

PHILIPPINE BIDDING DOCUMENTS

Government of the
Republic of the Philippines

Procurement of INFRASTRUCTURE PROJECTS

**First Edition
May 2025**



Republic of the Philippines
City of Cagayan de Oro
BIDS & AWARDS COMMITTEE



BIDDING DOCUMENTS

Construction of Two-Storey Multipurpose Building at Brgy. Bayabas; SN 50 - 2026

Contract/Project Name

Barangay Bayabas, Cagayan de Oro City

Project Location

City Government of Cagayan de Oro

Procuring Entity

City Engineer's Office

Implementing Office

Date of Issue: 03 June 2026

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Glossary of Acronyms, Terms, and Abbreviations

ABC – Approved Budget for the Contract.

ADR – Alternative Dispute Resolution.

ARCC – Allowable Range of Contract Cost.

BAC – Bids and Awards Committee.

BIR – Bureau of Internal Revenue.

BSP – Bangko Sentral ng Pilipinas.

CDA – Cooperative Development Authority.

COS – Contract of Service.

CPI – Consumer Price Index.

DOLE – Department of Labor and Employment.

DTI – Department of Trade and Industry.

GCC - General Conditions of Contract.

GFI – Government Financial Institution.

GOCC – Government-Owned and/or –Controlled Corporation.

GoP – Government of the Philippines.

GPPB – Government Procurement Policy Board.

HoPE – Head of Procuring Entity.

JO – Job Order.

IRR – Implementing Rules and Regulations.

ITB – Instructions to Bidders.

LCB- Lowest Calculated Bid.

LCRB – Lowest Calculated Responsive Bid.

LGUs – Local Government Units.

LoC – Line of Credit

MAB – Most Advantageous Bid.

MARB – Most Advantageous Responsive Bid.

MEARB – Most Economically Advantageous Responsive Bid.

MYCA – Multi-Year Contracting Authority.

NFCC – Net Financial Contracting Capacity.

NGA – National Government Agency.

PCAB – Philippine Contractors Accreditation Board.

PhilGEPS - Philippine Government Electronic Procurement System.

PSA – Philippine Statistics Authority.

RA No. – Republic Act Number.

SARB – Single Advantageous and Responsive Bid.

SCC - Special Conditions of Contract.

SCRB – Single Calculated and Responsive Bid.

SEARB – Single Economically Advantageous Responsive Bid.

SEC – Securities and Exchange Commission.

SLCC – Single Largest Completed Contract.

SRRB – Single Rated and Responsive Bid.

UN – United Nations.

Definition of Terms

Bid – a signed offer, proposal, or quotation submitted by a supplier, manufacturer, distributor, contractor, consultant, or service provider in response to the requirements of the Procuring Entity as stated in the Bidding Documents. (IRR of RA No. 12009, Section 5[c]).

Bidder – a supplier, manufacturer, distributor, contractor, consultant, and service provider, whether public or private, who submits a Bid in response to the requirements of the Procuring Entity as stated in the Bidding Documents. (IRR of RA No. 12009, Section 5[d]).

Bidding Documents – the documents issued by the Procuring Entity as the basis for Bids, furnishing all information necessary to prospective bidder to prepare a Bid for the Goods, Infrastructure Projects, and Consulting Services required by the Procuring Entity. (IRR of RA No. 12009, Section 5[e])

Bill of Quantities – a list of the specific items of the Work and their corresponding unit prices, lump sums, and/or provisional sums.

Consulting Services – services for Infrastructure Projects and other types of projects or activities of the government requiring adequate external technical and professional expertise that are beyond the capability or capacity of the government 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. (IRR of RA No. 12009, Section 5[i]).

Contract – the agreement entered into between the Procuring Entity and the Contractor to execute, complete, and maintain the Works and as recorded in the Contract Form signed by the parties, including all attachments and appendices thereto and all documents incorporated by reference therein.

Contract Price – the price stated in the Notice of Award and thereafter to be paid by the Procuring Entity to the Contractor for the execution of the Works in accordance with this Contract.

Contract Time Extension (CTE) – the allowable period for the Contractor to complete the Works in addition to the original Completion Date stated in this Contract.

Contractor – 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.

Days – refers to calendar days; months to calendar months.

Dayworks – varied work inputs subject to payment on a time basis for the Contractor's employees and Equipment, in addition to payments for associated Materials and Plant.

Defect – any part of the Works not completed in accordance with the Contract.

Defects Liability Certificate – the certificate issued by the Procuring Entity upon correction of defects by the Contractor.

Defects Liability Period – the one (1) year period between contract completion and final acceptance within which the Contractor assumes the responsibility to undertake the repair of any damage to the Works at its own expense.

Drawings – graphical presentations of the Works. They include all supplementary details, shop drawings, calculations, and other information provided or approved for the execution of this Contract.

Effective Date of the Contract – the date indicated in the contract. However, the Contractor shall commence performance of its obligations only upon receipt of the Notice to Proceed.

Foreign-funded Procurement or Foreign-Assisted Project – refers to the acquisition of Goods, Consulting Services, and the contracting for Infrastructure Projects by the Government of the Philippines which are wholly or partly funded by foreign loans or grants pursuant to a Treaty or International or Executive Agreement.

Funding Source – Organization named in the SCC.

Goods – refer to (i) all items, supplies, and materials, whether in the nature of equipment, furniture, stationery, materials for construction, or personal property of any kind, needed in the transaction of public businesses or in the pursuit of any government undertaking, project or activity; or (ii) general support services which pertain to all types of services except Consulting Services and Infrastructure Projects, such as the repair and maintenance of equipment and furniture, as well as trucking, hauling, janitorial, security, and related or analogous services. Personnel Services or individual COS or JO engagements do not fall under this definition; (IRR of RA No. 12009, Section 5[n]).

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;” (IRR of RA No. 12009, Section 5[r]).

Lot – refers to one or more infrastructure projects that are grouped or bundled together based on factors, such as scope, location, or other relevant parameters, as determined by the End-User or Implementing Unit of the Procuring Entity. Each lot is distinct within the project and may be awarded as a separate contract.

MARB – refers to the award criteria in the procurement of Infrastructure where the considerations for the award of contract are the eligibility of the bidder, the responsiveness of its bid to the technical requirements, and the most advantageous bid in reference to the highest rated offer based on the quality component of the bid.

Materials – refer to all supplies, including consumables, used by the Contractor for incorporation in the Works.

MEARB – refers to the award criteria in the procurement of Infrastructure where the considerations for the award of contract are the eligibility of the bidder, the responsiveness of its bid to the technical requirements, and the determination of the most economically advantageous bid in reference to the quality-price ratio allocated to the technical and financial components of the bid.

Notice to Proceed – refers to a written notice issued by the Procuring Entity to the Contractor requiring the latter to begin the commencement of the work not later than a specified or determinable date.

Online submission – pertains to the submission of the bid for Infrastructure Projects and the bid envelopes containing the technical and financial components of the bid through electronic means or through the electronic bidding facility of the PhilGEPS, once available.

Permanent Works – refer to all permanent structures and all other project features and facilities required to be constructed and completed in accordance with this Contract which shall be delivered to the Procuring Entity, and which shall remain at the Site after the removal of all Temporary Works.

Plant – refers to the machinery, apparatus, and the like intended to form an integral part of the Permanent Works.

Procuring Entity - the organization acquiring the Infrastructure Project, as named in the SCC.

Project – refers to a specific or identified procurement covering Goods, Infrastructure Projects 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.

Program of Work – refers to the big-picture plan and comprehensive schedule that details construction-related tasks to ensure the timely and efficient delivery of the project.

Site Investigation Reports – refers to those that were included in the Bidding Documents and are factual and interpretative reports about the surface and subsurface conditions at the Site.

Slippage – refers to a delay in work execution occurring when actual accomplishment falls below the target as measured by the difference between the scheduled and actual accomplishment of the Work by the Contractor as established from the work schedule. This is actually described as a percentage of the whole Works.

Simple Infrastructure Projects – refers to construction, improvement, rehabilitation, demolition, repair, restoration, or maintenance of structures, technical facilities and systems with an Approved Budget for the Contract (ABC) not exceeding Ten Million Pesos (PhP 10,000,000.00) built at the community level for the sustenance of lives and livelihoods of the population living in a community and built according to the needs and aspirations of the community population.

Verified Report – the report submitted by the Implementing Unit to the HoPE setting forth its findings as to the existence of grounds or causes for termination and explicitly stating its recommendation for the issuance of a Notice to Terminate.

Section I. Invitation to Bid



Invitation to Bid for Construction of Two-Storey Multipurpose Building at Brgy. Bayabas; SN 50 – 2026

- 1) The City Government of Cagayan de Oro, through the Current Appropriation, Annual Budget, CY 2025, Non Office: Economic Services Sector - Infrastructure Programs and Projects - Other Development Programs and Projects - Barangay Empowerment Programs and Projects, intends to apply the sum of Nine Million Nine Hundred Ninety Nine Thousand Nine Hundred Eighty Four and 75/100 (PhP9,999,984.75) being the Approved Budget for the Contract (ABC) to payments under the contract for Construction of Two-Storey Multipurpose Building at Brgy. Bayabas; SN 50 – 2026. Bids received in excess of the ABC shall be automatically rejected at bid opening.
- 2) The City Government of Cagayan de Oro now invites bids for Construction of Two-Storey Multipurpose Building at Brgy. Bayabas; SN 50 – 2026. Completion of the Works is required Three Hundred One (301) Calendar Days. Bidders should have completed, within Five (5) Years from the date of submission and receipt of bids, a contract similar to the Project. The description of an eligible bidder is contained in the Bidding Documents, particularly, in Section II. Instructions to Bidders (ITB).
- 3) Bidding will be conducted through competitive bidding procedures using a non-discretionary “pass/fail” criterion as specified in the IRR, otherwise known as the “New Government Procurement Act (NGPA)”.

