to the laboratory and whether concrete strength meets the specifications.

4. Additional Tests

If, in the opinion of the Project Manager, based on the cylinder reports, concrete with strengths below specification requirements has been placed, the Project Manager, at the expense of the Contractor shall make additional tests. Additional tests may be compression test on cored cylinder, ASTM C42, and/or load tests as outlined in ACT 318 Sec. 202.

3.4.3 Mixing Concrete

Mixing shall be thoroughly mixed in a mixer of an approved size and type to insure a uniform distribution of the materials throughout the mass:

1. Site Mixed Concrete

All structural concrete shall be machine-mixed for at least 1 ½ minutes after all materials including water are in the mixing drum. The time elapse between the introduction of the mixing of water to the cement and aggregate and placing of the concrete in final position shall not exceed 45 minutes. Placing of the material in the mixer shall be done in such a way that the first batch of concrete materials in the mixer shall contain sufficient excess cement, sand and water to coat the inside of the drum without reducing the cement content of the mix to be discharged. The retempering of concrete, placing additional cement, aggregate or water during mixing period shall not be permitted.

No hand mixing shall be allowed, except in case of emergency of breakdown during pouring operations, subject to the approval of the Project Manager.

3.4.4 Concrete Placing

Concrete shall be placed only after all formworks, materials to be embedded, and preparation of surface involved in the placing have been inspected and approved by the Project Manager. The Contractor shall provide equipment and shall employ methods that will minimize separation of aggregates from the concrete mix.

Water shall be removed from excavation before concrete is deposited. Flow of water shall be diverted through proper side drains to a pump, or removed by other approved methods to avoid washing over freshly deposited concrete. Hardened concrete, debris and foreign materials shall be removed from the interior of forms and from inner surfaces of mixing and conveying equipment. Reinforcements shall be secured in position, inspected and approved before pouring concrete. Runaways shall not be provided for wheeled concrete-handling equipment's, such equipments shall not be wheeled over reinforcement nor shall runaways be supported by reinforcements.

Concrete shall be handled from the mixer to the place of final deposits as rapidly as practicable by methods, which shall prevent segregation or loss of the ingredients. It shall be deposited in the forms in approximately layers and as nearly as practicable in its final position to avoid re-handling.

Conveying or handling of concrete by the use of inclined chutes or pipes of more than three (3) meters shall not be permitted. Dumping of concrete into buggies, buckets or wheelbarrows with a free fall of more than one (1) meter shall not be permitted. When placing operations would involve dropping of concrete more than 1 ½ meters, it shall be deposited through a sheet metal or other approved conveyor. AS for practicability, the conveyor shall be kept full of concrete during placing and their lower ends shall be kept buried in the newly placed concrete. After the initial set of concrete, the forms shall not be jarred and no strain shall be placed on the ends of the reinforcing bar, which are being projected.

Concrete in columns shall be placed in one continuous operation. Concrete in girders, beams and slabs in superstructures shall be poured in a monolithic and continuous manner. No construction joint shall be allowed on any part of the structure without the approval of the Project Manager.

Consolidate all concrete in accordance with provisions of ACI 309R. Consolidate each layer of concrete greater than 4 inches in depth with high frequency, interval, mechanical equipment supplemented by hand spading and tamping. Consolidate concrete slab 4 inches or less in depth by wood tampers, spading and settling with a

heave leveling straight edge. Operate vibrators with vibratory element submerged in the concrete, with a minimum frequency of not less than 6000 impulses per minute when submerged. Insert and withdraw vibrators approximately 18 inches apart. Penetrate the previously place lift with the vibrator when more than one lift is required. Place concrete in 180-inch maximum vertical lifts. Limit duration of vibration to time necessary to produce satisfactory consolidation without causing segregation of aggregates. Provide adequate number of units and power source at all times. Maintain spare units on hand to ensure adequacy. If in the opinion of the Project Manager the equipment being used is not adequate to accomplish proper consolidation, the Project Manager may order delay in further placement of concrete until such equipment is available for use at the location of placement of concrete.

3.3.4 Protection and Curing

1. General

Concrete surfaces exposed to conditions causing premature drying shall be protected as soon as possible with canvas, straw, burlap and or other satisfactory material and kept moist; or if the surfaces are not covered they shall be kept moist by flushing or sprinkling, as directed by the Project Manager. All concrete shall be moist cured for a period of not less than seven (7) consecutive days after placing by an approved method or combination of methods applicable to local conditions.

2. Moist Cutting

The surface of the concrete shall be kept continuously wet water for a period of seven (7) days, by spraying or covering with burlap or other approved material thoroughly saturated with water and keeping the covering wet by spraying or intermittent hosing. Water for curing shall be generally lean and free from any element, which might cause objectionable staining or discoloration of the concrete.

3.4.6 Repairs to the Concrete

All imperfections on concrete surfaces are corrected to produce concrete surfaces that conform to the requirements of this section. Unless otherwise approved by the Project Manager, patching with the cement mortar shall repair imperfections on formed surfaces. Cement mortar for patching shall be the same composition as used in the concrete, except for exposed surfaces; part of the cement shall be white cement to provide a finish color matching the surrounding concrete. Honeycomb or otherwise defective areas shall be cut out from solid concrete to a depth of not less than 25 mm. the edges of the cut shall be perpendicular to the surface of the concrete. The area to be patched, at least 15 mm adjacent thereto shall be saturated with water before placing the mortar. The mortar shall be mixed approximately one (1) hour before placing and shall be remixed occasionally during this period with trowel without adding water. A grout of cement and water, mixed to a consistency of paint, shall then be brushed onto the surface to which the mortar is to be bonded. The mortar shall be compacted into place and screened slightly higher than the surrounding surface. Patches on exposed surfaces shall utilize plywood forms, after the removal of forms, shall not be plastered, unless other wise directed by the Project Manager. All joint marks on the formwork shall be reworked to a smooth surface to match adjacent areas and to present a new appearance.

3.4.7 Forms

(1) General

Forms shall be used whenever necessary to confine the concrete and shape it to the required lines and dimensions, or to protect the concrete from contamination. 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 for exposed surface shall be lined with form grade plywood. Bolts and rods used for interval ties shall be so arranged that when the forms are removed, they shall not be less than two (2) centimeters from the formed surface.

Removal of forms or shoring is subject to approval by the engineer, and under no circumstances shall bottom form and shoring be removed until after the members have acquired sufficient strength to support their weight and the load thereon. Forms shall remain in place for a minimum time as follows:

Columns, sides of beams, shear and bearing walls ----- 3 days
Beams ----- 14 days

Re-shore immediately after stripping beams and girders that support subsequent formwork.

(2) Cleaning and Oiling Forms

Before placing concrete, the contact surface of the forms shall be cleaned of incrustations of mortar, grout or other foreign material. Forms shall be coated with standard form oil that can effectively prevent sticking and will not stain the concrete surfaces.

(3) Removal of Forms

Forms shall be removed in a manner, which shall prevent damage to concrete structures. Forms shall not be removed without prior approval of the Project Manager. Any repairs of the surface imperfections shall be performed at once and curing shall be started as soon as the surface is sufficiently hard to permit it without further damage. The minimum time period for removal of forms shall govern where it exceeds the minimum specified curing period. Where the formwork for one element supports the formwork for another element, the greater time period shall apply to both elements. Forms shall not be removed before the expiration of the minimum time specified below:

| <u>Element</u> | | <u>Time Period</u> |
|---|-------------------------|------------------------|
| Walls columns, sides of beams and girders, and slabs on grade | | 1 |
| Pan joist forms (side only): 76 cm (30 inches) wide or less over 76 cm (30 inches) wide | | 3 |
| Where design live: | less than the dead load | greater than dead load |

Joist, beam or girder, soffits:
(Clear span between structural support):

| | | |
|-----------------------------------|----|----|
| Under 3.00 m (10 ft.) | 7 | 4 |
| 3.00 m (10 ft) to 6.00 m (20 ft.) | 14 | 7 |
| Over 6.00 m (20 ft) | 21 | 14 |

One-way floor slabs: (Clear span between structural supports)

| | | |
|---------------------------------|----|---|
| Under 3.00 m (10 ft) | 4 | 4 |
| 3.00 m (10 ft) to 6.00m (20 ft) | 7 | 4 |
| Over 6.00m (20 ft) | 10 | 7 |

Sufficient shoring members to support dead loads including construction loads on beams and slabs shall be provided for a period of eight (8) days in addition to the seven (7) days specified thereto. The time for removal of forms for structures not included thereto shall be as directed by the Project Manager. Concrete work shall be protected from damage during construction.

3.4.8 Reinforcing Steel

(1) General

Steel reinforcement shall be provided together with all the necessary wire tie chairs, spacers, support and other necessary devices.

(2) Cutting and Bending

Reinforcing steel shall be accurately cut and bent in accordance with the approval detailed reinforcement drawings. Reinforcing steel shall not be straightened or re-bend in a manner that will injure the material. Bars with kink or with bends not shown on the approved detailed reinforcing drawings or with cracks or splits of the bends shall not be used. All the bars shall be bent cold. If Contractor elects to have reinforcing steel cut and bent off the site, he shall provide, maintain and operate a small cutting and bending shop on the site and maintain and representative stock of steel. This provision is to take care of minor revisions and additions in an expeditious manner.

The Project Manager may require the contractor to prepare and submit bar cutting schedule prior to fabrication of reinforcing steel bars.

(3) Placing Reinforcement

Reinforcing steel shall be accurately placed in accordance with approved detailed reinforcement drawings and shall be adequately secured against displacement by using specified tie wires or approved clips at all intersections. After it has been installed, reinforcing steel shall be inspected by the Project Manager for compliance with requirements as to size, shape, length, splicing, position and number. Reinforcing steel shall be supported by concrete or metal supports, spacers or metal hangers, except for surfaces exposed to the ground or to the weather, where supports shall be concrete. Wooden support spreaders shall not be used. At surfaces where attractive appearance is required, the supports shall be of the type, which shall not cause subsequent staining or marring of the exposed surface.

3.4.9 Joints in Concrete

(1) Construction Joints

Construction joints shall be provided where indicated in the drawing or as directed by the Project Manager. Joints not indicated on the drawings shall be constructed and located as not to impair the strength of structures. When a construction joint is to be made, the surface of the hardened concrete shall be thoroughly cleaned and all laitance removed. In addition, the joint shall be thoroughly wetted and sloshed with a coat of neat cement grout immediately prior to placing of new concrete.

(2) Expansion and Contraction Joints

Expansion and contraction joints shall be provided where indicated and shall be in accordance with details.

(3) Preformed Strips

Preformed strips shall be placed before the adjoining concrete is poured. The joint sealer shall be applied after concrete on both sides of the joint has been poured and after the joint lines have been trued.

3.5 SELF-LEVELLING CONCRETE

- 3.5.1 Standards – All aspects of the installation must be in accordance with the requirements of BS 8204 (Installation of Resilient floor coverings) and BS 8203 (Installation of textile floor coverings) and supplementary specifications.
- 3.5.2 Preparation – The surface should be free of oil, grease, weak material, laitance and contaminants. All sub-floors, including concrete and highly polished surfaces (e.g. power floated concrete, marble, terrazzo and ceramic tiles), should always be mechanically textured. The floor should then be either vacuumed or swept clean.
- 3.5.3 All surfaces must be primed with Acrylic Primer (Porous substrates) and Epoxy Primer (non-porous substrates).
- 3.5.4 Mixture – in single units of the ratio of 20kg powder to 3.6-3.8 liters of water. Do not add extra water because long term performance may be impaired. A 65mm by 40mm flow ring should be filled with pre-mixed Self-levelling compound. Using a Flow chart, a spread ratio of between 230mm and 260mm should be obtained to ensure that a correct mix is passing through the pump. After applying the material onto the primed floor, simply use a hand trowel to spread. Maximum application thickness of 6mm on to epoxy primer.
- 3.5.5 Protection and Completion – Ensure the screed is not subject to draughts during the first 6 hours of curing as this may lead to cracking and crazing. Take up doorways with polythene to prevent air movement. Prevent contamination by following trades (e.g. plastering), including water spillage.
- 3.5.6 Cleaning-Immediately after use all tools and equipment should be cleaned with water. Cured material can be removed mechanically or by acid etching.

3.6 Methods of Measurement and Basis of Payment

The Project Manager shall be in accordance with the dimension in the plan or as otherwise direct the measurement of completed work. The quantities to be paid for under this section shall be measured as follows:

- a. The volume to be paid for under this item shall be the number of cubic meters of concrete placed and accepted. Payment for concrete shall be constructed to

include the cost of forms, false works, curing, fasteners and accessories necessary to complete this item of work.

- b. The quantities for reinforcing steel to be paid for shall be the final quantity placed and accepted in the completed structure. No measurement for payment shall be made for splices added by the Contractor for his convenience. Payment for the accepted quantities for reinforcing steel shall be deemed to include the cost tie wires, separators, wire, supports, hangers, chairs and other materials necessary to complete the work.

The quantities measured as provided above shall be paid for at the contract price for each of the pay item, which price and payment shall be full compensation for furnishing and placing all materials, labor, equipment, tools and incidentals necessary to complete the work.

4.0 MASONRY

4.1 Scope of Work

The work includes furnishing and placing of concrete masonry units in conformity with the lines, grades and cross-sections shown on the drawings and in accordance with the specifications.

4.2 Applicable Documents

The latest edition of the following specifications and standards shall form part of this specification to the extent required by the references thereto.

| | |
|--------|---|
| ASTM | America Society for Testing Materials |
| C144 | Standard Specification for Aggregate for Masonry Mortar |
| PSA | Product Standards Agency Publications (Philippines) |
| PNS 16 | Specification of Concrete Hollow Blocks |

4.3 Material Requirements

4.3.1 Concrete Hollow Blocks

Concrete hollow blocks shall be a standard product of recognized manufacturer to PNS 16, as indicated on the drawings. Exterior and interior masonry units shall be non-load bearing units. However, load-bearing units may be provided in lieu of non-load bearing units. For non-load bearing units, the required compressive strength shall be 25 kg/cm² or 2.48 Mpa.

4.3.2 Cement, Reinforcing Steel and Water

Cement, reinforcing steel and water shall be as specified in Section 3.0.

4.4 Construction Requirements

4.4.1 Workmanship

Masonry walls shall be placed level and plumb all around. One section of the walls shall not be placed in advance of the others, unless specifically approved. Unfinished work shall be stepped back for joining with the new work; tooting shall not be permitted. Heights of masonry work shall be checked with an instrument at sills and heads of openings, to maintain the level of the walls. Door and window frames, louvered openings, anchors, pipes and conduits shall be installed carefully and neatly

as the masonry work progresses. Spaces around door frames shall be filled solidly with mortar. Drilling, cutting, fitting and patching to accommodate the work of others, shall be performed by skilled workers. Bolts, anchors, inserts, plugs, ties and miscellaneous metal work specified elsewhere shall be placed in position as the work progress. Chases of approved dimensions for pipes and other purposes shall be provided, where indicated or necessary. Top of exposed walls and partitions, not being worked on, shall be covered with a waterproof membrane, well secured in place. Wall and partitions shall be structurally bonded or anchored to each and to concrete wall beams, and columns.

4.4.2 Mortar Mixing

Mortar materials shall be measured in approved container to insure that the specified proportions of materials are controlled and accurately maintained during the progress of the work. Unless specified otherwise, mortar shall be mixed in such a manner that the materials will be disturbed uniformly throughout the mass. A sufficient amount of water shall be added gradually and the mass further mixed, not less than 3 minutes, until a mortar of the plasticity required for the purpose intended shall be obtained. The mortar shall be mixed in a manner such that the quality of water can be controlled accurately and uniformly. Mortar boxes, pans of mixing drums shall be kept clean and free of debris or dried mortar. The mortar shall be used before the initial setting of the cement has taken place; rettempering of mortar in which cement has started set shall not be permitted.

4.4.3 Proportion of Mortar Grout

Fine mortar grout shall be mixed in the volumetric proportion of one part Portland cement, $\frac{1}{4}$ part hydrated lime and 3 parts sand. Coarse grout shall be mixed in proportion of one part Portland cement, $\frac{1}{4}$ hydrated lime, 3 parts sand and 3 parts pea gravel passing a 3/8-inch sieve.

4.4.4 Use of Fine and Coarse Grout

Fine grout shall be used in grout spaces less than 50 mm in my horizontal dimension or when clearance between reinforcement and masonry id more than 17mm.

4.4.5 Mortar Joints

Mortar joint shall be uniform in thickness, and the average thickness of any three consecutive joints shall be 9.50 mm. "Gage rods" shall be made and approved prior to starting the work and shall be used throughout the work. Changes in coursing or bonding after the work has started shall not be permitted. The jointer shall be slightly larger than the width of the joints, so that complete contact is made along the edge of the units, compressing and sealing the surface of the joint. Joints in masonry, which will not be exposed, shall be stuck flush. Joints shall be brushed to remove all loose and excess mortar. All horizontal joint shall be on level and vertical joints shall be plumbed and aligned from the top to the bottom of the wall with a tolerance of plus or minus 12 mm.

