PHILIPPINE BIDDING DOCUMENTS

CONSTRUCTION OF PEZA-BCEZ MULTIPURPOSE CENTER

Government of the Republic of the Philippines

Sixth Edition
July 2020

Preface

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

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

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

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

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

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

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

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

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

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

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

TABLE OF CONTENTS

Glossary of Terms, Abbreviations, and Acronyms.....5

Section I. Invitation to Bid 8

Section II. Instructions to Bidders..... 11

1. Scope of Bid.....11
2. Funding Information 11
3. Bidding Requirements.....11
4. Corrupt, Fraudulent, Collusive, Coercive, and Obstructive Practices 11
5. Eligible Bidders.....12
6. Origin of Associated Goods.....12
7. Subcontracts.....12
8. Pre-Bid Conference.....12
9. Clarification and Amendment of Bidding Documents.....12
10. Documents Comprising the Bid: Eligibility and Technical Components.....13
11. Documents Comprising the Bid: Financial Component 13
12. Alternative Bids 14
13. Bid Prices 14
14. Bid and Payment Currencies.....14
15. Bid Security.....14
16. Sealing and Marking of Bids.....14
17. Deadline for Submission of Bids 15
18. Opening and Preliminary Examination of Bids 15
19. Detailed Evaluation and Comparison of Bids.....15
20. Post Qualification.....15
21. Signing of the Contract 16

Section III. Bid Data Sheet..... 17

Section IV. General Conditions of Contract ..... Error! Bookmark not defined.

1. Scope of Contract.....21
2. Sectional Completion of Works.....21
3. Possession of Site.....21
4. The Contractor's Obligations.....21
5. Performance Security.....22
6. Site Investigation Reports 22

7. Warranty....22
8. Liability of the Contractor....22
9. Termination for Other Causes....22
10. Dayworks....23
11. Program of Work....23
12. Instructions, Inspections and Audits....23
13. Advance Payment....23
14. Progress Payments....23
15. Operating and Maintenance Manuals....24
Section V. Special Conditions of Contract..... Error! Bookmark not defined.
Section VI. Specifications ..... Error! Bookmark not defined.
Section VII. Drawings..... 90
Section VIII. Bill of Quantities ..... Error! Bookmark not defined.
Section IX. Checklist of Technical and Financial Documents..... 92

Glossary of Terms, Abbreviations, and Acronyms

ABC – Approved Budget for the Contract.

ARCC – Allowable Range of Contract Cost.

BAC – Bids and Awards Committee.

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

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

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

BIR – Bureau of Internal Revenue.

BSP – Bangko Sentral ng Pilipinas.

CDA – Cooperative Development Authority.

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

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

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

CPI – Consumer Price Index.

DOLE – Department of Labor and Employment.

DTI – Department of Trade and Industry.

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

GFI – Government Financial Institution.

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

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

GOP – Government of the Philippines.

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

LGUs – Local Government Units.

NFCC – Net Financial Contracting Capacity.

NGA – National Government Agency.

PCAB – Philippine Contractors Accreditation Board.

PhilGEPS - Philippine Government Electronic Procurement System.

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

PSA – Philippine Statistics Authority.

SEC – Securities and Exchange Commission.

SLCC – Single Largest Completed Contract.

UN – United Nations.

Section I. Invitation to Bid

Notes on the Invitation to Bid

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

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

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

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

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

d. Any important bid evaluation criteria.

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

Philippine Economic Zone Authority

Invitation to Bid for the project titled:

"CONSTRUCTION OF PEZA-BCEZ MULTIPURPOSE CENTER"

1. ***Philippine Economic Zone Authority – Baguio City Economic Zone***, through the ***2023 Corporate Operating Budget*** intends to apply the sum of ***Eighty Million Pesos (Php 80,000,000.00)*** being the Approved Budget for the Contract (ABC) to payments under the contract for the project titled ***"Construction of PEZA-BCEZ Multipurpose Center" (PR23-11-255)*** Bids received in excess of the ABC shall be automatically rejected at bid opening.

2. The ***Philippine Economic Zone Authority*** now invites bids for the above Procurement Project. Completion of the Works is required within ***Four Hundred Ninety-Three (493) Calendar Days*** from the issuance date of Notice to Proceed. Bidders should have completed a contract similar to the Project which is ***Reinforced Concrete Multipurpose Building with Steel Roof Trusses*** **or other similar projects, within ten (10) years from submission and opening of bids**. The description of an eligible bidder is contained in the Bidding Documents, particularly, in Section II (Instructions to Bidders).

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

4. Interested bidders may obtain further information from ***Philippine Economic Zone Authority-Baguio City Economic Zone***, and inspect the Bidding Documents at the address given below from ***8:00 AM to 5:00 PM, Mondays to Fridays***.

   PEZA-BCEZ Administration Building, Loakan Road, Baguio City

5. A complete set of Bidding Documents may be acquired by interested bidders on ***November 24, 2023*** from given address upon payment of the applicable fee for the Bidding Documents, pursuant to the latest Guidelines issued by the GPPB, in the amount of ***Fifty Thousand Pesos only (Php50,000.00)***. The Procuring Entity shall allow the bidder to present its proof of payment for the fees in person or through electronic mail.

6. The ***Philippine Economic Zone Authority-Baguio City Economic Zone*** will hold a Pre-Bid Conference on ***December 1, 2023, 9:00AM***, at ***3rd Floor Conference Room PEZA-BCEZ Admin. Building, Loakan Road, Baguio City*** which shall be open to prospective bidders.

Publication	November 24, 2023
Availability of Bid Documents	November 24, 2023
Pre-Bid Conference	December 1, 2023
Deadline of Submission of Bids	December 14, 2023 @ 1:00 P.M.
Opening of Bids	December 14, 2023 @ 1:30 P.M.

7. All Bids must be duly received by the BAC Secretariat through ***manual submission*** at the office address as indicated below on or before ***December 14 2023 at 1:00 PM***. Late bids shall not be accepted.

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

Forms of Bid Security	Amount
Bid Securing Declaration	Applicable
Cash; Manager's Check; Bank Draft/ Guarantee; or Irrevocable letter of Credit	**Php 1,600,000.00** or equivalent to two percent (2%) of ABC
Surety Bond	**Php 4,000,000.00** or equivalent to five percent (5%) of ABC]

9. Bid opening shall be on ***December 14, 2023, 1:30pm*** at the given address below. Bids will be opened in the presence of the bidders' representatives who choose to attend the activity.

10. Payment of bidding documents can be paid via the online payment portal at ***https://epay.peza.gov.ph. Conduct of Site Inspection before or after the opening of bids is recommended***. Bids (hard copies, 1 original and 2 copies each of the Technical and Financial envelope) must be submitted.

11. The ***Philippine Economic Zone Authority-Baguio City Economic Zone*** reserves the right to reject any and all bids, declare a failure of bidding, or not award the contract at any time prior to contract award in accordance with Sections 35.6 and 41 of the 2016 revised Implementing Rules and Regulations (IRR) of RA No. 9184, without thereby incurring any liability to the affected bidder or bidders.

12. For further information, please refer to:

    Ms. Divina P. Suguitan
    BAC Secretariat
    Philippine Economic Zone Authority-Baguio City Economic Zone
    1/F PEZA BCEZ Administration Building,
    Loakan Road, Baguio City
    bcezbacsec@peza.gov.ph

13. You may visit the following websites for downloading of Bidding Documents:

    PEZA Website https:/www.peza.gov.ph/index.php/bid-opportunities
    Philgeps Website

November 24, 2023

11/24/2023

ENGR. PAUL M. CODAMON
BCEZ- BAC Chairperson

Section II. Instructions to Bidders

1. Scope of Bid

The Procuring Entity, ***Philippine Economic Zone Authority-Baguio City Economic Zone*** invites Bids for the ***"Construction of PEZA-BCEZ Multipurpose Center"***, with Project Identification Number *PR23*-11-255

The Procurement Project (referred to herein as "Project") is for the construction of Works, as described in Section VI (Specifications).

2. Funding Information

2.1. The GOP through the source of funding as indicated below for ***2023*** in the amount of ***Eighty Million Pesos (PhP80,000,000.00)***.

2.2. The source of funding is GOCC and GFIs, the Corporate Operating Budget.

3. Bidding Requirements

The Bidding for the Project shall be governed by all the provisions of RA No. 9184 and its 2016 revised IRR, including its Generic Procurement Manual and associated policies, rules and regulations as the primary source thereof, while the herein clauses shall serve as the secondary source thereof.

Any amendments made to the IRR and other GPPB issuances shall be applicable only to the ongoing posting, advertisement, or invitation to bid by the BAC through the issuance of a supplemental or bid bulletin.

The Bidder, by the act of submitting its Bid, shall be deemed to have inspected the site, determined the general characteristics of the contracted Works and the conditions for this Project, such as the location and the nature of the work; (b) climatic conditions; (c) transportation facilities; (c) nature and condition of the terrain, geological conditions at the site communication facilities, requirements, location and availability of construction aggregates and other materials, labor, water, electric power and access roads; and (d) other factors that may affect the cost, duration and execution or implementation of the contract, project, or work and examine all instructions, forms, terms, and project requirements in the Bidding Documents.

4. Corrupt, Fraudulent, Collusive, Coercive, and Obstructive Practices

The Procuring Entity, as well as the Bidders and Contractors, shall observe the highest standard of ethics during the procurement and execution of the contract. They or through an agent shall not engage in corrupt, fraudulent, collusive, coercive, and obstructive practices defined under Annex "I" of the 2016 revised IRR of RA No. 9184 or other integrity violations in competing for the Project.

5. Eligible Bidders

5.1. Only Bids of Bidders found to be legally, technically, and financially capable will be evaluated.

5.2. The Bidder must have an experience of having completed a Single Largest Completed Contract (SLCC) that is similar to this Project, equivalent to at least fifty percent (50%) of the ABC adjusted, if necessary, by the Bidder to current prices using the PSA's CPI, except under conditions provided for in Section 23.4.2.4 of the 2016 revised IRR of RA No. 9184.

A contract is considered to be "similar" to the contract to be bid if it has the major categories of work stated in the **BDS**.

5.3. For Foreign-funded Procurement, the Procuring Entity and the foreign government/foreign or international financing institution may agree on another track record requirement, as specified in the Bidding Document prepared for this purpose.

5.4. The Bidders shall comply with the eligibility criteria under Section 23.4.2 of the 2016 IRR of RA No. 9184.

6. Origin of Associated Goods

There is no restriction on the origin of Goods other than those prohibited by a decision of the UN Security Council taken under Chapter VII of the Charter of the UN.

7. Subcontracts

7.1. The Bidder may subcontract portions of the Project to the extent allowed by the Procuring Entity as stated herein, but in no case more than fifty percent (50%) of the Project.

The Procuring Entity has prescribed that:

a. Subcontracting is not allowed.

8. Pre-Bid Conference

The Procuring Entity will hold a pre-bid conference for this Project on the specified date and time and either at its physical address ***3rd Floor, Conference Room, PEZA-BCEZ Admin. Building, Loakan Road, Baguio City*** and/or through videoconferencing/webcasting} 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.

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

12. Alternative Bids

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

13. Bid Prices

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

14. Bid and Payment Currencies

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

14.2. *Payment of the contract price shall be made in:* 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 *One Hundred Twenty (120) calendar days from the date of 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. The BAC shall open the Bids in public at the time, on the date, and at the place specified in paragraph 9 of the **IB**. The Bidders' representatives who are present shall sign a register evidencing their attendance. In case videoconferencing, webcasting or other similar technologies will be used, attendance of participants shall likewise be recorded by the BAC Secretariat.

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

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

19. Detailed Evaluation and Comparison of Bids

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

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

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

20. Post Qualification

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

21. Signing of the Contract

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

Section III. Bid Data Sheet

<table>
<tr><th>ITB Clause</th><th></th></tr>
<tr><td>5.2</td><td>For this purpose, contracts similar to the Project refer to contracts which have the same major categories of work, which shall be:

1) Similar contract refers to Construction of building or any building structure with concrete and steel roofing works such as Office, Commercial, Industrial and Warehouse Building using structural steel members (at least 2-storey building).

2) Completed within the last ten (10) years from the date of submission and opening of bids</td></tr>
<tr><td>7.1</td><td>Subcontracting is not allowed.</td></tr>
<tr><td>10.3</td><td>Current and Valid PCAB License and registration:
Size Range: Medium A for General Building
License Category: Category B
Allowable Range of Contract Cost: Up to 150M</td></tr>
<tr><td>10.4</td><td>The key personnel must meet the required minimum years of experience set below:

<table>
<tr><th>Key Personnel</th><th>Qualification and Experience</th></tr>
<tr><td>1 – Project Engineer</td><td>Shall be a Licensed Civil Engineer / Architect;

Shall have at least Eight (8) years of General Experience in the construction industry;

With a Five (5) years Relevant Experience on similar projects</td></tr>
<tr><td>1 – Project Electrical Engineer</td><td>Shall at least be a Registered Electrical Engineer (REE) / Registered Master Electrician (RME);

Shall have least Five (5) years of General Experience in the construction industry;

With a Three (3) years Relevant Experience on similar projects</td></tr>
<tr><td>1 – Project Mechanical Engineer</td><td>Shall at least be a Registered Mechanical Engineer (RME)

Shall have least Five (5) years of General Experience in the construction industry;

With a Three (3) years Relevant Experience on similar projects</td></tr>
<tr><td>1 – Materials Engineer</td><td>Shall be a Licensed Civil Engineer;

Shall have at least Eight (8) years of General Experience</td></tr>
</table>
</td></tr>
</table>

		in the construction industry; With a Five (5) years Relevant Experience on similar projects; DPWH Accredited Materials Engineer I (as per D.O. 98, s. 2016 "Revised Guidelines on the Accreditation of Contractors'/Consultants' Materials Engineer)
	1 – Occupational Safety and Health Practitioner	Certified by an accredited safety organization in Construction Occupational Safety and Health as prescribed by Department of Labor and Employment (DOLE) Must have at least Eight (8) years of General Experience as a Safety Officer in the construction industry. With a Five (5) years Relevant Experience on similar projects
	1 – First Aider	With certificate of Training issued by RED CROSS in compliance with DOLE requirements for the approval of Construction Safety & Health Program (Required Upon issuance of Notice of Award) subject to D.O 98 Series of 2014: Submission of Construction Safety and Health Program Approved by the Department of Labor and Employment (DOLE). Must have at least Eight (8) years of General Experience as a First Aider in the construction industry. With a Five (5) years Relevant Experience on similar projects
	1 – Foreperson (Foreman)	Shall have least Eight (8) years of General Experience in the construction industry; With a Five (5) years Relevant Experience on similar projects
	Note: General Experience – all experience related to Infrastructures Relevant Experience – similar building projects and similar position	
10.5	The minimum major equipment requirements are the following: 1 – Backhoe with Bucket – 0.8cu.m./1.04 cu.yd. 1 – Boom Truck – 2 – 5 mt 1 – Cutting Outfit 1 – Backhoe with Breaker – 0.8cu.m./1.04 cu.yd. 1 – Water Pump – 1,800lpm output/7.5HP 3 – Dump truck – 9-10 cu.m./12 cu.yd.	

	1 – Plate Compactor – 400-500 Gasoline Engine/5HP 2 – Concrete Vibrator – 2" ϕ Head/5 Amp Gasoline Drive 1 – Pumpcrete (Trailer Mounted with pipes and accessories) – 60cu.m./hr. 1 – Bar Cutter – cutting capacity – 10mm – 32mm diam. RSB 1 – Bar Bender – Bending capacity – 10mm – 32mm diam. RSB 3 – Welding Machine – Electric Driven/500 Amp 1 – Truck Mounted Crane – 31-35mt 3 – One Bagger Mixer – 4-6cu.ft./min Full sets of Scaffoldings 1 – Motorized Road Grader / Spreading/Leveling Machine – 99 – 140HP 1 – Vibratory Roller – 10mt/125HP 1 – Manual Concrete Screeder (floater) 1 – Concrete Saw – 14" Blade with cutting depth of 4-3/4"/7.5HP Set of Steel Forms – 9-10" depth with tongue and groove 1 – Fusing Machine for PPR Pipe – fusing capacity ½" – 4" pipes 1 – Pipe Grooving Machine – Grooving capacity 65mm – 200mm schedule Pipes 1 – Lifting Equipment – can carry 1 – 2 tons 1 – Core Drilling Machine – 1350W/110mm drilling range 1 – Pipe Threader – Threading capacity ½" – 4" pipe Testing/Laboratory Equipment Sets of Cylinder Molds Sets of Rectangular Molds Calipers (Digital/Manual)
12	*Not applicable.*
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 of not less than **₱1,600,000.00** [the amount equivalent to two percent (2%) of ABC], if bid security is in cash, cashier's/manager's check, bank draft/guarantee or irrevocable letter of credit; b. The amount of not less than **₱4,000,000.00** [the amount equivalent to five percent (5%) of ABC*]* if bid security is in Surety Bond.
16	Aside from the original copy, the bidder shall submit additional two (2) copies of the first and second components of its bid.
17	Bid submission shall be done manually. The address for receipt of Bids submitted manually is at the PEZA-BCEZ Admin Building Lobby, Loakan Road, Baguio City, Benguet. The deadline for receipt of Bids is on December 14, 2023, 1:00 P.M.
19.2	Partial bids are not allowed.
20	The following must be submitted by the bidder undergoing post qualification within five (5) calendar days from receipt of the notice of the BAC:

	1. Registration Certificate-; 2. Mayor's/Business Permit or its equivalent document; 3. Tax Clearance; 4. Philippine Contractors Accreditation Board (PCAB) license and registration; and 5. Audited Financial Statement 6. Income Tax Return stamped received by BIR or its duly accredited and authorized institution for the immediately preceding year, filed thru the Electronic Filing and Payment System (e-FPS) of the BIR and duly validated confirmation as evidence to the tax payments made; 7. Latest Business Tax Returns regarding VAT or Percentage Tax duly filed thru Electronic Filing and Payment System (e-FPS) of the BIR and duly validated confirmation as evidence to the tax payments made (Filing Reference Number). The Business Tax Return shall either be quarterly, monthly or a combination of both provided that the above requirement is complied. *The latest income and business tax returns are those within the last six months preceding the date of bid submission.*
21	Additional contract documents relevant to the Project that may be required by existing laws and/or the Procuring Entity, such as: 1. Duly signed Construction Schedule and S-curve, 2. Duly signed Manpower Schedule, 3. Duly signed Construction methodology in narrative form; 4. Duly signed Equipment Utilization Schedule, and 5. Construction Safety and Health Program approved by the DOLE, and other acceptable tools of project scheduling.

Section IV. General Conditions of the Contract

1. Scope of Contract

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

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

2. Sectional Completion of Works

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

3. Possession of Site

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

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

4. The Contractor's Obligations

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

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

5. Performance Security

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

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

6. Site Investigation Reports

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

7. Warranty

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

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

8. Liability of the Contractor

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

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

9. Termination for Other Causes

Contract termination shall be initiated in case it is determined *prima facie* by the Procuring Entity that the Contractor has engaged, before, or during the implementation of the contract, in unlawful deeds and behaviors relative to contract

acquisition and implementation, such as, but not limited to corrupt, fraudulent, collusive, coercive, and obstructive practices as stated in **ITB** Clause 4.

10. Dayworks

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

11. Program of Work

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

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

12. Instructions, Inspections and Audits

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

13. Advance Payment

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

14. Progress Payments

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

15. Operating and Maintenance Manuals

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

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

Section V. Special Conditions of Contract

GCC Clause	
2	Not applicable.
3.1	The Procuring Entity shall give possession of the Site to the Contractor upon the receipt of the Notice to Proceed.
4	No further instruction.
6	Conduct of Site Inspection is strictly required.
7.2	**Permanent Structure: Fifteen (15) years** Buildings of types 4 (steel, iron, concrete, or masonry construction with walls, ceilings, and permanent partitions of incombustible fire resistance) and 5 (steel, iron, concrete, or masonry construction), steel and concrete bridges, flyovers, concrete aircraft movement areas, ports, dams, diversion tunnels, causeways, wharves, piers, dikes, filtration and treatment plants, sewerage systems, power plants, transmission and communication towers, railway system, and other similar structures:
10	No dayworks are applicable to the contract.
11.1	The Contractor shall submit the Program of Work to the Procuring Entity's Representative within **ten (10) days** of delivery of the Notice of Award.
11.2	The amount to be withheld for late submission of an updated Program of Work is one percent (1%) of the contract amount.
13	The amount of the advance payment is 15% of the total contract price to be made as follows: 7.5% upon receipt and acceptance by the Procuring Entity of the Advance Payment Guaranty. 7.5% upon issuance of a certification by the Engineer that the minimum required equipment for the project have been mobilized at the site. The advance payment shall be recouped by deducting fifteen percent (15%) from the periodic progress billing.
14	The first Progress Payment shall be paid only upon completion of at least 20% of the work and certified by the Procuring Entity's Representative. Materials and equipment delivered on the site but not completely put in place **shall not** be included for payment.