Bidding is restricted to Filipino citizens/sole proprietorships, cooperatives, and partnerships or organizations with at least sixty percent (60%) interest or outstanding capital stock belonging to citizens of the Philippines.

- 4) Interested bidders may obtain further information from City Government of Cagayan de Oro - Bids and Awards Committee and inspect the Bidding Documents at the address given below during office hours of 03 June 2026 to 12:00 noon of 25 June 2026.
- 5) A complete set of Bidding Documents may be acquired by interested bidders on office hours 03 June 2026 to 12:00 noon of 25 June 2026 from the address below upon payment of the applicable fee for the Bidding Documents, pursuant to the latest Guidelines issued by the GPPB, in the amount of Ten Thousand Pesos (PhP10,000.00). The Procuring Entity shall allow the bidder to present its proof of payment for the fees by furnishing the BAC with the original copy of the Official Receipt issued by the City Treasurer’s Office.

It may also be downloaded free of charge from the website of the Philippine Government Electronic Procurement System (PhilGEPS) and the website of the Procuring Entity, provided that bidders shall pay the applicable fee for the Bidding Documents not later than the submission of their bids.

- 6) The City Government of Cagayan de Oro will hold a Pre-Bid Conference on 11 June 2026; 2:00 P.M. at Bids and Awards Committee Conference Room, 3rd Floor

Administrative Building, City Hall, Cagayan de Oro City which shall be open to prospective bidders.

- 7) Bids must be duly received by the Bids and Awards Committee (BAC) Secretariat through manual submission at the address indicated below between 1:00 P.M. - 2:00 P.M. of 25 June 2026. Late bids shall not be accepted.
- 8) All Bids must be accompanied by a Bid Security in any of the acceptable forms and in the amount stated in **ITB** Clause 16.
- 9) Bid opening shall be on 25 June 2026; 2:00 P.M. at Bids and Awards Committee Conference Room, 3rd Floor Administrative Building, City Hall, Cagayan de Oro City. Bids will be opened in the presence of the Bidders' representatives who choose to attend the activity.
- 10) The Government of Cagayan de Oro 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 Section 70 of R.A. No. 12009, without thereby incurring any liability to the affected bidder or bidders.
- 11) For further information, please refer to:

Mr. Antonio Ramon S. Resma, Jr.
Head of the BAC Secretariat
3rd Floor Administrative Building, City Hall,
Cagayan de Oro City
Tel No. (088) – 857-3147
Baccdeo2023@gmail.com
- 12) You may visit the following websites:

For downloading of Bidding Documents:
www.cagayandero.gov.ph/www.philgeps.gov.ph

June 03, 2026

ATTY. JOEFFREY D. NAMALATA
BAC Chairperson

Section II. Instructions to Bidders

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A. General

1) Scope of Bid

1.1 The Procuring Entity named in the **BDS**, invites Bids for the [insert Procurement Project], with Project Identification Number [indicate number].

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

1.2 The winning Bidder will be expected to complete the Works by the intended completion date specified in **SCC** Clause 1.1.

2) Source of Funds

The Procuring Entity has a budget or received funds from the Funding Source named in the **BDS**, and in the amount indicated in the **BDS**. It intends to apply part of the funds received for this Project to cover eligible payments under the contract.

3) Corrupt, Fraudulent, Collusive, Coercive, and Obstructive Practices

3.1 Unless otherwise specified in the **BDS**, the Procuring Entity, as well as Bidders and Contractors, shall observe the highest standard of ethics during the procurement and execution of the contract. In pursuance of this policy, the Procuring Entity:

- a) defines, for purposes of this provision, the following terms under existing laws, rules, and regulations:
 - i) "corrupt practice" means an act by which officials in the public or private sectors improperly and unlawfully enrich themselves, others, or induce others to do so, by misusing the position in which they are placed, and includes the offering, giving, receiving, or soliciting of anything of value to influence the action of any such official in the procurement process or in contract execution; entering, on behalf of the government, into any contract or transaction manifestly and grossly disadvantageous to the same, whether or not the public officer profited or will profit thereby, and similar acts as provided in RA No. 3019.
 - ii) "fraudulent practice" means a misrepresentation of facts for purposes of influencing a procurement process or the execution of a contract to the detriment of the Procuring Entity, which includes collusive practices among Bidders (prior to or after bid submission) designed to establish bid prices at artificial, non-competitive levels and to deprive the Procuring Entity of the benefits of free and open competition.
 - iii) "collusive practices" means a scheme or arrangement between two or more Bidders, with or without the knowledge of the Procuring Entity, designed to establish bid prices at artificial, non-competitive levels.

iv) “coercive practices” means harming or threatening to harm, directly or indirectly, persons, or their property to influence their participation in a procurement process, or affect the execution of a contract;

v) “obstructive practice” is

a) deliberately destroying, falsifying, altering or concealing of evidence material to an administrative proceedings or investigation or making false statements to investigators in order to materially impede an administrative proceedings or investigation of the Procuring Entity or any foreign government/foreign or international financing institution relative to allegations of a corrupt, fraudulent, coercive or collusive practice; and/or threatening, harassing or intimidating any party to prevent the latter from disclosing its knowledge of matters relevant to the administrative proceedings or from pursuing such proceedings or investigation; or

b) acts intended to materially impede the exercise of the inspection and audit rights of the Procuring Entity or any foreign government/foreign or international financing institution herein.

b) Undertakes to reject a proposal for award upon *prima facie* determination that the Bidder recommended for award has engaged in any of the prohibited practices mentioned in this Clause for purposes of competing for the contract.

3.2 Further, the Procuring Entity will seek to impose the maximum civil, administrative, and/or criminal penalties available under the applicable laws on individuals and organizations deemed to be involved in any of the practices mentioned in **ITB** Clause 4.

3.3 Furthermore, the Funding Source and the Procuring Entity reserve the right to inspect and audit records and accounts of a Bidder or Contractor in the bidding for and performance of a contract themselves or through independent auditors as reflected in the **GCC** Clause 36.

4) Conflict of Interest

4.1 All Bidders found to have conflicting interests shall be disqualified to participate in the procurement at hand, without prejudice to the imposition of appropriate administrative, civil, and criminal sanctions. A Bidder may be considered to have conflicting interests with another Bidder in any of the events described in paragraphs (a) through (c) and a general conflict of interest in any of the circumstances set out in paragraphs (d) through (f) below:

a) A Bidder has controlling shareholders or beneficial owners in common with another Bidder;

b) A Bidder receives or has received any direct or indirect subsidy from any other Bidder;

- c) A bidder has the same legally authorized representative as that of another Bidder for purposes of this Bid;
 - d) A bidder has a relationship, directly or through third parties, that puts them in a position to have access to information about or influence on the bid of another Bidder or influence the decisions of the Procuring Entity regarding this bidding process. This may include a firm or an organization that lends, or temporarily seconds, its personnel to firms or organizations that are engaged in consulting services for the preparation related to procurement for or implementation of the project if the personnel would be involved in any capacity on the same project;
 - e) A bidder who participated as a consultant in the preparation of the design or technical specifications of the goods and related services that are the subject of the bid; or
 - f) A bidder who lends, or temporarily seconds, its personnel to firms or organizations which are engaged in consulting services for the preparation related to procurement for or implementation of the project, if the personnel would be involved in any capacity on the same project.
- 4.2 All Bidding Documents shall be accompanied by an Omnibus Sworn Statement of the Bidder that it is not related, by consanguinity or affinity up to the third civil degree, to the HoPE, Procurement Agent (if engaged), the head of the Project Management Office (PMO), the End-User or Implementing Unit or any members of the Bids and Awards Committee (BAC), Technical Working Group (TWG), and BAC Secretariat.¹
- 4.3 The Bidder shall also disclose the ultimate beneficial ownership of the entity it represents. Failure to comply shall be a ground for the automatic disqualification of the bid in consonance with Section 59 of the IRR. For this reason, relationship to the aforementioned persons within the third civil degree of consanguinity or affinity shall automatically disqualify the Bidder from participating in the procurement of contracts of the Procuring Entity notwithstanding the act of such persons inhibiting themselves from the procurement process. This Clause shall apply to the following persons and affiliates:
- a) In the case of individuals or sole proprietorships, to the Bidders and their spouses;
 - b) In the case of partnerships, to the partnership itself and its partners;
 - c) In the case of cooperatives, to the cooperative itself and members of the board of directors, general manager or chief executive officer;
 - d) In the case of a partnership, joint venture, or consortium, to the entity itself, its members or partners, as well as any person or entity that is a member of a blacklisted partnership, joint venture, or consortium; and

¹ Section 81.1 of the IRR.

- e) In the case of corporations, a single stockholder, together with their relatives up to the third civil degree of consanguinity or affinity, and their assignees, holding at least twenty percent (20%) of the shares therein, its chairperson and president, shall be blacklisted after they have been determined to hold the same controlling interest in a previously blacklisted corporation or in two corporations that have been blacklisted; the corporations of which they are part shall also be blacklisted.

5) Eligible Bidders

- 5.1 Only Bids found to be legally, technically, and financially eligible will be evaluated. For procurement of Infrastructure Projects, the following persons shall be eligible to participate in this bidding:
 - a) Duly licensed Filipino citizens or sole proprietorships;
 - b) Partnerships duly organized under the laws of the Philippines and of which at least sixty percent (60%) of the interest belongs to citizens of the Philippines;
 - c) Corporations duly organized under the laws of the Philippines, and of which at least sixty percent (60%) of the outstanding capital stock belongs to citizens of the Philippines;
 - d) Cooperatives duly organized under the laws of the Philippines; and
 - e) Persons or entities forming themselves into a Joint Venture (JV), i.e., a group of two (2) or more persons or entities that intend to be jointly and severally responsible or liable for a particular contract; Provided, however, that in accordance with relevant laws, rules, and regulations, Filipino ownership or interest of the joint venture concerned shall be at least sixty percent (60%); Provided, further, that joint ventures in which Filipino ownership or interest is less than sixty percent (60%) may be eligible where the structures to be built require the application of techniques or technologies which are not adequately possessed by a person or entity meeting the sixty percent (60%) Filipino ownership requirement; Provided, furthermore, that in the latter case, Filipino ownership or interest shall not be less than twenty-five percent (25%). For this purpose, Filipino ownership or interest shall be based on the contributions of each of the member of the joint venture as specified in their Joint Venture Agreement (JVA); Provided, finally, that the primary purpose of each member of the joint venture must be similar or related to the requirement of the project to be bid out.
- 5.2 The Procuring Entity may also invite foreign bidders when provided for under any Treaty or International or Executive Agreement as specified in the **BDS**.
- 5.3 In accordance with RA No. 4566 or the "Contractors' License Law" as amended by RA No. 11711 or "An Act Further Amending Republic Act No. 4566", the persons or entities enumerated in Section 52 of the IRR may participate in the procurement of Infrastructure Projects if it has been issued a license by the Philippine Contractors Accreditation Board (PCAB) to engage or act as a contractor.