4.4.6 Concrete Masonry Unit

The first course of concrete masonry unit shall be laid in full bed of mortar, for the full width of the unit; the succeeding courses shall be laid with broken joints. Concrete masonry units with the cells verticals shall have bed-joints formed by applying the mortar to the entire top of the surface of the inner and outer face shall, and the head joints formed by applying mortar of a width of about 25 mm to the ends of the adjoining

units lay previously. The mortar for joints shall be smooth, not furrowed, and shall be of such thickness that it will be forced out of joints as the units are being placed in position. Where anchors, bolts, ties and reinforcing bars occur within the cell of the units, such cells shall be solidly filled with mortar or grout as the work progress.

4.4.7 Reinforcement

Horizontal tie reinforcement shall be provided where indicated. Reinforcement shall be continuous and provided in the longest available lengths. Reinforcement above and below openings shall extend and be embedded into the columns, unless otherwise shown on the drawings. Spices shall overlap not less than 150 mm. Reinforcement shall be embedded in the mortar joints in the manner that all parts shall be protected by mortar. The two top courses of filler block walls shall have their cores filled with grout when placed in position.

Unless otherwise shown on the drawings, the size and spacing of bars shall be as follows:

For Vertical Bars:

| | | |
|-----------------|---|--|
| 150 mm (6") CHB | - | 12 mm (1/2") dia. At 600 mm (24") on centers |
|-----------------|---|--|

| | | |
|-----------------|---|-----------------------------|
| 100 mm (4") CHB | - | 10 mm (3/8") dia. At 600 mm |
|-----------------|---|-----------------------------|

| | | |
|----------------------|---|--|
| For horizontal bars: | - | 12 mm (1/2") dia at 600 mm (24") on center (every third Course) for 150 mm (6") and 100 m (4") CHBs. |
|----------------------|---|--|

4.4.8 Bounding and Anchoring

Masonry walls and partitions shall be accurately anchored or bonded at points where they intersect, and where they abut or adjoin the concrete frame of the building. All anchors shall be completely embedded in mortar.

4.4.9 Grout Placement

Grout shall be performed on the interior side of wall, except as approved otherwise, sills, ledges, offsets and other surfaces to be left exposed shall be protected form grout falling on such surfaces and be and shall be removed immediately. Grout shall be stirred before placing to avoid segregation of the aggregate and shall be sufficiently fluid to flow into joints and around the reinforcement without leaving any voids. Grout shall be placed by pumping or pouring from buckets equipped with spouts, in lifts not exceeding 1.2 meters high. Grout shall be puddle thoroughly to eliminate voids without displacing the masonry units form its original position. Masonry units displaced by grouting operation shall be removed and re-laid to its proper alignment using fresh mortar-grout.

4.4.10 Tests and Test Reports

The testing requirements stated herein or incorporated in referenced contract documents may be waived provided certified copies of report of tests from approved laboratories preformed on previously manufactured materials are submitted and

approved. Test reports shall be accompanied by notarized copies from the manufacturer certifying that the previously tested material is of the same type, quality manufacturer, and make.

4.5 Method of Measurement and Basis of Payment

In measuring the quantity of masonry units for payment, the dimensions to be used shall be as shown on the plans or as directed by the Project Manager in writing. Projections extended beyond the faces of the wall shall not be included. The area to be paid for in this section shall be the number of square meters of concrete masonry wall and partition placed and accepted in accordance with the plans and specifications. Payment of accomplished work shall be deemed to include the cost of mortar grout, reinforcing steel, tie wires, false work and other necessary works to complete this item.

The quantity of concrete masonry walls and partition shall be paid for at the contract unit price shown in the bid schedule, which payment shall be full compensation for furnishing and placing all materials, labor, equipment, tools and incidentals necessary to complete the work.

5.0 METALS

5.1 Scope of Work

The work includes the furnishing, fabrication, erection or installation of structural steel roof framing, Stainless Handrails and miscellaneous metal work in accordance with this specification and as shown in the drawings.

5.2 Applicable Specifications & Standard

The latest edition of the following specifications and standards refereed to hereinafter by basic designation only, shall form part of the specification:

| | |
|----------|--|
| ASTM | American Society for Testing and Materials |
| A36/A36M | Specification for Structural Steel |
| A53 | Steel Pipe Zinc Coated Welded and Seamless Black and Hot-Dip |
| A307 | Bolts and Studs, 60, 000 psi Tensile Strength |
| A325 | Standard Specification, high Strength Bolts for Joints |
| A570 | Hot-rolled Carbon Steel Sheet and Strip, Structural Quality |
| A611 | Steel, Cold-Rolled Steel, Carbon, Structural Quality |
| AWS | American Welding Society |
| D1.1 | Structural Welding Code, Steel |
| AISC | American Institute of Steel Construction, Specification for the Design, Fabrication, Erection of Structural Steel for Buildings. |
| AISI | American Iron Steel Institute, Specification for the Design of Light Gage Cold-Formed Steel Structural Members. |

5.3 Material Requirement

5.3.1 Structural Steel Shapes Plates and Bars

Unless otherwise shown or specified on the drawing, structural steel shapes plates and bars shall conform to ASTM specification A36/A6M.

5.3.2 Hot-Formed Steel Sheet and Strip

Unless otherwise shown or specified on the drawings, hot-formed steel and strip shall conform steel and strip shall conform to ASTM A570.

5.3.3 Bolts, Nuts and Washer

It shall conform to specification STM A370, with a minimum yield point of 33, 000 psi, unless otherwise shown in the drawings. Heavy hexagonal structural bolts, heavy hexagonal nuts and hardened washers, shall be quenched and tarpapered medium-carbon steel bolts, nuts and washers complying with ASTM A325.

5.3.4 Screw and Expansion Bolts

Screw and Expansion bolts be of standard commercial grade, and of the sizes and types indicated as approved by the

5.3.5 Electrodes

Electrodes for arc welding shall be E60, or E70, AWS D1.1

5.3.6 Galvanizing

Unless otherwise specified, galvanizing shall be of standard quality, hot-dipped process of 1.25 ounces per square foot of coating. Galvanized surface that are damaged prior to final acceptance shall be repaired using and approved repair compound to the satisfaction of the Project Manager.

5.3.7 Railings/Handrails

Handrails sizes and material composition are those specified in the approved drawings as well as with the vertical railings. Joints and surfaces that are damaged prior to final acceptance shall be repaired using and approved repair compound to the satisfaction of the Project Manager.

5.3.8 Miscellaneous Metals

Miscellaneous metals including fastenings, anchorage's and incidentals not specifically mentioned herein or in other section of this specifications but are required to complete the work, for which there are no detailed drawings, shall be provided and installed in accordance with standard practice of the trades as approved by the Project Manager.

5.3.9 Delivery, Storage and Handling

Fabricated materials delivered to job site shall be stored in clean and protected dry areas in manufacturer's protective package. Structural steel materials to be stored shall be placed on skids above the ground. It shall be kept clean and properly drained. Skids placed near enough together to prevent injury from deflection shall support long members, such as purlins and chords. The Contractor shall check the quantity and quality of materials turned over to him against the delivery list and report promptly in writing any shortage or damage discovered.

5.4 Construction Requirements

5.4.1 General

Fabrication and erection of structural steel shall be in accordance with AISC specification for the design. Fabrication and erection of structural steel for buildings, except as specified herein. The Contractor shall submit to the Project Manager for

approval shop drawings showing the proposed method of fabrication and installation of all metal work. No work shall be started until the shop drawings have been approved. And all work shall conform to the approved shop drawings.

5.4.2 Fabrication of Steel Structure

The work shall be well formed at the shape and size shown and assemblies as detailed. Structural members shall be fabricated and assembled in the shop to the greatest extent as possible. Shearing and punching shall be produced in clean, true lines and surfaces with burrs removed. Nuts shall be drawn up tight. Joints, which are to be exposed to the weather, shall be weather lights. Holes shall be cut, drilled or punched at right angles to the surface of the metal and shall not be burned or enlarged. Holes in base or bearing plates shall be drilled.

1) Welding

Structural steel shall be welded in accordance with the standard code of Arc and Gas Welding in Building Construction of the American Welding Society. Qualified welders shall perform all welding work only.

2) Shop Painting

Unless otherwise specified or indicated in the drawings, all structural steel work (except galvanized surfaces and surfaces that will be painted with epoxy) shall be given a shop coat of red lead or zinc chromate primer.

5.4.3 Erection

The steel structure shall be erected true to line and grades. Bracing's and supports shall be installed whenever necessary to take care of all the loads to which the structure may be subjected. Such bracings shall be left in place as long as may be required for safety. As erection progress, the work shall be securely bolted to take care of all the dead loads, wind and erection stresses. No reaming of undersize bolt holes shall be permitted, and erection bolts shall not be used for lining up members.

(1) Drift Pins

Drift pins may be used only to bring together several parts; they shall not be used in such a manner as to distort or damage the metal.

(2) Gas Cutting

The use of gas cutting torch in the field for correcting fabrication errors shall not be permitted on any major member in the structural framing. Its use may be permitted only when the member is not under stress, and subject to the approval of the Project Manager.

(3) Base Plates and Bearing Plates

Base plates and large bearing plates shall be supported in steel wedges or shims until the supported members have been plumbed, following which the entire bearing area shall be grouted with no-shrink cement grout.

(4) Grouting Mortar for Setting Base Plates

Concrete grout shall be a non-shrinking type grouting mortar. The mortar subject to the approval by the Project Manager can either be a mixture of Portland cement, well graded fine aggregate, aluminum powder; and water or an approved commercial grouting mortar containing non-metallic chemical oxidizing agent. If adopted, the approved product shall be delivered to the site of the work in original sealed container bearing the trade name of the manufacturer. Surfaces to receive the mortar shall be clean and shall be moistened thoroughly before placing the mortar. Exposed surfaces of mortar shall be water cured we burlap for at least seven (7) days.

(5) Setting Up

Steel shall be erected plumb, level and properly guyed. In setting or erecting structural steel, the individual piece shall be considered plumb or level where the error does not exceed 1 to 500.

(6) Inspection

The Contractor shall give the Project Manager at least fifteen (15) days notice prior to the start of work at the mill shop, so that the required inspection may be made. The term "mill" means any rolling mil, shop or foundry where material for the work is to be manufactured or fabricated. No materials shall be rolled or fabricated until the said inspection has been provided.

The Contractor shall furnish the Project Manager with copies of the certificate mill reports of the structural steel structure preferably before but not later than the delivery of steel structure to the job site.

The Contractor shall furnish all facilities for inspection and the Project Manager shall be given free access to the mill or shop and premises at all times. The Contractor shall furnish without charge all labor; machinery, materials and tools necessary to prepare test specimens.

Inspection at the mill or shop is intended as a means of facilitating work and avoiding errors. It is expressly understood that it will not relieve the Contractor from any responsibility for imperfect materials or workmanship and the necessity for replacing the same. The acceptance of any materials or furnished member at the mill or shop by the Project Manager shall be preclude their subsequent rejections if found defective before final acceptance of the work. Inspection of welding works will be in accordance with the provision of Section 5 of the "Standard Code for Arc and Gas Welding in Building Construction" of the American Welding Society.

5.5 Method of Measurement and Basis of Payment

1. The quantity of structural steel roof framing to be paid for shall be the number of kilograms completed in place and accepted. Payment for the accepted quantities shall be deemed to include the cost of steel plates, anchor bolts buckles, sag rods, cross bracing, purlins mounting accessories and other works necessary to complete this work item.
2. The quantity to be paid for stair nosing and railing shall be the number of linear meter placed and accepted. Payment shall be construed to include the cost of false work, anchors, and other materials used in mounting this item and including the wooden handrails (where indicated in plans).

The quantity determined as provided above shall be paid for the contract price for each of the pay item listed in the bid schedule, which price and payment shall be full compensation for furnishing and placing all materials, labor, equipment, tools and incidentals necessary to complete the work.

6.0 **CARPENTRY AND JOINERY**

6.1 **Scope of Work**

This section includes all rough and finish carpentry and joinery works, as shown in the drawings and in accordance with this specification.

6.2 **Material Requirements**

6.2.1 **Lumber**

All lumber shall be in accordance with the accepted commercial standard and shall be of the approved quality of each kind and shall be of the following species and grades as shown in the drawings.

| <u>Use</u> | <u>Species</u> | <u>Grade</u> |
|--|--------------------------------------|--------------|
| Lumber in contact with concrete, masonry and cement plasters | Yakal | Good |
| Jambs, transoms, mullions headers, sills, frames and wood base of detachable partition | Yakal | Clear |
| Ceiling joist, studs, roof framing and nailers | Apitong or Tanguile or Metal Furring | Good |
| Wood trims, wooden planks and wood vent, handrails and frames | Tanguile | Clear |

(1) **Quality of Lumber**

All lumber shall be of the approved quality of each kind required for the various parts of the work, well seasoned, thoroughly dry and free from large, loose or unsound knots, saps, shakes and other imperfections impairing its strength, durability and appearance. Jambs, transoms, mullions, headers, sills, frames and wood base shall be air dried and well seasoned for at least two (2) months before use.

(2) **Substitutions**

Any lumber equally for the purpose any may be substituted for the kinds specified, provided that the substitution shall be acceptable to the Project manager.

(3) **Moisture Content**

Except where otherwise specified, lumber shall be sun-dried, or kiln-dried. At time of installation, the maximum moisture content, expressed as a percentage of the oven-dry wood, shall be as follows:

a. Rough Carpentry and Framing

Framing lumber 2 inches and less in thickness: 19 percent

Framing lumber over 2 inches thick: 25 percent

Boards: 19 percent

(1) Interior millwork, finish and trim: 17 percent

6.2.2 Plywood/Fiber Cement Board

Ceiling and partition shall be to 6-mm thick marine plywood or 9mm fiber cement board as specified in the plans or in the scope of work.

For interior walls or partitions as shown in the plans or as required, fiber cement board shall be installed in accordance with the manufacturers' specifications:

Wall Framing (galvanized steel section) Standard materials are C-Stud, U-Track, Rivet or wafer screw, expansion bolt 6mm, drywall screw 25, 38, 40mm, corner metal bead or corner super bead.

6.2.3 Framing

Wooden frames for detachable partitions shall be kiln-dried, tanguile.

6.2.4 Fasteners

Fasteners shall be of the type and size best suited for the purpose as shown in the drawing. Fasteners shall be zinc coated regular commercial size as indicated and shall conform to ASTM specification A307.

6.3 Construction Requirements

6.3.1 Workmanship

Lumber for framing and other carpentry or metal framing shall be fitted closely, set accurately to the required lines and levels, and shall be secured in a place in a rigid and substantial manner. Spiking, nailing and bolting shall be done in an approved manner. Spikes, nails and bolts shall be of the proper size, and care shall be taken so as not to split the members. All frames coming in contact with concrete or masonry shall be anchored by means of nails metal screws with tox spaced sufficiently apart all around the contact surfaces. Bolt holes shall be drilled accurately and shall have a diameter of 3 mm more than the bolt size. All exposed wood surfaces shall be smoothly dressed and if so required, shall be well sand papered to an even smooth surface ready for finishing.

6.3.2 Finish Framing

Grades and species of wood shall be as specifies. Interior finish shall be set plumb, level, square and in true alignment and joints shall be tight and formed to conceal

shrinkage. All finish framing, shall be done as much as possible with carefully fitted mortise and tendon joints as much as possible, if not possible locate them in inconspicuous places where nailing is permitted on wood surfaces. Nailing and blocking shall be provided as necessary.

6.3.3 Rough Framing

Framing and other rough carpentry shall be fitted closely and set accurately to the required line and levels and shall be secured in place in a rigid and substantial manner. Framing members shall not be spliced between bearing points and shall be provided as necessary for the proper completion of the work. Nailing shall be done in an approved manner, so as not to split the framing members.

6.3.4 Protection of Work

The Contractor shall protect all finished woodwork and millwork from injury after it has been set in place until completion and final acceptance.

6.3.5 Hardware

Items of hardware to be installed shall be as directed or as shown in the drawings and fitted carefully attached securely. Care shall be exercised not to mar or injure the work.

7.0 ROOFING

7.1 Scope of Work

This section includes the furnishing of all plant, tools, equipment, materials and other in the installation of waterproofing and roofing, including miscellaneous sheet metal works as required providing a waterproof installation.

7.2 Description

The work includes installation of pre-painted Rib-type Long Span roofing (0.5mm thk) complete with hardware and accessories.

7.2.1 GENERAL

The work includes furnishing all materials and requirements performing all operations to provide a long span corrugated twin ribbed roofing and miscellaneous roofing work as required to provide an acceptable installation. Surfaces to which metal formed roofing sheets are to be applied shall be thoroughly cleaned and prepared, free from any defects that may affect the application. Metal formed roofing shall be locked and lapped and installed as applicable. Details shall be in accordance with manufacturer's recommended installation practice.

Metal formed roofing and sheets and accessories shall be carefully handled at all times in strong and handling to prevent damage to the surfaces, edges and ends and shall be slightly elevated for drainage.