15.1	The following documents shall be submitted by the Contractor and it shall include the submission of complete and final "As-Built Drawings" 1. Two (2) sets of original A1 (23.4" x 33.1") copies, signed and sealed by the contractor, supervising project engineer/ architect/ electrical/ mechanical/ sanitary engineer as applicable; 2. Complete set of electronics files in USB Thumb Drive of "AS-BUILT PLANS" IN pdf AND cad FORMAT; 3. Complete set of electronic and printed copies of colored photos in *jpeg-format* **with date and time** stamp demonstrating **before, during** and **after** construction works. 4. Test Results of the materials incorporated in the works subject for billing. The period by which above-cited documents are required to be submitted, shall be **within ten (10) calendar days prior to every billing**. The completed "As – Built Plans" is required Thirty (30) calendar days from completion of the project.
15.2	Release of Final Payment shall be made only upon the submission of the "Complete As-Built Drawings" including the soft copy (Auto CAD File and PDF File) and Complete Manuals of equipment installed by the Contractor and issuance of Certificate of Completion as recommended by PEZA-BCEZ's authorized representative/s or End User of the project and subject to the approval of the signatory of the Contract or the Head of the Procuring Entity.

Section VI. Specifications

The latest and current DPWH Standard Specifications for Public Works and Highways ("Blue Book") shall be adopted for the implementation of the project unless otherwise specified herein.

All Materials to be used must be **BRAND NEW**.

In particular, Volume II of the Blue Book shall be used if the Contract pertains to Highways, Bridges, and Airports. Volume III of the Blue Book shall be used if the Contract pertains to Buildings, Flood Control and Drainage, or Water Supply. The Blue Book incorporates standards of the American Association of State Highway and Transportation Officials (AASHTO), American Society for Testing and Materials (ASTM), and American Concrete Institute (ACI), among others, pertaining to construction.

Additional specification per Item of Work:

Item A.1. – Clearing and Grubbing Including Removal of Tree Roots, Tree Trimming, Hauling, and Disposal

Quantity and Unit: 1,814.88 sq.m.

This item shall consist of clearing, grubbing, removing, and disposing of all vegetation and debris as designated in the Contract, except those objects that are designated to remain in place or are to be removed in consonance with other provisions of this Specification. The work shall also include the preservation from injury or defacement of all objects designated to remain.

Material(s) to be used:

1. None.

Minimum equipment to be used:

1. Backhoe – 0.8 cu.m./1.04cu.yd.
2. Dump Truck – 9-10 cu.m./12 cu.yd.
3. Minor Tools

Payment will be made as per actual accomplishment based on Bill of Quantities

Item A.2. – Removal of Structures and Obstructions (Concrete Bench)

Quantity and Unit: 33 each

This Item shall consist of the removal wholly or in part, and satisfactory disposal of all buildings, fences, structures, old pavements, abandoned pipelines, and any other obstructions which are not designated or permitted to remain, except for the obstructions to be removed and disposed of under other items in the Contract. It shall also include the salvaging of designated materials and backfilling the resulting trenches, holes, and pits.

In this item, the materials removed/dismantled shall be turned over to PEZA-BCEZ or as instructed by the Project in Charge.

Material(s) to be used:

1. None.

Minimum equipment to be used:

1. Backhoe – 0.8 cu.m./1.04cu.yd.
2. Boom Truck – 2 – 5 mt
3. Minor Tools

Payment will be made as per actual accomplishment based on Bill of Quantities

Item A.3. – Removal of Structures and Obstructions (Steel Posts including Basketball Ring)

Quantity and Unit: 10 each.

This Item shall consist of the removal wholly or in part, and satisfactory disposal of all buildings, fences, structures, old pavements, abandoned pipelines, and any other obstructions which are not designated or permitted to remain, except for the obstructions to be removed and disposed of under other items in the Contract. It shall also include the salvaging of designated materials and backfilling the resulting trenches, holes, and pits.

In this item, the materials removed/dismantled shall be turned over to PEZA-BCEZ or as instructed by the Project in Charge.

Material(s) to be used:

1. Acetylene
2. Oxygen
3. 1" diam Rope

Minimum equipment to be used:

1. Cutting Outfit
2. Backhoe/Boom Truck
3. Minor Tools

Payment will be made as per actual accomplishment based on Bill of Quantities

Item A.4. – Removal of Structures and Obstructions (Perimeter Fence and Gates)

Quantity and Unit: 132.02 ln.m.

This Item shall consist of the removal wholly or in part, and satisfactory disposal of all buildings, fences, structures, old pavements, abandoned pipelines, and any other obstructions which are not designated or permitted to remain, except for the obstructions to be removed and disposed of under other items in the Contract. It shall also include the salvaging of designated materials and backfilling the resulting trenches, holes, and pits.

In this item, the materials removed/dismantled shall be turned over to PEZA-BCEZ or as instructed by the Project in Charge.

Material(s) to be used:

1. Acetylene
2. Oxygen

Minimum equipment to be used:

1. Cutting Outfit

Payment will be made as per actual accomplishment based on Bill of Quantitie

Item A.5. – Removal of Structures and Obstructions (Concrete Slab and PCCP - Including Hauling and Disposal)

Quantity and Unit: 800.24 sq.m.

This Item shall consist of the removal wholly or in part, and satisfactory disposal of all buildings, fences, structures, old pavements, abandoned pipelines, and any other obstructions which are not designated or permitted to remain, except for the obstructions to be removed and disposed of under other items in the Contract. It shall also include the salvaging of designated materials and backfilling the resulting trenches, holes, and pits.

Material(s) to be used:

1. None.

Minimum equipment to be used:

1. Backhoe with Breaker – 0.8 cu.m./1.04cu.yd.
2. Dump Truck – 9-10 cu.m./12 cu.yd.
3. Minor Tools

Payment will be made as per actual accomplishment based on Bill of Quantities

Item A.6. – Removal of Structures and Obstructions (Comfort Room and Septic Tank including Pumping of Septic Waste Including Hauling and Disposal)

Quantity and Unit: 1 lot

This Item shall consist of the removal wholly or in part, and satisfactory disposal of all buildings, fences, structures, old pavements, abandoned pipelines, and any other obstructions which are not designated or permitted to remain, except for the obstructions to be removed and disposed of under other items in the Contract. It shall also include the salvaging of designated materials and backfilling the resulting trenches, holes, and pits.

Material(s) to be used:

1. None.

Minimum equipment to be used:

1. Backhoe – 0.8 cu.m./1.04cu.yd.
2. Dump Truck – 9-10 cu.m./12 cu.yd.
3. Water Pump – 1,800lpm output/7.5HP
4. Minor Tools

Payment will be made as per actual accomplishment based on Bill of Quantities

Item A.7. – Removal of Structures and Obstructions (Riprap)

Quantity and Unit: 20.80 cu.m.

This Item shall consist of the removal wholly or in part, and satisfactory disposal of all buildings, fences, structures, old pavements, abandoned pipelines, and any other obstructions which are not designated or permitted to remain, except for the obstructions to be removed and disposed of under other items in the Contract. It shall also include the salvaging of designated materials and backfilling the resulting trenches, holes, and pits.

Material(s) to be used:

1. None.

Minimum equipment to be used:

1. Backhoe – 0.8 cu.m./1.04cu.yd.
2. Minor Tools

Payment will be made as per actual accomplishment based on Bill of Quantities

Item A.8. – Removal of Structures and Obstructions (Boulders)

Quantity and Unit: 5 each

This Item shall consist of the removal wholly or in part, and satisfactory disposal of all buildings, fences, structures, old pavements, abandoned pipelines, and any other obstructions which are not designated or permitted to remain, except for the obstructions to be removed and disposed of under other items in the Contract. It shall also include the salvaging of designated materials and backfilling the resulting trenches, holes, and pits.

Material(s) to be used:

1. None.

Minimum equipment to be used:

1. Backhoe with Breaker – 0.8 cu.m./1.04cu.yd.
2. Minor Tools

Payment will be made as per actual accomplishment based on Bill of Quantities

Item B.1. – Excavation (Leveling of Site Including Hauling and Disposal) (Common Soil)

Quantity and Unit: 732.35 cu.m.

This Item shall consist of the necessary excavation for the foundation of bridges, culverts, underdrains, and other structures not otherwise provided for in the Specifications. Except as otherwise provided for pipe culverts, the backfilling of completed structures and the disposal of all excavated surplus materials shall be in accordance with these Specifications and reasonably close conformity with the Plans or as established by the Project in Charge.

This Item shall include the necessary diverting of live streams, bailing, pumping, draining, sheeting, bracing, and the necessary construction of cribs and cofferdams, and furnishing the materials, therefore, and the subsequent removal of cribs and cofferdams and the placing of all necessary backfill.

It shall also include the furnishing and placing of approved foundation fill material to replace unsuitable material encountered below the foundation elevation of structures.

No allowance will be made for the classification of different types of material encountered.

Material(s) to be used:

1. None.

Minimum equipment to be used:

1. Backhoe – 0.8 cu.m./1.04cu.yd.
2. Dump Truck – 9-10 cu.m./12 cu.yd.
3. Minor Tools

Payment will be made as per actual accomplishment based on Bill of Quantities

Item B.2. – Structural Excavation (Common Soil Including Hauling and Disposal)

Quantity and Unit: 1,659.57 cu.m.

This Item shall consist of the necessary excavation for the foundation of bridges, culverts, underdrains, and other structures not otherwise provided for in the Specifications. Except as otherwise provided for pipe culverts, the backfilling of completed structures and the disposal of all excavated surplus materials shall be in accordance with these Specifications and in reasonably close conformity with the Plans or as established by the Project in Charge.

This Item shall include the necessary diverting of live streams, bailing, pumping, draining, sheeting, bracing, and the necessary construction of cribs and cofferdams, and furnishing the materials, therefore, and the subsequent removal of cribs and cofferdams and the placing of all necessary backfill.

It shall also include the furnishing and placing of approved foundation fill material to replace unsuitable material encountered below the foundation elevation of structures.

No allowance will be made for the classification of different types of material encountered.

In this item, the excavated materials shall be used in the embankment for the foundation fill and leveling off the ground surface for this project otherwise, it shall be hauled and properly disposed by the contractor.

Material(s) to be used:

1. None.

Minimum equipment to be used:

1. Backhoe – 0.8 cu.m./1.04cu.yd.
2. Dump Truck – 9-10 cu.m./12 cu.yd.
3. Minor Tools

Payment will be made as per actual accomplishment based on Bill of Quantities

Item B.3. – Gravel Bedding (G-1) (Footing, Tie Beam, Slab on Fill, Genset, Canal, Mechanical)

Quantity and Unit: 159.09 cu.m.

This item shall consist of the placing of gravel bedding in accordance with this Specification and conformity with the lines, grades, and dimensions shown on the Plans or established by the Project in Charge.

Material(s) to be used:

1. Gravel size of 1”.

Minimum equipment to be used:

1. Plate Compactor (400-500 Gasoline Engine, 5HP)
2. Minor Tools

Payment will be made as per actual accomplishment based on Bill of Quantities

Item B.4. – Embankment from Structural Excavation (Footings, Road, Retaining Wall, Mechanical)

Quantity and Unit: 1,025.40 cu.m.

This Item shall consist of the construction of the embankment in accordance with this Specification and in conformity with the lines, grades, and dimensions shown on the Plans or established by the Project in Charge.

Material(s) to be used:

1. From the Structural Excavation

Minimum equipment to be used:

1. Plate Compactor (at least 5HP)
2. Minor Tools

Payment will be made as per actual accomplishment based on Bill of Quantities

Item C.1. – Structural Concrete (Ready Mix, Class AA - 28 Mpa = 4,000 Psi @ 28 Days) (Foundations, Slabs, Columns and Beams)

Quantity and Unit: 809.31 cu.m.

This Item shall consist of furnishing, bending, placing, and finishing concrete in all structures except pavements in accordance with this Specification and conforming to the lines, grades, and dimensions shown on the Plans. Concrete shall consist of a mixture of Portland Cement, fine aggregate, coarse aggregate, admixture when specified, and water mixed in the proportions specified or approved by the Project in Charge.

Material(s) to be used:

4,000 psi Ready mix Concrete consist of:

1. Portland Cement
2. Coarse Aggregate (Crushed Stone) (See table below)

Grading Requirements for Coarse Aggregate

Sieve Designation		Mass Percent Passing				
Standard Mm	Alternate US Standard	Class A	Class B	Class C	Class P	Class Seal
63	2-1/2”	100	100	100	100	100
50	2”	95 – 100	95 – 100	90 – 100	95 – 100	95 – 100
37.5	1-1/2”	-	-	40 – 70	-	-
25	1”	35 – 70	35 – 70	0 – 15*	20 – 55	25 – 60
19.0	¾”	-	-		0 – 10*	-

12.5 9.5 4.75	½” 3/8” No.4	10 – 30 0 - 5	10 – 30 - 0 - 5			0 – 10*

* The measured cement content shall be within plus (+) or minus (-) 2 mass percent of the design cement content.

3. Fine Aggregate (See table below)

Grading Requirements for Fine Aggregate

Sieve Designation	Mass Percentage Passing
9.5mm (3/8”)	100
4.75mm (No. 4)	95-100
2.36mm (No.8)	-
1.18mm (No.16)	45-80
0.60mm (No. 30)	-
0.30mm (No. 50)	5-30
0.15mm (No.100)	0-10

4. Clean/Potable Water

Minimum equipment to be used:

1. Pumpcrete (Trailer Mounted with pipes and accessories) – 60cu.m./hr.
2. Concrete Vibrator (Flexible Shaft Type 2” diam. Head with 5 Amperes Gasoline Drive Unit)
3. Minor Tools

Additional Instructions:

- No manual concrete mixing. (Mano-mano)
- No complete equipment no concrete pouring.
- 3 sets consisting of 3 samples prepared per 75cu.m. or for each pouring day for cylinder sample.
- Samples shall be randomly pick by the Project in Charge/Project Designer.
- Samples will be tested for compression at 7 days, 14 days, and 28 days.
- The Contractor shall provide the mold for the samples – 150mm x 300mm Steel Cylinder Molds.

- The strength level of the concrete will be considered satisfactory if the averages of all sets of three (3) consecutive strength test results equal or exceed the specified strength, fc‟ and no individual strength test result is deficient by more than 15% of the specified strength, fc‟. Concrete deemed to be not acceptable using the above criteria may be rejected unless the Contractor can provide evidence, by means of core tests, that the quality of concrete represented by failed test results is acceptable in place. At least three (3) representative cores shall be taken from each member or area of concrete in place that is considered deficient. The location of cores shall be determined by the Engineer so that there will be at least impairment of strength of the structure. The obtaining and testing of drilled cores shall be in accordance with AASHTO T 24. Concrete in the area represented by the cores will be considered adequate if the average strength of the cores is equal to at least 85% of, and if no single core is less than 75% of, the specified strength, fc‟. If the strength of control specimens does not meet the requirements of this Subsection, and it is not feasible or not advisable to obtain cores from the structure due to structural considerations, payment of the concrete will be made at an adjusted price due to strength deficiency of concrete specimens as specified hereunder:

Deficiency in Strength of Concrete Specimens, Percent (%)	Percent (%) of Contract Price Allowed
Less than 5	100
5 to less than 10	80
10 to less than 15	70
15 to less than 20	60
20 to less than 25	50
25 or more	0

Payment will be made as per actual accomplishment based on Bill of Quantities

Item C.2. – Structural Concrete (Ready Mix, Class A - 24 Mpa = 3,500 Psi @ 28 Days) (Slab on Grade, Stairs, Genset Foundation, Canal, Retaining Wall, Path Walk, Catch Basin, Lean Concrete, Manholes, and Lintel Beams)

Quantity and Unit: 583.80 cu.m.

This Item shall consist of furnishing, bending, placing, and finishing concrete in all structures except pavements in accordance with this Specification and conforming to the lines, grades, and dimensions shown on the Plans. Concrete shall consist of a mixture of Portland Cement, fine aggregate, coarse aggregate, admixture when specified, and water mixed in the proportions specified or approved by the Project in Charge.

Material(s) to be used:

3,500 psi Ready mix Concrete consist of:

1. Portland Cement
2. Coarse Aggregate (Crushed Stone) (See table below)

Grading Requirements for Coarse Aggregate

Sieve Designation		Mass Percent Passing				
Standard Mm	Alternate US Standard	Class A	Class B	Class C	Class P	Class Seal
63	2-1/2”	100	100	100	100	100
50	2”	95 – 100	95 – 100	90 – 100	95 – 100	95 – 100
37.5	1-1/2”	-	-	40 – 70	-	-
25	1”	35 – 70	35 – 70	0 – 15*	20 – 55	25 – 60
19.0	¾”	-	-		0 – 10*	-
12.5	½”	10 – 30	10 – 30			0 – 10*
9.5	3/8”	0 - 5	- 0 - 5			
4.75	No.4					

* The measured cement content shall be within plus (+) or minus (-) 2 mass percent of the design cement content.

3. Fine Aggregate (See table below)

Grading Requirements for Fine Aggregate

Sieve Designation	Mass Percentage Passing
9.5mm (3/8”)	100
4.75mm (No. 4)	95-100
2.36mm (No.8)	-
1.18mm (No.16)	45-80
0.60mm (No. 30)	-

0.30mm (No. 50)	5-30
0.15mm (No.100)	0-10

4. Clean/Potable Water

Minimum equipment to be used:

1. At least One Bagger Mixer (4-6 cu.ft. per minute)
2. Pumpcrete (Trailer Mounted with pipes and accessories) – 60cu.m./hr.
3. Concrete Vibrator (Flexible Shaft Type 2" diam. Head with 5 Amperes Gasoline Drive Unit)
4. Minor Tools

Additional Instructions:

- No manual concrete mixing. (Mano-mano)
- No complete equipment no concrete pouring.
- 3 set consisting of 3 samples prepared per 75cu.m. or for each pouring day for cylinder sample.
- Samples shall be randomly pick by the Project in Charge/Project Designer.
- Samples will be tested for compression at 7 days, 14 days, and 28 days.
- The Contractor shall provide the mold for the samples – 150mm x 300mm Steel Cylinder Molds.
- The strength level of the concrete will be considered satisfactory if the averages of all sets of three (3) consecutive strength test results equal or exceed the specified strength, fc‟ and no individual strength test result is deficient by more than 15% of the specified strength, fc‟. Concrete deemed to be not acceptable using the above criteria may be rejected unless the Contractor can provide evidence, by means of core tests, that the quality of concrete represented by failed test results is acceptable in place. At least three (3) representative cores shall be taken from each member or area of concrete in place that is considered deficient. The location of cores shall be determined by the Engineer so that there will be at least impairment of strength of the structure. The obtaining and testing of drilled cores shall be in accordance with AASHTO T 24. Concrete in the area represented by the cores will be considered adequate if the average strength of the cores is equal to at least 85% of, and if no single core is less than 75% of, the specified strength, fc‟. If the strength of control specimens does not meet the requirements of this Subsection, and it is not feasible or not advisable to obtain cores from the structure due to structural considerations, payment of the concrete will be made at an adjusted price due to strength deficiency of concrete specimens as specified hereunder:

Deficiency in Strength of Concrete Specimens, Percent (%)	Percent (%) of Contract Price Allowed
Less than 5	100
5 to less than 10	80

10 to less than 15	70
15 to less than 20	60
20 to less than 25	50
25 or more	0

Payment will be made as per actual accomplishment based on Bill of Quantities

Item C.3. – Reinforcing Steel of Reinforced Concrete Structures (Grade 60 - 16mm and above diameter)

Quantity and Unit: 159,894.77 kgs.

This Item shall consist of furnishing, bending, fabricating, and placing of steel reinforcement of the type, size, shape, and grade required in accordance with this Specification and in conformity with the requirements shown on the Plans or as directed by the Project in Charge.

Material(s) to be used:

1. Reinforcing Steel Bars, Deformed, Grade 60 (16mm and above diameter)
2. G.I. Tie Wire #16

Minimum equipment to be used:

1. Bar Cutter – cutting capacity – 10mm – 32mm diam. RSB
2. Bar Bender – bending capacity – 10mm – 32mm diam. RSB
3. Minor Tools

Additional Instructions:

- Fabrication and installation are contingent upon the availability of the Mill Certificate or Testing Result for the Reinforcing Steel Bars (RSB).
- Prior to concrete pouring, the Project in Charge must conduct a thorough inspection of the rebars installed.

Payment will be made as per actual accomplishment based on Bill of Quantities.

Item C.4. – Reinforcing Steel of Reinforced Concrete Structures (Grade 40 - 12mm and below diameter)

Quantity and Unit: 114,133.17 kgs.

This Item shall consist of furnishing, bending, fabricating, and placing of steel reinforcement of the type, size, shape, and grade required in accordance with this Specification and in conformity with the requirements shown on the Plans or as directed by the Project in Charge.

Material(s) to be used:

1. Reinforcing Steel Bars, Deformed, Grade 40 (12mm and below diameter)
2. G.I. Tie Wire #16

Minimum equipment to be used:

1. Bar Cutter – cutting capacity – 10mm – 32mm diam. RSB
2. Bar Bender – bending capacity – 10mm – 32mm diam. RSB
3. Minor Tools

Additional Instructions:

- Fabrication and installation are contingent upon the availability of the Mill Certificate or Testing Result for the Reinforcing Steel Bars (RSB).
- Prior to concrete pouring, the Project in Charge must conduct a thorough inspection of the rebars installed.

Payment will be made as per actual accomplishment based on Bill of Quantities.

Item C.5. – Structural Steel Roof Truss

Quantity and Unit: 48,068.16 kgs.

This work shall consist of steel structures and the steel structure portions of composite structures, constructed in reasonably close conformity with the lines, grades, and dimensions shown on the Plans or established by the Project in Charge.