- 5.4 The Bidder must have completed an SLCC that is similar to the procurement project to be bid, and whose value must be equivalent to at least fifty percent (50%) of the ABC, adjusted to current prices using the Philippine Statistics Authority (PSA) consumer price indices; Provided, that any change to the fifty percent (50%) requirement may be allowed, subject to the recommendation of the Procuring Entity, which shall be submitted to the GPPB for consideration; Provided, further, that contractors under Small A and Small B categories without similar experience on the procurement project to be bid may be allowed to bid if the cost of such contract is not more than the Allowable Range of Contract Cost of their registration based on the guidelines as prescribed by the PCAB.

For foreign-funded procurement, the GoP and the foreign government, or foreign or international financing institution may agree on another track record requirement, as specified in the **BDS**.

Moreover, a contract shall be considered similar to the procurement project if it has the same major categories of work. The Procuring Entity may clarify in the Bidding Documents what is regarded as major categories of work, guided by the principle of proportionality and Fit-for-Purpose approach.

- 5.5 The SLCC shall be supported by an Owner's Certificate of Final Acceptance issued by the project owner other than the Contractor, or a final rating of at least Satisfactory in the Constructors Performance Evaluation System (CPES), or a similar performance and monitoring system. In the case of contracts with the private sector, an equivalent document shall be submitted.
- 5.6 The computation of a bidder's NFCC must be at least equal to the ABC to be bid, calculated as follows:

NFCC = [(Current assets minus current liabilities) (15)] minus the value of all outstanding or uncompleted portions of the projects under ongoing contracts, including awarded contracts yet to be started, coinciding with the procurement project to be bid; Provided, That a different formula may be adopted subject to the recommendation of the Procuring Entity, which shall be submitted to the GPPB for consideration.

The value of the domestic bidder's current assets and current liabilities shall be based on the latest AFS submitted to the BIR.

For purposes of computing the foreign bidders' NFCC, the value of the current assets and current liabilities shall be based on their latest AFS prepared in accordance with international financial reporting standards.

6) Bidder's Responsibilities

- 6.1 The Bidder or its duly authorized representative shall submit a sworn statement in the form prescribed in Section IX. Philippine Bidding Documents Related Forms as required in **ITB** Clause 12.1(h)(iv).
- 6.2 Before submitting their bids, the Bidders are deemed to be knowledgeable of all existing laws, decrees, ordinances, acts and regulations of the Philippines which may affect this Project in any way.

6.3 The Bidder undertook the following responsibilities:

- a) Took steps to carefully examine and ensure full understanding and comprehension of the Bidding Document, its requirements, clauses, and provisions;
- b) Acknowledged all conditions, local or otherwise, affecting the implementation of the contract;
- c) Made an estimate of the facilities available and needed for the contract to be bid, if any;
- d) Complied with its responsibility to inquire or secure Supplemental Bid Bulletin(s);
- e) Ensured that it is not “blacklisted” or barred from bidding by the Government of the Philippines (GoP) or any of its agencies, offices, corporations, or LGUs, including foreign government, or foreign/international financing institutions whose blacklisting rules have been recognized by the GPPB; by itself or by reason of its relation, membership, association, affiliation, or controlling interest with another blacklisted person or entity;
- f) Ensured that each of the documents submitted in satisfaction of the bidding requirements is an authentic copy of the original, complete, and that all statements and information provided therein are true and correct;
- g) Authorized the HoPE or its duly authorized representative/s to verify all the documents submitted;
- h) Ensured that the signatory 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, to sign, and execute the ensuing contract, accompanied by the duly notarized Special Power of Attorney, Board or Partnership Resolution, or Secretary’s Certificate, whichever is applicable;
- i) Complied with the disclosure provision under Section 81 and 82 of RA No. 12009 and its IRR in relation to other provisions of RA No. 3019;
- j) Complied with existing labor laws and standards. Moreover, the Bidder undertakes to:
 - i) Ensure the entitlement of workers to wages, hours of work, safety and health and other prevailing conditions of work as established by national laws, rules and regulations; or Collective Bargaining Agreement (CBA) or arbitration award, if and when applicable.

In case there is a finding by the Procuring Entity or the Department of Labor and Employment (DOLE) of underpayment or non-payment of workers’ wages and wage-related benefits, the Bidder agrees that the performance security or portion of the contract amount shall be withheld in

favor of the complaining workers pursuant to appropriate provisions of RA No. 12009, without prejudice to the institution of appropriate actions under the Labor Code, as amended, and other social legislations;

- ii) Comply with Occupational Safety and Health Standards (OSHS) and correct deficiencies, if any.

In case of imminent danger, injury or death of the worker, the Bidder undertakes to suspend contract implementation pending clearance to resume from the DOLE Regional Office, in compliance with the Work Stoppage Order; and

- iii) Inform the workers of their conditions of work, labor clauses under the contract specifying wages, hours of work and other benefits under prevailing national laws, rules and regulations; or CBA or arbitration award, if and when applicable, through posting in two (2) conspicuous places in the establishment's premises.
- k) Ensured that it did not give or pay, directly or indirectly, any commission, amount, fee, or any form of consideration, pecuniary or otherwise, to any person or official, personnel or representative of the government in relation to any procurement project or activity;
- l) Examined all instructions, forms, terms, and specifications in the Bidding Documents;
- m) Determined and complied with all matters pertaining to the contract to be bid, including but not limited to: (i) the location and the nature of the contract, project, or work; (ii) climatic conditions; (iii) transportation facilities; (iv) 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 (v) other factors that may affect the cost, duration and execution or implementation of the contract, project, or work; and
- n) Ensured that all information in the Bidding Documents, including bid or supplemental bid bulletin(s) issued, are correct and consistent. The Procuring Entity shall not assume any responsibility regarding erroneous interpretations or conclusions by the prospective or eligible Bidder out of the data furnished by the Procuring Entity.

Failure to observe any of the above responsibilities shall be at the risk of the Bidder concerned;

6.4 The Bidder, by the act of submitting its bid, shall be deemed to have inspected the site, determined the general characteristics of the contract works and the conditions for this Project and examine all instructions, forms, terms, and project requirements in the Bidding Documents.

6.5 Further, the Bidder shall bear all costs associated with the preparation and submission of its bid, and the Procuring Entity shall in no case be responsible

or liable for those costs, regardless of the conduct or outcome of the bidding process.

In case of failure of bidding, the Bidding Documents fee may be applied in the re-bidding for the same Project.

- 6.6 Furthermore, the Bidder should be aware that the Procuring Entity will accept bids only from those that have paid the applicable fee for the Bidding Documents at the office indicated in the Invitation to Bid.

7) Origin of Goods and Services

Unless otherwise indicated in the **BDS**, there is no restriction on the origin of Goods, or Contracting of Works or Services other than those prohibited by a decision of the United Nations Security Council taken under Chapter VII of the Charter of the United Nations.

8) Subcontracts

- 8.1 Unless otherwise specified in the **BDS**, the Bidder may subcontract portions of the Works to an extent as may be approved by the HoPE and as stated in the **BDS**. However, the subcontracted portion shall not exceed fifty (50%), or a different percentage of the ABC, on a per project basis, as approved by the GPPB.
- 8.2 Subcontracting of any portion of the Project shall not relieve the Bidder from any liability or obligation that may arise from the contract.
- 8.3 Subcontractors must meet the eligibility criteria as stated in the **BDS** and shall submit the same eligibility documents as the general contractor. Failure of a subcontractor to meet the eligibility criteria does not affect the eligibility of the general contractor for the procurement project. In such case, the portion intended to be subcontracted to the ineligible subcontractor shall be assumed by the general contractor.
- 8.4 Subcontracting arrangement, if allowed, including the time of submission of the eligibility documents of the subcontractor, shall be disclosed in the **BDS**.

B. Contents of Bidding Documents

9) Pre-Bid Conference

- 9.1 If so specified in the **BDS**, a pre-bid conference shall be held either at the Procuring Entity's physical address and/or online through videoconferencing, webcasting, or similar technology, or a combination thereof, on the date indicated therein, to clarify and address the Bidders' questions on the technical and financial components of this Project.
- 9.2 The pre-bid conference shall be held at least twelve (12) calendar days before the deadline for the submission of and receipt of bids, but not earlier than seven (7) calendar days from the posting of the invitation to bid and other bidding documents on the PhilGEPS website.
- 9.3 Bidders are highly encouraged to attend the pre-bid conference to fully understand the Procuring Entity's requirements. While non-attendance of the

Bidder will in no way prejudice its bid, the Bidder is deemed to know any changes and/or amendments to the Bidding Documents, as may be provided in the Supplemental Bid Bulletin.

The proceedings of the pre-bid conference shall be recorded, and the corresponding minutes shall be prepared not later than five (5) calendar days after the pre-bid conference. The minutes shall be made available to prospective Bidders not later than five (5) days upon written request.

- 9.4 Decisions of the BAC amending any provision of the Bidding Documents shall be issued in writing through a Supplemental Bid Bulletin at least seven (7) calendar days before the deadline for the submission and receipt of bids.