Metal formed roofing and sheets and accessories shall be delivered to the site in the original sealed container or packages bearing the manufacturer's name and brand designated where materials are covered by a reference specification number, type and class as applicable.

7.3 Installation

Lay and install the first sheet with turned down edge towards the outside of the area to be covered. Overlap the next sheets to the previous sheet in such a manner that the exposed edge is turned down and the covered edge is turned up. Side up fasteners should be done by rivets and washers spaced from 300mm to 450mm on centers.

Care should be exercised in the proper anchorage of all roof frames.

Ridge strips for ridge rolls and ridge flashings are attached to the roofing sheets by means of rivets. Other flashings are to be fabricated from plain sheets of the same materials as the roofing in accordance with the details and/or site requirements. These are also attached to roofing sheets by means of rivet.

7.3.1 TEMPORARY PROTECTION

Metal formed roofing sheets surfaces requiring protection from stains, discoloration, surface abrasion and other construction abuses shall be suitably protected in accordance with the manufacturer's recommendations.

7.3.2 FINAL CLEARING

Upon completion, the Contractor shall clean the metal formed roofing sheets surfaces and drain line of burrs, leaves, stones and other foreign matter that may impair the flow of water. Surface shall be kept clean by periodic inspection.

7.4 Elastomeric Waterproofing Membrane (Roof Deck Slab, Shear Wall, Comfort Rooms and Other locations where necessary)

7.4.1 SCOPE OF WORK

The Contractor shall furnish and install all materials and labor required to provide waterproofing on designated locations.

7.4.2 MATERIAL

Elastomeric water proofing membrane shall be liquid applied single component and made by a reputable manufacturer.

7.4.3 PREPARATION

All surfaces to be waterproofed should be clean, sound and dry. Concrete surfaces should have a light steel-trowel followed by a fine hair-broom or equivalent finish that is dry and free from dust, oil and other contaminants. Remove all high spots. Moss and lichen must be removed physically followed by treatment with fungal wash down through and allowed to dry. Lattence should be removed from concrete by grit blasting, wire brushing or wet jet blasting and allowing to dry.

7.4.4 WATER TESTING

All waterproofed surfaces, roof, siding, gutter and downspout system shall be tested for water tightness by flushing or flooding, with water as directed by the Consultant. Floodwater shall be kept on gutters, downspouts for a minimum time of twenty-four (24) hours. If any leak occurs, the works shall be repaired or reconstructed. Test shall be repeated until satisfactorily result has been attained.

7.5 Methods of Measurement and Basis of Payment

The accepted quantities measured as prescribed in the bill of quantities shall be paid for at the appropriate contract unit price for the pay item listed as shown in the bid schedule, which price and payment shall be full compensation for placing all materials, labor, equipment, tools and incidentals to complete the work.

8.0 DOORS AND WINDOWS

8.1 Scope of Work

This section calls for the furnishing, fabrication and installation of doors and windows in accordance with the plans and specifications.

8.2 Material Requirements

8.2.1 Wood Doors

(1) General

Doors schedule, color and design shall be in accordance with the plans. Door panels shall have 44-mm thickness, unless otherwise specified or shown on plans, except for counter doors, which shall be 31 mm thick.

(2) Door Types

(a) Hollow Core Doors

Except as otherwise specified, flush door shall be done in accordance with the detail as shown on the plans. The plywood edge protection shall be around and into the outside frame of the door in order to prevent "peeling off" of the plywood veneers at the edges.

(3) Lumber

Lumber for doors shall be of commercial grade, of the approved quality of each kind, well seasoned, thoroughly dry and free from loose or unsound knots, shakes, pitch pockets, or other imperfections affecting its strength, durability or appearance.

(a) Door frames in contact with concrete shall be yakal, good grade of design size and thickness as indicated in the drawings. Application of black coal tar between contact surfaces shall be provided.

(b) Door studs, nailed and frames shall be tanguile, S4S and kiln dried with not more than fourteen percent (14%) moisture content.

(4) Plywood

Plywood for interior flush doors shall be tanguile, first class and of commercial standard. For toilets and baths, use marine plywood.

(5) PVC Doors

PVC doors for interior shall be of best quality. PVC doors shall be 44 mm. thick. and shall also be provided with bottom louvered portions as indicated in the plans.

(6) Flush Doors (Wooden Hollow-core Flush Doors)

Wooden Hollow-Core Flush Doors shall be 44 mm. thick. And use 6 mm thick marine plywood. Provide paint finish.

(7) Steel Doors

Various steel doors shall be conformant with the approved schedule of doors and windows.

(8) Windows

Windows shall be awning-type Analok windows with clear glass and security grill. Refer to approved schedule of doors and windows for exact requirement of windows.

8.2.2 HARDWARE

Hardware for doors and windows shall be acceptable foreign and local products of the types, materials, sizes and mechanism as indicated on the drawings, and shall be free from any mark or other defect. Submit samples for Construction Officer's or Architect's approval.

Hinges and door closer shall be the type size and capacity as indicated on the drawings, however, the Contractor shall verify each hardware item as to weight and other load of doors and windows, and minor modifications may be made without change in construction cost.

Each vent shall be a solid bronze, polished, cam locking handle and strike.

8.2.3 PAINTING

Refer to the Section entitled PAINTING.

8.3 Construction Requirements

8.3.1 Installation of Doors

Doors shall be installed only after the completion of other works, which may affect the moisture content of the door. Doors shall be fitted and trimmed as required by the opening they will cover. Doors shall have a clearance of 3 mm at the side and top and shall have a bottom clearance of 6 mm over thresholds or as shown on details. The lock edge shall be leveled at the rate of 3-mm in 50 mm. Cuts made on the jambs shall be sealed immediately after cutting, using a clear water-resistant varnish or sanding sealer.

Doors with surfaces receive paint finish may be furnished factory primed, and doors with natural finish may be furnished factory pre-finished. Final furnishing shall be done in site in accordance with painting and varnishing specifications.

8.3.2 Installation of Builders Hardware

(1) Door knobs, lock and latch strikes

All lock and latch strike shall be installed in door frames at the same height from the floor. Door knobs shall be so located that the center of the knob is 0.90 m from the finished floor.

(2) Butt Hinges

Each panel of hinged door shall be provided with two (2) butts for doors 1.50 m or less in height; three (3) butts, over 1.50 m high and not over 2.10 m in height. Doors of a greater height than 2.10m, unless otherwise specified, shall be provided with an additional one- (1) butt for each 0.65-m or fraction thereof.

Size of the Butt Hinges required as follows:

| Thickness of Door | Width of door | Size of Butt Hinges |
|------------------------------------|----------------|------------------------------|
| 21 mm or 25 mm (7/8" or 1") | Verify to plan | 63 mm (2-1/2") |
| 28 mm (1-1/8") | Verify to plan | 75 mm x 75 mm (3" x 3") |
| 44 mm (1-3/4") | Verify to plan | 100mm x 100mm (4" x 4") |
| 56 mm x 63 mm (2-1/4" x 2-1/2") | Verify to plan | 125 mm x 125 mm (5" x 5") |

8.4 Method of Measurement and Basis of Payment

1. The quantities for doors to be paid for shall be the number of square meter and/or number of units of door panel completed and accepted. Payment of this item shall be deemed to include the cost of jambs, heads, door frames, nailers, glass pane (if any), lockset, hinges and finish hardware.
2. The quantities accomplished for steel or aluminum casement and glass jalousie windows shall be measured in square meters of area and/or number of units completed and accepted. Payment of this item shall be construed to include the cost of window jambs, sill, transom, mullions, glass jalousie, aluminum frames, mouldings and finished hardware.
3. The quantities accomplished for each type of steel window shall be paid in square meters of area and/or number of units completed and accepted for each item of work. Payment for these items shall be considered to include the cost of steel frames, glass panels, finished hardware, grills, mouldings and glazing and incidental works.
4. The quantities accomplished for doors/windows screen shall be paid in square meters of area and/or number of units completed and accepted for each item of work. Payment for this item shall include the cost of aluminum frames, screen, accessories and other incidental works necessary to complete the work.

The quantities measured as stipulated above, shall be paid for at the contract unit price for each item, which price and payment shall be fully compensation for furnishing and placing all materials, labor, equipment, tools and incidentals necessary to complete the work described on this section.

9.0 FINISHES

9.1 Scope of Work

This section covers all works required in connection with surface finished on wood, metal, masonry and concrete surfaces in accordance with this specification and as shown in the drawings.

9.2 Material Requirement

9.2.1 Plastering Works

- (1) Portland Cement
Cement shall conform to ASTM standard C150, Type 1
- (2) Sand
Fine aggregates for plastering shall be natural sand and shall be retained between No. 50 and No. 100 sieves.
- (3) Lime
It shall be dehydrated lime where the free (un-dehydrated) calcium oxide and magnesium oxide in the hydrated product shall not exceed 8 percent by weight.
- (4) Water
Water used in mixing, shall be reasonably clean and free of oil, salt, acids, alkali, grass or other substances injurious to the finished product.

9.2.2 Tile Works

- (1) Floor Tiles
Tiles shall be standard grade, unglazed vitrified tiles, and 6 mm thick. Color and pattern shall be as specified in the drawing or as approved by the Project Manager.

For all other floor finishes not indicated below, refer to schedule or call-out specifications of finishes indicated in the plan.

- 600 mm x 600 mm Glazed Wall Tiles;
- 600mm x 600mm Homogenous Floor Tiles;
- 600mm x 600mm Non-Skid Floor Tiles;
- Granite (verify dimension on plan).

Accessories – soap holders and paper holders shall be recessed type to follow color specified.

Vinyl floor tile wherever indicated in the drawing shall be 2.0mm thick or otherwise specified in the plans. Verify color, design and pattern.

Rubber Nosing shall be installed on all stair steps.

9.2.3 Seamless Vinyl (Rolled Vinyl)

DESCRIPTION

| | | | |
|-----------------|--------|---------|------|
| Total Thickness | EN 428 | mm | 2.00 |
| Weight | EN 430 | g/sq. m | 2750 |
| Width of sheet | EN 426 | cm | 200 |
| Length of sheet | EN 426 | lm | 20 |
| Coverage | - | sq. m | 40 |
| Tile size | EN 427 | mm | - |

CLASSIFICATION

| | | | |
|----------------------------|---------------------|-------------------|-----------|
| Norm/Product Specification | - | - | EN 649 |
| | ASTM F 1913-04 | - | Compliant |
| European Classification | EN 685 | class | 34-43 |
| Fire rating | AS ISO9239 | kW/m ² | 10.4 |
| | - | Smoke%/min | 90 |
| Slip resistance | AS4586-2013 (App A) | group | P4 |

| | | | |
|---|-------------------------|-----------------------------|----------------------|
| AS4586-2013 (App D) | | group | R9 |
| Static electrical propensity | EN 1815 | kV | <2 |
| PERFORMANCE | | | |
| Wear resistance | EN 660.2 | mm ² | ≤2.0 |
| Wear group | EN 649 | group | T |
| Type binder content | ISO 10581 | type | I |
| Dimensional stability | EN 434 | % | ≤0.40 |
| Residual indentation | EN 433 | mm | ~0.02 |
| Castor chair test (type W) | EN 425 | - | OK |
| Thermal conductivity | EN 12 524 | W/(m.K) | 0.25 |
| Colour fastness | EN 20 105 -- B02 degree | ≥6 | |
| Surface treatment | - | - | Evercare™ |
| Chemical product resistance(1) | EN 423 | class | OK |
| Anti-bacterial activity (E. coli – S. aureus-MRSA)(2) | ISO 22196 | - | >99% inhibits growth |
| ENVIRONMENT/INDOOR AIR QUALITY | | | |
| VOC | ASTMD5116 | mg/m ² /hr(24hr) | <0.005 |
| Certification | - | - | - |
| Floorscore® | | | |

(2) GROUT MATERIALS

As required by the Project Manager or as follows:

Portland Cement Grout:

Scratch Coat: 1 part Portland cement to 5 parts damp sand to 1/5 part hydrated lime.

Mortar Bed: 1 part Portland cement to 5 parts sand to ½ part hydrated lime.

Bond Coat: neat Portland cement paste.

(3) Wall and Wainscoting Tiles

It shall be 6-mm thick, standard grade, glazed vitrified tiles. Color and pattern shall be as shown in the drawing or as approved by Tiles shall be free from lamination, serrated edges, chipped off corners and other imperfections affecting their quality, appearance and strength.

9.2.3 Paints

This item shall consist of furnishing all paints, enamels, varnishes and other products to be used including labor, tools and equipment required as shown on the Plans and in accordance with this Specifications.

1. Material Requirements

All paint materials shall meet the requirements of the Standard Specifications of the Standardization Committee on supplies.

All paint materials shall be delivered on the job-site in their original containers with labels and seals unbroken.

Manufacture or brand of painting materials to be used shall be any of the leading brands or approved certified by the design Architect.

Tinting Color, tinting colors shall first be grade pigments ground in alkyd resin, which disperse and mix easily with paint to produce the colors desired.

2. Preparation of Surfaces

Inspect all surfaces in regard to their suitability to receive a finishing. In the event that imperfection due to materials or workmanship appear on any surfaces after the application of the paint the coat of any correction shall be borne by the contractor. Damage to any painted finished due to carelessness or negligence of other shall be corrected.

Neutralizer shall quality surface conditioner to be diluted with water neutralize lime activity in new exterior and interior concrete surfaces improving paint adhesion and durability.

Touch all knots, pitch streaks and sappy spots with shellac or other approved sealer. Putty nail holes, cracks, etc., after the first coat with non-shrinking putty of a color to match that of the finish.

Prepare masonry works surfaces to be painted by removing all dirt, dust, oil and grease stain sand efflorescence. Masonry surfaces to be painted shall be free from alkali and thoroughly dry before paint is applied. Before applying succeeding coats, primers and undercoats shall be completely integral and performing the function for which they are specified. Properly prepare and touch up all scratches, abrasions, or any other disfigurement and remove any foreign matter before proceeding with following coat. Do not apply final coat on interior work until after other trades are finished with their work in any given area in normal sequence and all materials and debris removed and the premises left in satisfactory broom clean condition as approved. Remove or protect hardware accessories plates, lighting, fixtures and similar items placed prior top paintings, reposition or remove protection upon completion of each space. Disconnect equipment adjacent to walls where necessary move to permit painting wall surfaces, and following completion of painting, replace and reconnect. Except where otherwise noted or specified all paints shall be applied in three (3) coats (priming body and finish coats). Each coat shall be roller applied (except as otherwise noted) spread evenly and in full covering body.

3. Patching Compound, patching compound shall be fine powder material that can be mixed into putty consistency with oil base primers and paints to fill minor surface dents and imperfections.
4. Natural Wood Paste Filler, wood paste filler shall be quality filler ready mixed in can for filling and sealing open grains of interior wood. It shall produce a level finish for succeeding coats of paints, lacquer and other related products.

5. Application

Paints when applied by brush shall be non-fluid, thick enough to lay down an adequate film of wet paint. Brush marks shall flaw out after the application of paint. Paints prepared for application by roller must be similar to brushing paint. It must be non sticky when thinned to spraying viscosity to 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 might change the required properties of the paint. Experienced and skilled craftsmen to assure finished work of first class quality, appearance and durability shall perform all works. All paints and other coatings shall be mixed and applied strictly in accordance with the manufacturers printed instructions.

6. Paint Schedule

The type of paint specified are intended to illustrate the quality and are taken from paint catalogue equivalent materials from manufacturers listed herein, which the contractor desires to use other than those specified should accompany proposal with such request in writing for approval of the Architect or Engineer. After the award, no substitution of materials for those mentioned in the accepted proposal will be permitted.

Exterior walls

Cement plaster over concrete use:

- (1) Preparation of exterior and interior concrete walls
- (2) Prepare masonry surface to be painted by removing all dirt, dust, oil and grease stains and efflorescence. Treat with masonry Neutralizers # 44 or approve equivalent. Mix one liter of Masonry neutralizer with 16 liters of water, then apply liberally by brush and let dry overnight before rinsing with water. Let dry.
- (3) Coat concrete primer and sealer
- (4) Coats textures paint
- (5) Coat semi gloss latex paint

Exterior and interior Work

Frames steel windows and grating use:

1. Wash all metal surfaces with mineral sprints or detergents to remove any dirt or grease before applying materials. Where rust or scale is present, wire brush or sand paper clean before painting. Treat rusty portions with Metal Etching Solution # 71 or approve equivalent. Rinse and let dry.
2. Coat PRIMER paint
3. Coats QD Enamel

Interior Work

Plywood/gypsum/fiber cement boards Ceiling/walling use: (Roller Painted)

1. 1 priming coat flat washable paint
2. 2 finish coat semi gloss paint.

Cabinets

Ducco or semi-ducco finish or as specified in the plans.