Material(s) to be used:

1. Structural Steel (A36) – 5”x5”x14mm Angle Bars
2. Structural Steel (A36) – 2”x2”x6mm Angle Bars
3. 2” G.I. Pipe (Schedule 40)
4. Oxygen
5. Acetylene
6. E-6011/E-6013 Welding Rod/Electrode
7. Consumables

Minimum equipment to be used:

1. Welding Machine – Electric Driven/500 Amp
2. Cutting Outfit
3. Truck Mounted Crane – 31-35mt
4. Minor Tools

Payment will be made as per actual accomplishment based on Bill of Quantities.

Item C.6. – Structural Steel Purlins (2" x 6" x 1.8mm Double)

Quantity and Unit: 13,274.64 kgs.

This work shall consist of steel structures and the steel structure portions of composite structures, constructed in reasonably close conformity with the lines, grades, and dimensions shown on the Plans or established by the Project in Charge.

Material(s) to be used:

1. Structural Steel (A36) – 6”x2”x1.8mm C-Purlins (Double)
2. Structural Steel (A36) – 4”x2”x6mm Unequal Angle Bar – cleats/stoppers
3. #12 x 40mm Purlin Bolt
4. E-6011/E-6013 Welding Rod/Electrodes
5. Consumables

Minimum equipment to be used:

1. Welding Machine – Electric Driven/500 Amp

2. Minor Tools

Payment will be made as per actual accomplishment based on Bill of Quantities.

Item C.7. – Structural Steel Purlins (2" x 4" x 1.5mm Single)

Quantity and Unit: 311.22 kgs.

This work shall consist of steel structures and the steel structure portions of composite structures, constructed in reasonably close conformity with the lines, grades, and dimensions shown on the Plans or established by the Project in Charge.

Material(s) to be used:

1. Structural Steel (A36) – 4”x2”x1.5mm C-Purlins
2. Structural Steel (A36) – 2”x2”x3mm Angle Bar
3. E-6011/E-6013 Welding Rod/Electrodes
4. Consumables

Minimum equipment to be used:

1. Welding Machine – Electric Driven/500 Amp
2. Minor Tools

Payment will be made as per actual accomplishment based on Bill of Quantities.

Item C.8. – Metal Structure Accessories (Anchored/Machine Bolts) - Truss and Stairs

Quantity and Unit: 198 pcs.

This work shall consist of steel structures and the steel structure portions of composite structures, constructed in reasonably close conformity with the lines, grades, and dimensions shown on the Plans or established by the Project in Charge.

Material(s) to be used:

1. Structural Steel (A36) – 675mm x 100mm x 25mm diam. Anchor Bolt with standard nuts and washers (2 each – nuts and washers)

Minimum equipment to be used:

1. Minor Tools

Payment will be made as per actual accomplishment based on Bill of Quantities.

Item C.9. – Metal Structure Accessories (Sagrods)

Quantity and Unit: 304 pcs.

This work shall consist of steel structures and the steel structure portions of composite structures, constructed in reasonably close conformity with the lines, grades, and dimensions shown on the Plans or established by the Project in Charge.

Material(s) to be used:

1. 12mm plain bar sagrod with standard nuts and washers

Minimum equipment to be used:

1. Minor Tools

Payment will be made as per actual accomplishment based on Bill of Quantities.

Item C.10. – Metal Structure Accessories (Turnbuckle)

Quantity and Unit: 64 pcs.

This work shall consist of steel structures and the steel structure portions of composite structures, constructed in reasonably close conformity with the lines, grades, and dimensions shown on the Plans or established by the Project in Charge.

Material(s) to be used:

1. 16mm standard turnbuckle

Minimum equipment to be used:

1. Minor Tools

Payment will be made as per actual accomplishment based on Bill of Quantities.

Item C.11. – Metal Structure Accessories (Crossbracing)

Quantity and Unit: 707.84 kgs.

This work shall consist of steel structures and the steel structure portions of composite structures, constructed in reasonably close conformity with the lines, grades, and dimensions shown on the Plans or established by the Project in Charge.

Material(s) to be used:

1. 16mm cross bracings (Grade 60)

Minimum equipment to be used:

1. Minor Tools

Payment will be made as per actual accomplishment based on Bill of Quantities.

Item C.12. – Metal Structure Accessories (Steel Plates) - Truss, Cross Bracing, Stairs

Quantity and Unit: 4,062.05 kgs.

This work shall consist of steel structures and the steel structure portions of composite structures, constructed in reasonably close conformity with the lines, grades, and dimensions shown on the Plans or established by the Project in Charge.

Material(s) to be used:

1. 5mm MS Plate (pre-cut)
2. 8mm MS Plate (pre-cut)
3. 10mm MS Plate (pre-cut)
4. 12mm MS Plate (pre-cut)
5. 15mm MS Plate (pre-cut)

Minimum equipment to be used:

1. Minor Tools

Payment will be made as per actual accomplishment based on Bill of Quantities.

Item C.13. – Metal Structure Accessories (Bench)

Quantity and Unit: 4,638.61 kgs This work shall consist of steel structures and the steel structure portions of composite structures, constructed in reasonably close conformity with the lines, grades, and dimensions shown on the Plans or established by the Project in Charge.

Material(s) to be used:

1. Structural Steel (A36) – 2”x2”x5mm Angle Bar
2. E-6011/E-6013 Welding Rod/Electrodes
3. Consumables

Minimum equipment to be used:

1. Welding Machine – Electric Driven/500 Amp
2. Minor Tools

Payment will be made as per actual accomplishment based on Bill of Quantities.

Item C.14. – Metal Structure Accessories (Stairs)

Quantity and Unit: 1 lot

This work shall consist of steel structures and the steel structure portions of composite structures, constructed in reasonably close conformity with the lines, grades, and dimensions shown on the Plans or established by the Project in Charge.

Material(s) to be used:

1. Structural Steel (A36) – 6”x2”x5mm C-Channel
2. Structural Steel (A36) – 2”x2”x5mm Angle bar
3. 4” G.I. Pipe Schedule 40
4. E-6011/E-6013 Welding Rod/Electrodes
5. Consumables

Minimum equipment to be used:

1. Welding Machine – Electric Driven/500 Amp
2. Minor Tools

Payment will be made as per actual accomplishment based on Bill of Quantities.

Item C.15. – Metal Structure Accessories (Railings - Stairs, Fire Exit, and Bench)

Quantity and Unit: 1,134.00 kgs.

This work shall consist of steel structures and the steel structure portions of composite structures, constructed in reasonably close conformity with the lines, grades, and dimensions shown on the Plans or established by the Project in Charge.

Material(s) to be used:

1. 1.5” G.I. Pipe Schedule 40
2. E-6011/E-6013 Welding Rod/Electrodes
3. Consumables

Minimum equipment to be used:

1. Welding Machine – Electric Driven/500 Amp
2. Minor Tools

Payment will be made as per actual accomplishment based on Bill of Quantities.

Item C.16. – Prepainted Metal Sheets (0.5mm thick, Rib Type, Long Span) - Roofing and Fascia

Quantity and Unit: 1,572.01 sq.m.

This Item shall consist of furnishing all plant equipment, tools, materials, and labor required to properly perform and complete the pre-painted metal roofing, together with

related accessories such as ridge/hip rolls, insulation, valleys, gutters, and flashing, when called for on Plans all in conformity with his Specifications.

Material(s) to be used:

1. 0.5mm thk. Prepainted Metal Sheets (Rib type, Long Span)
2. 2" Tekscrews
3. 6mm J-bolt with Felt and Cyclonic Washers
4. Consumables

Minimum equipment to be used:

1. Minor Tools

Payment will be made as per actual accomplishment based on Bill of Quantities.

Item C.17. – Thermal Insulation with Wire Mesh

Quantity and Unit: 1,395.11 sq.m.

This Item shall consist of furnishing all plant equipment, tools, materials, and labor required

to properly perform and complete the pre-painted metal roofing, together with related accessories

such as ridge/hip rolls, insulation, valleys, gutters, and flashing, when called for on Plans all in conformity with his Specifications.

Material(s) to be used:

1. 10mm 2-sided Insulation Foam
2. ½" Galvanized Welded Wire Mesh Gauge 16
3. Consumables

Minimum equipment to be used:

1. Minor Tools

Payment will be made as per actual accomplishment based on Bill of Quantities.

Item C.18. – Fabricated Metal Roofing Accessory (Soffit Frame)

Quantity and Unit: 1,534.94 kgs.

This Item shall consist of furnishing all plant equipment, tools, materials, and labor required

to properly perform and complete the pre-painted metal roofing, together with related accessories

such as ridge/hip rolls, insulation, valleys, gutters, and flashing, when called for on Plans all in conformity with his Specifications.

Material(s) to be used:

1. 1.5"x1.5"x3mm Angle Bar
2. 1.5"x3mm Flat Bar
3. E-6011/E-6013 Welding Rod/Electrodes
4. Consumables

Minimum equipment to be used:

1. Welding Machine – Electric Driven/500 Amp

2. Minor Tools

Payment will be made as per actual accomplishment based on Bill of Quantities

Item C.19. – Prepainted Metal Sheets (Ridge Roll)

Quantity and Unit: 46.35 ln.m.

This Item shall consist of furnishing all plant equipment, tools, materials, and labor required

to properly perform and complete the pre-painted metal roofing, together with related accessories

such as ridge/hip rolls, insulation, valleys, gutters, and flashing, when called for on Plans all in conformity with his Specifications.

Material(s) to be used:

1. 36” Prepainted Ridge Roll, 0.5mm thickness
2. Aluminum Blind Rivets 5/32” diameter x ¾” length
3. Consumables

Minimum equipment to be used:

1. Minor Tools

Payment will be made as per actual accomplishment based on Bill of Quantities

Item C.20. – Prepainted Metal Sheets (Spandrel)

Quantity and Unit: 1,711.50 ln.m.

This Item shall consist of furnishing all plant equipment, tools, materials, and labor required

to properly perform and complete the pre-painted metal roofing, together with related accessories

such as ridge/hip rolls, insulation, valleys, gutters, and flashing, when called for on Plans all in conformity with his Specifications.

Material(s) to be used:

1. 6” Prepainted Perforated Metal Spandrel, 0.4mm thk.
2. 25mmx25mmx0.5mm Wall Angle
3. Aluminum Blind Rivets 5/32” diameter x ¾” length
4. Consumables

Minimum equipment to be used:

1. Minor Tools

Payment will be made as per actual accomplishment based on Bill of Quantities

Item C.21. – Prepainted Metal Sheets (Gutter with Leaf Guard)

Quantity and Unit: 92.70 ln.m.

This Item shall consist of furnishing all plant equipment, tools, materials, and labor required to properly perform and complete the pre-painted metal roofing, together with related accessories

such as ridge/hip rolls, insulation, valleys, gutters, and flashing, when called for on Plans all in conformity with his Specifications.

Material(s) to be used:

1. 36” Prepainted Spanish Gutter, 0.5mm thk.
2. 12” x 1” Plain G.I. Straps
3. Aluminum Leaf Guard Wire Mesh
4. Aluminum Blind Rivets 5/32” diameter x ¾” length
5. Consumables

Minimum equipment to be used:

1. Minor Tools

Payment will be made as per actual accomplishment based on Bill of Quantities

Item C.22. – Fabricated Roofing Accessory (Downspout)

Quantity and Unit: 280.80 ln.m.

This Item shall consist of furnishing all plant equipment, tools, materials, and labor required

to properly perform and complete the pre-painted metal roofing, together with related accessories

such as ridge/hip rolls, insulation, valleys, gutters, and flashing, when called for on Plans all in conformity with his Specifications.

Material(s) to be used:

1. 3” PVC Pipe S1000
2. 12” x 1” Plain G.I. Straps
3. Consumables

Minimum equipment to be used:

1. Minor Tools

Payment will be made as per actual accomplishment based on Bill of Quantities

Item C.23. – Prepainted Metal Sheets (End Flashing)

Quantity and Unit: 62.44 ln.m.

This Item shall consist of furnishing all plant equipment, tools, materials, and labor required

to properly perform and complete the pre-painted metal roofing, together with related accessories

such as ridge/hip rolls, insulation, valleys, gutters, and flashing, when called for on Plans all in conformity with his Specifications.

Material(s) to be used:

1. Prepainted Box End Flashing, 0.5mm thickness
2. Aluminum Blind Rivets 5/32” diameter x ¾” length
3. Consumables

Minimum equipment to be used:

1. Minor Tools

Payment will be made as per actual accomplishment based on Bill of Quantities

Item C.24. – Carpentry Works (Stage Frame including Stage Stairs)

Quantity and Unit: 1,476.40 bd.ft.

The work under this item shall consist of furnishing all required materials, fabricated woodwork, tools, equipment and labor and performing all operations necessary for the satisfactory completion of all carpentry and joinery works in strict accord with applicable drawings, details and these Specifications.

Material(s) to be used:

1. S4S Kiln Dried Lumber (2”x3”, 2”x1”, 2”x7”)
2. Assorted CWN
3. Consumables

Minimum equipment to be used:

1. Minor Tools

Payment will be made as per actual accomplishment based on Bill of Quantities

Item C.25. – Carpentry Works (Stage Flooring including Stair Cover)

Quantity and Unit: 47.29 sq.m.

The work under this Item shall consist of furnishing all required materials, fabricated woodwork, tools, equipment and labor and performing all operations necessary for the satisfactory completion of all carpentry and joinery works in strict accord with applicable drawings, details and these Specifications.

Material(s) to be used:

1. 4’x8’x3/4” Marine Plywood
2. Assorted CWN
3. Consumables

Minimum equipment to be used:

1. Minor Tools

Payment will be made as per actual accomplishment based on Bill of Quantities

Item C.26. – Carpentry Works (Solid Wood Yellow Meranti for Bench and Stair Step including Stair Covers)

Quantity and Unit: 414 pcs.

The work under this Item shall consist of furnishing all required materials, fabricated woodwork, tools, equipment and labor and performing all operations necessary for the satisfactory completion of all carpentry and joinery works in strict accord with applicable drawings, details and these Specifications.

Material(s) to be used:

1. 12” x 4’ x 1.5” Yellow Meranti Hard Wood
2. 4’ x 8’ x ½” Marine Plywood
3. 2.5” Tekscrews (wood to metal)
4. Consumables

Minimum equipment to be used:

1. Minor Tools

Payment will be made as per actual accomplishment based on Bill of Quantities

Item C.27. – Grouted Riprap (Class A)

Quantity and Unit: 46.67 cu.m..

This Item shall consist of stone masonry in minor structures, in headwalls for culverts, in retaining walls at the toes of slopes, and at other places called for on the Plans, constructed on the prepared foundation bed, in accordance with this Specification and in conformity with the lines, grades, sections, and dimensions shown on the Plans or as ordered in writing by the Project in Charge.

Material(s) to be used:

1. Portland Cement
2. Crushed Sand
3. Gravel Fill
4. Weep Holes 3” PVC S1000
5. Filter Cloth
6. Boulders (15-25 kgs.)
7. Consumables

Minimum equipment to be used:

1. One Bagger Mixer – 4-6cu.ft./min
2. Minor Tools

Payment will be made as per actual accomplishment based on Bill of Quantities

Item C.28. – Formworks and Falseworks

Quantity and Unit: 4,574.04 sq.m.

This work shall consist of erecting, fabricating, and dismantling formworks and falseworks in close conformity with the lines, grades, and dimensions shown on the Plans or established by the Project in Charge.

All formworks (phenolic and good lumber) after the construction/project shall be turned over to PEZA-BCEZ.

Material(s) to be used:

1. 4’ x 8’ x 1/2” Phenolic Board
2. Good Lumber
3. Assorted CWN
4. Consumables

Minimum equipment to be used:

1. 1 Full Set of Metal/Steel Scaffoldings that Covers 205sq.m.
    - H Frame 1.7m x 1.2m, 1 set covers the following:

a. H Frames
b. Diagonal Cross Braces
c. Horizontal Braces
d. Joint Pins

- Shoring Jack, 3.8m Full Extension
- Adjustable U-Head Jack, 0.6m
- Adjustable Base Jack, 0.6m
- 1 ½" G.I. Pipe x 6m
- 1 ½" G.I. Pipe x 4m
- 1 ½" G.I. Pipe x 3m
- 1 ½" G.I. Pipe x 1m
- Tie Rod x 0.6m
- Round Wing Nut

2. Minor Tools

Payment will be made as per actual accomplishment based on Bill of Quantities

Item C.29. – Subgrade Preparation

Quantity and Unit: 600 sq.m.

This Item shall consist of the preparation of the subgrade for the support of overlying structural layers. It shall extend to full width of the roadway. Unless authorized by the Engineer, subgrade preparation shall not be done unless the Contractor is able to start immediately the construction of the pavement structure.

Material(s) to be used:

1. None

Minimum equipment to be used:

1. Motorized Road Grader / Spreading/Leveling Machine – 99 – 140HP
2. Vibratory Roller – 10mt/125HP
3. Minor Tools

Payment will be made as per actual accomplishment based on Bill of Quantities

Item C.30. – Aggregate Subbase Course

Quantity and Unit: 120 cu.m.

This item shall consist of furnishing, placing and compacting an aggregate subbase course on a prepared subgrade in accordance with this Specification and the lines, grades and cross-sections shown on the Plans, or as directed by the Engineer.

Sieve Designation		Mass Percent Passing
Standard, mm	US Standard	
50	2"	100
25	1"	55-85

9.5	3/8”	40-75
0.075	No. 200	0-12

Material(s) to be used:

1. Aggregate Subbase Course (mix with soil for binding and to avoid voids)

Minimum equipment to be used:

1. Motorized Road Grader / Spreading/Leveling Machine – 99 – 140HP
2. Vibratory Roller – 10mt/125HP
3. Minor Tools

Payment will be made as per actual accomplishment based on Bill of Quantities

Item C.31. – PCC Pavement (Unreinforced) 0.23m thk., 3,500 psi @ 28 Days (Premix Concrete/Ready Mix)

Quantity and Unit: 600 sq.m.

This Item shall consist of pavement of Portland Cement Concrete, with or without reinforcement, constructed on the prepared base in accordance with this Specification and in conformity with lines, grades, thickness and typical cross section shown on the Plans.

For Course Aggregate:

Sieve Designation		Mass Percent Passing
Standard, mm	US Standard	
75	3”	100
63	2-1/2”	90-100
50	2”	-
37.50	1-1/2”	25-60
25	1”	-
19	¾”	0-10
12.50	½”	0-5
4.75	No. 4	-

For Fine Aggregate:

Sieve Designation	Mass Percentage Passing

9.5mm (3/8”)	100
4.75mm (No. 4)	95-100
2.36mm (No.8)	-
1.18mm (No.16)	45-80
0.60mm (No. 30)	-
0.30mm (No. 50)	5-30
0.15mm (No.100)	0-10

Material(s) to be used:

1. Reinforcing Steel Bar – Dowels – 16mm diameter (Grade 60)
2. Curing Compound
3. Asphalt Sealant
4. Premix Concrete/Ready Mix Concrete (3,500 psi @ 28 Days)
5. Pipe Sleeve, 2” – For Rebars
6. Grease/Tar – For Forms

Minimum equipment to be used:

1. Concrete Vibrator – 2” ϕ Head/5 Amp Gasoline Drive
2. Manual Concrete Screeder (floater)
3. Concrete Saw/Cutter – 14” Blade with cutting depth of 4-3/4”/7.5HP
4. Bar Cutter – cutting capacity – 10mm – 32mm diam. RSB
5. Steel Forms (must have tongue and groove joint)
6. Minor Tools

Additional Instructions:

- No manual concrete mixing. (Mano-mano)
- No complete equipment no concrete pouring.
- 1 set consisting of 3 samples prepared per 75cu.m. or for each pouring day for beam sample.
- Samples shall be randomly pick by the Project in Charge/Project Designer.
- Samples will be tested for flexural at 7 days only.
- The Contractor shall provide the mold for the samples – 150mm x 150mm x 500mm Steel Beam Molds.
- The strength level of the concrete will be considered satisfactory if the averages of all sets of three (3) consecutive strength test results equal or exceed the specified strength, fc‟ and no individual strength test result is deficient by more than 15% of the specified strength, fc‟. Concrete deemed to be not acceptable using the above criteria may be rejected unless the Contractor can provide evidence, by means of core tests, that the quality of concrete represented by failed test results is acceptable in place. At least three (3) representative cores shall be taken from each member or area of concrete in place that is considered deficient. The location of cores shall be

determined by the Engineer so that there will be at least impairment of strength of the structure. The obtaining and testing of drilled cores shall be in accordance with AASHTO T 24. Concrete in the area represented by the cores will be considered adequate if the average strength of the cores is equal to at least 85% of, and if no single core is less than 75% of, the specified strength, fc". If the strength of control specimens does not meet the requirements of this Subsection, and it is not feasible or not advisable to obtain cores from the structure due to structural considerations, payment of the concrete will be made at an adjusted price due to strength deficiency of concrete specimens as specified hereunder:

Deficiency in Strength of Concrete Specimens, Percent (%)	Percent (%) of Contract Price Allowed
Less than 5	100
5 to less than 10	80
10 to less than 15	70
15 to less than 20	60
20 to less than 25	50
25 or more	0

- Reinforcing bars shall be tested first before installing/fabricating.
- Thickness determination by concrete core drilling on a lot basis, 5 holes per kilometer per lane shall be drilled.
- The Contractor shall execute the drilling of core samples.
- In calculating the average thickness of the pavement, individual measurements which are in excess of the specified thickness by more than 5 mm will be considered as the specified thickness plus 5 mm and measurement which are less than the specified thickness by more than 25 mm shall not be included in the average. When the average thickness for the lot is deficient, the contract unit price will be adjusted for thickness in accordance with table below.