10) Clarification and Amendment of Bidding Documents

- 10.1 Prospective bidders may request for clarification(s) on and/or interpretation of any part of the Bidding Documents. Such a request must be in writing and submitted to the BAC of the Procuring Entity at the address or electronic mail indicated in the **BDS** or through the electronic bidding facility of PhilGEPS, as may be applicable, at least ten (10) calendar days before the deadline set for the submission and receipt of Bids.
- 10.2 The BAC shall respond to the said request by issuing a Supplemental Bid Bulletin duly signed by the BAC Chairperson. It shall be made available to all those who have properly secured the Bidding Documents, at least seven (7) calendar days before the deadline for the submission and receipt of Bids.
- 10.3 Supplemental Bid Bulletins may also be issued upon the Procuring Entity's initiative for purposes of clarifying or modifying any provision of the Bidding Documents not later than seven (7) calendar days before the deadline for the submission and receipt of Bids. Any modification to the Bidding Documents shall be identified as an amendment.
- 10.4 Any Supplemental Bid Bulletin issued by the BAC shall also be posted on the PhilGEPS website, in any conspicuous place in the premises of the Procuring Entity, and on the website or social media platforms of the Procuring Entity, if available, or such other channels as may be authorized by the GPPB. It shall be the responsibility of all prospective bidders, including those who have properly secured the Bidding Documents, to inquire and secure Supplemental Bid Bulletins that may be issued by the BAC. However, Bidders who have submitted bids before the issuance of the Supplemental Bid Bulletin must be accordingly informed by the BAC, and be allowed to modify or withdraw their bids prior to the deadline for the submission and receipt of bids in accordance with ITB Clause 21.

C. Preparation of Bids

11) Language of Bids

The eligibility requirements or statements, the bids, and all other documents to be submitted to the BAC must be in English. If the eligibility requirements or statements, the bids, and all other documents submitted to the BAC are in foreign language other than English, it must be accompanied by a translation of the documents in English. The documents shall be translated by the relevant foreign government agency, the foreign government agency authorized to translate documents, or a registered

translator in the foreign bidder's country. The Bidder shall cause the authentication of the translated documents and shall be authenticated by the appropriate Philippine foreign service establishment or post or the equivalent office having jurisdiction over the foreign bidder's affairs in the Philippines. However, for Contracting Parties to the Apostille Convention, the documents shall be authenticated through an apostille by the Competent Authority, as defined in Section 20.2.9.2 of the IRR, except for countries identified by the DFA that will still require legalization (red ribbon) by the relevant Embassy or Consulate. The English translation shall govern, for purposes of interpretation of the bid.

12) Documents Comprising the Bid: Technical and Financial Components

12.1 The first bid envelope shall contain the following technical documents, including the eligibility documents:

- a) PhilGEPS Certificate of Registration (Platinum Membership) in accordance with Section 20 of the IRR;
- b) PCAB License and Registration, in case of Joint Venture (JV);
- c) Statement 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;
- d) Statement of the Bidder's SLCC, in accordance with **ITB** Clause 5.5.

The SLCC shall be supported by an Owner's Certificate of Final Acceptance issued by the project owner other than the Contractor, or a final rating of at least satisfactory in the CPES, or a similar performance and monitoring system. In case of contracts with the private sector, an equivalent document shall be submitted;

- e) NFCC computation in accordance with **ITB** Clause 5.6;
- f) Joint Venture Agreement (JVA), if applicable;
- g) Bid Security in the prescribed form and amount in accordance with **ITB** Clause 16, and validity period under **ITB** Clause 15;
- h) Project Requirements, which shall include the following:
 - i) Organizational chart of the personnel to be deployed for the procurement project to be bid;
 - ii) List of Contractor's personnel (e.g., Project Manager, Project Engineers, Materials Engineers, and Foremen), to be assigned to the procurement project to be bid, with their complete qualifications and experience data. These personnel must meet the required minimum years of experience set in the **BDS**;
 - iii) List of Contractor's major equipment units which are owned, leased, or under purchase agreements, supported by proof of ownership or certification of availability of equipment from the equipment lessor or vendor for the duration of the project, as

the case may be, which must meet the minimum requirements for the contract set in the **BDS**; and

- iv) Omnibus Sworn Statement in accordance with Section 54.3 of the IRR.
- 12.2 The second bid envelope shall contain the Financial Bid Form, which includes the bid prices and the bill of quantities, in accordance with **ITB** Clauses 13.1.
- 12.3 Whenever necessary, modifications may be made to the foregoing provisions specifically for major and specialized procurement to suit the particular needs of the Procuring Entity, subject to the approval of the GPPB.
- 12.4 All bids that exceed the ABC shall not be accepted. Unless otherwise indicated in the **BDS**, for foreign-funded procurement, the ABC shall be applied as the ceiling to bid prices provided the following conditions are met:
- a) Bidding Documents are obtainable free of charge on a freely accessible website. If payment of Bidding Documents is required by the Procuring Entity, payment could be made upon the submission of bids.
 - b) The Procuring Entity has procedures in place to ensure that the ABC is based on recent estimates made by the engineer or the responsible unit of the Procuring Entity and that the estimates are based on adequate detailed engineering and reflect the quality, supervision and risk, and inflationary factors, as well as prevailing market prices, associated with the types of works or goods to be procured.
 - c) The Procuring Entity has trained cost estimators on estimating prices and analyzing bid variances. In the case of Infrastructure Projects, the Procuring Entity must also have trained quantity surveyors.
 - d) The Procuring Entity has established a system to monitor and report bid prices relative to ABC and engineer's or Procuring Entity's estimate.
 - e) The Procuring Entity has established a monitoring and evaluation system for contract implementation to provide feedback on actual total costs of goods and works.

However, the GoP and the foreign government, or foreign or international financing institutions may agree to waive the foregoing conditions.

13) Bid Prices

- 13.1 The contract shall be for the whole Works, as described in the Bidding Documents, based on the priced Bill of Quantities submitted by the Bidder.
- 13.2 The Bidder shall fill in rates and prices for all items of the Works described in the Bill of Quantities. In case partial bids are allowed in the ITB, bids not addressing or providing all of the required items in the Bidding Documents including, where applicable, the Bill of Quantities, shall be considered non-responsive and shall be automatically disqualified. In this regard, where a required item is provided, but no price is indicated, the same shall be

considered as non-responsive, but specifying a zero (0) or a dash (-) for the said item would mean that it is being offered for free to the Government, except those required by law or regulations to be provided for.

- 13.3 For the given scope of work in the contract as awarded, all bid prices shall be considered as fixed prices, and therefore not subject to price escalation during contract implementation, except under extraordinary circumstances as specified in GCC Clause 45.

14) Bid Currencies

- 14.1 All bid prices shall be quoted in Philippine Peso unless otherwise provided in the **BDS**. 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 Daily Reference Exchange Rate Bulletin on the day of the bid opening.²
- 14.2 If so allowed in accordance with **ITB** Clause 14.1, the Procuring Entity, for purposes of bid evaluation and comparing the bid prices, will convert the currencies in which the bid price is expressed to Philippine Peso at the foreign exchange rates.
- 14.3 Unless otherwise specified in the **BDS**, payment of the contract price shall be made in Philippine Peso.

15) Bid Validity

- 15.1 Bids shall remain valid for the period specified in the **BDS** which shall not exceed one hundred twenty (120) calendar days from the date of the opening of bids.
- 15.2 Should it become necessary to extend the validity of the bids and the bid securities beyond one hundred twenty (120) calendar days, the Procuring Entity concerned shall request in writing all those who submitted bids for such extension before the expiration date therefor. Bidders, however, shall have the right to refuse to grant such extension without forfeiting their Bid Security.

16) Bid Security

- 16.1 The Bidder, at its option, shall submit a Bid Security in the form and amount as stated in the **BDS**, which may include the following:

Form of Bid Security	Amount of Bid Security (Not less than the required Percentage of the ABC)
(a) Cash or cashier's/manager's check issued by a bank. <i>For biddings conducted by LGUs, the Cashier's or Manager's check</i>	Two percent (2%)

² RA No. 8183 or "An Act to Assure Uniform Value to Philippine Coin and Currency."

<i>may be issued by other banks certified by the BSP as authorized to issue such financial instrument.</i>	
(b) Bank draft/guarantee or irrevocable Letter of Credit issued by a bank; Provided, however, that it shall be confirmed or authenticated by a local bank, if issued by a foreign bank. <i>For biddings conducted by LGUs, the Bank Draft/ Guarantee, or irrevocable letter of credit may be issued by other banks certified by the BSP as authorized to issue such financial instrument.</i>	Five percent (5%)
(c) Surety bond callable upon demand issued by a surety or insurance company duly certified by the Insurance on as authorized to issue such security.	Five percent (5%)
(d) Bid Securing Declaration	Not Applicable

The Bid Security shall be denominated in Philippine Peso and posted in favor of the Procuring Entity.