9.3 Construction Requirements

9.3.1 Cement Finish on Masonry Walls

(1) General

The work consists of furnishing all materials, labor and performing all operations in connection with plastering masonry wall surfaces, complete in every respect as shown in the drawings and as specified herein. Plastering work shall be protected properly from being damaged during plastering operations. Scaffolding shall be amply strong, well braced, tied securely and inspected regularly. Overloading of scaffolding shall not be permitted.

(2) Mixing of Plaster

Except where hand mixing of small patches is an approved mechanical mixer of an approved type shall be used for the mixing of plaster. Materials shall be accurately measured by a device that will maintain the specified proportions within a plus or minus tolerance not in excess of 5% by volume. Plaster materials shall be accurately measured in approved containers to insure the specified proportions. Caked and mixing each batch and kept free of plaster from previous mixes. Plaster materials shall be thoroughly mixed with the proper amount of water until a uniform color and consistency is attained. Tempering shall not be permitted and all plaster that has begun to stiffen shall be discarded.

(3) Proportioning Plaster

Portland Cement plaster shall be a two-coat application, the base and the finish coat. Each coat shall be proportioned as follows: One part by volume of Portland, to three parts sand. Hydrated lime may be used as directed by the Consultant.

Portland Cement plaster shall be a two-coat application, the base and finish coat. Each coat shall be proportioned as follows: One part by volume of Portland, to three parts sand. Hydrated lime may be used as directed by the Consultant.

(4) Application of Plaster

Surface to receive plaster must be free from structural defects and shall be thoroughly dampened prior to application of plaster.

Plaster base coats shall be applied with sufficient pressure and the plaster shall be sufficiently plastic to provide good bond on masonry base. The base coat shall be compacted and straightened to a true surface without the application of water and the entire surface shall be floated to receive the finish coat. The finish coat shall be applied to a thickness approximately 3 mm before the scratch coat has set. Maximum finish free from blemishes or irregularities. Trowling shall be continued until the finish surface sets. Immediately after setting, surfaces shall be soured vigorously with clean burlap or cement bag paper or brush to remove the sheen finish produced by trowling.

Plaster work shall be finished level, plumb, square and true, within a tolerance of 3mm in meters without waves, blisters, pits, crazing, discoloration, projections or other imperfections. Plaster work shall be formed carefully around angles and contours, and well up to screens. Special care shall be taken to prevent consequent dropping of applications. There must be no visible junction marks where one day's work adjoins another. Finished work shall be protected in an approved manner to prevent damage.

(5) Portland Cement Plaster

Cement plaster shall have a total thickness of not less than 12 mm thick. The base coat shall be applied not less than 9 mm thick and allowed to dry slowly for 24 hours. Then the finish coat shall be applied to a thickness of not less than 3 mm and brushed with 4 applications of fog spray of clean water. The first spray shall be applied 12 hours after the finishing coat has been completed and three subsequent spraying shall be applied at sufficient intervals thereafter as approved by the consultants.

(6) Patching and Pointing

Upon completion of the work all loose, cracked, damaged or defective plastering shall be cut and re-plastered in a satisfactory manner. All pointing and patching of plastered

surfaces and where plastering abuts or adjoins any other finished works shall be done in a neat and workmanship manner ready to receive pain or other finish.

(7) Curing and Protection

Damp curing shall begin as soon as the mortar has hardened sufficiently to prevent injury and water applied in a fog spray to keep the plaster damp throughout without soaking. The period for damp curing shall be specified for each coat. Protect the plaster from uneven and excessive evaporation during hot or drying weather conditions.

(8) Cleaning

After the completion of plastering work, all scaffolding surplus materials, debris and plaster daubs and stains in floors, windows and other surface shall be removed to the satisfaction and approval of the Project Manager.

9.3.2 Cement Finish on Concrete Floor Slabs

(1) General

This work includes plain cement finish with or without red cement, and plain cement finish as bed for tiles, including all labor, materials, equipment and other facility to complete the work in accordance with the plans and specifications.

(2) Finishing Requirements

Floors and slabs shall be sloped uniformly to the drains. In areas where tiles are to be laid, the concrete base slab shall be depressed to not less than 50 mm, when not indicated. Floor and slab finishes, where not indicated, shall receive a single steel trawling. Dry cement shall not be placed directly on the new concrete surface to absorb excess moisture.

(3) Finishing Procedures

Finishing procedures for floors and slabs, where not indicated on the drawings, shall be as follows:

| Finish | Description | Uses |
|-----------|--|---|
| Screened | Rough, free from Ridges and holes | Slab and concrete surfaces under Earth fill |
| Floated | Medium rough with Texture finished | Light storage areas, base slabs And heavy machine pads |
| Trowelled | Fine and texture To flossy glass Finish depending Upon the number Of passes of | All surfaces: 1) under floor- 1 pass 2) normal wearing surface – 2 passes 3) Dense wearing surfaces-3 Passes |

(4) Screened Finish

Concrete shall be placed, consolidated and immediately struck off to bring the top surface of the slab to proper grade. Floors shall be leveled with a tolerance of 3mm in 3.0 m, except where drain occurs, in which case the floors shall be pitched to the drains. Striking off and bull floating shall be completed before water appears on the surface of the freshly-placed concrete. If water is still visible by the time floating is to start, the excess water shall first be scrubbed off the surface by appropriate means.

(5) Floated Finish

Floating shall begin when the water sheen has disappeared and when the surface has stiffened sufficiently to support a man without indenting the surface. Floating shall be performed by hand with a wood float. During the floating, the surface shall be checked with a 3.0-m straight edge applied at different angles. The surface shall be floated to a true plane within 3 mm in 3.0 meters.

(6) Trowelled Finish

Upon attaining proper set, the floor shall first be given a floated finish as specified herein above and then hand trowelled. The first trowelling should produce a smooth surface, free of defects. The finished surface shall be free of trowelled marks, uniform in texture and true to a plane within 3mm in 3.0 meters.

(7) Broomed Finish

The floor shall first be given a floated finish and a steel trowelled finish as specified herein above and then surface shall be broomed with flexible bristle broom. The topping mixture shall be spread evenly over the roughened base before the final set has taken place. At the time of brooming, the trowelled surface shall have hardened sufficiently to retain the scoring on ridges. The brooming shall be in a direction transverse to that of traffic or at right angles to the slope of the floor.

(8) Mixing of Red Cement

Red cement shall be thoroughly dry, mixed with fresh Portland cement using dry and clean equipment. The proportion shall be three (3) parts red cement to one (1) part Portland cement. Cement top finish shall be one (1) part Portland cement – red cement mix and one (1) part sand, mix with minimum water content.

(9) Application of Cement Finishes

The concrete slab to receive cement top finish shall be roughened before the concrete has set. Before applying the cement top finish, the concrete surface shall be further roughened with a pick of a similar tool remove laitance, loose particles, plaster and anything that would prevent bond and then cleaned by an approved method or device. After cleaning, the slab shall be thoroughly wet before top finish is applied. The cement top finish shall have a minimum thickness of 19 mm and shall be poured continuously until the entire section is complete. Cement top finish shall be floated either manually or machine, struck off with straight edge, steel trowelled to a hard smooth surface, and graded to drain where required. Where the floor is to be hardened, ½ of the pre-mixed floor hardener shall be spread over the freshly poured cement top finish after screening and removing any excess water from the mixture and the floor shall then be floated. The balance of pre-mixed floor

hardener shall be evenly spread over the surface at the right angles to the first application. The floor shall then be floated and care shall be taken to embed the floor topping with hardener firmly in surface of the concrete floor. The treated cement top shall be allowed firmly in surface of the concrete floor. The treated cement top shall be allowed to set sufficiently so that the surface maybe steel trawled to a hard-scaled surface.

9.3.3 Other Cement Finish

(1) Patching of Surface Defects

All surface defects shall be repaired with cement mortar of the same composition as used in the concrete. Part of the cement in the mortar may be white cement, for patching exposed areas to match the color of the surrounding concrete. Patching shall begin as soon as the forms are removed and areas to be patched are cleaned thoroughly. Minor defective areas shall be cut out of the solid concrete to a depth of not less than 25 mm. And edges of cuts shall be perpendicular to the surface of the concrete. Area to be patched and about 150 mm of the adjacent surrounding areas approximately one (1) hour before placing and remix occasionally during this period without adding water. An initial grout of cement and water mixed to the consistency of paint of the required color shall be applied into the surface to which the mortar is to be bonded.

(2) Repairing of Structural Defects

Concrete with excessive honey-comb, exposed reinforcing bars and other defects which affect the structural strength of the members shall be removed and repaired by the Contractor to the satisfaction of the Project Manager.

(3) Finishing of Formed Surfaces

Finishing of formed surfaces, where not indicated in the drawings, shall be as follows:

- (a) Surfaces exposed to public view shall be smooth form finished. No plastering work shall be done on exposed surfaces to correct imperfections. Form facing materials shall be used to produce a smooth, hard and uniform texture on the concrete. Tie holes and defects shall be patched and all fins shall be completely removed.
- (b) Surfaces not exposed to public view shall be rough form finished. Tie holes and defects shall be patched and fins exceeding 6 mm in height shall be chipped off or rubbed off.
- (c) Finishing of formed surfaces shall be accomplished after removal and repair of surface defects.

9.3.4 Tile Works

(1) General

The work consists of furnishing all materials, labor and performing all operations in connection with tile finishing of floors and walls, complete including mortar beds for the tile. Tile work shall not be started on portions where embedded lines crossed – over the area until roughing-ins for plumbing and electrical work has been completed and tested. The work of all other trades in the areas where the work is to be done shall be protected from damage in a workmanship manner as directed by the Project Manager.

(2) Mortar for Tiles

A scratch coat for wall tile shall consist of one part Portland cement, ¼ part lime putty and 3 parts sand by volume. Scratch coat shall have a minimum thickness of 9mm. the buttering mortar for setting wall tiles and mortar setting bed for floor tiles shall have the same proportion as that of scratch coat.

(3) Floor Tiling

(a) Preparation of Surfaces

Before tile is applied with a dry-set mortar bed, the structural floor shall be tested for levelness or uniformity of slope by flooding it with water. Areas with ponds shall be filled, leveled and resetting before the setting bed is applied. The slab shall be soaked thoroughly with clean water on the day before the setting bed is applied. Immediately preceding the application of the setting bed, the slab shall again be wetted thoroughly but, no free water shall then be applied not more than 1.5 mm thick. The mortar shall be spread until its surface is true and even and thoroughly compacted, either level or sloped uniformly for drainage, where required. A setting bed, as far as can be covered with the tile before the mortar have reached its initial set, must be placed in one (1) operation, but in the event that more setting mortar has been placed that can be covered, the unfinished portion shall be removed and cut back to a clean leveled edge.

(b) Application of Floor Tile

All tiles to be soaked in clean water to a minimum of one (1) hour before they are installed. Placing tile on a wetted cloth in a shallow pan before installing shall damp absorptive mounted tile. Before the initials set has taken place in the setting bed, a skim of Portland cement mortar 75 mm to 1.5 mm thick may be hand over the setting bed plain Portland cement. 75 mm and 1.5 mm thick may be hand dusted uniformly over the setting bed and worked lightly with a trowel or brush until thoroughly damp. The tiles shall then be pressed firmly upon the setting bed, and carefully tapped into the mortar until true and even with the place of the finished floor base. Tapping and leveling shall be completed within one (1) hour after placing tiles. Borders and defined lines shall be laid before the field or body of the floor. Where floor drain is provided, the floor shall be sloped properly to the drains. Cutting of tiles, where necessary, shall be done along the outer edges of the tile against trim, base, thresholds, pipes, built-in fixtures and similar surfaces and shall be geared and joined carefully. Tiles shall be secured firmly in place, and loose tiles or tiles sounding hollow shall be removed and replaced to the satisfaction of the Project Manager. All lines shall be kept straight, parallel and true all finished surface brought to true and even planes.

(4) Wall Tiling

(a) Preparation of Surfaces

Scratch coat shall be applied on prepared surface to serve as backing for wall tiles, not less than 24 hours or more than 48 hours before starting the tile setting. Temporary screeds shall be applied to the scratch coat to provide a true and plumb surface to the proper distance back from the finished wall. The setting bed shall be applied, rotted and floated flushed with the screeds over an area n greater than will be covered with the tile while the bed remains plastic. The thickness of the setting bed shall not exceed 20 mm and the mortar shall not be tempered.

(b) Application of Wall Tile

Tiles shall be soaked in clean water for a minimum of one (1) hour before they are installed. A skim coat Portland cement mortar mixed with water to the consistency of thick cream. 75 mm thick shall be applied to the mortar setting bed, or to the back of each tile. The tiles shall then be pressed firmly upon the setting bed and tapped until flush and even plane of the other tiles. The tiles shall be applied before the mortar bed has taken its initial set. Intersections and returns shall be formed accurately. All lines shall be kept straight and true; and all finished corners rounded. Horizontal joints shall be maintained level and vertical joints plumb alignment.

(5) Jointing

Joints shall be parallel and uniform in width, plumb, level and in alignment. End joints in broken-joint shall be made, as far as practicable, on the centerline of the adjoining tiles. Joint widths shall be uniform and measured to accommodate the tiles in the given spaces with a minimum curing.

(6) Grouting

Grouting shall be done using the approved materials of the Project Manager. Grouting shall be done as soon as the mortar beds have sufficiently set. All cement shall be Portland cement, colored or white, as required. Where light colored mortar is required in joints, mixture of white cement and non-fading mineral oxide shall be used to produce the desired color. The quantity of mineral oxides shall not exceed 10% of the volume of the cement in any case.

(7) Cleaning

Upon completion of grouting, the tile shall be thoroughly cleaned and maintained in this condition until completion of the contract.

9.3.5 Painting

(1) General

The work covered by this section consists of furnishing all labor, equipment, tools and materials in performing all operations in connection with painting and finishing, including protective coating of metal surfaces, complete in accordance with the specifications and the applicable drawings.

(2) Color and Samples

The Project Manager shall in accordance with the color schemes shown in the drawings or as direct all colors.

Sample panels of selected colors, as least (1) meter square in area shall be prepared for approval by the Project Manager prior to the application.

(3) Workmanship

Skilled workers shall do all work in a workmanlike manner. Paints shall be evenly applied and free from sags, runs, crawls and other defects. All coats shall be of proper consistency and well brushed out or rolled on so as to show a minimum brush or rolled marks. Brushes or rollers shall be clean and in good condition.

All coats shall be thoroughly dry before the succeeding coat is applied. Allow at least twenty-four (24) hours or more between applications of coat. For exterior painting during rainy season, allow one (1) week drying time before the succeeding coat is applied.

Painting coats as specified are intended to cover surfaces perfectly, its surfaces are not fully covered, further coats shall be applied to attain the desired evenness of the paint application. All finishes shall be uniform as to sheen, color and texture. Paint may be applied by spray method, except when, in the opinion of the spraying in any particular application would produce unsatisfactory results. The Contractor shall provide all drop cloths and other covering requisite to the protection of the floors and other work.

Each surface shall be inspected carefully before applying any finish; and if surface is not in proper condition, they shall be notified to that effect in writing, otherwise the Contractor shall be held responsible for any defects in the finishes arising there from. Should a coat of paint be applied to a certain area and defects shall be knocked out and re-plastered by the Contractor and repainted to the satisfaction of the Project Manager.

(4) Inspection of Surfaces

The Contractor shall inspect all surfaces to be painted and all defects shall be remedied before starting the work before starting the work. No work shall be started unless the Contractor shall have made certain the dryness of the surfaces. Test shall be made, in the presence of the Project Manager, to verify the dryness of surfaces to be painted.

(5) Concrete Surfaces

(a) Surface Preparation

Before applying paint, concrete and cement surfaces shall be allowed to dry thoroughly. Clean surfaces of all dirt, alkali and grease before commencing work. Treat all surfaces with a solution of two (2) kilos of zinc sulfate to four (4) liters of water and sufficient phenolphthalein to act as color warning. Presence of alkali is indicated when phenolphthalein turns red and further treatment is required to neutralize it. Allow the surface to dry at least three (3) days and remove and loose crystals from the surface before finishing.

(b) Finishing:

For exterior and interior concrete surfaces and all other surface with cement plaster finish, use flat concrete paint with the specified brand approved by the Project Manager.

First Coat- Apply flat concrete paint thinned with ½ liter water per 4 liters of paint; tint with latex tinting color to closely match color of topcoat or use premixed paint. Dry for 3 to 6 hours.

Intermediate Coat- Repair all minor surface imperfection with paint putty made by mixing paint with patching compound powder. Let it dry for 24 hours, and then smoothen the surface with sand paper, before applying the intermediate coat.

Final Coat- Apply semi-gloss or gloss paint tinted with latex tinting color to the shade specified.

Ducco or semi-ducco finish shall be applied using the appropriate paint sprayer by a well experienced painter.

(6) Wood Surfaces

(a) Surface Preparations

Plane the surface of wood with sandpaper to remove roughness, loose edges, slivers, splinters then clean to remove dust. All frames in contact with concrete or plaster shall be treated with an anti-termite solution or solution or equivalent before applying paints. Set the nail heads into the wood, fill holes, cracks and defects. Dry for three (3) hours and clean surface with sandpaper to smoothen the surface.