Deficiency in the Average Thickness per lot (mm)	Percent (%) of Contract Price Per Lot
0 - 5	100
6 – 10	95
11 – 15	85
16 – 20	70

21 – 25	50
More than 25	Remove and Replace/No Payment

Note: No acceptance and final payment shall be made on completed pavement unless core test for thickness determination is conducted.

Payment will be made based on Bill of Quantities

Item D.1. – Masonry Works – 150mm CHB including Reinforcing Steel

Quantity and Unit: 749.99 sq.m.

This item shall consist of furnishing and installing 150mm CHB Walls including its reinforcing steel in the area indicated on the Plans and in conformity with this Specification.

Material(s) to be used:

1. 150mm (6") CHB
2. Portland Cement
3. Crushed Aggregates
4. Reinforcing Steel Bars, Deformed 12mm diam. (Grade 40)
5. G.I. Tie Wire #16

Minimum equipment to be used:

1. One Bagger Mixer (4-6 cu.ft. per minute)
2. Minor Tools

Payment will be made as per actual accomplishment based on Bill of Quantities

Item D.2. – Masonry Works – 100mm CHB including Reinforcing Steel

Quantity and Unit: 382.50 sq.m.

This item shall consist of furnishing and installing 100mm CHB Walls including its reinforcing steel in the area indicated on the Plans and in conformity with this Specification.

Material(s) to be used:

1. 100mm (4") CHB
2. Portland Cement
3. Fine Aggregates
4. Reinforcing Steel Bars, Deformed 12mm diam. (Grade 40)
5. G.I. Tie Wire #16

Minimum equipment to be used:

1. One Bagger Mixer (4-6 cu.ft. per minute)
2. Minor Tools

Payment will be made as per actual accomplishment based on Bill of Quantities

Item D.3. – Masonry Works – Cement Plaster Finish

Quantity and Unit: 2,264.98 sq.m.

This item shall consist of furnishing and installing Cement Plaster Finish in the area indicated on the Plans and in conformity with this Specification.

Material(s) to be used:

1. Portland Cement
2. Fine Aggregates

Minimum equipment to be used:

1. Minor Tools

Payment will be made as per actual accomplishment based on Bill of Quantities

Item D.4. – Unglazed Tiles

Quantity and Unit: 272.86 sq.m.

This Item shall consist of furnishing all ceramic tiles and cementitious materials, tools and equipment including labor required in undertaking the proper installation of walls and floor tiles as shown on the Plans and in accordance with this Specification.

Material(s) to be used:

1. 60cm x 60cm Unglazed Tiles (color and design as indicated in the plans or as directed by the Project Architect)
2. Portland Cement
3. Fine Aggregates
4. Tile Grout
5. Consumables

Minimum equipment to be used:

1. Minor Tools

Payment will be made as per actual accomplishment based on Bill of Quantities

Item D.5. – Glazed Tiles (Wall Tiles)

Quantity and Unit: 302.80 sq.m.

This Item shall consist of furnishing all ceramic tiles and cementitious materials, tools and equipment including labor required in undertaking the proper installation of walls and floor tiles as shown on the Plans and in accordance with this Specification.

Material(s) to be used:

1. 20cm x 30cm Glazed Tiles (color and design as indicated in the plans or as directed by the Project Architect)
2. Portland Cement
3. Fine Aggregates
4. Tile Grout
5. Tile Adhesive
6. Consumables

Minimum equipment to be used:

1. Minor Tools

Payment will be made as per actual accomplishment based on Bill of Quantities

Item D.6. – Plain Cement Floor Finish

Quantity and Unit: 1,327.02 sq.m.

This Item shall consist of furnishing all materials, labor, tools and equipment in

undertaking cement floor finishing where shown on the Plans and in accordance with this Specification.

Material(s) to be used:

1. Portland Cement
2. Fine Aggregates

Minimum equipment to be used:

2. Minor Tools

Payment will be made as per actual accomplishment based on Bill of Quantities

Item D.7. – Wood Flooring System with Multi-Sport Court Line (Basketball, Badminton and Volleyball) and Logo Paintings

Quantity and Unit: 613.11 sq.m.

This item shall consist of furnishing and installing of wood tiles on the area indicated on the Plans and in conformity with this Specification.

Material(s) to be used: (must be FIBA Standard requirement)

1. Pre-Finished Precision-milled Elite Hevea (22 x 70 x 1800)
2. 15/32" (12m) Rated Sheathing
3. 2" x 3" (38 mm x 64 mm) Sleeper
4. 3/8" (10mm) Rubber Pad
5. Paints – for Game Line and Logo
6. Consumables

Minimum equipment to be used:

1. Minor Tools

Payment will be made as per actual accomplishment based on Bill of Quantities

Item D.8. – Waterproofing Cement Base (3 Coats)

Quantity and Unit: 197.21 sq.m.

This Item shall consist of furnishing all waterproofing materials, labor, tools, equipment and other facilities and undertaking the proper installation works required as shown on the Plans

and in accordance with this Specification.

Material(s) to be used:

1. Cementitious Waterproofing
2. Portland Cement
3. Fine Sand
4. Consumables

Minimum equipment to be used:

2. Minor Tools

Payment will be made as per actual accomplishment based on Bill of Quantities

Item D.9. – Carpentry Works - Cubicle/Partition of Water Closet/Urinals

Quantity and Unit: 43.96 sq.m.

The work under this Item shall consist of furnishing all required materials, fabricated woodwork, tools, equipment and labor and performing all operations necessary for the satisfactory completion of all carpentry and joinery works in strict accord with applicable drawings, details and these Specifications.

Material(s) to be used:

1. ½" Laminated Wood
2. 3"x3" Ball bearing Stainless Steel Hinge
3. Stainless Steel Bathroom Toilet Privacy Bolt Door Lock with Vacant Engaged Indicator
4. Stainless Steel Bathroom Partition Board Support Feet
5. 65mm x 65mm Stainless Steel L Shaped Angle Bracket
6. Stainless Steel Screws, Fasteners, and Bits
7. Consumables

Minimum equipment to be used:

1. Minor Tools

Payment will be made as per actual accomplishment based on Bill of Quantities

Item D.10. – Painting Works – Metal (All Metal Works)

Quantity and Unit: 3,400.80 sq.m.

This Item shall consist of furnishing all paint materials, varnish, and other related products, labor, tools, equipment, and plant required in undertaking the proper application of painting, varnishing, and related works indicated on the Plans and in accordance with this Specification.

In this item, all metal works shall be painted with 2 coats of Red Oxide Primer. Additional paint shall be indicated in the plans or as instructed by the Project in Charge.

Material(s) to be used:

1. Red Oxide Primer
2. Enamel Paint (Color and design is indicated in the plans or as instructed by the Project in Charge)
3. Paint Thinner
4. Tinting Color
5. Consumables

Minimum equipment to be used:

1. Minor Tools

Payment will be made as per actual accomplishment based on Bill of Quantities

Item D.11. – Painting Works – Masonry (All Masonry/Cement/Ficem)

Quantity and Unit: 2,940.58 sq.m.

This Item shall consist of furnishing all paint materials, varnish, and other related products, labor, tools, equipment, and plant required in undertaking the proper application of

painting, varnishing, and related works indicated on the Plans and in accordance with this Specification.

In this item, all masonry works shall be painted with 1 coat of Concrete Sealer/Primer and 2 coats of Semi-Gloss Latex. Additional paint shall be indicated in the plans or as instructed by the Project in Charge.

Material(s) to be used:

1. Concrete Neutralizer
2. Concrete Sealer/Primer
3. Patching Compound
4. Semi-Gloss Latex (Color and design is indicated in the plans or as instructed by the Project in Charge)
5. Consumables

Minimum equipment to be used:

1. Minor Tools

Payment will be made as per actual accomplishment based on Bill of Quantities

Item D.12. – Carpentry Works - (Drywall Installation on 1/2" Fiber Cement Board with Rockwool Insulation)

Quantity and Unit: 172.23 sq.m.

The work under this Item shall consist of furnishing all required materials, fabricated woodwork, tools, equipment and labor and performing all operations necessary for the satisfactory completion of all carpentry and joinery works in strict accord with applicable drawings, details and these Specifications.

Material(s) to be used:

1. 4' x 8' x 1/2" (9 MM) Fiber Cement Board
2. 35 mm X 76 mm x 3.0 m (GA 24) Metal Studs
3. 0.60 m x 5 m x 50mm Rockwool Insulation
4. 1/8" dia Rivets with 1/4" Grip Range
5. Screw
6. Consumables

Minimum equipment to be used:

1. Minor Tools

Payment will be made as per actual accomplishment based on Bill of Quantities

Item D.13. – Carpentry Works - Doors (Solid Wood with Door Jamb, Hinges and Door Knob)

Quantity and Unit: 6 sets

This Item shall consist of furnishing all materials, hardware, plant, tools, labor, and services necessary for the complete fabrication and installation of wooden doors and windows of the type and size as shown on the Plans and in accordance with the following specifications.

Material(s) to be used:

1. Wooden Door Jamb, (2" x 6") (210 x 90)

2. Wooden Door Jamb, (2" x 6") (210 x 70)
3. Solid/Hard Wood Panel Door (Wood - 90cm x 210cm x 38mm)
4. Solid/Hard Wood Panel Door (Wood - 70cm x 210cm x 38mm)
5. Stainless Steel Door Knob
6. Stainless Steel 3” x 3” Ball Bearing Hinge
7. Consumables

Minimum equipment to be used:

1. Minor Tools

Item D.14. – Doors - Aluminum Glass Door - Swing Type

Quantity and Unit: 13.61 sq.m.

This Item shall consist of furnishing all aluminum glass door materials, labor, tools and equipment required in undertaking the proper installation as shown on the Plans and in accordance with this Specification.

Material(s) to be used:

1. Aluminum Glass Door, Powder Coated Finish, 10mm Tempered Glass
2. Consumables

Minimum equipment to be used:

1. Minor Tools

Payment will be made as per actual accomplishment based on Bill of Quantities

Item D.15. – Doors (Fire Rated Fire Exit Steel Door with Peeking window Glass, Jamb and Accessories)

Quantity and Unit: 11.12 sq.m..

This Item shall consist of furnishing and installing all fabricated steel doors and frames equipped with fixing accessories and locking devices in accordance with the Plans and/or shop drawings and as herein specified.

Material(s) to be used:

1. Fire Rated Fire Exit Steel Door, 100 x 210 Gauge 18 (44mm thick)
2. 2” x 4” Door Jamb Gauge 16 – 1.5 hours Fire Rated
3. Panic Device
4. Single Lever Lock
5. Hinges
6. Fire Rated Fillers
7. Consumables

Minimum equipment to be used:

1. Welding Machine – Electric Driven/500 Amp
2. Minor Tools

Payment will be made as per actual accomplishment based on Bill of Quantities

Item D.16. – Doors - Louver Steel Door

Quantity and Unit: 1.51 sq.m..

This Item shall consist of furnishing and installing all fabricated steel doors and frames equipped with fixing accessories and locking devices in accordance with the Plans and/or shop drawings and as herein specified.

Material(s) to be used:

1. Fire Rated Fire Exit Steel Door, 90 x 210 Gauge 18 (44mm thick)
2. 2" x 4" Door Jamb Gauge 16 – 1.5 hours Fire Rated
3. Door Knob
4. Hinges
5. Fire Rated Fillers
6. Consumables

Minimum equipment to be used:

1. Welding Machine – Electric Driven/500 Amp
2. Minor Tools

Payment will be made as per actual accomplishment based on Bill of Quantities

Item D.17. – Windows – Aluminum Glass Window - Casement and Louver Type

Quantity and Unit: 269.48 sq.m.

This Item shall consist of furnishing all aluminum glass window materials, labor, tools and equipment required in undertaking the proper installation as shown on the Plans and in accordance with this Specification.

Material(s) to be used:

1. Aluminum Glass Windows, Powder Coated Finish, 8mm Tempered Glass
2. Consumables

Minimum equipment to be used:

1. Minor Tools

Payment will be made as per actual accomplishment based on Bill of Quantities

Item D.18. – Windows (Aluminum Double Glazed Windows)

Quantity and Unit: 241.54 sq.m.

This Item shall consist of furnishing all aluminum glass window materials, labor, tools and equipment required in undertaking the proper installation as shown on the Plans and in accordance with this Specification.

Material(s) to be used:

1. Aluminum Glass Windows, Powder Coated Finish, 8mm Tempered Glass
2. Consumables

Minimum equipment to be used:

1. Minor Tools

Payment will be made as per actual accomplishment based on Bill of Quantities

Item D.19. – Windows (Fixed and Casement Louvered Steel Window)

Quantity and Unit: 191.60 sq.m.

This Item shall consist of furnishing all aluminum glass window materials, labor, tools and equipment required in undertaking the proper installation as shown on the Plans and in accordance with this Specification.

Material(s) to be used:

1. Fixed Louvered Steel Window
2. Casement Louvered Steel Window
3. Consumables

Minimum equipment to be used:

1. Welding Machine – Electric Driven/500 Amp
2. Minor Tools

Payment will be made as per actual accomplishment based on Bill of Quantities

Item D.20. – Carpentry Works - Gypsum Board on Metal Ceiling

Quantity and Unit: 17.29 sq.m.

This Item shall consist of furnishing and installing acoustical ceiling materials, tool, labor and equipment necessary as shown on the Plans and Specifications.

Material(s) to be used:

1. 4' x 8' x 9mm Gypsum Board
2. 0.8mm thk. 12mm x 38mm x 5m Double Furring
3. 0.6mm x 12mm x 38mm x 4.8m Carrying Channel
4. Rod Suspension Hanger with Adjustment Spring
5. Channel Clips
6. 0.2mm thk. 20mm x 20mm x 2.44 Wall Angle
7. Aluminum Blind Rivets 5/32” diameter x ¾” length
8. 1” Metal/Gypsum Screws
9. Consumables

Minimum equipment to be used:

1. Minor Tools

Payment will be made as per actual accomplishment based on Bill of Quantities

Item D.21. – Carpentry Works - (Exterior Wall Sidings)

Quantity and Unit: 60.84 sq.m.

The work under this Item shall consist of furnishing all required materials, fabricated woodwork, tools, equipment and labor and performing all operations necessary for the satisfactory completion of all carpentry and joinery works in strict accord with applicable drawings, details and these Specifications.

Material(s) to be used:

1. 4' x 8' x 1/2" (9 MM) Fiber Cement Board
2. 35 mm X 76 mm x 3.0 m (GA 24) Metal Studs
3. 1/8" dia Rivets with 1/4" Grip Range
4. 1” Metal/Gypsum Screws
5. Consumables

Minimum equipment to be used:

1. Minor Tools

Payment will be made as per actual accomplishment based on Bill of Quantities

Item E.1. – Sanitary Pipes and Fittings (PVC – S1000)

Quantity and Unit: 1 lot

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.

Material(s) to be used:

1. 3" PVC Sanitary Pipe S1000
2. PVC Tee 3" x 3" x 3" S1000
3. PVC Wye 3" x 3" x 3" S1000
4. PVC 45° Elbow Bent 3" x 3" S1000
5. 3” PVC Clean Out with Plug and Sealing Ring S1000
6. 2" PVC Sanitary Pipe S1000
7. PVC Tee 2" x 2" x 2" S1000
8. PVC Wye 2" x 2" x 2" S1000
9. PVC 45° Elbow Bent 2" x 2" S1000
10. 2” PVC Clean Out with Plug and Sealing Ring S1000
11. Ceiling Hangers
12. Consumables

Minimum equipment to be used:

1. Minor Tools

Payment will be made as per actual accomplishment based on Bill of Quantities

Item E.2. – Sanitary Fixtures – Water Closet with Complete Fittings and Accessories

Quantity and Unit: 32 sets

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.

Material(s) to be used:

1. Water Closet
    - Dimensions: 670 x 360 x 730 mm
    - Color: American White
    - Water Consumption: 3/6 LPF
    - Roughing In: 300mm
    - Flushing System: Siphon Jet
    - Bowl Shape: Elongated Bowl
    - Material: Vitreous China; Grade A
2. Consumables

Minimum equipment to be used:

1. Minor Tools

Payment will be made as per actual accomplishment based on Bill of Quantities

Item E.3. – Sanitary Fixtures – Urinal with Complete Fittings and Accessories

Quantity and Unit: 15 sets

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.

Material(s) to be used:

1. Urinal
    - Dimensions: 410 x 300 x 700 mm
    - Inlet Type: Top Inlet Urinal
    - Color: American White
    - Installation Type: Wall Hung
    - Material: Vitreous China; Grade A
2. Lever Type – Urinal Flush
    - Water Consumption: 1.9 LPF
    - Material: Brass with Chrome Finish
3. Consumables

Minimum equipment to be used:

1. Minor Tools

Payment will be made as per actual accomplishment based on Bill of Quantities

Item E.4. – Sanitary Fixtures – Countertop with Complete Fittings and Accessories

Quantity and Unit: 12 sets

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.

Material(s) to be used:

1. Countertop
    - Dimensions: 540 x 425 x 170 mm
    - Color: American White
    - Installation Type: Undercounter
    - Material: Vitreous China; Grade A
2. Consumables

Minimum equipment to be used:

1. Minor Tools

Payment will be made as per actual accomplishment based on Bill of Quantities

Item E.5. – Sanitary Fixtures – Wall Hung Lavatory with Complete Fittings and Accessories

Quantity and Unit: 6 sets

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.

Material(s) to be used:

1. Wall Hung Lavatory
    - Dimensions: 504 x 433 x 208 mm
    - Color: American White
    - Installation Type: Wall Hung
    - Material: Vitreous China; Grade A
2. Consumables

Minimum equipment to be used:

1. Minor Tools

Payment will be made as per actual accomplishment based on Bill of Quantities

Item E.6. – Sanitary Fixtures – Stainless Steel Floor Drain Plates

Quantity and Unit: 21 sets

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.

Material(s) to be used:

1. Floor Drain
    - Dimensions: 100 x 100 mm
    - Material: SUS304 Stainless Steel Satin Finish
    - Insect/Mice Proof
2. Consumables

Minimum equipment to be used:

1. Minor Tools

Payment will be made as per actual accomplishment based on Bill of Quantities

Item E.7. – Plumbing Pipes and Fittings (1/2” PPR Pipe – PN20)

Quantity and Unit: 1 lot

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.

Material(s) to be used:

1. 1/2" PPR Pipe PN 20
2. 1/2" PPR Equal Tee PN20
3. 1/2" PPR Elbow 90° PN 20

4. 1/2" x 25 Female Treaded PPR PN20
5. Stainless Steel 2 - Way Angle Valve
6. 1/2" Brass Gate Valve
7. Calibrated 1/2" Brass Water Meter
8. Consumables

Minimum equipment to be used:

1. Fusing Machine for PPR Pipe – fusing capacity ½" – 4" pipes
2. Minor Tools

Payment will be made as per actual accomplishment based on Bill of Quantities

Item E.8. – Plumbing Fixtures – Stainless Steel Bidet

Quantity and Unit: 32 sets

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.

Material(s) to be used:

1. Stainless Steel Bidet
    - Material: SUS304 Stainless Steel Satin Finish
    - ½" Standard Inlet
    - Explosion Proof/High Pressure
2. Consumables

Minimum equipment to be used:

1. Minor Tools

Payment will be made as per actual accomplishment based on Bill of Quantities

Item E.9. – Plumbing Fixtures – Stainless Steel Lavatory Faucet

Quantity and Unit: 18 sets

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.

Material(s) to be used:

1. Stainless Steel Lavatory Faucet
    - Material: SUS304 Stainless Steel Satin Finish
    - Top Mount Faucet
    - Single Lever Type
    - Explosion Proof/High Pressure
2. Consumables

Minimum equipment to be used:

1. Minor Tools

Payment will be made as per actual accomplishment based on Bill of Quantities

Item E.10. – Plumbing Fixtures – Stainless Steel Mop Sink Faucet

Quantity and Unit: 4 sets

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.

Material(s) to be used:

1. Stainless Steel Mop Sink Faucet
    - Material: SUS304 Stainless Steel Satin Finish
    - Faucet with Hose Connector
    - Lever Type
    - 2-way Water Outlet (faucet and hose)
    - Explosion Proof/High Pressure
2. Consumables

Minimum equipment to be used:

1. Minor Tools

Payment will be made as per actual accomplishment based on Bill of Quantities

Item E.11. – Plumbing Fixtures – Shower Set, Complete Fittings and Accessories

Quantity and Unit: 2 sets

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.

Material(s) to be used:

1. Stainless Steel Hot and Cold Shower Set
    - Material: SUS304 Stainless Steel Satin Finish
    - Rainfall Showerhead, Telephone Showerhead
    - Adjustable Height from 80cm - 120cm
    - Can Rotate 360 degrees
    - With Storage Shelf
    - Explosion Proof/High Pressure
2. Consumables

Minimum equipment to be used:

1. Minor Tools

Payment will be made as per actual accomplishment based on Bill of Quantities

Item E.12. – Storm Drain System – PVC Pipe of Catch Basin for Down Spout with Steel Gratings/Grills

Quantity and Unit: 20 each

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.