- 16.2 The Bid Security should be valid for the period specified in the **BDS**. Any bid not accompanied by an acceptable Bid Security shall be considered as non-responsive and rejected by the Procuring Entity.
- 16.3 In no case shall the Bid Security be returned later than the expiration of the bid validity period indicated in the Bidding Documents, unless it has been extended in accordance with Section 57.2 of the IRR. In case the bidder is required to extend its bid validity, the bidder may, at its discretion, substitute a Bid Securing Declaration for the extended period as a replacement of its Bid Security; Provided, that the option to substitute is indicated in the **BDS**.
- 16.4 Upon signing and execution of the contract, pursuant to **ITB** Clause 29, and the posting of the performance security pursuant to **ITB** Clause 30, the Bid Security of the successful Bidder's Bid Security will be discharged, but in no case later than its validity period as indicated in **ITB** Clause 15.
- 16.5 The Bid Security may be forfeited based on any of the following grounds, as provided under Rule VIII, X, XI, and XXI of the IRR:
- a) If a Bidder:
 - i) With the Lowest Calculated Responsive Bid (LCRB), Most Economically Advantageous Responsive Bid (MEARB), Most Advantageous Responsive Bid (MARB), Single Calculated and Responsive Bid (SCRB), Single Economically Advantageous

Responsive Bid (SEARB), or Single Advantageous Responsive Bid (SARB) withdraws, fails, refuses or is unable to: (i) submit the documents required under Section 66.5 of the IRR; (ii) enter into contract with the Procuring Entity; or (iii) post the required performance security within the period stipulated in the IRR and in accordance with **ITB** Clause 30;

- ii) Causes the delay, without justifiable cause, of the screening for eligibility, opening of bids, evaluation and post evaluation of Bids, and awarding of contracts;
- iii) Refuses to clarify or validate in writing its bid during post-qualification within a period of seven (7) calendar days from receipt of the request for clarification;
- iv) Withdraws a bid, or refuses to accept an award, or refuses or fails to enter into contract with the Procuring Entity without justifiable cause, after the approval of the HoPE for having been the declared LCRB or MEARB, as the case may be;
- v) Refuses or fails to furnish performance security within the prescribed time;
- vi) Commits of three (3) or more of any of the acts imposed with suspension, as provided under Section 99 of the IRR;
- vii) Uses force, fraudulent machinations, coercion, undue influence or pressure on any member of the BAC or any officer or employee of the Procuring Entity to take a particular action for its own favor or gain, or to the advantage of a particular bidder;
- viii) Colludes with one (1) or more bidders and submitting different bids as if they were bona fide, when they knew that one or more of them was so much higher than the other that it could not be honestly accepted and that the contract will surely be awarded to the pre-arranged lowest bid;
- ix) Maliciously submits different bids through two (2) or more persons, corporations, partnerships, or any other business entity in which it has interest, to create the appearance of competition that does not in fact exist so as to be declared as the winning bidder;
- x) Enters into an agreement with other bidder/s which call upon one to refrain from bidding for procurement contracts, or which call for withdrawal of bids already submitted, or which are otherwise intended to secure an undue advantage to any of the bidders;
- xi) Fails to faithfully disclose its relationship, regardless of the time of its discovery, with the HoPE, members of the BAC, the TWG, and the BAC Secretariat, the head of the PMO or the End-User or Implementing Unit, and the project consultants of the Procuring Entity, or of the procurement agent, whichever is

applicable, by consanguinity or affinity up to the third civil degree pursuant to Section 81 of the IRR;

- xii) Submits beneficial ownership information containing false entries;
 - xiii) Allows the use of one's name or uses the name of another for purposes of public bidding;
 - xiv) Submits eligibility requirements and bids containing false information or falsified documents or the concealment of such information that will materially alter the outcome of eligibility screening or any stage of the procurement;
 - xv) Accesses the contents of any Bid submitted to the Procuring Entity before the opening of bids, without authorization;
 - xvi) Has any documented attempt to unduly influence the outcome of the bidding;
 - xv) Employs schemes which stifle or suppress any procurement activity; or
 - xvi) Commits a third offense imposed with blacklisting under the Act by the same Procuring Entity, or a combination of three (3) violations imposed with blacklisting by the Procuring Entity and other Procuring Entities, as posted on the GPPB portal;
- b) If a Winning Bidder:
- i) Conducts poor performance or unsatisfactory quality and/or progress of work. Poor performance shall be as follows:
 - i.i) Negative slippage of fifteen percent (15%) and above within the critical path of the project due entirely to the fault or negligence of the winning bidder; or
 - i.ii) Non-compliance of the materials and workmanship with the approved specifications arising from the fault or negligence of the winning bidder.
 - ii) In case it is determined prima facie that the winning bidder has engaged, before or during the implementation of the contract, in the following unlawful deeds and behaviors relative to contract acquisition and implementation:
 - ii.i) Corrupt, fraudulent, collusive and coercive practices;
 - ii.ii) Drawing up or using forged documents; or
 - ii.iii) Using adulterated materials, means or methods, or engaging in production contrary to rules of science or trade.

- iii) Assigns or subcontracts the contract or any part thereof or substituting key personnel named in the proposal without prior written approval by the Procuring Entity;
- iv) Willfully or deliberately abandons or does not perform the project or contract by the winning bidder resulting in substantial breach thereof without lawful and/or just cause;
- v) Has its contract terminated due to its default or unlawful acts; or
- vi) Fails to comply with the provision on warranty that requires to repair any noted defect or damage to the Infrastructure Project due to the use of materials of inferior quality within ninety (90) calendar days from the issuance of the order by the HoPE to undertake such repairs.

17) Format and Signing of Bids

- 17.1 Bidders shall submit their bids through their duly authorized representative using the appropriate forms provided in Section IX. Philippine Bidding Documents Related Forms on or before the deadline specified in the **ITB** Clause 19 in two (2) separate sealed bid envelopes which shall be submitted simultaneously, whether through manual or online submission. The first shall contain the technical component of the bid, including the eligibility requirements under **ITB** Clause 12, and the second shall contain the financial component of the bid.
- 17.2 Forms as mentioned in **ITB** Clause 17.1 must be completed without any alterations to their format. No substitute form shall be accepted.
- 17.3 Each and every page of the Bid Form, including the Bill of Quantities, under Section IX hereof, shall be signed by the duly authorized representative/s of the Bidder. Failure to do so shall be a ground for the rejection of the bid.
- 17.4 Any insertions, erasures, or overwriting shall be valid only if they are signed or initialed by the duly authorized representative/s of the Bidder.

18) Sealing and Marking of Bids

- 18.1 Bidders shall enclose their technical documents described in **ITB** Clause 12 in one sealed envelope marked "TECHNICAL COMPONENT," and the financial component in another sealed envelope marked "FINANCIAL COMPONENT," sealing them all in an outer envelope marked "BID."
- 18.2 The Bid shall be typed or written in ink and shall be signed by the Bidder or its duly authorized representative/s.
- 18.3 All envelopes shall:
 - a) contain the name of the contract to be bid in capital letters;
 - b) bear the name and address of the Bidder in capital letters;

- c) be addressed to the Procuring Entity's BAC in accordance with **ITB** Clause 18.1;
 - d) bear the specific identification of this bidding process indicated in the **ITB** Clause 1.1; and
 - e) bear a warning "DO NOT OPEN BEFORE..." the date and time for the opening of bids, in accordance with **ITB** Clause 19.
- 18.4 For manually submitted bid envelopes that are not properly sealed and marked, as required in the Bidding Documents, the same shall be accepted; Provided, That the bidder or its duly authorized representative shall acknowledge such condition of the bid as submitted. On the other hand, unsealed or unmarked bid envelopes, or bids that cannot be opened or corrupted in case of online submission, shall be rejected.

The BAC shall assume no responsibility for misplaced or lost contents of the improperly sealed or marked bid, or for its premature opening.

D. Submission and Opening of Bids

19) Deadline for Submission of Bids

Bids must be received by the Procuring Entity's BAC at the address indicated in the **Invitation to Bid**, or through the e-bidding facility of the PhilGEPS, on or before the date and time indicated in the **BDS**.

20) Late Bids

Bids, including the eligibility requirements, submitted after the deadline shall be rejected by the BAC. The BAC shall record in the Minutes of the Meeting the submission and opening of bids, the Bidder's name, its representative, and the time the late bid was submitted.

21) Modification and Withdrawal of Bids

21.1 Bidders may modify their bids before the deadline for the submission and receipt of bids.

- a) For manual submission and receipt of bids, the Bidders shall not be allowed to retrieve their original bid, but shall only be allowed to submit the bid modification by sending another bid, equally sealed, properly identified, linked to its original bid, and marked as a "modification," thereof, and stamped "received" by the BAC. Bid modifications received after the applicable deadline shall not be considered and shall be returned to the bidder unopened.
- b) For online submission of bids, the Bidders shall not be allowed to retrieve their original Bid, but shall only be allowed to submit the bid modification, send another Bid equally secured, properly identified labelled as a "modification" of the one previously submitted. The time indicated in the latest bid receipt page generated shall be the official time of submission. Bids modification submitted after the applicable deadline shall not be accepted.

- 21.2 Bidders may withdraw their bids in writing before the deadline for submission and receipt of bids. Withdrawal of bids after the applicable deadline shall be subject to appropriate sanctions as prescribed in the IRR.

Bidders may also express their intention not to participate in the bidding in writing, which should be received by the BAC before the deadline for submission and receipt of bids. Bidders that withdraw their bids shall no longer be allowed to submit another bid for the same contract, directly or indirectly.

- 21.3 No bid may be modified after the deadline for submission and receipt of bids. Further, no bid may be withdrawn in the interval between the deadline for submission and receipt of bids, and the expiration of bid validity specified by the Bidder in the Financial Bid Form. Withdrawal of bid during this interval shall result in the forfeiture of the Bidder's Bid Security pursuant to **ITB** Clause 16.5, and the imposition of administrative sanctions as prescribed by RA No. 12009 and without prejudice to the imposition of civil and criminal sanctions as provided under applicable laws.

Alternative Bids shall be rejected. For this purpose, Alternative Bid shall pertain to an offer made by a bidder in addition or as a substitute to its original bid, which may be included as part of its original bid or submitted separately. A bid with options shall likewise be considered an Alternative Bid regardless of whether said bid proposal is contained in a single envelope or submitted in two (2) or more separate bid envelopes.

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.

Each Bidder shall submit only one Bid, either individually or as a partner in a JV. A Bidder who submits or participates in more than one bid (other than as a subcontractor if a subcontractor is permitted to participate in more than one bid) will cause all the proposals with the Bidder's participation to be disqualified. This shall be without prejudice to any applicable criminal, civil and administrative penalties that may be imposed upon the persons and entities concerned.