(b) Finishing

For all woodwork, use gloss latex house paint with the specified brand approved by the Project Manager.

First Coat- Apply paint thinned with ½ liter water per 4 liters of paint.

Second Coat- Apply latex thinned with latex tinning colors to the shade specified for 4 to 6 hours.

9.4 Method of Measurement and Basis of Payment

The finished area to be paid for under each item shall be measured by the number of square meter painted surfaces accepted in accordance with the plans and specifications. The cost of plastering works, tinting color, thinner, sand paper, putty including mixing, application, curing, false work and protection work shall be deemed to be included in the contract unit price for each pay item as shown in the bid schedule.

The finished area to be paid for tiles surfaces shall be measured by the number of square meter accepted in accordance with the plans and specifications. The cost of tile trims, plastering, grout adhesive, rubber nosing and other required materials as per plans shall be deemed to be included in the contract unit price for each pay item as shown in the bid schedule.

The accepted quantities measured as stipulated above shall be paid for at the contract unit price for each of the particular pay item listed below, which price and payment shall be full compensation for furnishing and placing all materials, labor, equipment, tools and incidentals necessary to complete each work item.

10.0 **PLUMBING WORKS**

10.1 Scope of Work

This item shall consist of furnishing all materials, tools, equipment and fixtures required as shown on the Plans for the satisfactory performance for the entire plumbing system including installation in accordance with the latest edition of the National Plumbing Code, and this Specification.

10.2 Material Requirements

This item shall consist of furnishing all materials, tools, equipment and fixtures required as shown on the Plans for the satisfactory performance of the entire plumbing system including

installation in accordance with the latest edition of the National Plumbing Code, and this specification.

- 10.2.1 For cold water lines, Pn 10 Fusion Weld Polypropylene Pipes. Provide coal tar with burlap for embedded pipe.
- 10.2.2 UPVC Pipe series 1000 conforming to ASTM D-2729 for all downspouts and sewer, waste & vent lines.
- 10.2.3 Water Closets shall be Flush-type for offices and other specified areas and lever-type with pressurized tank for patients' comfort rooms.
- 10.2.4 Unless otherwise specified, toilet lavatories shall be countertop lavatories with complete fittings. Counters shall be granite slab or as specified on the drawings.
- 10.2.5 Where indicated in the plans, the counter top model, make and color shall be approved by the Architect or Engineer.
- 10.2.6 Pipes, plumbing fixtures, water lines, clean out and vents shall be supplied and installed in accordance with the approved workmanship.
- 10.2.7 Drainage pipes shall be Reinforced Concrete Pipes of specified sizes.
- 10.2.8 Water Supply Pipes and Fittings

A. Pipes shall be Pn 10 Fusion Weld Polypropylene Pipe conforming to specification requirements including Trims and Fittings.

B. Valves for water supply shall be bronze body with threaded ends rated 21.0 kgf/cm. square. All valves are gate valves unless otherwise specified. Gate valves shall have solid wedge body and discs conforming to specification requirements defined in ASTM B-62. Globe valves shall have plug type discs with ferrule-threaded ends and bronze body.

C. Unions in ferrous pipe 50 mm in diameter and smaller shall be malleable iron.

10.2.8 Approved Alternate Pipes and Fittings

Pipes and fittings for sanitary and potable water lines as approved alternative shall be Galvanized Iron Pipes and Fittings Schedule 40 and Unplasticized Polyvinyl Chloride Pipes and Fittings (UPVC). Pipes and fittings shall be made of virgin materials conforming to specification requirements defined in ASTM D-2241 and PNS 65: 1986. Fittings shall be molded type and designed for solvent cement joint connection for water lines and rubber O-ring seal joint for sanitary lines.

10.3 Construction Requirements

The Contractor before any installation work is started shall carefully examine the Plans and shall investigate actual structural and finishing work condition affecting all this work. Where actual condition necessities a rearrangement of the approve pipe layout for approval by the Project Manager.

10.3.1 Installation of Waste and Vent Pipes

- 10.3.1.a Horizontal lines shall be secured strongly by hooks to the building frame and suitable brackets or chairs shall be provided at the floor which they start.
- 10.3.1.b Vent pipes in roof spaces shall be run as closest possible to under side of roof with horizontal piping pitched down to stacks without forming traps. Vertical vent pipes connected into one main vent riser above the highest vented fixtures.

- 10.3.1.c Where an end circuit vent pipe from any fixtures is connected to a vent line serving other fixtures, the connection shall be at least 1.20 m above the floor on which the fixtures are located.
- 10.3.1.d Horizontal waste line receiving the discharge from two or more fixtures shall be provided with end vents separate venting of fixtures is noted on the plans.
- 10.3.1.e All changes in pipe size on soil and waste lines shall be made with reducing fittings or recessed reducers. All changes in direction shall be made appropriate use of 45 degrees, wyes, half wyes, quarter bends or elbows may be used in waste lines where the change in direction of flow is the horizontal to the vertical and on the discharge from waste closets. Where it becomes necessary to use short radius fittings in other location the approval of the Project Manager shall be obtained prior to installation of the same.
- 10.3.1.d Vent pipe shall be provided with Vent Cap (Studor) and flashed and made watertight at the roof with ferrule lead. Flashing shall be turned down into pipes.
- 10.3.2 Water Pipes, Fittings and Connections

All water piping inside the building and underground, 100-mm in diameter and smaller shall be schedule 40, series 1000 PVC pipes fittings.

 - 10.3.2.a The water piping shall be extended to all fixtures, outlets and equipment from the gate valves installed in the branch near the rise.
 - 10.2.3.b The cold water system shall be installed with a fall towards a main shut off valve and drain. Ends of pipes and outlet shall be capped or plugged and left ready for future connections.
 - 10.2.3.c. Mains and Branches
 - 10.2.3.d All pipes shall be cut accurately to measurements and shall be worked into place without springing or forcing. Care shall be taken so as to not to weaken the structural portions of the building.
 - 10.2.3.e. All piping above the ground shall be run parallel with the lines of the building unless otherwise indicated on the plans.
 - 10.2.3.f All service pipes, valves and fittings shall be kept at sufficient distance from other work to permit finished covering on the different services.
 - 10.2.3.g No water piping shall be buried in floors, unless specifically indicated on the Plans and approved by the Project Manager.
 - 10.2.3.h Changes in pipes shall be made with reducing fittings.
 - 10.2.3.i Drain Cocks

Pipe drain indicated on the drawing shall consist of 12-mm globe valve with renewable disc and installed at low points on the cold water piping so that all piping shall slope 100 in 30.5 m.
 - 10.2.3.j Threaded Pipe Joints

All pipes shall be reamed before threading. All screw joints shall be made with graphite and oil or with an approved granite compound applied to make threads only. Threads shall be cut not more than three threads on the pipe shall remain exposed.
 - 10.2.3k Expansion and Contraction of Pipes

Accessible contraction-expansion joints shall be made whenever necessary. Horizontal runs of pipe over 15 m length shall be anchored to the wall to the supporting structure about midway on the run to force

expansion and contraction equally toward the ends or as shown on the Plans.

- Valves shall be provided on all supplied fixtures as herein specified.
- The cold water connection to the return circulation connection shall have and a check valve.
- All connection to domestic hot water heaters shall be equipped with unions between valve and tanks.
- Valve shall not be installed with its stem below the horizontal. All valves shall be gate valves unless otherwise indicated on the Plans.
- Valves p to and including 50-mm diameter shall be threaded ends; rough bodies and finished trimmings, except those on chromium plated brass pipe.
- Valves 63 mm in diameters and larger shall have iron bodies, brass mounted and shall have either screws or flange ends.
- Hose bibs shall be made of brass with 12.5-mm inlet threads, hexagon shoulders and 19 mm male.

10.3.3 Fixtures, Equipment and Fastenings

- 10.3.3.a. All fixtures and equipment shall be supported and fastened in a safe and satisfactory workmanship as practiced.
- 10.3.3.b. All fixtures where required to be wall mounted on concrete or concrete hollow block wall, fasten with brass and expansion bolts. Expansion bolt shall be 6-mm diameter with 20-mm threads to 25 mm into solid concrete, fitted with loose tubing to sleeves of proper length to acquire extreme rigidity.
- 10.3.3.c. Insert shall be securely anchored and properly flushed into the walls. Inserts shall be concealed and rigid.
- 10.3.3.d. Bolts and nuts shall be horizontal and exposed. It shall be provided with washers and chromium plate finish.

10.3.4 Plates and Flashing

- 10.3.4.a. Plates to cover exposed pipes passing through floor finished walls or ceiling shall be fitted with chromium plated cast brass plates or chromium plated cast iron steel on ferrous pipes.
- 10.3.4.b. Plates shall be large enough to cover and close the hole around the area where pipes pass. It shall be properly installed to insure permanence.
- 10.3.4.c. Roof areas penetrated by vent pipes shall be rendered watertight by lead sheet flashing and condor flashing. It shall extend at least 150 mm above the pipe and 300 mm along the roof.

10.3.5 Bathroom and Toilet Accessories

- a. ~~Shower head and fittings shall be movable, cone type with escutcheon arm complete with stainless steel; shower valve and control lever. All exposed surface to be chromium finish.~~
- b. Grab bars shall be made of tubular stainless steel pipe provided with safety grip and mounting flange for disabled people.
- c. Floor drains shall be made of steel beehive type, measuring 10cm x 10 cm and provided with detachable stainless strainer, expanded metal lath type.

- d. Toilet paper holder and soap holder shall be vitreous china or approved equal wall mounted. Color shall reconcile with the adjacent fixture and facing tiles.
- e. Faucets shall be made of stainless steel for interior use.
- f. Hose bibs shall be made of bronze cast finish.

10.4 Drainage System Test

- 10.4.1 The entire drainage and venting system shall have all necessary openings, which can be plugged to permit the entire system to be filled with water to the level of the highest water or a full 30 minutes during which time there shall be no drop greater than 102 mm.
- 10.4.2. Where only a portion of the system is to be tested, the test shall be conducted in the same manner as described for the entire system except that a vertical stack 3.00 m highest horizontal line to be tested may be installed and filled with water to maintain sufficient pressure or water pump may be used to supply required pressure.
- 10.4.2. If and when the Project Manager decides that an additional test is needed, such as an air to smoke test on the drainage system, the Contractor shall perform such test without any designated representative.

10.5 Water Test on System

- 10.5.1. Upon completion of the roughing-in and before connecting fixtures the entire cold water piping system shall be tested at a hydrostatic pressure 1 ½ times the expected working pressure in the system during operation and remained tight and leak-proofed.
- 10.5.2. Where piping system is to be concealed the piping system and in the presence of the Engineer or his duly designated representative.

10.6 Defective Work

- 10.6.3. All defective materials replaced and tested will be repeated until satisfactory performance is attained.
- 10.6.4. Any material replaced for the satisfactory performance of the system made shall be at the expense of the Contractor.
- 10.6.5. Caulking of screwed joints or holes will not be permitted.

10.7 Disinfection

- 10.7.1. The entire water distribution system shall be thoroughly flushed and treated with chlorine before it is operated for public use.
- 10.7.2. Disinfection materials shall be liquid chlorine or hydro-chloride and shall be introduced in a manner approved as practice or potable water.
- 10.7.3. Valves for the water distribution system shall be opened and closed several times during the 16 hours chlorinating treatment is done.

10.8 Method of Measurement and Basis of Payment

The work done under this item shall be quantified per length and/or number of units as provided in the Bill of Quantities, tested and accepted to the satisfaction of the Project Manager. The accepted quantities measured shall be paid at the contract unit price and payment shall be full compensation including labor, materials (pipes, fittings, etc.) and incidentals necessary to complete this Item.

11.0 ELECTRICAL WORKS

11.1 Scope of Work

All work under these specifications shall consist of furnishing/cause to furnish materials, labor, tools, appliances, and all other services necessary unless otherwise indicated to complete and make ready for operation, the electrical power, lighting, and other utility system described herein and/or indicated in the electrical plans including owner-furnished equipment and fixtures. In accordance with the electrical plans and these specifications.

- 1) Roughing-in and wiring for lighting, power, telephone, fire alarm, nurse call, and paging system.
- 2) Supply and install/cause to install primary metering.
- 3) Supply, installation, and testing of panel boards, and disconnect switches.
- 4) Supply and installation of underground feeder system included in the plan to powerhouse.
- 5) Supply and installation of boxes, pull boxes, auxilliary gutters, wire gutters, bus bar gutters, circuit breaker gutters and the like.
- 6) Supply and installation of lighting fixtures, switches, ceiling fans, and power outlets.
- 7) Supply and installation of hangers and supports of conduits for power, feeder and sub-feeder system and auxiliary system.
- 8) Painting of electrical works covering conduits, boxes, hangers, gutters, and the like.
- 9) Testing for electrical system:
 - a. Insulation resistance test
 - b. Ground resistance test
 - c. Continuity test
 - d. Operational test
 - e. Polarity check
 - f. Phase balancing check

11.1.1 Anything that has been omitted in any of work or materials usually furnished which are necessary for the completion of the works as outlined herein shall be undertaken or supplied by the contractor included in this division of work and must be included in the bid proposal.

11.2 CODE REGULATIONS

All materials and equipments to be used in the electrical installations and construction shall be in accordance with the provisions of the latest edition of the Philippine Electrical Code and the pertinent ordinances of the municipality wherein the project is located.

All work shall comply with the rules and regulations of the local power utility company in so far as they are concerned in providing the respective permanent services to the building.

11.3 DRAWINGS AND SPECIFICATIONS

The electrical plans and these specifications are meant to be complementary to each other, and what is called for in one shall be as binding as if called for by both.

Any permanent conflict between the electrical plans and this specification and any unclear points of controversial matter in either shall be referred to the owner's assigned representative for final decision.

Upon final completion of the work herein described, the electrical contractor shall furnish the Owner two (2) copies of the "As-built" plans for future reference and maintenance purposes.

The electrical plans indicate the general layout of the complete electrical system, arrangement of feeders, circuit outlets, switches, controls, panel boards, service equipment and other work. Field verification of the scale dimensions on the plane must be made, since actual locations, distances and levels will be governed by actual field conditions.

The Electrical Contractor shall check architectural, structural and plumbing plans if necessary to resolve such conflicts. The Electrical Contractor shall notify the architect and secure approval and agreement on necessary adjustments before installation is started.

11.4 PERMITS AND INSPECTION

The Electrical Contractor shall obtain all necessary permits and certificates of electrical inspection from the proper government authorities concerned, required both for the performance of the work involved and the operation of the system upon completion of the work.

The Electrical Contractor shall pay all the fees necessary to secure the above-mentioned permits and certificates.

The Electrical Contractor shall at his own expense, reproduce the electrical plans to the necessary scale and size, complete them with all the necessary information and requirements as maybe required by the government authorities concerned with the approval of plans.

The Electrical Contractor shall coordinate with the local power company regarding the power facilities and secure approval of the power requirements.

11.5 MATERIALS AND WORKMANSHIP

All materials to be used shall be brand new, with trade name, unused, and shall in every case be the best where such standards have been established for the particular type of materials used.

Trade/brand name of materials indicated in the specifications are recommendatory in nature and are included for the purpose of uniformity in bids. If trade/brand names other than those indicated are to be used during construction, brochures and samples shall be submitted to the owner's representative for approval.

Only skilled workmen using proper tools and equipment shall be employed during the entire course of the installation work. All workmanship shall be of the best quality and all works shall be done in accordance with the best engineering practice of the trade involved.

11.6 WIRING METHOD

Lighting and Power Branch Circuit – uPVC pipes concealed in ceilings and double walls and/or embedded in concrete walls/slabs. All uPVC pipes ran underground outside of buildings shall be buried not less than 40mm below natural grade line and enclosed in concrete envelope. All concrete envelopes passing under roadways or areas accessible to vehicles shall be steel reinforced up to 1.0m from the edge of the roadway.

Low Voltage Service Entrance and All Feeders – rigid steel conduit, exposed/concealed in ceiling/double walls, embedded in concrete walls/slabs or ran underground encased in concrete.

All Other Auxiliary Layout – uPVC pipes concealed in ceilings/double walls and/or embedded in concrete walls/slabs.

Use flexible metal pipe for connection between junction boxes inside ceiling and lightings and other fixtures using approved fittings.

All boxes, cabinets and other equipments shall be flush-mounted unless specified/approved otherwise.

All boxes for lighting outlets, convenience outlets, tumbler switches and other devices shall be unless specified, galvanized pre-painted or uPVC and other approved products of reputable manufacturers. Cut ends of conduits shall be reamed and cleaned to remove burr and sharp edges. Threads cut on conduits shall be the same thread dimensions as factory cut conduit threads. Conduit joints shall be made straight and true. Elbows and offsets and changes in direction and runs shall be uniform. Bends shall be made without kinking or destroying the cross-sectional contours of the conduits. Conduit terminals shall be provided at outlet boxes and cabinets with locknuts and bushing. Conduits shall be continuous from outlet and from outlet to pull boxes and cabinets in the manner that the conduit system shall be electrically continuous.