Material(s) to be used:

1. 3” PVC Pipe S1000
2. 2”x2”x5mm Angle Bar

3. Reinforcing Steel Bars (Grade 40)
4. E-6011/E-6013 Welding Rod/Electrode
5. Consumables

Minimum equipment to be used:

1. Welding Machine – Electric Driven/500 Amp
2. Minor Tools

Payment will be made as per actual accomplishment based on Bill of Quantities

Item F.1. – 15 mm Ø - 25 mm Ø Rigid Steel Conduit (RSC) / Intermediate metal Conduit (IMC) / Electrical Metal Tubing (EMT)

Quantity and Unit: 1,872.00 ln.m

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

Material(s) to be used:

1. uPVC CONDUIT 1/2" diameter, (10ft.). Available in UL listed UL651, AS/NZS 2053, CE, EN61386, OPERATES IN -25/ 100 DEGREES CELSIUS, can be underground, embedded, aboveground, Fire Retardant, VO fire rated
2. uPVC CONDUIT 3/4" diameter, (10ft.) Available in UL listed UL651, AS/NZS 2053, CE, EN61386, OPERATES IN -25/ 100 DEGREES CELSIUS, can be underground, embedded, aboveground, Fire Retardant, VO fire rated
3. uPVC CONDUIT 1" diameter, (10ft.) Available in UL listed UL651, AS/NZS 2053, CE, EN61386, OPERATES IN -25/ 100 DEGREES CELSIUS, can be underground, embedded, aboveground, Fire Retardant, VO fire rated
4. FMC CONDUIT 1/2" diameter, 30m/roll. Manufactured in accordance with ANSI C80.3. Electrical metallic tubing. UL Listed
5. EMT CONDUIT 1/2" diameter, 10 FEET LONG, (10ft.). Available in hot-dipped galvanized both inside and outside. Manufactured in accordance with ANSI C80.3. Electrical metallic tubing. UL Listed
6. EMT CONDUIT 1" diameter, 10 FEET LONG, (10ft.). hot-dipped galvanized both inside and outside. Manufactured in accordance with ANSI C80.3. Electrical metallic tubing. UL Listed

Minimum equipment to be used:

1. Minor Tools

Payment will be made as per actual accomplishment based on Bill of Quantities

Item F.2. – 50 mm Ø - 65 mm Ø Rigid Steel Conduit (RSC) / Intermediate metal Conduit (IMC) / Electrical Metal Tubing (EMT)

Quantity and Unit: 821.00 ln.m.

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

Material(s) to be used:

1. 4" dia. HDPE conduit, UL and UC certified, length: 5m, produced to ASTM F2160, UL 651A or NEMA TC-7, Flame resistant V0 rated
2. 2" dia. RSC conduit, UL and UC certified, length: 10 ft, Hot-dipped galvanized on both external and internal, manufactured according to American National Standards Institute, Inc.-ANSI C80.1, Underwriters Laboratories Standard for Electrical Metallic Tubing. -UL 6

Minimum equipment to be used:

1. Minor Tools

Payment will be made as per actual accomplishment based on Bill of Quantities

Item F.3. – 80 mm Ø - 100 mm Ø Rigid Steel Conduit (RSC)/Intermediate metal Conduit (IMC) / Electrical Metal Tubing (EMT)

Quantity and Unit: 15.00 ln.m.

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

Material(s) to be used:

1. 2 1/2" dia. RSC conduit, UL and UC certified, length: 10 ft, Hot-dipped galvanized on both external and internal, manufactured according to American National Standards Institute, Inc.-ANSI C80.1, Underwriters Laboratories Standard for Electrical Metallic Tubing. -UL 6

Minimum equipment to be used:

1. Minor Tools

Payment will be made as per actual accomplishment based on Bill of Quantities

Item F.4. – 1.6 mm2 - 5.5 mm2 Electric Wire (TW/THHN/TWHN2)

Quantity and Unit: 5,850.00 ln.m.

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

Material(s) to be used:

1. 2.0 mm² Stranted, Copper Building Wire Type, THHN/THWN - 2, Lead Free, Ampacity: 35 Amperes in air, 25 Amperes in raceway, 150m/box, virgin copper with 100% conductivity, PVC Insulation: Lead free and flame retardant, heat, moisture, gasoline and oil resistant
2. 3.5 mm² Stranted, Copper Building Wire Type, THHN/THWN - 2, Lead Free, Ampacity: 30A, 150m/box, virgin copper with 100% conductivity, PVC Insulation: Lead free and flame retardant, heat, moisture, gasoline and oil resistant
3. 5.5 mm² Stranted, Copper Building Wire Type, THHN/THWN - 2, Lead Free, Ampacity: 30A, 150m/box, virgin copper with 100% conductivity, PVC Insulation: Lead free and flame retardant, heat, moisture, gasoline and oil resistant

Minimum equipment to be used:

1. Minor Tools

Payment will be made as per actual accomplishment based on Bill of Quantities

Item F.5. – 8.00 mm2 - 38 mm2 Electric Wire (TW/THHN/TWHN2)

Quantity and Unit: 1,510.00 ln.m.

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

Material(s) to be used:

1. 8.0 mm² Stranted, Copper Building Wire Type, THHN/THWN - 2, Lead Free, Ampacity: 70A, 150m/box, virgin copper with 100% conductivity, PVC Insulation: Lead free and flame retardant, heat, moisture, gasoline and oil resistant
2. 14.0 mm² Stranded, Copper Building Wire Type, THHN/THWN - 2, Lead Free, Ampacity: 70A, 150m/coil, virgin copper with 100% conductivity, PVC Insulation: Lead free and flame retardant, heat, moisture, gasoline and oil resistant
3. 22 mm² Stranded, Copper Building Wire Type, THHN/THWN - 2, Lead Free, Ampacity: 70A, per meter, virgin copper with 100% conductivity, PVC Insulation: Lead free and flame retardant, heat, moisture, gasoline and oil resistant
4. 38 mm² Stranded, Copper Building Wire Type, THHN/THWN - 2, Lead Free, Ampacity: 70A, per meter, virgin copper with 100% conductivity, PVC Insulation: Lead free and flame retardant, heat, moisture, gasoline and oil resistant

Minimum equipment to be used:

1. Minor Tools

Payment will be made as per actual accomplishment based on Bill of Quantities

Item F.6. – 50.00 mm2 - 125 mm2 Electric Wire (TW/THHN/TWHN2)

Quantity and Unit: 30.00 ln.m.

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

Material(s) to be used:

1. 50.0 mm² Stranted, Copper Building Wire Type, THHN/THWN - 2, Lead Free, Ampacity: 70A, 150m/box, virgin copper with 100% conductivity, PVC Insulation: Lead free and flame retardant, heat, moisture, gasoline and oil resistant

Minimum equipment to be used:

1. Minor Tools

Payment will be made as per actual accomplishment based on Bill of Quantities

Item F.7. – Downlight/Pinlight Fixture with One- Compact Fluorecent Lamp (CFL) or LED Bulb, 1 Bulb set

Quantity and Unit: 84.00 sets

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

Material(s) to be used:

1. Surface type Ceiling light, 300mmx300mm, 18w, TRICOLOR, 100Llm/w,
2. Surface type Ceiling light, 400mmx400mm, 24w, TRICOLOR, 150lm/w
3. Surface type LED Downlight, 12w, 1,200lm, Warm white, High brightness LED COB, IP40, Aluminum housing + clear glass
4. weatherproof wall light 15 watts, 1500lm, 6000k cool white, 260mmx125mmx125mm, die cast aluminum housing + PC Lens frosted, IP67
5. Iron pot pendant ceiling light, w/ E27 Holder, 1 pc bulb, aluminum casing (black), 300"mm dia x 190mm H, mounting: hanging/ suspended, 1 pc 18w light bulb 3,500k color temperature, IP44, w/ chain chord adjustable
6. led 3 watts exit sign, luminous green color, IP20, BURNING TIME: >90 hours, Acrylic+die cast aluminum
7. Emergency light, 2x3 watts, two fully adjustable glare-free light heads cool white 6000k, with manual switch and led indicator
8. Slim troffer light (high bay linear), 36 watts, 6500k, 3,800lm, 115lm/w, 120 degrees beam angle, 1200mmx300mm, IP20, Housing color (white), mounting: Hanging/ suspended
9. T5 Slim Surface Mounted Fixture, 18w, 270 DEG BEAM ANGLE, SMD LED technology, 6500k daylight, 1600lm, 1.2mx35mm, quick connect linkable feature up to 10 series connection

Minimum equipment to be used:

1. Minor Tools

Payment will be made as per actual accomplishment based on Bill of Quantities

Item F.8. – Fluorescent Lighting Fixture with Ballast /Light Emitting Diode (LED) Bulb, 1 Bulb set

Quantity and Unit: 39.00 sets

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

Material(s) to be used:

1. Surface type T8 Tube Fixture- Prismatic Diffuser, T8 36w, Polycarbonate lamp holder, IP30, Cold rolled steel housing material, 1200mmx600mm
2. 12w track light-5 pieces, Track bar 2m (black), LED Track light 12w, COB type black, Aluminum housing + PC Lens, IP40, 6500K Daylight
3. T8 Batten fixture with holder, 270 degrees beam angle, 18w, 6500k daylight, Mercury-free, 1980lm, 1200mmx46mm

4. Industrial type luminaire 1-32 Watts, 1200mm(4ft) T8 Tube, Metal Sheet Housing, Poweder Coated Reflector, Surface Mounted/ suspended/ hanged, Double end, IP 40, non-dimmable Daylight 6000-6500k two
5. LED Pendant light 36w, Aluminum housing + Frosted PC Cover (black finish), 1,200mmx70mmx40mm, IP44 INDOOR, w/ chain adjustable

Minimum equipment to be used:

1. Minor Tools

Payment will be made as per actual accomplishment based on Bill of Quantities

Item F.9. – Die-Cast Aluminum Floodlight with Electrocoat Paint Finish

Quantity and Unit: 34.00 sets

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

Material(s) to be used:

1. TPL-FL05-500W-60D, Luminous flux (Luminaire): 69458 lm, Luminous flux (Lamps): 70176 lm, Luminaire Wattage: 502.7 W, IP66 Waterproof rate, 60 degrees beam angle, 6000k daylight, CRI>90, 14kg, w/ surge protection, die cast aluminum housing
2. Wall LED pack light 150 watts with photocell sensor, 12000lm, 5500k, dusk to dawn photo sensor, waterproof IP67
3. Outdoor spotlight for logo
4. High bay led 150 watts, Die cast aluminum housing and acrylic cover, 320mmx75mm dia, Beam angle: 120 degrees, IP65, 6000K, >80,000 hours, surge protection

Minimum equipment to be used:

1. Minor Tools

Payment will be made as per actual accomplishment based on Bill of Quantities

Item F.10. – Duplex Convenience Outlet/Receptacle, Special Purpose Convenience Outlet/Receptacle

Quantity and Unit: 101.00 sets

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

Material(s) to be used:

1. GFCI Outlet, rated current: 20A, Rated voltage: 250V, Frequency rating: 50/60Hz, Ampere rating: 20A, Leakage current level: 6mA, Trip time: ≤ 25mS, Terminal accommodation: up to #12 AWG wire size, with complete accessories (box, cover, etc.)
2. Duplex outlet set, heavy duty, 20A ampacity
3. Floor Box Outlet (4 - Duplex Outlet) cover size: 250mmx220mm, Body size: 230mmx200mm, Access floor open size: 235mmx205mm, 4- duplex outlet, 20-ampacity capacity each

Minimum equipment to be used:

1. Minor Tools

Payment will be made as per actual accomplishment based on Bill of Quantities

Item F.11. – Switches

Quantity and Unit: 41.00 sets

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

Material(s) to be used:

1. 1-gang Switch Set, 15A ampacity
2. 2-gang Switch Set, 15A ampacity
3. 3-gang Switch Set, 15A ampacity

Minimum equipment to be used:

1. Minor Tools

Payment will be made as per actual accomplishment based on Bill of Quantities

Item F.12. – Junction/ Utility/ Pull/ Square Box

Quantity and Unit: 938.00 sets

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

Material(s) to be used:

1. PVC Junction Box with cover, gage # 16
2. PVC Utility Box with cover, gage # 16
3. PVC 3/4" AND 1" connector UL and UC listed, gage # 16
4. EMT 3/4" AND 1" connector UL and UC listed, gage # 16

Minimum equipment to be used:

1. Minor Tools

Payment will be made as per actual accomplishment based on Bill of Quantities

Item F.13. – Panel Board with Main Breaker/Branches, 3 wires, 1 neutral, 250 Amp - 600 Amp

Quantity and Unit: 2.00 sets

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

Material(s) to be used:

1. Main Distribution panel, Main Distribution Panel 150A, 65KAIC, MCCB - 3 Pole Main, 6-branches (125A-3 Pole, 70A- 2 pole, 50A-2 pole, 2-spare), Bolt-on, NEMA 1, GA #16,

2. Fire pump panelboard: 600A - three phase main 4-BRANCHES, 1-600 amps 3 pole, 1-60amps 3 pole, Bolt-on, NEMA 1, GA #16, UL LISTED/ UL CLASSIFIED

Minimum equipment to be used:

1. Minor Tools

Payment will be made as per actual accomplishment based on Bill of Quantities

Item F.14. – Panel Board with Main Breaker/Branches, 3 wires, 1 neutral, 50 Amp - 200 Amp

Quantity and Unit: 7.00 sets

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

Material(s) to be used:

1. 125A MCCB - 3 phase Main, 6-branches, 2-60amps 3 pole, Bolt-on, NEMA 1, GA #16, UL LISTED/ UL CLASSIFIED
2. Manual Transfer Switch, 50A, 2 Pole
3. Manual Transfer Switch, 70A, 2 Pole
4. 60A- 3 phase 12-BRANCHES MCB, 7-20 amps single pole, 1-30 amps single pole, Bolt-on, NEMA 1, GA #16, UL LISTED/ UL CLASSIFIED
5. 60A- 3 phase 12-BRANCHES MCB, 7-20 amps single pole, 1-30 amps single pole,1-2 pole 50 amps, Bolt-on, NEMA 1, GA #16, UL LISTED/ UL CLASSIFIED
6. 30A- single phase main 4-BRANCHES, 1-15 amps 2 pole, 2-20amps 2 pole, 1-15 amps 2 pole, Bolt-on, NEMA 1, GA#16, UL LISTED/ UL CLASSIFIED

Minimum equipment to be used:

1. Minor Tools

Payment will be made as per actual accomplishment based on Bill of Quantities

Item F.15. – Shower Heater

Quantity and Unit: 2.00 sets

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

Material(s) to be used:

1. 1.2kg,3500w, Instant water heater, open outlet type, one turn system, 9 safety points, 295x154x82mm, Anti-leak Tank, Energy saving mode, safety auto-cut off

Minimum equipment to be used:

1. Minor Tools

Payment will be made as per actual accomplishment based on Bill of Quantities

Item G.1. – Installation of 50 CFM ceiling fan

Quantity and Unit: 10 units

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.

Material(s) to be used:

1. 50CFM Ceiling Fan
2. 100mm diam. Stainless Steel Vent Cap
3. Threaded Rod
4. ¼" Expansion Bolt
5. Flexible Aluminum Duct

Minimum equipment to be used:

1. Minor Tools

Payment will be made as per actual accomplishment based on Bill of Quantities

Item G.2. – 200MM Ø X 6M B.I. Pipe Line, Schedule 40

Quantity and Unit: 1 pc.

This Item shall consist of furnishing and installation of Automatic Water sprinkler System, inclusive of all pipings and pipe fittings connections, valves, controls, electrical wiring connection and all other accessories ready for service in accordance with the Plans and Specifications.

Material(s) to be used:

1. 200mm Ø B.I. Pipe Line, Schedule 40
2. Consumables

Minimum equipment to be used:

1. Pipe Grooving Machine – Grooving capacity 65mm – 200mm schedule Pipes
2. Lifting Equipment – can carry 1 – 2 tons
3. Minor Tools

Payment will be made as per actual accomplishment based on Bill of Quantities

Item G.3. – 200MM Ø Anti Vortex Plate Complete W/ Strainer

Quantity and Unit: 1 pc.

This Item shall consist of furnishing and installation of Automatic Water sprinkler System, inclusive of all pipings and pipe fittings connections, valves, controls, electrical wiring connection and all other accessories ready for service in accordance with the Plans and Specifications.

Material(s) to be used:

1. 200MM Ø Anti Vortex Plate W/ Strainer
2. 200MM Ø Long Elbow 90°
3. 200MM Ø Slip on Flange
4. E-6011/E-6013 Welding Rod/Electrode
5. Consumables

Minimum equipment to be used:

1. Welding Machine – Electric Driven/500 Amp
2. Minor Tools

Payment will be made as per actual accomplishment based on Bill of Quantities

Item G.4. – 200MM Ø Gate Valve OS&Y (Grooved End) with Supervisory Switch

Quantity and Unit: 1 unit

This Item shall consist of furnishing and installation of Automatic Water sprinkler System, inclusive of all pipings and pipe fittings connections, valves, controls, electrical wiring connection and all other accessories ready for service in accordance with the Plans and Specifications.

Material(s) to be used:

1. UL listed or FM approved, 300 psi, 200MM Ø Gate Valve OS&Y (Grooved End)
2. UL listed or FM approved, Supervisory Switch
3. Consumables

Minimum equipment to be used:

1. Lifting Equipment – can carry 1 – 2 tons
2. Minor Tools

Payment will be made as per actual accomplishment based on Bill of Quantities

Item G.5. – 200MM Ø Seismic Joint/Flexible Connector (Flanged)

Quantity and Unit: 1 unit

This Item shall consist of furnishing and installation of Automatic Water sprinkler System, inclusive of all pipings and pipe fittings connections, valves, controls, electrical wiring connection and all other accessories ready for service in accordance with the Plans and Specifications.

Material(s) to be used:

1. 200MM Ø Slip on Flange
2. 20MM Ø Seismic Joint/Flexible Connector (Flanged)
3. E-6011/E-6013 Welding Rod/Electrode
4. Consumables

Minimum equipment to be used:

1. Welding Machine – Electric Driven/500 Amp
2. Lifting Equipment – can carry 1 – 2 tons
3. Minor Tools

Payment will be made as per actual accomplishment based on Bill of Quantities

Item G.6. – 200MMx150MMØ Eccentric Reducer (Flanged)

Quantity and Unit: 1 unit

This Item shall consist of furnishing and installation of Automatic Water sprinkler System, inclusive of all pipings and pipe fittings connections, valves, controls, electrical wiring connection and all other accessories ready for service in accordance with the Plans and Specifications.

Material(s) to be used:

1. 200MM Ø Slip on Flange
2. 150MM Ø Slip on Flange
3. 200MMx150MM Ø Eccentric Reducer (Flanged)
4. Consumables

Minimum equipment to be used:

1. Pipe Grooving Machine – Grooving capacity 65mm – 200mm schedule Pipes
2. Lifting Equipment – can carry 1 – 2 tons
3. Minor Tools

Payment will be made as per actual accomplishment based on Bill of Quantities

Item G.7. – 150MM Ø X 6M B.I. Pipe Line, Schedule 40

Quantity and Unit: 2 pcs.

This Item shall consist of furnishing and installation of Automatic Water sprinkler System, inclusive of all pipings and pipe fittings connections, valves, controls, electrical wiring connection and all other accessories ready for service in accordance with the Plans and Specifications.

Material(s) to be used:

1. 150MM Ø B.I. Pipe Line, Schedule 40
2. E-6011/E-6013 Welding Rod/Electrode
3. Consumables

Minimum equipment to be used:

1. Welding Machine – Electric Driven/500 Amp
2. Lifting Equipment – can carry 1 – 2 tons
3. Minor Tools

Payment will be made as per actual accomplishment based on Bill of Quantities

Item G.8. – 150MM Ø Gate Valve OS&Y (Grooved End) with Supervisory Switch

Quantity and Unit: 4 units

This Item shall consist of furnishing and installation of Automatic Water sprinkler System, inclusive of all pipings and pipe fittings connections, valves, controls, electrical wiring connection and all other accessories ready for service in accordance with the Plans and Specifications.

Material(s) to be used:

1. UL listed or FM approved, 150MM Ø Gate Valve OS&Y (Grooved End)
2. UL listed or FM approved, Supervisory Switch
3. Consumables

Minimum equipment to be used:

1. Lifting Equipment – can carry 1 – 2 tons
2. Minor Tools

Payment will be made as per actual accomplishment based on Bill of Quantities

Item G.9. – 150MM Ø Check Valve (Grooved End)

Quantity and Unit: 1 unit

This Item shall consist of furnishing and installation of Automatic Water sprinkler System, inclusive of all pipings and pipe fittings connections, valves, controls, electrical wiring connection and all other accessories ready for service in accordance with the Plans and Specifications.

Material(s) to be used:

1. UL listed or FM approved, 150MM Ø Check Valve (Grooved End)
2. Consumables

Minimum equipment to be used:

1. Lifting Equipment – can carry 1 – 2 tons
2. Minor Tools

Payment will be made as per actual accomplishment based on Bill of Quantities

Item G.10. – 150MM Ø Alarm Check Valve Horizontal (Grooved End) complete with water motor alarm assembly, variable pressure trim, retarding chamber

Quantity and Unit: 1 unit

This Item shall consist of furnishing and installation of Automatic Water sprinkler System, inclusive of all pipings and pipe fittings connections, valves, controls, electrical wiring connection and all other accessories ready for service in accordance with the Plans and Specifications.