22) Opening and Preliminary Examination of Bids

- 22.1 The BAC shall open the bids in public, immediately after the deadline for submission and receipt of bids, as specified in the **BDS**. In case the Bids cannot be opened as scheduled due to justifiable reasons, the BAC shall take custody of the submitted Bids and reschedule the opening of Bids on the next working day or at the soonest possible time, through the issuance of a Notice of Postponement to be posted on the PhilGEPS website and the website of the Procuring Entity concerned.

- 22.2 The manner of opening of the bids for Infrastructure Projects shall depend on the award criterion to be adopted, as follows:

a) For LCRB and MEARB, the BAC shall open the technical and financial proposals on the same day; and

- b) For MARB, only the technical proposals shall be opened while the financial proposals shall remain unopened and shall be kept securely by the BAC until the specified time of their opening as indicated in the **BDS**. Only the financial proposals of the bidders who have met the highest technical score for MAB shall be opened.
- 22.3 The Procuring Entity shall prepare the minutes of the proceedings of the bid opening that shall include, as a minimum: (a) names of Bidders, their bid price (per lot, if applicable, and/or including discount, if any), bid security, findings of preliminary examination, and whether there is a withdrawal or modification; and (b) attendance sheet. The BAC members shall sign the abstract of bids as read.
- 22.4 The Bidders or their duly authorized representatives may attend the opening of bids. The BAC shall ensure the integrity, security, and confidentiality of all submitted bids. The Abstract of bids, as read, and the minutes of the bid opening shall be made available to the public, upon written request and payment of a specified fee to recover the cost of materials.
- 22.5 To ensure transparency and accurate representation of the bid submission, the BAC Secretariat shall notify in writing all bidders whose bids it has received through mail at its PhilGEPS-registered physical address or official e-mail address. The said notice shall be issued within seven (7) calendar days from the date of the bid opening.

E. Evaluation and Comparison of Bids

23) Process to be Confidential

- 23.1 Members of the BAC, its staff and personnel, Secretariat, and TWG, as well as Observers, are prohibited from making or accepting any communication with any bidder regarding the evaluation of their bids until the issuance of the Notice of Award, unless otherwise allowed in the case of **ITB** Clause 24.
- 23.2 Any effort by a Bidder to influence the Procuring Entity in the Procuring Entity's decision in respect of bid evaluation, bid comparison or contract award will result in the rejection of the bid.

24) Clarification of Bids

To assist in the evaluation, comparison, and post-qualification of the bids, the Procuring Entity may ask in writing any Bidder for a clarification of its bid. All responses to requests for clarification shall be in writing. Any clarification submitted by a Bidder in respect to its bid that is not in response to the request of the Procuring Entity shall not be considered.

25) Detailed Evaluation and Comparison of Bids

- 25.1 The Procuring Entity's evaluation of bids shall be based on the bid price quoted in the Bid Form, which includes the Bill of Quantities.
- 25.2 The Procuring Entity will undertake the detailed evaluation and comparison of the bids which have passed the opening and preliminary examination of bids, pursuant to **ITB** Clause 22, to determine the Lowest Calculated Bid (LCB),

Most Economically Advantageous Bid (MEAB), and Most Advantageous Bid (MAB).

25.3 The award criterion shall be determined as follows:

a) For LCB:

- i) The detailed evaluation of the financial component of the bids, to establish the correct calculated prices of the bids; and
- ii) The ranking of the total bid prices as so calculated from the lowest to highest, where the bid with the lowest price shall be identified as the LCB.

b) For MEAB, the BAC shall evaluate the quality and price proposals to determine the MEAB using the following steps:

- i) The quality proposal together with the price proposal shall be considered in the evaluation of bids. The quality proposals shall be evaluated first using the criteria in the **BDS**. The price proposals of the bids that meet the minimum quality score shall then be opened.
- ii) The price and quality proposals shall be given corresponding weights with the price proposal given a minimum weight of fifteen percent (15%) up to a maximum of forty percent (40%). The weight of the quality criteria shall be adjusted accordingly such that their total weight in percent together with the weight given to the price proposal shall be equal to one hundred percent (100%).
- iii) To further promote green public procurement, the sustainability of materials or structures with green specifications shall be given greater weight in the evaluation of bids. As approved by the BAC, the exact weights shall be indicated in the **BDS**. The BAC shall rank the bidders in descending order based on the combined numerical ratings of their quality and price proposals. The bidder with the best overall score using the quality-price ratio shall be referred to as the MEAB.
- iv) The HoPE shall approve or disapprove the recommendations of the BAC within two (2) calendar days after receipt of the results of the evaluation from the BAC.

The quality component shall be assessed on the basis of criteria with corresponding numerical weights indicated in the **BDS**, which may include qualitative, environmental, or social aspects linked to the subject matter of the contract. These may include any or a combination of the following:

- a) Quality and technical merit, including technical competence and a credible track record;
- b) Aesthetic and functional design and characteristics;
- c) Approach and methodology;
- d) Accessibility;

- e) Tools and equipment;
- f) Social, environmental, economic, and innovative characteristics;
- g) Organization, qualification, and experience of employees or staff assigned to perform the contract;
- h) Ongoing contracts and work commitments; or
- i) Other relevant criteria in relation to the subject Infrastructure Projects to be procured.

c) For MAB

- i) The BAC shall evaluate the quality proposals to determine the MAB using the quality components. The quality components shall be assessed on the basis of the criteria with corresponding numerical weights indicated in the **BDS** to determine the bidder with the highest technical rating.
- ii) The second bid envelope of the bidder obtaining the highest technical rating shall be opened. If the financial proposal is equal to or lower than the ABC, the bid shall be accepted and determined as the MAB; otherwise, the same shall be rejected and the bidder will be disqualified.

25.4 In order to eliminate bias in evaluating the quality proposals, it is recommended that the highest and lowest scores for each bidder for each criterion shall not be considered in determining the average scores of the bidders, except when the evaluation is conducted in a collegial manner.

25.5 The BAC shall immediately conduct a detailed evaluation of all bids using non-discretionary criteria in considering the following:

- a) Completeness of the bid. Unless the **BDS** allows partial bids, bids not addressing or providing all of the required items in the BDS shall be considered non-responsive and, thus, automatically disqualified.

However, when no price or a zero (0) or a dash (-) is indicated in a required item in the bid form, the same shall be construed that it is being offered for free to the Government, except those required by law or regulations to be provided for; and

- b) Arithmetical corrections. The BAC shall consider computational errors and omissions to enable proper comparison of all eligible bids. It may also consider bid correction if expressly allowed in the **BDS**. Any adjustment shall be calculated in monetary terms to determine the calculated prices.

25.6 Based on the detailed evaluation of bids, those that comply with the above-mentioned requirements shall be ranked in the ascending order of their total calculated bid prices, as evaluated and corrected for computational errors, discounts and other modifications, to identify the LCB, MEAB, or MAB. Total calculated bid prices, as evaluated and corrected for computational errors,

discounts and other modifications, which exceed the ABC shall not be considered, unless otherwise indicated in the **BDS**.

- 25.7 The BAC shall evaluate all bids on an equal footing to ensure fair and competitive bid comparison. For this purpose, all bidders shall be required to include in their bids the cost of all taxes, such as, but not limited to, value-added tax (VAT), income tax, local taxes, and other fiscal levies and duties. Such bids, including said taxes, shall be the basis for the bid evaluation and comparison.
- 25.8 If so indicated pursuant to **ITB** Clause 1.1, bids may be submitted for individual lots, or for any combination thereof, provided that all bids and combinations of bids 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 prices quoted shall correspond to all of the requirements specified for each lot. Bid Security as required by **ITB** Clause 16 shall be submitted for each contract (lot) separately. The basis for evaluation of lots is specified in **BDS** Clause 25.5 (a).

26) Post - Qualification

- 26.1 The BAC shall determine to its satisfaction whether the Bidder that is evaluated as having submitted the LCB, MEAB, or MAB, as the case may be, complies with and is responsive to all the requirements and conditions specified in **ITB** Clauses 5 and 12. The Bidder, within a non-extendible period of five (5) calendar days from receipt of notice from the BAC that it submitted the LCB, MEAB, or MAB, shall submit all the eligibility documents supporting its PhilGEPS Certificate of Registration (Platinum Membership), its latest income and business tax returns filed for the preceding quarter which should not be earlier than two (2) quarters from the date of submission and receipt of bid, and other appropriate licenses and permits required by law and stated in the **BDS**.
- 26.2 Failure to submit any of the post-qualification requirements on time, or a finding against the veracity thereof, shall disqualify the Bidder for award; Provided, That in the event that a finding against the veracity of any of the documents submitted is made, it shall cause the forfeiture of the Bid Security.
- 26.3 The determination shall be based upon an examination of the documentary evidence of the Bidder's qualifications submitted pursuant to **ITB** Clause 12, as well as other information as the Procuring Entity deems necessary and appropriate, using a non-discretionary "pass/fail" criterion, which shall be completed within a period of twelve (12) calendar days.
- 26.4 If the BAC determines that the bidder with the LCB, MEAB, or MAB passes all the criteria for post-qualification, it shall declare the said bid as the LCRB, MEARB, MARB, SCB, SEAB, or Single Advantageous Bid (SAB) and recommend to the HoPE the award of contract to the said bidder at its submitted bid price or its calculated bid price, whichever is lower or, in the case of quality-based evaluation procedure, submitted bid price or its negotiated price, whichever is lower.