Where conduit runs are exposed, they shall be supported at an interval of not more than 0.75 m maximum with proper clamps and bolts or expansion shields or other means of support.

All splices, taps, junction in wires larger than 8.0 sq.mm. shall be done with solderless connectors of suitable sizes and properly insulated with rubber tapes and protected by friction tapes, so that the insulation strength shall at least be equal to the insulation of the conductors they join.

Unless otherwise specified, the type of wires to be used shall either be THW or THHN. Smallest size of wire to be used for lighting and power unless otherwise indicated shall be 3.5 sq.mm.

11.7 FEEDERS

Feeders shall be laid out in accordance with the riser diagram shown in the electrical plans.

Unless otherwise specified type THW or THHN wires shall be used for feeder lines. The wires and conduits sizes shown in the electrical plans shall be the minimum sizes to be used.

11.8 WALLS SWITCHES AND RECEPTACLES

All wall switches shall be flush type and mounted 1.40 meters above finish floor line unless otherwise specified.

Convenience outlets shall be grounding type, wall flushed, mounted 0.30 meter above finished floor line or finished counters unless otherwise specified in the plan. Ground fault circuit interrupter protected convenience outlets shall be used in bathrooms, lavatories, sinks, laundry areas and the like.

11.9 MAIN SWITCHES, TRANSFER SWITCHES, PANELBOARDS

The cabinets for the above shall be of standard sizes and shall be gauge #16. Circuit breakers shall be as specified in the plan and shall be followed at all times.

11.10 LIGHTING FIXTURES

Install all lighting fixtures and lamps as specified and as shown on plans, Fluorescent lamps shall either be 48 inches/40 watts or 24 inches/20 watts, standard cool white or daylight with the minimum light output of 3,000 lumens. Use high power factor ballast.

All fluorescent fixtures housing shall be of US Gauge 22 minimum.

Submit one sample of each type of fixtures to the Architect for approval prior to manufacturing and installation.

11.11 WATER PUMP

The Electrical Contractor shall install a complete wiring and conduit system including circuit breaker.

The Electrical contractor shall; supply, install, test and commission the water pump and accessories such as motor, starter, ground fault protection, water level controller, etc.

11.12 AUXILIARY SYSTEMS

The Electrical Contractor shall, after completion, submit a complete schematic wiring diagram of the above to the owner's representative.

Method of Measurement and Basis of Payment

The work done under this item shall be quantified per length and/or number of units as provided in the Bill of Quantities, tested and accepted to the satisfaction of the Project Manager. The accepted quantities measured shall be paid at the contract unit price and payment shall be full compensation including labor, materials (wires, pipes, fittings, etc.) and incidentals necessary to complete this Item.

12.0 - MECHANICAL

12.00 - AIR CONDITIONING AND REFRIGERATION SYSTEM

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.

The types, sizes, capacities, quantities and power characteristics of the compressor, evaporator, condenser chilled water pump and condenser water pump shall be as specified or as shown on the Plans.

Construction Requirements

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 building and equipment damaged by contractor in the prosecution of the work shall be replaced as shown on the Plans.

Operating Tests

Operating test of complete air conditioning system shall be 6 hours minimum for each system. Tests of air flow, temperature and humidity shall be made to demonstrate that each complies with the requirements of the Plans and Specifications.

Miscellaneous

The owner shall be provided with three (3) bound copies "AS-BUILT" diagram, shop drawings, parts lists, serial number and inventory of equipment including manufacturers and maintenance manuals for submission to the hospital's Material Management Section (MMS).

All standard tools and equipment shall be furnished for proper and regular maintenance of installed equipment.

Method of Measurement

The work under this Item shall be measured either by set, piece, length, square meter actually placed and installed as shown on the Plans.

1. Lighting Fixtures – including pipes and fittings, wires and cables and other miscellaneous expenses
2. Wiring Devices – including pipes and fittings, wires and cables, boxes and other miscellaneous expenses
3. Panelboard/Circuit Breakers – including bush bars, housing and other miscellaneous expenses
4. Aircon Overload Protection – including pipes and fittings, wires and cables and other miscellaneous expenses
5. Other Electrical Works (Roughing-in for upper floors) - pipes and fittings for lighting fixtures, convenience outlets, wiring devices.

i. Basis of Payment

All work performed and measured and as provided for in the Bill of Quantities shall be paid for the Unit Bid of Contract Unit Price which payment shall constitute full compensation including labor, materials, tools and incidentals necessary to complete this Item:

13.0 MISCELLANEOUS

13.1- SIGNAGE

Informative and directional signage must be installed in conspicuous places. It shall be made of stainless steel, high quality acrylic lettering, and/or other materials stated in the plans and/or bill of quantities

Construction Requirements

The area to be installed shall be free from any foreign materials to ensure strong contact surface. If welded, the finish must be free from weld excess and precise welding process must be observed.

13.2- TELECOMMUNICATION LINES AND WIFI SYSTEM

Delivery, installation and testing of telecommunication lines and wifi system on conspicuous places reflected in the plans.

Construction Requirements

All lines must be kept above the finished ceiling boards. Secured with conduit pipe and for ease of identification, labeling may be done.

13.3- CCTV

Delivery, installation and testing of CCTV System.

Construction Requirements

CCTV cameras must be placed in conspicuous places to provide enough vision where blind spots are identified. Lines must be kept above the finished ceiling boards. Secured with conduit pipe and for ease of identification, labeling may be done. Monitors must be placed on offices.

13.4- GENERATOR SET

Delivery, installation and testing of Generator Set.

Construction Requirements

Generator Set must be installed to suffice the electrical power requirement of the area during power interruption. Lines must be kept above the finished ceiling boards. Secured with conduit pipe and for ease of identification, labeling may be done. Housing for the generator must be constructed and installed in an area where ease of mobility is present.

13.5- FIRE DETECTION AND ALARM SYSTEM

Delivery, installation and testing of Fire Detection and Alarm System to include smoke detectors, Manual Pull, Fire Alarm Bell, Fire alarm with Strobe lights, FACP and other as per plan specifications and the implementing rules and regulations of RA 9514 or the Fire Code of the Philippines.

ii. Basis of Payment

All work performed and measured and as provided for in the Bill of Quantities shall be paid for the Unit Bid of Contract Unit Price which payment shall constitute full compensation including labor, materials, tools and incidentals necessary to complete this Item

NOTE: THE CONTRACTOR'S PROPOSAL SHALL COVER ALL ITEMS AND OTHER INCIDENTAL WORKS NECESSARY TO COMPLETE EACH ITEM OF WORKS MENTIONED ABOVE. IN CASE OF DISCREPANCIES BETWEEN THE ABOVE MENTIONED SPECIFICATIONS IN THE BILL OF QUANTITIES, THE CONTRACTOR MUST IMMEDIATELY COORDINATE WITH THE CONCERNED OFFICE FOR VERIFICATION.



REPUBLIC OF THE PHILIPPINES
Department of Health
NATIONAL CENTER FOR MENTAL HEALTH
Nueve de Febrero Street, Mandaluyong City, Philippines
BIDS AND AWARDS COMMITTEE



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SECTION VII
Drawings
(INFRA – IB NO. 001 – 2025)

**Public Bidding for Infrastructure Project No. 01-2025 - Construction of
Two Storey NCMH Psychosocial Rehabilitation and Recovery Training
Center for Service Users CY 2025 – 240 Calendar Days**

The actual Drawings including site plans, are attached to this section. A Blueprint for this project shall be provided upon submission of Letter of Intent and payment of the applicable fee for the Bidding Documents.



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SECTION VIII
Bill of Quantities
(INFRA – IB NO. 001 – 2025)

**Public Bidding for Infrastructure Project No. 01-2025 - Construction of
Two Storey NCMH Psychosocial Rehabilitation and Recovery Training
Center for Service Users CY 2025 – 240 Calendar Days**

| ITEM NO. | DESCRIPTION | QUAN TITY | UNIT | UNIT COST | AMOUNT |
|----------|--|-----------|------|-------------------------|------------------|
| | | <i>A</i> | | <i>B</i> (from DUPA) | <i>C = A x B</i> |
| A | GENERAL REQUIREMENTS | | | | |
| 1 | Mobilization | 1 | lot | - | - |
| 2 | Construction of Temporary Facilities (Barracks, Storage Area, Working/Fabrication Area, Temporary Septic Tank, Site Enclosure & Access and etc.) with Installation of Electrical and Water Temporary Sub - meter | 50 | sq.m | - | - |
| 3 | Fabrication and Installation of the required 8 feet by 8 feet Commission on Audit (COA) Billboard w/ backing and stand, Complete with Necessary Accessories | 1 | lot | - | - |
| 4 | Fabrication and Installation of the required 4 feet by 8 feet Project Billboard w/ backing and stand, Complete with Necessary Accessories | 1 | lot | - | - |
| 5 | Installation of the Required Construction Safety Signages on all necessary areas | 1 | lot | - | - |
| | | | | SUB TOTAL (A) | - |
| B | DEMOLITION WORKS | | | | |
| 1 | Demolition of Affected Temporary GI Roof Sheet Fence | 1 | lot | - | - |
| 2 | Clearing of shrubs and trimming of tree branches affected by the building construction. | 1 | lot | - | - |
| | | | | SUB TOTAL (B) | - |
| C | EARTHWORKS | | | | |

Signature of Authorized
Representative:

| | | | | | |
|----------|--|-----|------|--------------------------|---|
| 1 | Excavation Works (Adobe Soil) | 350 | cu.m | - | - |
| 2 | Application of Gravel Bedding (3/4") for footings and slab on grade | 18 | cu.m | - | - |
| 3 | Application of Soil Poisoning | 350 | sq.m | - | - |
| 4 | Backfilling of well grade soil materials | 500 | cu.m | - | - |
| 5 | Soil Compaction | 350 | sq.m | - | - |
| | | | | SUB TOTAL (C) | - |
| D | CONCRETE WORKS | | | | |
| 1 | Fabrication and Installation of Reinforced Concrete Isolated Footings, 4500 psi | 24 | cu.m | - | - |
| 2 | Fabrication and Installation of Reinforced Concrete Strap Footings, 4500 psi | 8 | cu.m | - | - |
| 3 | Fabrication and Installation of Reinforced Concrete Columns, 4500 psi | 46 | cu.m | - | - |
| 4 | Fabrication and Installation of Reinforced Concrete Tie Beams, 4500 psi | 22 | cu.m | - | - |
| 5 | Fabrication and Installation of Reinforced Concrete Second Floor Beams, 4500 psi | 28 | cu.m | - | - |
| 6 | Fabrication and Installation of Reinforced Concrete Roof Beams, 4500 psi | 10 | cu.m | - | - |
| 7 | Fabrication and Installation of Reinforced Concrete Slab On Grade (Main Building and Exterior Grounds), 3500 psi | 35 | cu.m | - | - |
| 8 | Fabrication and Installation of Reinforced Concrete Second Floor Suspended Slab, 4500 psi | 30 | cu.m | - | - |
| 9 | Fabrication and Installation of Reinforced Concrete Stairs, 4500 psi | 6 | cu.m | - | - |
| 10 | Fabrication and Installation of Reinforced Concrete Lintel Beams (3500psi, Class A) | 3 | cu.m | - | - |
| 11 | Fabrication and Installation of Reinforced Concrete Canopies and Façade Moulding (3500psi, Class A) | 4 | cu.m | - | - |
| 12 | Fabrication and Installation of Reinforced Concrete PWD Ramps (3500psi, Class A) | 2 | cu.m | - | - |
| 13 | Fabrication and Installation of Reinforced Concrete Masonry Stiffener Columns (3500psi, Class A) | 5 | cu.m | - | - |
| 14 | Fabrication and Installation of Façade and Walkway Canopy Reinforced Concrete Pedestals and Footing (3500psi, Class A) | 2 | cu.m | - | - |
| | | | | SUB TOTAL (D) | - |
| E | MASONRY WORKS | | | | |

Signature of Authorized Representative:

| | | | | | |
|----------|---|-----|------|----------------------|---|
| 1 | Construction of Plastered Exterior Masonry Walls as per plan specifications (Class C) | 360 | sq.m | - | - |
| 2 | Construction of Plastered Interior Masonry Walls as per plan specifications (Class C) | 450 | sq.m | - | - |
| 3 | Construction of Tie Beam Masonry Stem Walls as per plan specifications (Class B) | 100 | sq.m | - | - |
| 4 | Construction of Plastered Masonry Plant Box as per plan specifications (Class C) | 100 | sq.m | - | - |
| 5 | Construction of Plastered Masonry Parapet Walls as per plan specifications (Class C) | 60 | sq.m | - | - |
| 6 | Other Provisionary Hardware Accessories and Materials for Masonry Works | 1 | lot | - | - |
| | | | | SUB TOTAL (E) | - |
| F | STRUCTURAL STEEL AND ROOFING WORKS | | | | |
| 1 | Fabrication and Installation of Roofing Trusses, Purlins, Planted Columns, and Other Roof Framing Elements that will Complete the System (Main Building) | 250 | sq.m | - | - |
| 2 | Installation of the Required Roofing Sheet, Endwall/Fascia Flashing, Gutters and Spandrel Eaves, Complete with Necessary Accessories (Main Building) | 250 | sq.m | - | - |
| 3 | Fabrication and Installation of Roofing Rafters, Purlins, Tubular Steel Columns, and Other Roof Framing Elements that will Complete the System (Façade and Covered Walkway Canopy) | 85 | sq.m | - | - |
| 4 | Installation of the Required Roofing Sheet, Endwall/Fascia Flashing, Gutters and Spandrel Eaves, Complete with Necessary Accessories (Façade and Covered Walkway Canopy) | 85 | sq.m | - | - |
| | | | | SUB TOTAL (F) | - |
| G | CEILING SYSTEM WORKS | | | | |
| 1 | Installation and Fabrication of the Required Suspended PVC Ceiling System at Main Building Interior as per plan specifications, Complete with Necessary Accessories | 410 | sq.m | - | - |
| 2 | Installation and Fabrication of the Required Suspended PVC Ceiling System at Façade Canopy and Covered Walkway (Exterior) as per plan specifications, Complete with Necessary Accessories | 85 | sq.m | - | - |
| | | | | SUB TOTAL (G) | - |
| H | ELECTRICAL SYSTEM WORKS | | | | |
| 1 | Installation of Electrical Rough-ins as per plan requirement and specifications | 1 | lot | - | - |

Signature of Authorized Representative:

| | | | | | |
|----------|--|-----|--------------|----------------------|---|
| 2 | Installation of Electrical Wiring and Conductors as per plan requirement and specifications | 1 | lot | - | - |
| 3 | Installation of Circuit Protection (Panel Board and Breakers) as per plan requirement and specifications | 6 | Panel Boards | - | - |
| 4 | Installation of Electrical Devices, Lighting Fixtures and Switches as per plan requirements and specifications | 1 | lot | - | - |
| 5 | Installation of Service Entrance/Main Electrical Supply as per plan requirements and specification, Complete with Necessary Accessories | 1 | lot | - | - |
| 6 | Installation of Service Drop/ Transformer as per plan requirements and specification, Complete with Necessary Accessories | 1 | lot | - | - |
| 7 | Installation, Supply and Delivery of Generator Set with Automatic Transfer Switch and Wiring, Complete with Necessary Accessories. | 1 | lot | - | - |
| 8 | Supply and Installation of On – Grid/ Grid Tie Solar Power System as per plan requirements and specifications with Testing and Commissioning, Complete with Necessary Accessories | 1 | lot | - | - |
| | | | | SUB TOTAL (H) | - |
| I | PLUMBING SYSTEM WORKS | | | | |
| 1 | Installation of Water Supply Lines as per plan specifications, Complete with Necessary Accessories | 410 | sq.m | - | - |
| 2 | Installation of Drain, Waste and Vent Lines as per plan specifications, Complete with Necessary Accessories | 410 | sq.m | - | - |
| 3 | Installation of Plumbing Fixtures (Toilet, Faucet, Urinal, Sink, etc.) as per plan specifications, Complete with Necessary Accessories | 410 | sq.m | - | - |
| | | | | SUB TOTAL (I) | - |
| J | TILING WORKS | | | | |
| 1 | Installation of Semi Glossy Vitrified Floor Tiles at Hallways, Receiving Area, Arts and Craft Room, Hair and Manicure/Pedicure Station, Tailoring and Digital Printing Room, Staff Offices, Soap Making Room, Computer Room and Multifunctional Room as per plan specifications, Complete with Necessary Accessories | 300 | sq.m | - | - |
| 2 | Installation of Non - skid Vitrified Floor Tiles at Baking & Food Processing Area and Storage Rooms as per plan specifications, Complete with Necessary Accessories | 60 | sq.m | - | - |