Material(s) to be used:

1. UL listed or FM approved, 150MM Ø Alarm Check Valve Horizontal (Grooved End) complete with water motor alarm assembly, variable pressure trim, retarding chamber
2. Consumables

Minimum equipment to be used:

1. Lifting Equipment – can carry 1 – 2 tons
2. Minor Tools

Payment will be made as per actual accomplishment based on Bill of Quantities

Item G.11. – 150MM Ø Flow Meter (Grooved End)

Quantity and Unit: 1 unit

This Item shall consist of furnishing and installation of Automatic Water sprinkler System, inclusive of all pipings and pipe fittings connections, valves, controls, electrical wiring connection and all other accessories ready for service in accordance with the Plans and Specifications.

Material(s) to be used:

1. UL listed or FM approved, 150MM Ø Flow Meter (Grooved End)
    - Test range: 500-2000 gpm
    - Working pressure: 2.0 Mpa
    - Installation: Horizontal
2. Consumables

Minimum equipment to be used:

1. Lifting Equipment – can carry 1 – 2 tons
2. Minor Tools

Payment will be made as per actual accomplishment based on Bill of Quantities

Item G.12. – 150MM Ø Fittings

Quantity and Unit: 1 lot

This Item shall consist of furnishing and installation of Automatic Water sprinkler System, inclusive of all pipings and pipe fittings connections, valves, controls, electrical wiring connection and all other accessories ready for service in accordance with the Plans and Specifications.

Material(s) to be used:

1. Listed, 150MM Ø Elbow 90° (Grooved)
2. Listed, 150MM Ø Tee (Grooved)
3. Listed, 150 x 100MM Ø Tee reducer (Grooved)
4. Listed, 150MM Ø Victaulic type flexible coupling
5. Listed, 150MM Ø Slip on Flange
6. Listed, 150MM Ø End Cap (Grooved)
7. E-6011/E-6013 Welding Rod/Electrode
8. Consumables

Minimum equipment to be used:

1. Welding Machine – Electric Driven/500 Amp
2. Minor Tools

Payment will be made as per actual accomplishment based on Bill of Quantities

Item G.13. – 100MM Ø x 6M B.I. Pipe Line, Schedule 40

Quantity and Unit: 9 pcs.

This Item shall consist of furnishing and installation of Automatic Water sprinkler System, inclusive of all pipings and pipe fittings connections, valves, controls, electrical wiring connection and all other accessories ready for service in accordance with the Plans and Specifications.

Material(s) to be used:

1. 100MM Ø x 6M B.I. Pipe Line, Schedule 40
2. Consumables

Minimum equipment to be used:

1. Pipe Grooving Machine – Grooving capacity 65mm – 200mm schedule Pipes
2. Lifting Equipment – can carry 1 – 2 tons
3. Minor Tools

Payment will be made as per actual accomplishment based on Bill of Quantities

Item G.14. – 100MM Ø OS&Y (Grooved End) Floor Control Valve with Water Flow Switch and Supervisory Switch

Quantity and Unit: 2 units

This Item shall consist of furnishing and installation of Automatic Water sprinkler System, inclusive of all pipings and pipe fittings connections, valves, controls, electrical wiring connection and all other accessories ready for service in accordance with the Plans and Specifications.

Material(s) to be used:

1. UL listed or FM approved, 100MM Ø Gate Valve OS&Y (Grooved End)
2. UL listed or FM approved, 100MM Ø Water Flow Switch
3. UL listed or FM approved, Supervisory Switch
4. Consumables

Minimum equipment to be used:

1. Core Drilling Machine – 1350W/110mm drilling range
2. Lifting Equipment – can carry 1 – 2 tons
3. Minor Tools

Payment will be made as per actual accomplishment based on Bill of Quantities

Item G.15. – 100MM Ø Fittings

Quantity and Unit: 1 lot

This Item shall consist of furnishing and installation of Automatic Water sprinkler System, inclusive of all pipings and pipe fittings connections, valves, controls, electrical wiring connection and all other accessories ready for service in accordance with the Plans and Specifications.

Material(s) to be used:

1. Listed, 100MM Ø Elbow 90° (Grooved)
2. Listed, 100MM Ø Tee (Grooved)
3. Listed, 100 x 80MM Ø Tee reducer (Grooved)
4. Listed, 100 x 65MM Ø Mechanical Tee Threaded Outlet
5. Listed, 100 x 40MM Ø Mechanical Tee Threaded Outlet
6. Listed, 100MM Ø Victaulic type flexible coupling
7. Listed, 100MM Ø End Cap (Grooved)
8. Consumables

Minimum equipment to be used:

1. Core Drilling Machine – 1350W/110mm drilling range
2. Minor Tools

Payment will be made as per actual accomplishment based on Bill of Quantities

Item G.16. – 100MM Ø Pressure Relief Valve w/ Waste Cone

Quantity and Unit: 1 unit

This Item shall consist of furnishing and installation of Automatic Water sprinkler System, inclusive of all pipings and pipe fittings connections, valves, controls, electrical

wiring connection and all other accessories ready for service in accordance with the Plans and Specifications.

Material(s) to be used:

1. UL listed or FM approved, 100MM Ø Pressure Relief Valve
    - 300 psi working pressure
    - 100-300 psi adjustment
2. 100x200MM Ø Waste Cone with sight glass
3. Consumables

Minimum equipment to be used:

1. Lifting Equipment – can carry 1 – 2 tons
2. Minor Tools

Payment will be made as per actual accomplishment based on Bill of Quantities

Item G.17. – 80MM Ø x 6M B.I. Pipe Line, Schedule 40

Quantity and Unit: 14 pcs.

This Item shall consist of furnishing and installation of Automatic Water sprinkler System, inclusive of all pipings and pipe fittings connections, valves, controls, electrical wiring connection and all other accessories ready for service in accordance with the Plans and Specifications.

Material(s) to be used:

1. 80MM Ø x 6M B.I. Pipe Line, Schedule 40
2. Consumables

Minimum equipment to be used:

1. Pipe Grooving Machine – Grooving capacity 65mm – 200mm schedule Pipes
2. Lifting Equipment – can carry 1 – 2 tons
3. Minor Tools

Payment will be made as per actual accomplishment based on Bill of Quantities

Item G.18. – 80MM Ø Fittings

Quantity and Unit: 1 lot

This Item shall consist of furnishing and installation of Automatic Water sprinkler System, inclusive of all pipings and pipe fittings connections, valves, controls, electrical wiring connection and all other accessories ready for service in accordance with the Plans and Specifications.

Material(s) to be used:

1. Listed, 80MM Ø Elbow 45° (WELDED)
2. Listed, 80MM Ø Tee (Grooved)
3. Listed, 80 x 65MM Ø Tee reducer (Grooved)
4. Listed, 80 x 40MM Ø Mechanical Tee Threaded Outlet
5. Listed, 80MM Ø Victaulic type flexible coupling (Grooved)
6. Listed, 80MM Ø End Cap (Grooved)
7. Consumables

Minimum equipment to be used:

1. Welding Machine – Electric Driven/500 Amp
2. Core Drilling Machine – 1350W/110mm drilling range
3. Minor Tools

Payment will be made as per actual accomplishment based on Bill of Quantities

Item G.19. – 80MM Ø Gate Valve OS&Y (Grooved end), 80MM Ø Wye Strainer (Grooved end) & 80MM Ø Float Valve (Flanged type)

Quantity and Unit: 1 lot

This Item shall consist of furnishing and installation of Automatic Water sprinkler System, inclusive of all pipings and pipe fittings connections, valves, controls, electrical wiring connection and all other accessories ready for service in accordance with the Plans and Specifications.

Material(s) to be used:

1. UL listed or FM approved, 80MM Ø Gate Valve OS&Y (Flanged type)
2. UL listed or FM approved, 80MM Ø Wye Strainer
3. 80MM Ø Float Valve
4. Listed, 80MM Ø Flexible Coupling
5. 80MM Ø Slip on Flange
6. E-6011/E-6013 Welding Rod/Electrode
7. Consumables

Minimum equipment to be used:

1. Welding Machine – Electric Driven/500 Amp
2. Minor Tools

Payment will be made as per actual accomplishment based on Bill of Quantities

Item G.20. – 65MM Ø x 6M B.I. Pipe Line, Schedule 40 complete with Valves and Fittings

Quantity and Unit: 1 lot

This Item shall consist of furnishing and installation of Automatic Water sprinkler System, inclusive of all pipings and pipe fittings connections, valves, controls, electrical wiring connection and all other accessories ready for service in accordance with the Plans and Specifications.

Material(s) to be used:

1. 65MM Ø B.I. Pipe Line, Schedule 40
2. Listed,65 x 40MM Ø Tee reducer (Threaded)
3. Listed, 65MM Ø Victaulic type flexible coupling (Grooved)
4. 65MM Ø Brass Gate Valve (300psi)
5. Consumables

Minimum equipment to be used:

1. Pipe Threader – Threading capacity ½” – 4” pipe
2. Minor Tools

Payment will be made as per actual accomplishment based on Bill of Quantities

Item G.21. – 50MM Ø x 6M B.I. Pipe Line, Schedule 40 complete with Valves and Fittings

Quantity and Unit: 1 lot

This Item shall consist of furnishing and installation of Automatic Water sprinkler System, inclusive of all pipings and pipe fittings connections, valves, controls, electrical wiring connection and all other accessories ready for service in accordance with the Plans and Specifications.

Material(s) to be used:

1. 50MM Ø x 6M B.I. Pipe Line, Schedule 40
2. Listed, 50MM Ø B.I. Elbow 90°
3. Listed, 50x 25MM Ø Tee Reducer
4. Listed, 50MM Ø End Cap
5. 50MM Ø Brass Gate Valve (300psi)
6. Consumables

Minimum equipment to be used:

1. Pipe Threader – Threading capacity ½" – 4" pipe
2. Minor Tools

Payment will be made as per actual accomplishment based on Bill of Quantities

Item G.22. – 40MM Ø B.I. Pipe Line, Schedule 40 complete with Valves and Fittings

Quantity and Unit: 1 lot

This Item shall consist of furnishing and installation of Automatic Water sprinkler System, inclusive of all pipings and pipe fittings connections, valves, controls, electrical wiring connection and all other accessories ready for service in accordance with the Plans and Specifications.

Material(s) to be used:

1. 40MM Ø B.I. Pipe Line, Schedule 40
2. Listed, 40MM Ø B.I. Tee
3. Listed, 40MM Ø B.I. Elbow 90°
4. Listed, 40 x 32MMØ Tee Reducer
5. Listed, 40 x 25MMØ Tee Reducer
6. Listed, 40 x 25MMØ Elbow Reducer
7. ISO certified, 40 MMØ Threaded Flange
8. Consumables

Minimum equipment to be used:

1. Pipe Threader – Threading capacity ½" – 4" pipe
2. Minor Tools

Payment will be made as per actual accomplishment based on Bill of Quantities

Item G.23. – 32MM Ø x 6M B.I. Pipe Line, Schedule 40 complete with Valves and Fittings

Quantity and Unit: 1 lot

This Item shall consist of furnishing and installation of Automatic Water sprinkler System, inclusive of all pipings and pipe fittings connections, valves, controls, electrical

wiring connection and all other accessories ready for service in accordance with the Plans and Specifications.

Material(s) to be used:

1. 32MM Ø x 6M B.I. Pipe Line, Schedule 40
2. Listed, 32 x 25MMØ Tee Reducer
3. Listed, 32 x 25MMØ Elbow Reducer
4. Consumables

Minimum equipment to be used:

1. Pipe Threader – Threading capacity ½" – 4" pipe
2. Minor Tools

Payment will be made as per actual accomplishment based on Bill of Quantities

Item G.24. – 25MM Ø x 6M B.I. Pipe Line, Schedule 40 complete with Valves and Fittings

Quantity and Unit: 1 lot

This Item shall consist of furnishing and installation of Automatic Water sprinkler System, inclusive of all pipings and pipe fittings connections, valves, controls, electrical wiring connection and all other accessories ready for service in accordance with the Plans and Specifications.

Material(s) to be used:

1. 25MM Ø x 6M B.I. Pipe Line, Schedule 40
2. Listed, 25MM Ø B.I. Tee
3. Listed, 25MM Ø B.I. Elbow 90°
4. Listed, 25 x 13MMØ Reducer (for sprinkler)
5. 25MMØ Brass Gate Valve (300 psi)
6. Listed, 25MMØ Check Valve
7. 25MMØ Seismic joint / Flexible Connector
8. 25MMØ Pressure Relief Valve
9. 25MMØ Sight Glass
10. 25MMØ Threadolet
11. E-6011/E-6013 Welding Rod/Electrode
12. Consumables

Minimum equipment to be used:

1. Welding Machine – Electric Driven/500 Amp
2. Pipe Threader – Threading capacity ½" – 4" pipe
3. Minor Tools

Payment will be made as per actual accomplishment based on Bill of Quantities

Item G.25. – 15MM Ø x 6M B.I. Pipe Line, Schedule 40 complete with Valves and Fittings

Quantity and Unit: 1 lot

This Item shall consist of furnishing and installation of Automatic Water sprinkler System, inclusive of all pipings and pipe fittings connections, valves, controls, electrical wiring connection and all other accessories ready for service in accordance with the Plans and Specifications.

Material(s) to be used:

1. 15MM Ø B.I. Pipe Line, Schedule 40
2. 15MM Ø B.I. Elbow 90°
3. 15MMØ Threadolet
4. E-6011/E-6013 Welding Rod/Electrode
5. Consumables

Minimum equipment to be used:

1. Welding Machine – Electric Driven/500 Amp
2. Pipe Threader – Threading capacity ½" – 4" pipe
3. Minor Tools

Payment will be made as per actual accomplishment based on Bill of Quantities

Item G.26. – Pendent Sprinkler Head, 1/2"x 1/2" NPT

Quantity and Unit: 94 pcs.

This Item shall consist of furnishing and installation of Automatic Water sprinkler System, inclusive of all pipings and pipe fittings connections, valves, controls, electrical wiring connection and all other accessories ready for service in accordance with the Plans and Specifications.

Material(s) to be used:

1. UL listed or FM approved, Pendent Sprinkler Head, 1/2"x 1/2" NPT
2. Consumables

Minimum equipment to be used:

1. Minor Tools

Payment will be made as per actual accomplishment based on Bill of Quantities

Item G.27. – Sprinkler Reserve Cabinet (12 pcs Sprinkler)

Quantity and Unit: 1 lot

This Item shall consist of furnishing and installation of Automatic Water sprinkler System, inclusive of all pipings and pipe fittings connections, valves, controls, electrical wiring connection and all other accessories ready for service in accordance with the Plans and Specifications.

Material(s) to be used:

1. Sprinkler Reserve Cabinet (12 pcs Sprinkler)
2. UL listed or FM approved, Pendent Sprinkler Head, 1/2"orif.x 1/2" NPT
3. Mounting Accessories
4. Consumables

Minimum equipment to be used:

1. Minor Tools

Payment will be made as per actual accomplishment based on Bill of Quantities

Item G.28. – UL/FM Pressure Gauge 4" Dial -30-0-300psi, 1/2" NPT, w/ 1/2" Ball Valve

Quantity and Unit: 2 units

This Item shall consist of furnishing and installation of Automatic Water sprinkler System, inclusive of all pipings and pipe fittings connections, valves, controls, electrical

wiring connection and all other accessories ready for service in accordance with the Plans and Specifications.

Material(s) to be used:

1. UL/FM Pressure Gauge 4" Dial -30-0-300psi, 1/2" NPT, w/ 1/2" Ball Valve
2. Consumables

Minimum equipment to be used:

1. Minor Tools

Payment will be made as per actual accomplishment based on Bill of Quantities

Item G.29. – UL/FM Pressure Gauge 4" Dial 0-300psi, 1/2" NPT, w/ 1/2" Ball Valve

Quantity and Unit: 4 units

This Item shall consist of furnishing and installation of Automatic Water sprinkler System, inclusive of all pipings and pipe fittings connections, valves, controls, electrical wiring connection and all other accessories ready for service in accordance with the Plans and Specifications.

Material(s) to be used:

1. UL/FM Pressure Gauge 4" Dial 0-300psi, 1/2" NPT, w/ 1/2" Ball Valve
2. Consumables

Minimum equipment to be used:

1. Minor Tools

Payment will be made as per actual accomplishment based on Bill of Quantities

Item G.30. – UL/FM Listed Fire Pump End Suction pump @ 1000GPM, 150HP, 150 psi. TDH, 380V/3Ø/60Hz w/ UL/FM Controller & Casing Relief Valve 3/4" NPT, 500-2500GPM, 100-300 PSI

Quantity and Unit: 1 set

This Item shall consist of furnishing and installation of Automatic Water sprinkler System, inclusive of all pipings and pipe fittings connections, valves, controls, electrical wiring connection and all other accessories ready for service in accordance with the Plans and Specifications.

Material(s) to be used:

1. UL/FM Listed Fire Pump End Suction pump @ 1000GPM, 150HP, 150 psi. TDH, 380V/3Ø/60Hz w/ UL/FM Controller & Casing Relief Valve 3/4" NPT, 500-2500GPM, 100-300 PSI
2. Electrical Works
3. Consumables

Minimum equipment to be used:

1. Lifting Equipment – can carry 1 – 2 tons
2. Minor Tools

Payment will be made as per actual accomplishment based on Bill of Quantities

Item G.31. – Jockey Pump End Suction pump @ 40GPM, 10HP, 155 psi. TDH, 380V/3Ø/60Hz w/ UL/FM Controller

Quantity and Unit: 1 set

This Item shall consist of furnishing and installation of Automatic Water sprinkler System, inclusive of all pipings and pipe fittings connections, valves, controls, electrical wiring connection and all other accessories ready for service in accordance with the Plans and Specifications.

Material(s) to be used:

1. Jockey Pump End Suction pump @ 40GPM, 10HP, 155 psi. TDH, 380V/3Ø/60Hz w/ UL/FM Controller
2. Electrical Works
3. Consumables

Minimum equipment to be used:

1. Lifting Equipment – can carry 1 – 2 tons
2. Minor Tools

Payment will be made as per actual accomplishment based on Bill of Quantities

Item G.32. – Sprinkler Alarm & Fire Alarm Control panel - Flow, Gate Valve Supervisory System Interfacing complete with supports, wiring and conduiting

Quantity and Unit: 1 lot

This Item shall consist of furnishing and installation of Automatic Water sprinkler System, inclusive of all pipings and pipe fittings connections, valves, controls, electrical wiring connection and all other accessories ready for service in accordance with the Plans and Specifications.

Material(s) to be used:

1. Sprinkler Alarm & Fire Alarm Control panel - Flow, Gate Valve Supervisory System Interfacing complete with supports, wiring and conduiting
2. Consumables

Minimum equipment to be used:

1. Minor Tools

Payment will be made as per actual accomplishment based on Bill of Quantities

Item G.33. – Pressure Sensing Line - 15MM Ø Stainless Steel Pipe Line, Schedule 40 Series 304 complete with valves and fittings

Quantity and Unit: 1 lot

This Item shall consist of furnishing and installation of Automatic Water sprinkler System, inclusive of all pipings and pipe fittings connections, valves, controls, electrical wiring connection and all other accessories ready for service in accordance with the Plans and Specifications.

Material(s) to be used:

1. 15MM Ø Stainless Steel Pipe Line, Series 304
2. 15MM Ø Stainless Steel Pipe Series 304 Elbow 90°
3. 15MM Ø Stainless Ball Valve
4. 15MM Ø Stainless Tee w/ Plug

5. 15MM Ø Check Valve
6. Consumables

Minimum equipment to be used:

1. Minor Tools

Payment will be made as per actual accomplishment based on Bill of Quantities

Item G.34. – UL/FM Automatic Air Release Valve, 300 psi, 1" NPT inlet, 1/2" NPT outlet

Quantity and Unit: 3 units

This Item shall consist of furnishing and installation of Automatic Water sprinkler System, inclusive of all pipings and pipe fittings connections, valves, controls, electrical wiring connection and all other accessories ready for service in accordance with the Plans and Specifications.

Material(s) to be used:

1. UL/FM Automatic Air Release Valve, 300 psi, 1" NPT inlet, 1/2" NPT outlet
2. Consumables

Minimum equipment to be used:

1. Minor Tools

Payment will be made as per actual accomplishment based on Bill of Quantities

Item G.35. – Pipe Sleeving Complete with packing, Fire rated Sealant and escutcheon plate on both sides

Quantity and Unit: 1 lot

This Item shall consist of furnishing and installation of Automatic Water sprinkler System, inclusive of all pipings and pipe fittings connections, valves, controls, electrical wiring connection and all other accessories ready for service in accordance with the Plans and Specifications.

Material(s) to be used:

1. Pipe Sleeving Complete with packing, Fire rated Sealant and escutcheon plate on both sides
2. Consumables

Minimum equipment to be used:

1. Minor Tools

Payment will be made as per actual accomplishment based on Bill of Quantities

Item G.36. – Pipe Hangers/Supports & Seismic Bracing

Quantity and Unit: 1 lot

This Item shall consist of furnishing and installation of Automatic Water sprinkler System, inclusive of all pipings and pipe fittings connections, valves, controls, electrical wiring connection and all other accessories ready for service in accordance with the Plans and Specifications.

Material(s) to be used:

1. Pipe Hangers/Supports & Seismic Bracing
2. Consumables

Minimum equipment to be used:

1. Minor Tools

Payment will be made as per actual accomplishment based on Bill of Quantities

Item G.37. – Fire Hose Cabinet

Quantity and Unit: 8 sets

This Item shall consist of furnishing and installation of Automatic Water sprinkler System, inclusive of all pipings and pipe fittings connections, valves, controls, electrical wiring connection and all other accessories ready for service in accordance with the Plans and Specifications.

Material(s) to be used:

1. Fire Hose Cabinet
    - 32"x27"x7 1/4", Aluminum Frame, Tempered Glass, Steel Body, Gauge 18 Painted RED inside and out with magnetic snap lock, and Handle Fire Hose Cabinet
    - 1 1/2" x 100' Polyester Double Jacket Fire Hose
    - 1 1/2" Aluminum Male Coupling (NH/NST)
    - 1 1/2" Aluminum Swivel Female Coupling (NH/NST)
    - 1 1/2" Angle Valve (NH/NST)
    - 1 1/2" Stream and Fog Nozzle (NH Treaded /NST)
    - 1 1/2" Brass Nipple (NH/NST)
    - Semi-Automatic Hose Rack
    - Service Pressure - 400psi
    - Proof Test Pressure - 800psi
    - Burst Test Pressure - 1200psi
2. 1 1/2" Compatible Straight Nozzle (NH/NST)
3. Consumables

Minimum equipment to be used:

1. Minor Tools

Payment will be made as per actual accomplishment based on Bill of Quantities

Item G.38. – Fire Extinguishers with Mounting accessories and Signages

Quantity and Unit: 8 sets

This Item shall consist of furnishing and installation of Automatic Water sprinkler System, inclusive of all pipings and pipe fittings connections, valves, controls, electrical wiring connection and all other accessories ready for service in accordance with the Plans and Specifications.

Material(s) to be used:

1. ABC Type Portable Fire Extinguisher, 10 lbs., with Mounting Accessories (Mounting plate, bolts and anchors, etc.)
    - With Philippine Standard (PS) License or Import Commodity Clearance (ICC) / PS or ICC marked
2. Luminous Fire Extinguisher Signages
3. Consumables

Minimum equipment to be used:

1. Minor Tools

Payment will be made as per actual accomplishment based on Bill of Quantities

Item G.39. – Ladder Rung Stainless Steel 304 and Manhole

Quantity and Unit: 1 lot

This Item shall consist of furnishing and installation of Automatic Water sprinkler System, inclusive of all pipings and pipe fittings connections, valves, controls, electrical wiring connection and all other accessories ready for service in accordance with the Plans and Specifications.

Material(s) to be used:

1. Ladder Rung Stainless Steel 304 and Manhole
2. Consumables

Minimum equipment to be used:

1. Minor Tools

Payment will be made as per actual accomplishment based on Bill of Quantities

Item G.40. – 3" Water Meter

Quantity and Unit: 1 set

This Item shall consist of furnishing and installation of Automatic Water sprinkler System, inclusive of all pipings and pipe fittings connections, valves, controls, electrical wiring connection and all other accessories ready for service in accordance with the Plans and Specifications.

Material(s) to be used:

1. 3" Water Meter
    - Max Working Pressure 16BAR
    - Max Liquid Temperature: 60°C
    - Body: Cast Iron, Polyester Coated
2. Consumables

Minimum equipment to be used:

1. Minor Tools

Payment will be made as per actual accomplishment based on Bill of Quantities

Item H.1. – Supply, Delivery, and Installation of Basketball Hoops (Basketball Accessories)

Quantity and Unit: 1 pair

This Item shall consist of supplying, delivering, and installing the item.

Material(s) to be used:

1. Basketball Hoops
    - Projection: 2.55m; Minimum Court Length 35.5m
    - Goal Height: 3.05m
    - Backboard: 1800mm x 1050mm x 10mm high tough safety tempered Glass
    - Rim: 450mm diameter with double spring elastic rings

- Base: L-2.1m x W-1.1m x FH-0.65m x BH-0.35m welded by 3.00mm steel sheet
- Support welded by 120mm x 60mm x 3.0mm, 120mm x 120mm x 3mm square tube
- Includes soft sponge protective padding and cement counter weight (600kgs/backstop)
- Movable
- Foldable by hydraulic

Minimum equipment to be used:

1. Minor Tools

Payment will be made as per actual accomplishment based on Bill of Quantities

Item H.2. – Supply and Delivery of Volleyball Poles and Nets (Volleyball Accessories)

Quantity and Unit: 1 set

This Item shall consist of supplying, delivering, and installing the item.

Material(s) to be used:

1. Volleyball Accessories
    - Portable with wheels
    - Adjusted height: 2000mm - 2450mm
    - Material: High grade seamless steel tube
    - Diameter: 89mm x 5mm and 76mm x 4mm
    - Base: 120kgs.
2. Official Volleyball Net
    - 75-316 Official Size: 9.5m x 1m
    - Material: Nylon

Minimum equipment to be used:

1. Minor Tools

Payment will be made as per actual accomplishment based on Bill of Quantities

Item H.3. – Supply and Delivery of Badminton Poles and Nets (Badminton Accessories)

Quantity and Unit: 4 set

This Item shall consist of supplying, delivering, and installing the item.

Material(s) to be used:

1. Badminton Accessories
    - Portable with wheels
    - Height: 1.55m
    - Material: High grade steel pipe
    - Base: Cast Iron
2. Official Badminton Net
    - GF-BMNet Official Size: 5.18m x 0.75m
    - Material: Nylon

Minimum equipment to be used:

1. Minor Tools

Payment will be made as per actual accomplishment based on Bill of Quantities

Item H.4. – Supply, Delivery, and Installation of Score Board with Complete Accessories

Quantity and Unit: 1 set

This Item shall consist of supplying, delivering, and installing the item.

Material(s) to be used:

1. Score Board
    - 2 - sided Scoreboard (2-pcs main board) with:
        a. Game Time
        b. Team Score
        c. Period
        d. Team Foul
    - 2 shot clocks
    - Master: 4' x 8'
    - Slave: 2' x 3'
    - 6" digital size bright red LED

Minimum equipment to be used:

1. Minor Tools

Payment will be made as per actual accomplishment based on Bill of Quantities

Item H.5. – Supply and Delivery of Court Cover (Tarpaulin "Trapal" Lona)

Quantity and Unit: 515 sq.m.

This Item shall consist of supplying, delivering, and installing the item

Material(s) to be used:

1. Tarpaulin “Trapal” Lona (Rubberized Tolda)

Minimum equipment to be used:

1. Minor Tools

Payment will be made as per actual accomplishment based on Bill of Quantities

Item I.1. – Mobilization/Demobilization

Quantity and Unit: 1 lot

This item shall consist of mobilization and demobilization of manpower and equipment.

Material(s) to be used:

1. None

Minimum equipment to be used:

1. Depends on the number of manpower and equipment to be used in this project

Payment will be made as per actual accomplishment based on Bill of Quantities

Item I.2. – Safety, Security, and Health Provision

Quantity and Unit: 1 lot

This item shall consist of the safety, security, and health of all workers / tenants / clients / employees affected by this project.

Material(s) to be used:

1. Safety boots of each worker
2. Safety helmets/hard hats of each worker
3. Safety gloves of each worker
4. Safety shirt (long sleeves) with reflectorized strips of each worker
5. Full Body Harness of workers working 2 floors and above
6. Covid-19 Kit (Mask, Thermometer, Alcohol, etc.)
7. Complete set of First Aid Kit
8. Caution Tapes
9. Set of Safety Barricades
10. Warning Signages

Minimum equipment to be used:

1. None

Additional Instructions:

- No Proper PPE, No Entry.
- Temporary PEZA ID Pass per worker/employee is required.
- Contractor shall coordinate with PEZA-FCU for scheduling of Safety Orientation before starting the project.

Payment will be made as per actual accomplishment based on Bill of Quantities

Section VII. Drawings

1. Architectural Plan
2. Civil Structural Plan
3. Electrical Plan
4. Mechanical Plan
5. Sanitary Plan
6. Plumbing Plan

****See Annex "A" Folder for the drawings.*

Section VIII. Bill of Quantities

Republic of the Philippines
PHILIPPINE ECONOMIC ZONE AUTHORITY
BAGUIO CITY ECONOMIC ZONE
Loakan Road, Baguio City

Contract Name :	**Construction of PEZA-BCEZ Multi-Purpose Center**
Contract Location :	**PEZA-BCEZ, SFB Compound, Loakan Road, Baguio City**
Approved Budget for the Contract :	**PHP 80,000,000.00**
Contract Duration :	**493 Calendar Days**

BILL OF QUANTITIES

Item No.	Description	Unit	Quantity	Unit Price	Amount
PART A: SITE PREPARATION					
Item A.1.	Clearing and Grubbing Including Removal of Tree Roots, Tree Trimming, Hauling, and Disposal	sq.m.	1,814.88	In words: Pesos In Figures: Php	In words: Pesos In Figures: Php
Item A.2.	Removal of Structures and Obstructions (Concrete Bench)	each	33.00	In words: Pesos In Figures: Php	In words: Pesos In Figures: Php
Item A.3.	Removal of Structures and Obstructions (Steel Posts including Basketball Ring)	each	10.00	In words: Pesos In Figures: Php	In words: Pesos In Figures: Php
Item A.4.	Removal of Structures and Obstructions (Perimeter Fence and Gates)	ln.m.	132.02	In words: Pesos In Figures: Php	In words: Pesos In Figures: Php
Item A.5.	Removal of Structures and Obstructions (Concrete Slab and PCCP - Including Hauling and Disposal)	sq.m.	800.24	In words: Pesos In Figures: Php	In words: Pesos In Figures: Php
Item A.6.	Removal of Structures and Obstructions (Comfort Room and Septic Tank including Pumping of Septic Waste Including Hauling and Disposal)	lot	1.00	In words: Pesos In Figures: Php	In words: Pesos In Figures: Php
Item A.7.	Removal of Structures and Obstructions (Riprap)	cu.m.	20.80	In words: Pesos In Figures: Php	In words: Pesos In Figures: Php
Item A.8.	Removal of Structures and Obstructions (Boulders)	each	5.00	In words: Pesos In Figures: Php	In words: Pesos In Figures: Php
PART B : EARTHWORKS					
Item B.1.	Excavation (Leveling of Site Including Hauling and Disposal) (Common Soil)	cu.m.	732.35	In words: Pesos In Figures: Php	In words: Pesos In Figures: Php
Item B.2.	Structural Excavation (Common Soil Including Hauling and Disposal)	cu.m.	1,659.57	In words: Pesos In Figures: Php	In words: Pesos In Figures: Php
Item B.3.	Gravel Bedding (G-1) (Footing, Tie Beam, Slab on Fill, Genset, Canal, Mechanical)	cu.m.	159.09	In words: Pesos In Figures: Php	In words: Pesos In Figures: Php
Item B.4.	Embankment from Structural Excavation (Footings, Road, Retaining Wall, Mechanical)	cu.m.	1,025.40	In words: Pesos In Figures: Php	In words: Pesos In Figures: Php
PART C: CIVIL WORKS					
Item C.1.	Structural Concrete (Ready Mix, Class AA - 28 Mpa = 4,000 Psi @ 28 Days) (Foundations, Slabs, Columns and Beams)	cu.m.	809.31	In words: Pesos In Figures: Php	In words: Pesos In Figures: Php
Item C.2.	Structural Concrete (Ready Mix, Class A - 24 Mpa = 3,500 Psi @ 28 Days) (Slab on Grade, Stairs, Genset Foundation, Canal, Retaining Wall, Path Walk, Catch	cu.m.	583.80	In words: Pesos In Figures: Php	In words: Pesos In Figures: Php
Item C.3.	Reinforcing Steel of Reinforced Concrete Structures (Grade 60 - 16mm and above diameter)	kgs.	159,894.77	In words: Pesos In Figures: Php	In words: Pesos In Figures: Php
Item C.4.	Reinforcing Steel of Reinforced Concrete Structures (Grade 40 - 12mm and below diameter)	kgs.	114,133.17	In words: Pesos In Figures: Php	In words: Pesos In Figures: Php

Item C.5.	Structural Steel Roof Truss	kgs.	48,068.16	In words: Pesos In Figures: Php	In words: Pesos In Figures: Php
Item C.6.	Structural Steel Purlins (2" x 6" x 1.8mm Double)	kgs.	13,274.64	In words: Pesos In Figures: Php	In words: Pesos In Figures: Php
Item C.7.	Structural Steel Purlins (2" x 4" x 1.5mm Single)	kgs.	311.22	In words: Pesos In Figures: Php	In words: Pesos In Figures: Php
Item C.8.	Metal Structure Accessories (Anchored/Machine Bolts) - Truss and Stairs	pcs.	198.00	In words: Pesos In Figures: Php	In words: Pesos In Figures: Php
Item C.9.	Metal Structure Accessories (Sagrods)	pcs.	304.00	In words: Pesos In Figures: Php	In words: Pesos In Figures: Php
Item C.10.	Metal Structure Accessories (Turnbuckle)	pcs.	64.00	In words: Pesos In Figures: Php	In words: Pesos In Figures: Php
Item C.11.	Metal Structure Accessories (Crossbracing)	kgs.	707.84	In words: Pesos In Figures: Php	In words: Pesos In Figures: Php
Item C.12.	Metal Structure Accessories (Steel Plates) - Truss, Cross Bracing, Stairs	kgs.	4,062.05	In words: Pesos In Figures: Php	In words: Pesos In Figures: Php
Item C.13.	Metal Structure Accessories (Bench)	kgs.	4,638.61	In words: Pesos In Figures: Php	In words: Pesos In Figures: Php
Item C.14.	Metal Structure Accessories (Stairs)	lot	1.00	In words: Pesos In Figures: Php	In words: Pesos In Figures: Php
Item C.15.	Metal Structure Accessories (Railings - Stairs, Fire Exit, and Bench)	kgs.	1,134.00	In words: Pesos In Figures: Php	In words: Pesos In Figures: Php
Item C.16.	Prepainted Metal Sheets (0.5mm thick, Rib Type, Long Span) - Roofing and Fascia	sq.m.	1,572.01	In words: Pesos In Figures: Php	In words: Pesos In Figures: Php
Item C.17.	Thermal Insulation with Wire Mesh	sq.m.	1,395.11	In words: Pesos In Figures: Php	In words: Pesos In Figures: Php
Item C.18.	Fabricated Metal Roofing Accessory (Soffit Frame)	kgs.	1,534.94	In words: Pesos In Figures: Php	In words: Pesos In Figures: Php
Item C.19.	Prepainted Metal Sheets (Ridge Roll)	ln.m.	46.35	In words: Pesos In Figures: Php	In words: Pesos In Figures: Php
Item C.20.	Prepainted Metal Sheets (Spandrel)	ln.m.	1,711.50	In words: Pesos In Figures: Php	In words: Pesos In Figures: Php
Item C.21.	Prepainted Metal Sheets (Gutter with Leaf Guard)	ln.m.	92.70	In words: Pesos In Figures: Php	In words: Pesos In Figures: Php
Item C.22.	Fabricated Roofing Accessory (Downspout)	ln.m.	280.80	In words: Pesos In Figures: Php	In words: Pesos In Figures: Php
Item C.23.	Prepainted Metal Sheets (End Flashing)	ln.m.	62.44	In words: Pesos In Figures: Php	In words: Pesos In Figures: Php
Item C.24.	Carpentry Works (Stage Frame including Stage Stairs)	bd.ft.	1,476.40	In words: Pesos In Figures: Php	In words: Pesos In Figures: Php

Item C.25.	Carpentry Works (Stage Flooring including Stair Cover)	sq.m.	47.29	In words: Pesos In Figures: Php	In words: Pesos In Figures: Php
Item C.26.	Carpentry Works (Solid Wood Yellow Meranti for Bench and Stair Step including Stair Covers)	pcs.	414.00	In words: Pesos In Figures: Php	In words: Pesos In Figures: Php
Item C.27.	Grouted Riprap (Class A)	cu.m.	46.67	In words: Pesos In Figures: Php	In words: Pesos In Figures: Php
Item C.28.	Formworks and Falseworks	sq.m.	4,574.04	In words: Pesos In Figures: Php	In words: Pesos In Figures: Php
Item C.29.	Subgrade Preparation	sq.m.	600.00	In words: Pesos In Figures: Php	In words: Pesos In Figures: Php
Item C.30.	Aggregate Subbase Course	cu.m.	120.00	In words: Pesos In Figures: Php	In words: Pesos In Figures: Php
Item C.31.	PCC Pavement (Unreinforced) 0.23m thk., 3,500 psi @ 28 Days (Premix Concrete/Ready Mix)	sq.m.	600.00	In words: Pesos In Figures: Php	In words: Pesos In Figures: Php
PART D: ARCHITECTURAL					
Item D.1.	Masonry Works (150mm CHB Load Bearing (Including Reinforcing Steel))	sq.m.	749.99	In words: Pesos In Figures: Php	In words: Pesos In Figures: Php
Item D.2.	Masonry Works (100mm CHB Load Bearing (Including Reinforcing Steel))	sq.m.	382.50	In words: Pesos In Figures: Php	In words: Pesos In Figures: Php
Item D.3.	Masonry Works (Cement Plastering)	sq.m.	2,264.98	In words: Pesos In Figures: Php	In words: Pesos In Figures: Php
Item D.4.	Unglazed Tiles	sq.m.	272.86	In words: Pesos In Figures: Php	In words: Pesos In Figures: Php
Item D.5.	Glazed Tiles (Wall Tiles)	sq.m.	302.80	In words: Pesos In Figures: Php	In words: Pesos In Figures: Php
Item D.6.	Plain Cement Floor Finish	sq.m.	1,327.02	In words: Pesos In Figures: Php	In words: Pesos In Figures: Php
Item D.7.	Wood Flooring System with Multi-Sport Court Line (Basketball, Badminton and Volleyball) and Logo Paintings	sq.m.	613.11	In words: Pesos In Figures: Php	In words: Pesos In Figures: Php
Item D.8.	Waterproofing Cement Base (3 Coats)	sq.m.	197.21	In words: Pesos In Figures: Php	In words: Pesos In Figures: Php
Item D.9.	Carpentry Works - Cubicle/Partition of Water Closet/Urinals	sq.m.	43.96	In words: Pesos In Figures: Php	In words: Pesos In Figures: Php
Item D.10.	Painting Works - Metal (All Metal Works)	sq.m.	3,400.80	In words: Pesos In Figures: Php	In words: Pesos In Figures: Php
Item D.11.	Painting Works - Masonry (All Masonry/Cement/Ficem Works)	sq.m.	2,940.58	In words: Pesos In Figures: Php	In words: Pesos In Figures: Php
Item D.12.	Carpentry Works - (Drywall Installation on 1/2" Fiber Cement Board with Rockwool Insulation)	sq.m.	172.23	In words: Pesos In Figures: Php	In words: Pesos In Figures: Php
Item D.13.	Carpentry Works - Doors (Solid Wood with Door Jamb, Hinges and Door Knob)	set	6.00	In words: Pesos In Figures: Php	In words: Pesos In Figures: Php

Item D.14.	Doors - Aluminum Glass Door - Swing Type	sq.m.	13.61	In words: Pesos In Figures: Php	In words: Pesos In Figures: Php
Item D.15.	Doors (Fire Rated Fire Exit Steel Door with Peeking window Glass, Jamb and Accessories)	sq.m.	11.12	In words: Pesos In Figures: Php	In words: Pesos In Figures: Php
Item D.16.	Doors - Louver Steel Door	sq.m.	1.51	In words: Pesos In Figures: Php	In words: Pesos In Figures: Php
Item D.17.	Windows - Aluminum Glass Window - Casement and Louver Type)	sq.m.	269.48	In words: Pesos In Figures: Php	In words: Pesos In Figures: Php
Item D.18.	Windows (Aluminum double glazed Windows)	sq.m.	241.54	In words: Pesos In Figures: Php	In words: Pesos In Figures: Php
Item D.19.	Windows (Fixed and Casement Louvered Steel Window)	sq.m.	191.60	In words: Pesos In Figures: Php	In words: Pesos In Figures: Php
Item D.20.	Carpentry Works - Gypsum Board on Metal Ceiling	sq.m.	17.29	In words: Pesos In Figures: Php	In words: Pesos In Figures: Php
Item D.21.	Carpentry Works - (Exterior Wall Sidings)	sq.m.	60.84	In words: Pesos In Figures: Php	In words: Pesos In Figures: Php
PART E: SANITARY AND PLUMBING WORKS AND FIXTURES					
Item E.1.	Sanitary Pipes and Fittings (PVC - S1000)	lot	1.00	In words: Pesos In Figures: Php	In words: Pesos In Figures: Php
Item E.2.	Sanitary Fixtures (Water Closet With Complete Fittings and Accessories)	set	32.00	In words: Pesos In Figures: Php	In words: Pesos In Figures: Php
Item E.3.	Sanitary Fixtures (Urinal With Complete Fittings and Accessories)	set	15.00	In words: Pesos In Figures: Php	In words: Pesos In Figures: Php
Item E.4.	Sanitary Fixtures (Countertop Lavatory With Complete Fittings and Accessories)	set	12.00	In words: Pesos In Figures: Php	In words: Pesos In Figures: Php
Item E.5.	Sanitary Fixtures (Wall Hung Lavatory With Complete Fittings and Accessories)	set	6.00	In words: Pesos In Figures: Php	In words: Pesos In Figures: Php
Item E.6.	Sanitary Fixtures (Stainless Steel Floor Drain Plates)	set	21.00	In words: Pesos In Figures: Php	In words: Pesos In Figures: Php
Item E.7.	Plumbing Pipes and Fittings (1/2" PPR Pipe - PN 20)	lot	1.00	In words: Pesos In Figures: Php	In words: Pesos In Figures: Php
Item E.8.	Plumbing Fixtures (Stainless Steel Bidet)	set	32.00	In words: Pesos In Figures: Php	In words: Pesos In Figures: Php
Item E.9.	Plumbing Fixtures (Stainless Steel Lavatory Faucet)	set	18.00	In words: Pesos In Figures: Php	In words: Pesos In Figures: Php
Item E.10.	Plumbing Fixtures (Stainless Steel Mop Sink Faucet)	set	4.00	In words: Pesos In Figures: Php	In words: Pesos In Figures: Php
Item E.11.	Plumbing Fixtures (Shower Set, Complete Fittings and Accessories)	set	2.00	In words: Pesos In Figures: Php	In words: Pesos In Figures: Php