| | | | | | |
|----------|---|-------|------|----------------------|---|
| 3 | Installation of Non - Skid Vitrified Floor Tiles at Stairs (Steps and Landing) as per plan requirements and specifications, Complete with Necessary Accessories | 40 | sq.m | - | - |
| 4 | Installation of Non - skid Vitrified Floor Tiles at Comfort Rooms as per plan specifications, Complete with Necessary Accessories | 40 | sq.m | - | - |
| 5 | Installation of Vitrified Decorative Wall Tiles at Comfort Rooms as per plan specifications, Complete with Necessary Accessories | 160 | sq.m | - | - |
| 6 | Installation of Ceramic Matte Floor Tiles at Façade Entrance and application of concrete finish at PWD Ramp as per plan specifications, Complete with Necessary Accessories | 45 | sq.m | - | - |
| 7 | Installation of Outdoor Non - skid Textured Tiles at Covered Walkway as per plan specifications, Complete with Necessary Accessories | 30 | sq.m | - | - |
| 8 | Installation of Food Processing and Baking Area Backsplash Tiles as per plan specifications, Complete with Necessary Accessories | 10 | sq.m | - | - |
| | | | | SUB TOTAL (J) | - |
| K | PAINTING WORKS | | | | |
| 1 | Application of Paint Finish on the Exterior Walls of the Building | 430 | sq.m | - | - |
| 2 | Application of Paint Finish on the Interior Walls of the Building | 1,400 | sq.m | - | - |
| 3 | Application of Rust Inhibiting Primer on all Metal Surface (Roof Framing, Railings, Steel Post and etc.) | 1 | lot | - | - |
| 4 | Application of Limewash Paint Finish on the Façade of the Building | 1 | lot | - | - |
| | | | | SUB TOTAL (K) | - |
| L | FABRICATED MATERIALS | | | | |
| 1 | Fabrication and Installation of Glass Window as per plan requirements and specification, Complete with Necessary Accessories | 1 | lot | - | - |
| 2 | Fabrication and Installation of Wooden and Glass Door as per plan requirements and specification, Complete with Necessary Accessories | 1 | lot | - | - |
| 3 | Fabrication and Installation of Food Processing Concrete Countertop for Food Preparation, Cooking and Wash Area, Granite Finish as per plan requirements and specification, Complete with Necessary Accessories | 1 | lot | - | - |

| | | | | | |
|----------|--|-----|-------|----------------------|---|
| 4 | Fabrication and Installation of Comfort Room (PWD) Concrete Countertop for Handwashing, Granite Finish as per plan requirements and specification, Complete with Necessary Accessories | 2 | set/s | - | - |
| 5 | Fabrication and Installation of Pipe Chase as per plan requirements and specification, Complete with Necessary Accessories | 1 | set/s | - | - |
| 6 | Fabrication and Installation of Façade Design as per plan requirements and specification, Complete with Necessary Accessories | 1 | lot | - | - |
| 7 | Fabrication and Installation of the required Wooden Cabinets as per plan specifications, Complete with Necessary Accessories | 1 | lot | - | - |
| 8 | Fabrication and Installation of the required Salon and Toilet Mirror and other fittings as per plan specifications, Complete with Necessary Accessories. | 1 | lot | - | - |
| 9 | Fabrication and Installation of Accordion Partition with Sound Transmission Control as per plan specifications, Complete with Necessary Accessories | 1 | lot | - | - |
| | | | | SUB TOTAL (L) | - |
| M | HVAC SYSTEM WORKS | | | | |
| 1 | Installation of Aircon in designated area as per plan specifications and requirements, Complete with Necessary Accessories | 1 | lot | - | - |
| 2 | Installation of Exhaust Fans on all Office Comfort Rooms as per plan specifications and requirements, Complete with Necessary Accessories | 1 | lot | - | - |
| | | | | SUB TOTAL (M) | - |
| N | ETHERNET (WiFi), TELECOMMUNICATIONS AND CCTV SYSTEM WORKS | | | | |
| 1 | Installation of Ethernet and Telecommunications Wiring and Devices, Complete with Necessary Accessories | 1 | lot | - | - |
| 2 | Installation of CCTV Wiring and Devices, Complete with Necessary Accessories | 1 | lot | - | - |
| | | | | SUB TOTAL (N) | - |
| O | FIRE SUPPRESSION AND DETECTION SYSTEM WORKS | | | | |
| 1 | Supply and Installation of Fire Detection and Alarm System Wiring and Devices as per plan specifications, Complete with Necessary Accessories | 410 | sq.m | - | - |

Signature of Authorized Representative:

| | | | | | |
|----------|---|-----|------|----------------------|---|
| 2 | Supply and installation of the required Fire Protection System including devices and equipment as per plan specifications. | 410 | sq.m | - | - |
| | | | | SUB TOTAL (O) | - |
| P | MISCELLANEOUS | | | | |
| 1 | Fabrication and Installation of High Grade Acrylic NCMH Logo, Building and Room Identification Signages on all required areas as per plan specifications | 1 | lot | - | - |
| 2 | Fabrication and Installation of Electrical Service Post as per plan specification and requirements, 3500 psi | 1 | cu.m | - | - |
| 3 | Supply, Fabrication and Installation of Fall Protection Grab Handrails on All Required Areas (PWD and Comfort Room) as per plan requirements and specification, Complete with Necessary Accessories | 1 | lot | - | - |
| 4 | Installation of Built in Equipment and Appliances (Heating) as per plan requirements and specification, Complete with Necessary Accessories | 1 | lot | - | - |
| 5 | Supply, Delivery and Planting of Gardening Growing Plants for Landscaping as per plan specifications. | 1 | lot | - | - |
| 6 | Supply and Installation of Water Storage System as per plan requirements and specification, Complete with Necessary Accessories | 1 | lot | - | - |
| | | | | SUB TOTAL (P) | - |
| Q | CONSTRUCTION OF SEPTIC TANK AND CONCRETE CANAL | | | | |
| 1 | Construction of Width = 2 meters x Length = 4 meters x Depth = 2 meters Masonry Septic Tank as per plan specifications | 1 | sets | - | - |
| 2 | Construction of Width = 1.5 meters x Length = 4 meters x Depth = 2 meters Masonry Leaching Tank as per plan specifications | 1 | sets | - | - |
| 3 | Installation of the required Septic Tank and Water Tank Piping System, Complete with Necessary Accessories | 1 | lot | - | - |
| 4 | Construction of Concrete Canal with Concrete Cover (Class B – 3000 psi) and Trench Drain as per plan requirements and Specifications, Complete with Necessary Accessories | 60 | lm | - | - |
| | | | | SUB TOTAL (Q) | - |
| R | CONSTRUCTION OF ONE STOP UTILITY HOUSING AND CISTERN TANK FOR FIRE PROTECTION SYSTEM | | | | |

Signature of Authorized Representative:

| | | | | | |
|----------|---|-----|------|--------------------|---|
| 1 | EARTHWORKS | | | | |
| a | Excavation Works (Adobe Soil) | 100 | cu.m | - | - |
| b | Application of Gravel Bedding (3/4") for cistern tank, footings and slab on grade | 5 | cu.m | - | - |
| c | Application of Soil Poisoning | 50 | sq.m | - | - |
| d | Backfilling of well grade soil materials | 50 | cu.m | - | - |
| e | Soil Compaction | 50 | sq.m | - | - |
| | | | | TOTAL (R-1) | - |
| 2 | CONCRETE WORKS | | | | |
| a | Fabrication and Installation of Reinforced Concrete Footing, 3500 psi | 1 | cu.m | - | - |
| b | Fabrication and Installation of Reinforced Main Columns, Planted Columns and Stiffener Columns, 3500 psi | 3 | cu.m | - | - |
| c | Fabrication and Installation of Reinforced Tie Beam, Grade Beam and Roof Beams, 3500 psi | 5 | cu.m | - | - |
| d | Fabrication and Installation of Reinforced Slab on Grade, 3500 psi | 3 | cu.m | - | - |
| e | Fabrication and Installation of Reinforced Concrete Cistern Tank, 3500 psi | 27 | cu.m | - | - |
| | | | | TOTAL (R-2) | - |
| 3 | MASONRY WORKS | | | | |
| a | Construction of Plastered Exterior Masonry Walls including Roof Parapet as per plan specifications (Class C) | 60 | sq.m | - | - |
| b | Construction of Plastered Interior Masonry Walls as per plan specifications (Class C) | 12 | sq.m | - | - |
| c | Construction of Tie Beam Masonry Stem Walls as per plan specifications (Class B) | 10 | sq.m | - | - |
| | | | | TOTAL (R-3) | - |
| 4 | STRUCTURAL STEEL AND ROOFING SYSTEM WORKS | | | | |
| a | Fabrication and Installation of Roofing Trusses, Purlins, Planted Columns, and Other Roof Framing Elements that will Complete the System (One Stop Utility Housing) | 60 | sq.m | - | - |
| b | Installation of the Required Roofing Sheet, Endwall/Fascia Flashing, Gutters and Spandrel Eaves, Complete with Necessary Accessories (One Stop Utility Housing) | 60 | sq.m | - | - |
| | | | | TOTAL (R-4) | - |

Signature of Authorized Representative:

| | | | | | |
|----------|---|-----|------|----------------------|---|
| 5 | CEILING SYSTEM WORKS | | | | |
| a | Installation and Fabrication of the Required Suspended Ceiling System as per plan specifications, Complete with Necessary Accessories | 60 | sq.m | - | - |
| | | | | TOTAL (R-5) | - |
| 6 | ELECTRICAL SYSTEM WORKS | | | | |
| a | Installation of Electrical Rough-ins as per plan requirement and specifications | 1 | lot | - | - |
| b | Installation of Electrical Wiring and Conductors as per plan requirement and specifications | 1 | lot | - | - |
| c | Installation of Electrical Devices, Lighting Fixtures and Switches as per plan requirements and specifications | 1 | lot | - | - |
| | | | | TOTAL (R-6) | - |
| 7 | PAINTING WORKS | | | | |
| a | Application of Paint Finish on the Exterior Walls of the Building | 90 | sq.m | - | - |
| b | Application of Paint Finish on the Interior Walls of the Building | 105 | sq.m | - | - |
| c | Application of Rust Inhibiting Primer on all Metal Surface (Roof Framing, Railings, Steel Post and etc.) | 1 | lot | - | - |
| | | | | TOTAL (R-7) | - |
| 8 | FABRICATED MATERIALS | | | | |
| a | Fabrication and Installation of Wooden Door as per plan requirements and specification, Complete With Necessary Accessories | 1 | lot | - | - |
| b | Fabrication and Installation of Steel Gate and Panel in Generator Housing as per plan requirements and specification, Complete With Necessary Accessories | 1 | lot | - | - |
| | | | | TOTAL (R-8) | - |
| | | | | SUB TOTAL (R) | - |
| S | PROVISIONAL ITEMS | | | | |
| 1 | Processing of the Required Permits (DOH Permit to Construct, Building Permit and License to Operate) and Submission of As Built Plans (Signed and Sealed by the required Professional) upon Project Completion, Complete with all Necessary Attachments | 1 | lot | - | - |
| 2 | Material Testing of Reinforcing Bars and Hardened Concrete Samples as per the required ASTM Test Method | 1 | lot | - | - |

Signature of Authorized Representative:

| | | | | | |
|---------------------------|---|---|-----|--------------------------|---|
| | | | | SUB TOTAL (S) | - |
| T | CLEARING&GRUBBING/DEMOBILIZATION | | | | |
| 1 | Site Clearing and Grubbing, Includes Hauling of Debris and Construction Waste Prior Project Turn - Over | 1 | lot | - | - |
| 2 | Demobilization | 1 | lot | - | - |
| | | | | SUB TOTAL (T) | - |
| TOTAL PROJECT COST | | | | | - |

Submitted by:

Name and Signature of Bidders Authorized Representative

Date: _____

Position

Name of Bidder

Signature of Authorized
Representative:



REPUBLIC OF THE PHILIPPINES
Department of Health
NATIONAL CENTER FOR MENTAL HEALTH
Nueve de Febrero Street, Mandaluyong City, Philippines
BIDS AND AWARDS COMMITTEE



Telephone No. 531-9001 loc. 239

Telefax No. 5318318

E-mail: bacncmh@yahoo.com

Website: www.ncmh.gov.ph

SECTION IX

Checklist of Technical and Financial Documents

Project: **Public Bidding for Infrastructure Project No. 01-2025 - Construction of Two Storey NCMH Psychosocial Rehabilitation and Recovery Training Center for Service Users CY 2025– 240 Calendar Days**

Approved Budget for the Contract (ABC):

Php 33,944,178.15

Date/Time and Venue of Opening of Bids:

**July 10, 2025, 09:00 AM – (Thursday)
BAC Conference Room, NCMH Compound**

Instructions:

1. A bidder must submit one (1) original during submission and opening of bids. Two (2) additional copies of the original are requested to be submitted on the submission of the additional requirements for post qualification. All documents shall be current and updated.
2. The "ORIGINAL" copy of the bid form shall be typed or written in ink and shall be signed by the bidder or its duly authorized representative.
3. To facilitate the evaluation of the bids, bidders are advised to compile the documents in two (2) separate folders (i.e., one for Eligibility/Technical Documents and another for Financial Documents), properly labelled and tabbed, and following the sequence provided herein.

CHECKLIST OF TECHNICAL AND FINANCIAL DOCUMENTS' ENVELOPE

I. TECHNICAL COMPONENT ENVELOPE

CLASS "A" DOCUMENTS

A. LEGAL DOCUMENTS

- ☐ (1) **Valid REGISTRATION CERTIFICATE FROM PHILIPPINE GOVERNMENT ELECTRONIC PROCUREMENT SYSTEM (PHILGEPS)** – Platinum Membership (all pages) in accordance with Section 20.2.9.1 of RA No. 12009; or
- ☐ (1.1) **BUSINESS REGISTRATION CERTIFICATE** from the Securities and Exchange Commission (SEC), Department of Trade and Industry (DTI) for sole proprietorship, or Cooperative Development Authority (CDA) for cooperatives, or any proof of such registration as stated in the BDS; and
- ☐ (1.2) **MAYOR'S PERMIT** (valid and current) issued by the city or municipality where the principal place of business of the prospective bidder is located; and
- ☐ (1.3) **TAX CLEARANCE CERTIFICATE** (valid and current) for Bidding Purposes, per Executive Order No. 398, s. 2005, as finally reviewed and approved by BIR; and
- ☐ (1.4) **Valid Philippine Contractor's Accreditation Board (PCAB) License and Registration** (Category B: Size Range – Medium A); and
- ☐ (1.5) The Supplier's **AUDITED FINANCIAL STATEMENTS**, showing among others

the 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 date of bid submission. (CY 2024 with comparative statement CY 2024 and CY 2023)

B. TECHNICAL DOCUMENTS

- ☐ (2) Statement of the prospective bidder of **ALL ITS ON-GOING 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, using the form prescribed in **Annex B of the Bidding Forms; and**
- ☐ (3) Statement of the bidder's **SINGLE LARGEST COMPLETED CONTRACT (SLCC)*** similar to the contract to be bid, except under conditions provided under the rules, and using the form prescribed in **Annex C of the Bidding Forms, within the past 3 years prior to the date of submission and receipt of bids; and**
- NOTE: Similar project refers to "Construction, Repair/Rehabilitation, Improvement, and/or Renovation of Type IV Building (Reference: Section 401, P.D. 1096 National Building Code)", costing at least fifty percent (50%) of the ABC.*
- *All spaces should be filled up with correct information.*
- ☐ (4) Valid Special PCAB License in case of Joint Ventures **and** registration for the type and cost of the contract to be bid; **and**
- ☐ (5) **BID SECURITY** in any of the following form:
- ☐ (5.1) **Notarized Bid Securing Declaration**, using the form prescribed in **Annex E of the Bidding Forms; or**
- ☐ (5.2) **Surety Bond, callable upon demand** [issued by a surety or insurance company, with a certification from the Insurance Commission as authorized to issue such instrument] (**not less than 5% of the ABC**).
- ☐ (6) **PROJECT REQUIREMENTS**, which shall include the following:
- ☐ (6.1) Organizational Chart for the contract to be bid;
- ☐ (6.2) List of Contractor's key personnel (e.g., Project Manager, Project Engineers, Materials Engineer, and Foremen), to be assigned to the contract to be bid, with their complete qualification and experience data, using the form prescribed in **Annex G, H, I & P of the Bidding forms; and**
- ☐ (6.3) 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, using the form prescribed in **Annex J of the Bidding Forms;**
- ☐ (7) **Notarized OMNIBUS SWORN STATEMENT (OSS)** in accordance with Section 54.3 of RA No. 12009, using the form prescribed in **Annex D of the Bidding Forms, 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; **and**

C. FINANCIAL DOCUMENTS

- ☐ (8) The prospective bidder's computation of **NET FINANCIAL CONTRACTING CAPACITY (NFCC); and**

CLASS "B" DOCUMENTS: IF APPLICABLE ☐

- ☐ (9) **JOINT VENTURE AGREEMENT (JVA)**, in case the joint venture is already in existence;
or
In the absence of a JVA, **Duly Notarized Statements** (i.e., Protocol/Undertaking of Agreement) from all the potential joint venture partners should be included in the bid, stating: *That*, they will enter into and abide by the provisions of the JVA in the event that the bid is successful; and *That*, failure to enter into a joint venture in the event of a contract award shall be ground for the forfeiture of the bid security (Section 52.2 of RA No. 12009).

NOTES:

- (a) The JVA or the Protocol must specify the company/partner and the name of the office designated as the authorized representative of the joint venture.
- (b) Each partner of the joint venture shall submit their respective Legal (I.A) ☐ Eligibility Documents.
- (c) The submission of technical and financial eligibility documents by any of the joint venture partners constitutes compliance: *Provided that*, the partner responsible to submit the NFCC shall likewise submit the Statement of all of its ongoing contracts and latest Audited Financial Statements.

II. FINANCIAL COMPONENT ENVELOPE

- ☐ (1) Original of Duly signed and accomplished **FINANCIAL BID FORM**, using the form prescribed in **Annex A of the Bidding Forms; and**
- ☐ (2) Original of duly signed Bid Prices in the Bill of Quantities, using the form prescribed in **Section VIII: Bill of Quantities; and**
- ☐ (3) Duly accomplished Detailed Estimates Form, including a summary sheet indicating the unit prices of construction materials, labor rates, and equipment rental used in coming up with the Bid, using the form prescribed in **Annex F of the Bidding Forms; and**
- ☐ (4) Cash Flow by Quarter, using the form prescribed in **Annex Q of the Bidding Forms**

Note well:

1. Any missing, incomplete, or patently insufficient document in the above-mentioned checklist shall be considered "FAILED" (as per Rule IX, Sec. 59.1 of R.A. No. 12009).

2. In case of discrepancies between this checklist and the bidding documents the latter shall prevail.

The above checklist was discussed and agreed upon by the members of the NCMH Bids and Awards Committee in consultation with its Technical Working Group, including the proponent /end-user/ implementing unit

Bidding Forms

1. Annex A: Bid Form
 2. Annex B: List of all ongoing Government and Private Contracts including contracts awarded but not yet started
 3. Annex C: Statement of Single Largest Completed Contract which is similar in nature at least 50% of the ABC, for the past three years
 4. Annex D: Omnibus Sworn Statement (Affidavit)
 5. Annex E: Bid Securing Declaration (As an additional Form of Bid Security, at the option of the prospective bidders)
 6. Annex F: Detailed Estimates Form
 7. Annex G: Letter of Nominee
 8. Annex H: Certificate of Employment
 9. Annex I: Bio-data
 10. Annex J: List of Equipment, Owned or Leased and/or under Purchase Agreements
 11. Annex K: Construction Schedule and S-Curve
 12. Annex L: Manpower Utilization Schedule
 13. Annex M: Affidavit of Site Inspection
 14. Annex N: Performance Securing Declaration (To be submitted after receipt of the approved Notice of Award)
 15. Annex O: Contract Agreement Form (To be submitted after receipt of the approved Notice of Award)
 16. Annex P: Photocopy of Professional Tax Receipt and PRC License
 17. Annex Q: Cash Flow by Quarter
 18. Annex R: Detailed Unit Price Analysis (DUPA)
-

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 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 allowable forms of Performance Security, subject to the terms and conditions of issued GPPB guidelines¹² 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.
 - 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].

1. 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: _____

| Project Reference Number | Name of the Project | Location of the Project |
|--------------------------|---------------------|-------------------------|
|--------------------------|---------------------|-------------------------|

Name of the Procuring Entity _____

List of all Ongoing Government and Private Contracts including Contracts Awarded but not yet started

Business Name : _____
Business Address : _____

[illegible]

Note: This statement shall be supported with:

1. Notice of Award and / or Contract (Government and Private Contracts)
2. Sales Invoices (Private Contracts)

Submitted by _____
: _____
(Signature Above Printed Name)

| Designation | : |
|-------------|---|
|-------------|---|

Date _____

| Project Reference Number | Name of the Project | Location of the Project |
|--------------------------|---------------------|-------------------------|
|--------------------------|---------------------|-------------------------|

Name of the Procuring Entity

Statement of Single Largest Completed Contract which is similar in nature for the past 3 years

Business Name _____
Business Address _____

[illegible]

Note: This statement shall be supported with:

1. Notice of Award and/or Contract (Government and Private Contracts)
2. Sales Invoice (Private Contracts)

| | | |
|--------------|---|--------------------------------|
| Submitted by | : | (Signature Above Printed Name) |
|--------------|---|--------------------------------|

| Designation | ... |
|-------------|-----|
| ... | ... |

Date: ..

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:
- Carefully examining all of the Bidding Documents;
 - Acknowledging all conditions, local or otherwise, affecting the implementation of the Contract;
 - Making an estimate of the facilities available and needed for the contract to be bid, if any; and
 - 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 Article 315 of Act No. 3815 s. 1930, as amended, or the Revised Penal Code**

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]

“Annex E”

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]

Detailed Estimate

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

Letter of Nominee

LETTER OF NOMINEE FOR (e.g., PROJECT MANAGER/ENGINEER, MATERIALS ENGINEER, ELECTRICAL ENGINEER, AND SAFETY OFFICER/ENGINEER)

_____ (Date)

Name of Procuring Entity

National Center for Mental Health

_____ (Address)

Sir:

Supplementing our Confidential Application Statement for Eligibility for the Proposed Construction of (name of project and location), I/we have the honor to submit and certify herewith to be true and correct, the following pertinent information:

1. That I/we have engaged and contracted the services of Mr./Mrs. _____, hereinafter called the (Project Manager/Engineer, Materials Engineer, Electrical Engineer, And Safety Officer/Engineer), a registered _____ Engineer with Professional License Certificate No. _____ issued on _____ and who has paid his Professional Tax for the current year, dated _____ and who was performed the same duties in the construction of the projects enumerated in his/her Certificate of Employment and Bio-Data:
2. That said Engineer shall be appointed and designated by us as (Project Manager/Engineer, Materials Engineer, Electrical Engineer, and Safety Officer/Engineer) to personally perform the same duties in the above-mentioned Project, if and when the same is awarded in our favor;
3. That said (Project Manager/Engineer, Materials Engineer, Electrical Engineer, and Safety Officer/Engineer) shall employ the best care, skills and ability in performing his duties in accordance with the Contract Agreement, Conditions of Contract, Plans, Specifications, Special Provisions and other provisions embodied in the proposed Contract;
4. That said (Project Manager/Engineer, Materials Engineer, Electrical Engineer, and Safety Officer/Engineer) shall be personally present at the jobsite to supervise the phase of construction work pertaining to his assignment as Project Manager all the time;
5. That, in order to guarantee that said (Project Manager/Engineer, Materials Engineer, Electrical Engineer, and Safety Officer/Engineer) shall manage and supervise properly and be personally present in the Project, he is hereby required to secure a certification of appearance from the NCMH Engineer at the end of every month. That I/we shall not start the work without the Project Manager at the jobsite;
6. That in the event that I/we elect or choose to replace the said (Project Manager/Engineer, Materials Engineer, Electrical Engineer, and Safety Officer/Engineer) with another (Project Manager/Engineer, Materials Engineer, Electrical Engineer, and Safety Officer/Engineer), the Head, Implementing Office of the NCMH will be notified by us accordingly in writing at least twenty-one (21) days before making replacement;

7. That the name of the proposed new (Project Manager/Engineer, Materials Engineer, Electrical Engineer, and Safety Officer/Engineer), his qualifications, his experience, list of projects undertaken and other relevant information, shall be submitted to the NCMH for prior approval; and
8. That any willful violation on my/our part of the herein conditions may prejudice my/our standing as a reliable contractor in future bidding of the NCMH.

Very truly yours,

(Contractor)

CONCURRED IN:

(Project Manager/Engineer, Materials Engineer, Electrical Engineer, and Safety Officer/Engineer)

(Address)

Certificate of Employment

(e.g., PROJECT MANAGER/ENGINEER, MATERIALS ENGINEER, ELECTRICAL ENGINEER, AND SAFETY OFFICER/ENGINEER) **CERTIFICATE OF EMPLOYMENT**

_____ (Date)

Name of Procuring Entity

National Center for Mental Health

_____ (Address)

Sir:

I am a licensed _____ Engineer with Professional License No. _____ issued on _____ at _____.

I hereby certify that _____ contracted my services as Project Manager on the _____, if awarded to him.

The following projects had been supervised by me as (e.g., Project Manager/Engineer, Materials Engineer, Electrical Engineer, And Safety Officer/Engineer) (mention only projects of same nature as aforesaid Contract);

| NAME OF PROJECT | OWNER | COST | DATE COMPLETED |
|-----------------|-------|-------|----------------|
| _____ | _____ | _____ | _____ |
| _____ | _____ | _____ | _____ |
| _____ | _____ | _____ | _____ |
| _____ | _____ | _____ | _____ |

At present, I am supervising the following on-going projects:

| NAME OF PROJECT | OWNER | COST | % ACCOMPLISHED |
|-----------------|-------|-------|----------------|
| _____ | _____ | _____ | _____ |
| _____ | _____ | _____ | _____ |
| _____ | _____ | _____ | _____ |
| _____ | _____ | _____ | _____ |

In case of my separation for any reason whatsoever from the above-mentioned Contractor, I shall notify the National Center for Mental Health at least twenty-one (21) days before the effective date of my separation.

I have read carefully and will abide by the conditions required of me in the Contractor's Confidential Application Statement for Pre-qualification of the above Contractor.

As (e.g., Project Manager/Engineer, Materials Engineer, Electrical Engineer, And Safety Officer/Engineer), I know I will have to stay in the Project all the time to supervise and manage the Project to the best of my ability, and am aware that I am authorized to handle only one (1) project at a time.

I did not allow the use of my name for the purpose only of enabling the above-mentioned Contractor to qualify for the Project without any firm intention on my part to assume the post as (e.g., Project Manager/Engineer, Materials Engineer, Electrical Engineer, and Safety Officer/Engineer) if the Project is awarded to him since I understand that to do so will be a sufficient ground for my disqualification as (e.g., Project Manager/Engineer, Materials Engineer, Electrical Engineer, and Safety Officer/Engineer) in any future bidding or employment for any Contractor doing business with the National Center for Mental Health.

(Signature of (e.g., Project Manager/Engineer, Materials Engineer, Electrical Engineer, and Safety Officer/Engineer))

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

SUBSCRIBED AND SWORN TO BEFORE ME this _____ day of, affiant
exhibiting to me his Residence Tax Certificate No. _____ issued on _____ at
_____.

Notary Public
PTR No. _____
Until _____

Doc. No. _____
Page No. _____
Book No. _____
Series of _____

BIO - DATA

Proposed Position: _____

Name of Firm: _____

Name of Staff: _____

Profession: _____

Date of Birth: _____

Years with Firm/Entity: _____ Nationality: _____

Membership in Professional Societies: _____

Detailed Tasks Assigned: _____

Key Qualifications:

[Give an outline of staff member's experience and training most pertinent to tasks on project. Describe degree of responsibility held by staff member on relevant previous projects and give dates and locations. Use about half a page.]

Education:

[Summarize college/university and other specialized education of staff members, giving names of schools, dates attended, and degrees obtained. Use about one quarter of a page.]

Employment Record:

[Starting with present position, list in reverse order every employment held. List all positions held by staff member since graduation, giving dates, names of employing organizations, titles of positions held, and locations of projects. For experience in last ten years, also give types of activities performed and client references, where appropriate. Use about two pages.]

Languages:

[For each language, indicate proficiency: excellent, good, fair, or poor in speaking, reading, and writing.]

Certification:

I, the undersigned, certify that to the best of my knowledge and belief, these data correctly describe me, my qualifications, and my experience.

Date: _____
[Signature of staff member and authorized representative of the firm] Day/Month/Year

Full name of staff member: _____

Full name of authorized representative: _____

List of Equipment, Owned or Leased and/or under Purchase Agreements

Name of the Procuring Entity

Standard Form Number: SF-INFR-49

Business Name:

Location of the Contract:

Project No

Name of Contract

Location of the Contract

List of Equipment, Owned or Leased and/or under Purchase Agreements, Pledged to the Proposed Contract

| Description | Model / Year | Capacity / Performance Size | Plate No. | Motor No. / Body No. | Location | Condition | Proof of ownership / Lessor or Vendor |
|-------------------------------------|--------------|-----------------------------|-----------|----------------------|----------|-----------|---------------------------------------|
| A. Owned | | | | | | | |
| i. | | | | | | | |
| ii. | | | | | | | |
| iii. | | | | | | | |
| iv. | | | | | | | |
| v. | | | | | | | |
| B. Leased | | | | | | | |
| i. | | | | | | | |
| ii. | | | | | | | |
| iii. | | | | | | | |
| iv. | | | | | | | |
| v. | | | | | | | |
| C. Under Purchase Agreements | | | | | | | |
| i. | | | | | | | |
| ii. | | | | | | | |
| iii. | | | | | | | |
| iv. | | | | | | | |
| v. | | | | | | | |

List of minimum equipment required for the project:

Submitted by

Designation

Date

(Printed Name & Signature)

Standard Form Number: SF-INFR-41

Construction Schedule and S-Curve

[illegible]

Submitted by:

Name of Representative of the Bidder: _____ Date: _____

Position: _____

Name of the Bidder: _____

| Project No | Name of Contract | Location of the Contract |
|------------|------------------|--------------------------|
| 1 | 2 | 3 |

MANPOWER UTILIZATION SCHEDULE

| Category | Month | | | | | | | | | | | |
|--------------------|-------------------------------|---|---|---|---|---|---|---|---|----|----|----------------|
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
| | | | | | | | | | | | | |
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| | | | | | | | | | | | | |
| Contractor's Name: | Name of the Procuring Entity: | | | | | | | | | | | Contract Name: |

| Name of the Bidder: | |
|---------------------|--|
| | |

AFFIDAVIT OF SITE INSPECTION

Name of the Procuring Entity

Name of Contract
Location of the Contract

Standard Form Number: SF-INFR-51

AFFIDAVIT OF SITE INSPECTION

I, (Representative of the Bidder), of legal age, (civil status), Filipino and residing at (Address of the Representative), under oath, hereby depose and say:

1. That I am the (Position of the Authorized Representative) of the (Name of the Contract), with office at (Address of the Bidder);
2. That I have inspected the site for (Name of the Contract), located at (Location of the Contract);
3. That I am making this statement as part of the requirement for the Technical Proposal of (Name of the Bidder) for (Name of the Contract).

IN FAITH WHEREOF, I hereby affix my signature this _____ day of _____ 2025, at _____, Philippines.

Affiant

SUBSCRIBED AND SWORN TO before me this _____ day of _____ 2025, affiant exhibiting to me his/her Community Tax Certificate No. _____ issued on _____ at _____, Philippines

(Notary Public)

Until _____
PTR No. _____
Date _____
Place _____
TIN _____

Doc. No. _____
Page No. _____
Book No. _____
Series of _____

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]

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:

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.

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 conform 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.

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.

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 Signatory's Legal Capacity]
for:
[Insert Procuring Entity]

[Insert Name and Signature]
[Insert Signatory's Legal Capacity]
for:
[Insert Name and Signature]

SIGNED IN THE PRESENCE OF:

RIC B. CABRADILLA, CPA
Chief – Accounting Section

JERRY C. RODRIGUEZ, MGM-ESP
Chief – Hospital Operations and Patient Support Service

Acknowledgment

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

Photocopy of Professional Tax Receipt and PRR License

**PHOTOCOPY OF
UPDATED
PROFESSIONAL
TAX RECEIPT**

**PHOTOCOPY OF VALID
PRC ID
(FRONT)**

**PHOTOCOPY OF VALID
PRC ID
(BACK)**

**SIGNATURE
(1)**

**SIGNATURE
(2)**

**SIGNATURE
(3)**

Photocopy of Professional Tax Receipt and PRR License. Affix with 3 original specimen signature in **BLUE** ink and stamp of Professional's Seal (Dry Seal)

Cash Flow by Quarter

CONTRACT ID _____
 CONTRACT NAME _____
 LOCATION OF PROJECT _____

CASH FLOW BY QUARTER

| PARTICULAR | UNIT | FIRST QUARTER | SECOND QUARTER | THIRD QUARTER | FOURTH QUARTER |
|---|----------|------------------|-------------------|------------------|-------------------|
| Accomplishment per Quarter | In % | | | | |
| Cash Flow Per Quarter | In Plup. | | | | |
| Cumulative Accomplishment Per Quarter | In % | | | | |
| Cumulative Cash Flow Per Quarter | In Plup. | | | | |

Submitted by: _____

Authorized Representative _____

Name of Construction Company/Firm _____

Detailed Unit Price Analysis (DUPA)

Detailed Unit Price Analysis (DUPA) **with complete and detailed costing of materials, labors and equipment of all Items of Work indicated in the Detailed Estimates.**

Note: Softcopy will be provided to the bidders who will buy the bidding documents. **Brand-New and Sealed Flash drive** must be provided by the bidder.

Republic of the Philippines



Government Procurement Policy Board