Item E.12.	Storm Drain System (PVC Pipe of Catch Basin for Down Spout with Steel Grating)	each	20.00	In words: Pesos In Figures: Php	In words: Pesos In Figures: Php
PART F: ELCETRICAL WORKS AND FIXTURES					
Item F.1.	15 mm Ø - 25 mm Ø Rigid Steel Conduit (RSC) / Intermediate metal Conduit (IMC) / Electrical Metal Tubing (EMT)	ln.m.	1,872.00	In words: Pesos In Figures: Php	In words: Pesos In Figures: Php
Item F.2.	50 mm Ø - 65 mm Ø Rigid Steel Conduit (RSC) / Intermediate metal Conduit (IMC) / Electrical Metal Tubing (EMT)	ln.m.	821.00	In words: Pesos In Figures: Php	In words: Pesos In Figures: Php
Item F.3.	80 mm Ø - 100 mm Ø Rigid Steel Conduit (RSC)/Intermediate metal Conduit (IMC) / Electrical Metal Tubing (EMT)	ln.m.	15.00	In words: Pesos In Figures: Php	In words: Pesos In Figures: Php
Item F.4.	1.6 mm2 - 5.5 mm2 Electric Wire (TW/THHN/TWHN2)	ln.m.	5,850.00	In words: Pesos In Figures: Php	In words: Pesos In Figures: Php
Item F.5.	8.00 mm2 - 38 mm2 Electric Wire (TW/THHN/TWHN2)	ln.m.	1,510.00	In words: Pesos In Figures: Php	In words: Pesos In Figures: Php
Item F.6.	50.00 mm2 - 125 mm2 Electric Wire (TW/THHN/TWHN2)	ln.m.	30.00	In words: Pesos In Figures: Php	In words: Pesos In Figures: Php
Item F.7.	Downlight/Pinlight Fixture with One- Compact Fluorecent Lamp (CFL) or LED Bulb, 1 Bulb set	set	84.00	In words: Pesos In Figures: Php	In words: Pesos In Figures: Php
Item F.8.	Fluorescent Lighting Fixture with Ballast /Light Emitting Diode (LED) Bulb, 1 Bulb set	set	39.00	In words: Pesos In Figures: Php	In words: Pesos In Figures: Php
Item F.9.	Die-Cast Aluminum Floodlight with Electrocoat Paint Finish	set	34.00	In words: Pesos In Figures: Php	In words: Pesos In Figures: Php
Item F.10.	Duplex Convenience Outlet/Receptacle, Special Purpose Convenience Outlet/Receptacle	set	101.00	In words: Pesos In Figures: Php	In words: Pesos In Figures: Php
Item F.11.	Switches	set	41.00	In words: Pesos In Figures: Php	In words: Pesos In Figures: Php
Item F.12.	Junction/ Utility/ Pull/ Square Box	set	938.00	In words: Pesos In Figures: Php	In words: Pesos In Figures: Php
Item F.13.	Panel Board with Main Breaker/Branches, 3 wires, 1 neutral, 250 Amp - 600 Amp	set	2.00	In words: Pesos In Figures: Php	In words: Pesos In Figures: Php
Item F.14.	Panel Board with Main Breaker/Branches, 3 wires, 1 neutral, 50 Amp - 200 Amp	set	7.00	In words: Pesos In Figures: Php	In words: Pesos In Figures: Php
Item F.15.	Shower Heater	set	2.00	In words: Pesos In Figures: Php	In words: Pesos In Figures: Php
PART G: MECHANICAL WORKS AND FIXTURES					
Item G.1.	Installation of 50 CFM ceiling fan	unit	10.00	In words: Pesos In Figures: Php	In words: Pesos In Figures: Php
Item G.2.	200MM Ø X 6M B.I. Pipe Line, Schedule 40	pcs.	1.00	In words: Pesos In Figures: Php	In words: Pesos In Figures: Php
Item G.3.	200MM Ø Anti Vortex Plate Complete W/ Strainer	pcs.	1.00	In words: Pesos In Figures: Php	In words: Pesos In Figures: Php
Item G.4.	200MM Ø Gate Valve OS&Y (Grooved End) with Supervisory Switch	unit	1.00	In words: Pesos In Figures: Php	In words: Pesos In Figures: Php

Item G.5.	200MM Ø Seismic Joint/Flexible Connector (Flanged)	unit	1.00	In words: Pesos In Figures: Php	In words: Pesos In Figures: Php
Item G.6.	200MMx150MMØ Eccentric Reducer (Flanged)	unit	1.00	In words: Pesos In Figures: Php	In words: Pesos In Figures: Php
Item G.7.	150MM Ø X 6M B.I. Pipe Line, Schedule 40	pcs.	2.00	In words: Pesos In Figures: Php	In words: Pesos In Figures: Php
Item G.8.	150MM Ø Gate Valve OS&Y (Grooved End) with Supervisory Switch	unit	4.00	In words: Pesos In Figures: Php	In words: Pesos In Figures: Php
Item G.9.	150MM Ø Check Valve (Grooved End)	unit	1.00	In words: Pesos In Figures: Php	In words: Pesos In Figures: Php
Item G.10.	150MM Ø Alarm Check Valve Horizontal(Grooved End) complete with water motor alarm assembly, variable pressure trim, retarding	unit	1.00	In words: Pesos In Figures: Php	In words: Pesos In Figures: Php
Item G.11.	150MM Ø Flow Meter (Grooved End)	unit	1.00	In words: Pesos In Figures: Php	In words: Pesos In Figures: Php
Item G.12.	150MM Ø Fittings	lot	1.00	In words: Pesos In Figures: Php	In words: Pesos In Figures: Php
Item G.13.	100MM Ø x 6M B.I. Pipe Line, Schedule 40	pcs.	9.00	In words: Pesos In Figures: Php	In words: Pesos In Figures: Php
Item G.14.	100MM Ø OS&Y (Grooved End) Floor Control Valve with Water Flow Switch and Supervisory Switch	unit	2.00	In words: Pesos In Figures: Php	In words: Pesos In Figures: Php
Item G.15.	100MM Ø Fittings	lot	1.00	In words: Pesos In Figures: Php	In words: Pesos In Figures: Php
Item G.16.	100MM Ø Pressure Relief Valve w/ Waste Cone	unit	1.00	In words: Pesos In Figures: Php	In words: Pesos In Figures: Php
Item G.17.	80MM Ø x 6M B.I. Pipe Line, Schedule 40	pcs.	14.00	In words: Pesos In Figures: Php	In words: Pesos In Figures: Php
Item G.18.	80MM Ø Fittings	lot	1.00	In words: Pesos In Figures: Php	In words: Pesos In Figures: Php
Item G.19.	80MM Ø Gate Valve OS&Y (Grooved end), 80MM Ø Wye Strainer (Grooved end) & 80MM Ø Float Valve (Flanged type)	lot	1.00	In words: Pesos In Figures: Php	In words: Pesos In Figures: Php
Item G.20.	65MM Ø x 6M B.I. Pipe Line, Schedule 40 complete with Valves and Fittings	lot	1.00	In words: Pesos In Figures: Php	In words: Pesos In Figures: Php
Item G.21.	50MM Ø x 6M B.I. Pipe Line, Schedule 40 complete with Valves and Fittings	lot	1.00	In words: Pesos In Figures: Php	In words: Pesos In Figures: Php
Item G.22.	40MM Ø B.I. Pipe Line, Schedule 40 complete with Valves and Fittings	lot	1.00	In words: Pesos In Figures: Php	In words: Pesos In Figures: Php
Item G.23.	32MM Ø x 6M B.I. Pipe Line, Schedule 40 complete with Valves and Fittings	lot	1.00	In words: Pesos In Figures: Php	In words: Pesos In Figures: Php
Item G.24.	25MM Ø x 6M B.I. Pipe Line, Schedule 40 complete with Valves and Fittings	lot	1.00	In words: Pesos In Figures: Php	In words: Pesos In Figures: Php

Item G.25.	15MM Ø x 6M B.I. Pipe Line, Schedule 40 complete with Valves and Fittings	lot	1.00	In words: Pesos In Figures: Php	In words: Pesos In Figures: Php
Item G.26.	Pendent Sprinkler Head, 1/2"x 1/2" NPT	pcs.	94.00	In words: Pesos In Figures: Php	In words: Pesos In Figures: Php
Item G.27.	Sprinkler Reserve Cabinet (12 pcs Sprinkler)	lot	1.00	In words: Pesos In Figures: Php	In words: Pesos In Figures: Php
Item G.28.	UL/FM Pressure Gauge 4" Dial - 30-0-300psi, 1/2" NPT, w/ 1/2" Ball Valve	unit	2.00	In words: Pesos In Figures: Php	In words: Pesos In Figures: Php
Item G.29.	UL/FM Pressure Gauge 4" Dial 0-300psi, 1/2" NPT, w/ 1/2" Ball Valve	unit	4.00	In words: Pesos In Figures: Php	In words: Pesos In Figures: Php
Item G.30.	UL/FM Listed Fire Pump End Suction pump @ 1000GPM, 150HP, 150 psi. TDH, 380V/3Ø/60Hz w/ UL/FM Controller & Casing Relief Valve	set	1.00	In words: Pesos In Figures: Php	In words: Pesos In Figures: Php
Item G.31.	Jockey Pump End Suction pump @ 40GPM, 10HP, 155 psi. TDH, 380V/3Ø/60Hz w/ UL/FM Controller	set	1.00	In words: Pesos In Figures: Php	In words: Pesos In Figures: Php
Item G.32.	Sprinkler Alarm & Fire Alarm Control panel - Flow, Gate Valve Supervisory System Interfacing complete with supports, wiring and conduiting	lot	1.00	In words: Pesos In Figures: Php	In words: Pesos In Figures: Php
Item G.33.	Pressure Sensing Line - 15MM Ø Stainless Steel Pipe Line, Schedule 40 Series 304 complete with valves and fittings	lot	1.00	In words: Pesos In Figures: Php	In words: Pesos In Figures: Php
Item G.34.	UL/FM Automatic Air Release Valve, 300 psi, 1" NPT inlet, 1/2" NPT outlet	units	3.00	In words: Pesos In Figures: Php	In words: Pesos In Figures: Php
Item G.35.	Pipe Sleeving Complete with packing, Fire rated Sealant and escutcheon plate on both sides	lot	1.00	In words: Pesos In Figures: Php	In words: Pesos In Figures: Php
Item G.36.	Pipe Hangers/Supports & Seismic Bracing	lot	1.00	In words: Pesos In Figures: Php	In words: Pesos In Figures: Php

Item G.37.	Fire Hose Cabinet	sets	8.00	In words: Pesos In Figures: Php	In words: Pesos In Figures: Php
Item G.38.	Fire Extinguishers with Mounting accessories and Signages	units	8.00	In words: Pesos In Figures: Php	In words: Pesos In Figures: Php
Item G.39.	Ladder Rung Stainless Steel 304 and Manhole	lot	1.00	In words: Pesos In Figures: Php	In words: Pesos In Figures: Php
Item G.40.	3" Water Meter	set	1.00	In words: Pesos In Figures: Php	In words: Pesos In Figures: Php
PART H: SPORTS EQUIPMENT					
Item H.1.	Supply, Delivery, and Installation of Basketball Hoops (Basketball Accessories)	pair	1.00	In words: Pesos In Figures: Php	In words: Pesos In Figures: Php
Item H.2.	Supply and Delivery of Volleyball Poles and Nets (Volleyball Accessories)	set	1.00	In words: Pesos In Figures: Php	In words: Pesos In Figures: Php
Item H.3.	Supply and Delivery of Badminton Poles and Nets (Badminton Accessories)	set	4.00	In words: Pesos In Figures: Php	In words: Pesos In Figures: Php
Item H.4.	Supply, Delivery, and Installation of Score Board with Complete Accessories	set	1.00	In words: Pesos In Figures: Php	In words: Pesos In Figures: Php
Item H.5.	Supply and Delivery of Court Cover (Tarpaulin "Trapal" Lona)	sq.m.	515.00	In words: Pesos In Figures: Php	In words: Pesos In Figures: Php
PART I: OTHER GENERAL REQUIREMENTS					
Item I.1.	Mobilization/Demobilization	lot	1.00	In words: Pesos In Figures: Php	In words: Pesos In Figures: Php
Item I.2.	Security, Safety, and Health Provision	lot	1.00	In words: Pesos In Figures: Php	In words: Pesos In Figures: Php
TOTAL					In words: Pesos In Figures: Php

Section IX. Checklist of Technical and Financial Documents

I. TECHNICAL COMPONENT ENVELOPE

Class "A" Documents

Legal Documents

☐ (a) Valid PhilGEPS Registration Certificate (Platinum Membership) (all pages) in accordance with Section 8.5.2 of the IRR;

Technical Documents

☐ (b) Statement of the prospective bidder of all its ongoing government and private contracts, including contracts awarded but not yet started, if any, whether similar or not similar in nature and complexity to the contract to be bid; **and**

☐ (c) 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**

☐ (d) Special PCAB License in case of Joint Ventures **and** registration for the type and cost of the contract to be bid; **and**

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

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

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

☐ b. List of contractor's key personnel (*e.g.*, Project Manager, Project Engineers, Materials Engineers, and Foremen), to be assigned to the contract to be bid, with their complete qualification and experience data;

☐ c. List of contractor's major equipment units, which are owned, leased, and/or under purchase agreements, supported by proof of ownership or certification of availability of equipment from the equipment lessor/vendor for the duration of the project, as the case may be; **and**

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

Financial Documents

☐ (h) The prospective bidder's computation of Net Financial Contracting Capacity

(NFCC).

Class "B" Documents

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

II. FINANCIAL COMPONENT ENVELOPE

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

Other documentary requirements under RA No. 9184

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

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

☐ (m) Cash Flow by Quarter.

APPENDICES

The following forms that shall form part of the supplier's bid submission are downloadable in Microsoft Word forma at this link:

https://www.gppb.gov.ph/downloadable-forms/#tab-61412

Form A.

Bid Form for the Procurement of Infrastructure Projects

[shall be submitted with the Bid]

BID FORM

Date : _____

Project Identification No. : _____

To: [name and address of Procuring Entity]

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

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

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

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

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

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

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

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

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

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*]*.

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

Name: _____

Legal Capacity: _____

Signature: _____

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

Date: _____

Form B.

Authorized Representative Form

I, _____ of _____, with

Print Name of Company Owner Print Name of Company

Office address at _____, hereby authorize _____or

Print Name of representative

designated representative(s) of _____ to appear on

Print Name of Company

my behalf for the signing of documents unless I have limited my authorization to the following authorization:

_____

_____

This authorization is effective on _____. By signing this for, I revoke any previous authorizations that I have signed with regards to my authorization. This authorization shall continue in effect until revoked by me in writing.

Sincerely,

_____

Name of Company Owner

Form C.

STATEMENT OF ONGOING GOVERNMENT & PRIVATE CONTRACTS INCLUDING CONTRACTS AWARDED BUT NOT YET STARTED

[shall be submitted with the Bid]

Name of Bidder:

Bidder's Address:

Name of Contract and Amount of Contract	a. Owner Name b. Address	Contract Duration	Date of Contract	Date of Delivery	Kinds of Goods	% of Accomplishment		Value of Outstanding Works/Uncompleted Portion
						Planned	Actual	
Government								
Private								
						Total Cost		

_____

Name and Signature of Authorized Representative

_____

Date

Form D.

STATEMENT OF SINGLE LARGEST COMPLETED CONTRACT (SLCC)
SIMILAR TO THE CONTRACT TO BE BID

[shall be submitted with the Bid]

Name of Bidder: _____

Bidder's Address: _____

Name of Contract	a. Date of the Contract b. Date Started c. Date of Completion	a. Contract Duration b. Address c. Telephone Nos.	Kinds of Goods Sold	Amount of Completed Contracts	Date Delivery	End-user's Acceptance/Official Receipt/Sales Invoice issued

_____
Name and Signature Authorized Representative

_____
Date

Form E.

Format of Curriculum Vitae (CV) for ALL Proposed Personnel to be assigned to the Project

CONTRACTOR'S LETTERHEAD

(Recent ID Photo)

Proposed Position:	
FULL NAME of the Personnel:	
Profession:	
Years of Professional Experience:	
PRC ID NO. (Note: attach photocopy of PRC ID, if applicable)	
Reg. Date:	
Valid Until:	
PTR NO. ((Note: attach photocopy of PTR receipt, if applicable)	
Date & Place of Issue:	

Date of Birth:		Nationality		Years with the Firm/Entity	

INSTRUCTION:

This form should be accomplished and submitted as part of the Technical Documents.

RESPONSIBILITIES in relation to the Project:
Outline of Experience/s relative to Proposed Position in relation to the Project:
RELEVANT TRAININGS Attended (Attach photocopy of Certificate/s):
EDUCATION:

_____

SIGNATURE of the Proposed

Personnel over printed name

The **(bidder**) firmly commits to engage and assign the above person as (**position)** should the project be awarded.

SIGNATURE of Authorized Representative: _____

Name of Authorized Representative: _____

Position of Signatory: _____

Name of Bidder: _____

Address: _____

Tel. / Phone Number: _____

Email Address: _____

NOTE:

Compliance to Data Privacy Act. PEZA is committed to safeguarding the privacy and security of your personal data. The information provided in this form shall only be used in accordance with the Data Privacy Act and for the purpose for which this document is submitted. All personal information shall be handled and used only by authorized PEZA personnel. Any transmittal of personal information shall only be made with the concerned departments or units.

Form F.

COMPUTATION OF NET FINANCIAL CONTRACTING CAPACITY

Summary of the Supplier's/Distributor's/Manufacturer's assets and liabilities on the basis of the income tax return and audited financial statement, stamped "RECEIVED" by the Bureau of Internal Revenue or BIR authorized collecting agent, for the immediately preceding year.

		Year 20___
1	Total Assets	
2	Current Assets	
3	Total Liabilities	
4	Current Liabilities	
5	Net Worth (1-3)	
6	Net Working Capital	

The Net Financial Contracting Capacity (NFCC) based on the above data is computed as follows:

NFCC = K (Current Assets – Current Liabilities) minus value of all outstanding or uncompleted portions of the projects under ongoing contracts, including awarded contracts yet to be started coinciding with the contract to be bid.

Where:

K = 15

NFCC = **PhP** _____

Attached are certified true copies of the Audited Financial Statements stamped "RECEIVED" by the BIR for the years_____and_____, including the Auditor's

/Accountant's Certificate.

Date: _____

Submitted by:

Authorized Signature

Name & Title of Authorized

Signatory Name of Bidder

Bidder's Address

Contact

Number

Form G.

Sample Detailed Estimate Form

DETAILED UNIT PRICE ANALYSIS (DUPA)

Item No./Description : 900 Structural Concrete
Unit of Measurement : m^3
Output per hour : 3.72 m^3

	Designation	No. of Person/s	No. of Hour/s	Hourly Rate	Amount (PhP)
A.	Labor				
	a. Construction Foreman	1	1.00	129.43	129.43
	b. Skilled Laborer	2	1.00	95.10	190.20
	c. Unskilled Laborer	6	1.00	73.26	439.56
	Sub - Total for A				**759.19**
	Name and Capacity	**No of Unit/s**	**No. of Hour/s**	**Hourly Rate**	**Amount (PhP)**
B.	Equipment				
	a. Concrete Vibrator	2	1.00	91.25	182.50
	b. Pumpcrete	1	0.27	2,076.00	560.52
	Minor Tools (10% of Labor Cost)				
	Sub - Total for B				**743.02**
C.	Total (A + B)				1,502.21
D.	Output per Hour = 3.72 m^3				
E.	Direct Unit Cost (C ÷ D)				403.82
	Name and Specification	**Unit**	**Quantity**	**Unit Cost**	**Amount (PhP)**
F.	Materials				
	a. Ready Mix, Class AA/Class B/Class C/Class P, 7 days/14 days/ 28 days	m^3	1.05	3,475.00	3,648.75
	Sub - Total for F				**3,648.75**
G.	Direct Unit Cost (E + F)				4,052.57
H.	Overhead, Contingencies & Miscellaneous (OCM) Expenses		15% of G		607.89
I.	Contractor's Profit (CP)		10% of G		405.26
J.	Value Added Tax (VAT)		5% of (G + H + I)		253.29
K.	**Total Unit Cost**		**(G + H + I + J)**		**5,319.00**

Note:

Please refer to the DPWH DUPA format, sample is shown above.

Please ensure that all numerical values are rounded to two decimal places.

Republic of the Philippines
gppb
Government Procurement Policy Board