If, however, the BAC determines that the bidder with the LCB, MEAB, MAB, SCB, SEAB, or SAB fails to meet the post-qualification criteria, it shall

immediately notify the Bidder in writing of its post-disqualification and the grounds for such determination.³

- 26.5 Immediately after the BAC has notified the first bidder of its post-disqualification, and notwithstanding any pending request for reconsideration thereof, the BAC shall initiate and complete the same post-qualification process on the bidder with the second LCB, MEAB, or MAB. If the second bidder passes the post-qualification and provided that the request for reconsideration of the first bidder has been denied, the second bidder shall be post-qualified as the bidder with the LCB, MEAB, or MAB.
- 26.6 If the second bidder, however, fails the post-qualification, the procedure for post-qualification shall be repeated for the bidder with the next LCB, MEAB, or MAB and so on, until the LCRB, MEARB, or MARB, as the case may be, is determined for award, subject to the procedure of Notice and Execution of Award.
- 26.7 Within a period not exceeding ten (10) calendar days from the determination by the BAC of the LCRB, MEARB, MARB, SCRB, SEARB, or SARB and the recommendation to award the contract, the HoPE or its duly authorized representative shall approve or disapprove the said recommendation.
- 26.8 In case of approval, the HoPE or its duly authorized representative shall immediately issue the Notice of Award to the bidder with the LCRB, MEARB, MARB, SCRB, SEARB, or SARB, as the case may be.

In the event that the approving authority shall disapprove the resolution on the award of the contract, such disapproval shall be based only on valid, reasonable, and justifiable grounds as enumerated under Section 70 of the IRR to be expressed in writing. A copy of the decision disapproving the resolution shall be furnished to the BAC and the bidder.

27) Reservation Clause

- 27.1 Notwithstanding the eligibility or post-qualification of a bidder and without incurring any liability, the HoPE or its duly authorized representative at any stage of the procurement, reserves the right to review its qualifications, reject any and all bids, declare a failure of bidding or not award the contract in the following situations:
 - a) If it has reasonable grounds to believe that a misrepresentation has been made by the said bidder; or
 - b) If it has reasonable grounds to believe that there has been a change in the bidder's capability to undertake the project from the time it submitted its eligibility requirements.

Should such review uncover any misrepresentation made in the eligibility and bidding requirements, statements or documents, or any changes in the situation of the Bidder which will adversely affect its capability to undertake the Project so that it no longer meets the prescribed eligibility or bid evaluation criteria, the Procuring Entity shall consider the said Bidder as

³ Sec 63.5 of the IRR.

ineligible and disqualify it from participating further in the bidding process or being awarded the contract.

27.2 Based on the following grounds, the HoPE or its duly authorized representative reserves the right to reject any and all Bids, declare a Failure of Bidding at any time prior to the contract award, or not to award the contract, without thereby incurring any liability, and make no assurance that a contract shall be entered into as a result of the bidding:

- a) If there is *prima facie* evidence of collusion between appropriate public officers or employees of the Procuring Entity, or between the BAC and any of the bidders, or if the collusion is between or among the bidders themselves, or between a bidder and a third party, including any act which restricts, suppresses or nullifies or tends to restrict, suppress or nullify competition or influences or tends to influence the bidding process;
- b) If the BAC is found to have failed in complying with the applicable law or in following the prescribed bidding procedures; or
- c) If there are any justifiable and reasonable ground where the award of the contract will not redound to the benefit of the government, in instances where (i) the physical and economic conditions have significantly changed so as to render the project no longer economically, financially or technically feasible as determined by the HoPE; (ii) the Project is no longer necessary as determined by the HoPE; and (iii) the source of funds for the Project has been withheld or reduced through no fault of the Procuring Entity.

F. Award of Contract

28) Contract Award

28.1 Subject to **ITB** Clause 26, the HoPE or its duly authorized representative shall award the contract to the Bidder whose bid has been determined to be the LCRB, MEARB, MARB, SCRB, SEARB, or SARB, as the case may be.

28.2 Prior to the expiration of the period of bid validity, the Procuring Entity shall notify the winning Bidder in writing that its bid has been accepted, through a Notice of Award duly received by the Bidder or its representative personally or by registered mail or electronically, receipt of which must be confirmed in writing within two (2) days by the Bidder with the LCRB, MEARB, MARB, SCRB, SEARB, or SARB, as applicable, and submitted personally or sent by registered mail or electronically to the Procuring Entity.

28.3 Within ten (10) calendar days from receipt by the winning bidder of the Notice of Award, the following conditions should be complied with before the contract may be awarded:

- a) Submission of the following documents:
 - i) Valid JVA, if applicable;
 - ii) The SEC Certificate of Registration of the foreign corporation, if applicable; or

- iii) Valid PCAB license and registration for the type and cost of the Project for foreign bidders when the Treaty or International or Executive Agreement expressly allows submission of such license and registration as a pre-condition to the Notice of Award.
- b) Posting of the performance security in accordance with **ITB** Clause 30; and
- c) Signing of the contract as provided in **ITB** Clause 29.

29) Signing of the Contract

- 29.1 Within ten (10) calendar days from receipt of the Notice of Award, the winning Bidder shall post the required performance security, sign and date the contract, and return it to the Procuring Entity.
- 29.2 The Procuring Entity shall enter into a contract with the successful Bidder within the same ten (10) calendar day period provided that all the documentary requirements are complied with.
- 29.3 The following documents shall form part of the contract:
 - a) Contract Agreement;
 - b) Bidding Documents;
 - c) Winning Bidder's bid, including the technical and financial proposals, and all other documents/statements submitted (e.g., Bidder's response to request for clarifications on the bid), including corrections to the bid, if any, resulting from the Procuring Entity's bid evaluation;
 - d) Performance Security;
 - e) Notice of Award of Contract; and
 - f) Other contract documents that may be required by existing laws and/or specified in the **BDS**.

30) Performance Security

- 30.1 To guarantee the faithful performance by the winning bidder of its obligations under the contract, it shall post a performance security prior to the signing of the contract. Furthermore, the successful bidder shall be required to update the performance security posted before to the issuance of a variation order, if any.

- 30.2 Sectors enumerated under Section 76.1⁴ of the IRR may be allowed to post Performance Securing Declaration (PSD) as specified in the **BDS**.
- 30.3 The performance security shall be in a form selected by the Procuring Entity in the amount indicated in the **BDS**, which shall not be less than the percentage of the total contract price in accordance with the following price schedule:

Form of Performance Security	Amount of Performance Security (Not less than the Percentage of the Total Contract Price)
a) Cash or Cashier's or Manager's check issued by a bank. <i>For biddings conducted by LGUs, the cashier's or manager's check may be issued by other banks certified by the BSP as authorized to issue such financial instrument.</i>	Ten percent (10%)
b) Bank draft or guarantee or irrevocable Letter of Credit issued by a local bank. If issued by a foreign bank, it shall be confirmed or authenticated by a local bank.	
c) Surety bond callable upon demand issued by a surety or insurance company duly certified by the IC as authorized to issue such security.	Thirty Percent (30%)

- 30.4 The performance security shall be denominated in Philippine Peso and posted in favor of the Procuring Entity, which shall be forfeited in the event it is established that the winning bidder is in default in any of its obligations under the contract.

31) Notice to Proceed

The Procuring Entity shall issue the Notice to Proceed to the winning Bidder not later than three (3) calendar days from the date of approval of the contract by the

⁴ Section 76.1. The GPPB, once data is available from relevant agencies, shall maintain a registry of entities belonging to the following sectors:

- a) Farmers as certified by the Department of Agriculture (DA);
- b) Fisherfolk as certified by the Bureau of Fisheries and Aquatic Resources (BFAR);
- c) Persons with disabilities as certified by the National Council for Disability Affairs (NCDA) pursuant to RA No. 7277, otherwise known as the Magna Carta for Disabled Persons, as amended;
- d) Solo parents as certified by the Department of Social Welfare and Development (DSWD); e) Microenterprises and social enterprises as certified by the MSMED Council;
- f) Startups, spin-offs, and other forms of entity involved in science, technology, and innovation activities as certified by the DTI, DICT, NIC or the Department of Science and Technology (DOST), as may be applicable;
- g) Cooperatives duly registered with the CDA pursuant to RA No. 6938, otherwise known as the Cooperative Code of the Philippines, as amended; and
- h) Other relevant sectors as may be determined by the GPPB to ensure inclusivity and diversity in the procurement process.

appropriate signatories. All notices called for by the terms of the contract shall be effective only at the time of receipt thereof by the successful Bidder.

32) Protest Mechanism

Decisions of the BAC in all stages of procurement may be protested to the HoPE in accordance with Section 83 of the IRR.

Section III. Bid Data Sheet

Bid Data Sheet

ITB Clause	
1.1	<p>The Procuring City Government of Cagayan de Oro</p> <p>The Project title is Construction of Two-Storey Multipurpose Building at Brgy. Bayabas; SN 50 - 2026</p> <p>The identification number of the Contract is CEO26-22030.</p>
2	<p>The Funding Source is:</p> <p>2.1 The GOP through the source of funding as indicated below for the funding year 2025, in the amount of Nine Million Nine Hundred Ninety Nine Thousand Nine Hundred Eighty Four and 75/100 (₱9,999,984.75).</p> <p>2.2 The source of funding is:</p> <p style="padding-left: 40px;">LGUs, the Annual or Supplemental Budget, as approved by the <i>Sanggunian</i>.</p>
3.1	No further instructions.
5.2	Bidding is restricted to eligible bidders as defined in ITB Clause 5.2.
5.4	<p>The required track record shall be the following: PCAB License under General Engineering, at least Small B Size Range</p> <p>Contracts similar to the Project shall be those described as follows: Construction of Two-Storey Multipurpose Building.</p>
7	No further instructions.
8.1	“Subcontracting is not allowed.”
8.3	“Not applicable.”
8.4	“Subcontracting is not allowed.”
9.1	The Procuring Entity will hold a pre-bid conference for this Project on <u>11 June 2026; 2:00 P.M.</u> at Bids and Awards Committee Conference Room, 3rd Floor Administrative Building, City Hall, Cagayan de Oro City.
10.1	The Procuring Entity’s address is:

	<p>Capistrano – Hayes Streets City Hall, Cagayan de Oro City</p> <p>Contact person:</p> <p>Mr. Antonio Ramon S. Resma, Jr. Head of the BAC Secretariat 3rd Floor Administrative Building, City Hall, Cagayan de Oro City Tel No. (088) – 881-1567 baccdeo2023@gmail.com</p>																																	
12.1(h)(ii)	<p>The minimum work experience requirements for key personnel are the following:</p> <table border="1"> <thead> <tr> <th><u>Key Personnel</u></th> <th><u>General Experience</u></th> <th><u>Relevant Experience</u></th> </tr> </thead> <tbody> <tr> <td><u>Project Engineer (1)</u></td> <td><u>2 Years</u></td> <td><u>2 Years</u></td> </tr> <tr> <td><u>Materials Engineer (1)</u></td> <td><u>2 Years</u></td> <td><u>2 Years</u></td> </tr> <tr> <td><u>Foreman (1)</u></td> <td><u>2 Years</u></td> <td><u>2 Years</u></td> </tr> <tr> <td><u>First Aider (1)</u></td> <td><u>2 Years</u></td> <td><u>2 Years</u></td> </tr> <tr> <td><u>Safety Officer (1)</u></td> <td><u>2 Years</u></td> <td><u>2 Years</u></td> </tr> <tr> <td><u>Skilled Personnel (10)</u></td> <td></td> <td></td> </tr> <tr> <td><u>Unskilled Personnel (20)</u></td> <td></td> <td></td> </tr> </tbody> </table>	<u>Key Personnel</u>	<u>General Experience</u>	<u>Relevant Experience</u>	<u>Project Engineer (1)</u>	<u>2 Years</u>	<u>2 Years</u>	<u>Materials Engineer (1)</u>	<u>2 Years</u>	<u>2 Years</u>	<u>Foreman (1)</u>	<u>2 Years</u>	<u>2 Years</u>	<u>First Aider (1)</u>	<u>2 Years</u>	<u>2 Years</u>	<u>Safety Officer (1)</u>	<u>2 Years</u>	<u>2 Years</u>	<u>Skilled Personnel (10)</u>			<u>Unskilled Personnel (20)</u>											
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14.1	<p>The bid prices shall be quoted in Philippine Peso.</p>																																	
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15.1	<p>Bids will be valid for One Hundred Twenty (120) days from bid opening.</p>																																	
16.1	<p>The Bid Security shall be in the form of a Bid Securing Declaration, or any of the choose at least two (2) from any of the following:</p> <p style="padding-left: 40px;">Bid Security in the form of Cash in the amount of not less than ₱199,999.70 [2% of ABC]; or</p> <p style="padding-left: 40px;">Bid Security in the form of Surety Bond in the amount of not less</p>																																	

	than ₱499,999.24 [5% of ABC].
16.2	The Bid Security shall be valid until 22 October 2026.
16.3	Substitution of the bid security is not allowed.
19	The address for submission of bids is Bids and Awards Committee Conference Room, 3rd Floor Administrative Building, City Hall, Cagayan de Oro City. The deadline for submission of bids is <u>2:00 P.M. of 25 June 2026</u> .
21.5	No further instructions.
22.1	The date and time of bid opening is <u>2:00 P.M. of 25 June 2026</u> . The place of bid opening is Bids and Awards Committee Conference Room, 3rd Floor Administrative Building, City Hall, Cagayan de Oro City.
22.2(b)	Not applicable
25.3 (b)(i)	Not applicable
25.3 (b)(iii)	Not applicable
25.3(b)	Not applicable
25.3 (c)(i)	Not applicable
25.5 (a)	Partial bid is not allowed.
25.5 (b)	Bid correction is not allowed.
25.6	No further instructions.
26.1	None
29.3(f)	Construction schedule and S-curve, manpower schedule, construction methods, equipment utilization schedule, construction safety and health program approved by the DOLE, and Program Evaluation and Review Technique (PERT), Critical Path Method (CPM).
30.2	Posting Performance Securing Declaration in lieu of performance security may be allowed in this Project.
30.3	The Performance Security shall be in any of the following forms: In the form of Surety Bond in the amount of not less than <u>₱2,999,995.43</u>

	[30% of <i>the contract price</i>].
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Section IV. General Conditions of Contract

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1) General Terms

In this Contract, the following terms shall be interpreted as indicated:

- 1.1 The **Intended Completion Date** refers to the date specified in the **SCC** when the Contractor is expected to have completed the Works. The intended Completion Date may be revised only by the Procuring Entity by issuing an extension of time or an acceleration order.
- 1.2 The **Procuring Entity** is the party who employs the Contractor to carry out the Works stated in the **SCC**.
- 1.3 The **Site** is the place provided by the Procuring Entity where the Works shall be executed and any other place or places which may be designated in the **SCC**, or notified to the Contractor by the Procuring Entity as forming part of the Site.
- 1.4 The **Start Date**, as specified in the **SCC**, is the date when the Contractor is obliged to commence execution of the Works. It does not necessarily coincide with any of the Site Possession Dates.
- 1.5 **Work(s)** refer to the Permanent Works and Temporary Works to be executed by the Contractor in accordance with this Contract, including (i) the furnishing of all labor, materials, equipment and others incidental, necessary or convenient to the complete execution of the Works; (ii) the passing of any tests before acceptance by the Procuring Entity; (iii) and the carrying out of all duties and obligations of the Contractor imposed by this Contract as described in the **SCC**. In line with this, Temporary Works are works designed, constructed, and installed by the Contractor that are needed for construction or installation of the Permanent Works, which are subsequently removed.

2) Interpretation

- 2.1 In interpreting the Conditions of Contract, singular also means plural, male also means female or neuter, and the other way around. Headings have no significance. Words have their normal meaning under the language of this Contract unless specifically defined. The Procuring Entity will provide instructions clarifying queries about the Conditions of Contract.
- 2.2 If sectional completion is specified in the **SCC**, references in the Conditions of Contract to the Works, the Completion Date, and the Intended Completion Date apply to any Section of the Works (other than references to the Completion Date and Intended Completion Date for the whole of the Works).
- 2.3 The documents forming this Contract shall be interpreted in the following order of priority:
 - a) Contract Agreement;
 - b) Bid Data Sheet;
 - c) Instructions to Bidders;
 - d) Addenda to the Bidding Documents;

- e) Special Conditions of Contract;
- f) General Conditions of Contract;
- g) Specifications;
- h) Bill of Quantities; and
- i) Drawings.

3) **Governing Language and Law**

- 3.1 This Contract shall be interpreted in accordance with the laws of the Republic of the Philippines.
- 3.2 This Contract has been executed in the English language, which shall be the binding and controlling language for all matters relating to the meaning or interpretation of this Contract. All correspondence and other documents pertaining to this Contract which are exchanged by the parties shall be written in English.

4) **Communications**

Communications between parties that are referred to in the Conditions shall be effective only if made in writing. A notice shall be effective only when it is received by the concerned party.

5) **Possession of Site**

- 5.1 On the date specified in the **SCC**, the Procuring Entity shall grant the Contractor possession of so much of the Site as may be required to enable it to proceed with 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 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.
- 5.2 If possession of a portion is not given by the date stated in the **SCC** Clause 1.3, 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 shall be in accordance with **GCC** Clause 44.
- 5.3 The Contractor shall bear all costs and charges for special or temporary right-of-way required by it in connection with access to the Site. The Contractor shall also provide at its own cost any additional facilities outside the Site required by it for purposes of the Works.
- 5.4 The Contractor shall allow the Procuring Entity and any person authorized by the Procuring Entity access to the Site and to any place where work in connection with this Contract is being carried out or is intended to be carried out.

6) The Contractor's Obligations

- 6.1 The Contractor shall carry out the Works properly and in accordance with this Contract. The Contractor shall provide all supervision, labor, Materials, Plant and Contractor's Equipment, which may be required. All Materials and Plant on Site shall be deemed to be the property of the Procuring Entity.
- 6.2 The Contractor shall commence execution of the Works on the Start Date and shall carry out the Works in accordance with the Program of Work submitted by the Contractor, as updated with the approval of the Procuring Entity, and complete them by the Intended Completion Date.
- 6.3 The Contractor shall be responsible for the safety of all activities on the Site.
- 6.4 The Contractor shall carry out all instructions of the Procuring Entity that comply with the applicable laws where the Site is located.
- 6.5 The Contractor shall employ the key personnel named in the Schedule of Key Personnel, as referred to in the **SCC**, 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.
- 6.6 If the Procuring Entity asks the Contractor to remove a member of the Contractor's staff or work force, for justifiable cause, the Contractor shall ensure that the person leaves the Site within seven (7) days and has no further connection with the Work in this Contract.
- 6.7 During Contract implementation, the Contractor and its subcontractors shall abide at all times by all labor laws, including child labor related enactments, and other relevant rules.
- 6.8 The Contractor shall submit to the Procuring Entity for consent the name and particulars of the person authorized to receive instructions on behalf of the Contractor.
- 6.9 The Contractor shall cooperate and share the Site with other contractors, public authorities, utilities, and the Procuring Entity between the dates given in the schedule of other contractors particularly when they shall require access to the Site. The Contractor shall also provide facilities and services for them during this period. The Procuring Entity may modify the schedule of other contractors, and shall notify the Contractor of any such modification thereto.
- 6.10 Should anything of historical or other interest or of significant value be unexpectedly discovered on the Site, it shall be the property of the Procuring Entity. The Contractor shall notify the Procuring Entity of such discoveries and carry out the Procuring Entity's instructions in dealing with them.

7) Subcontracting

- 7.1 Unless otherwise indicated in the **SCC**, the Contractor shall not subcontract portions of the Works beyond the percentage specified in **BDS** Clause 8.1. If subcontracting is allowed, the arrangement, including the timing for submission of the subcontractor's eligibility documents, shall be disclosed.

7.2 For subcontracting arrangements, the following rules shall apply for both locally-funded projects and to projects financed through Official Development Assistance, except those covered by treaty, or international, or executive agreements:

- a) The subcontracted portion of the contract shall be subject to the approval of the HoPE and the following conditions:
 - i) The subcontracted portion shall not exceed fifty percent (50%), or a different percentage on a per project basis as approved by the GPPB. The threshold percentages fixed herein shall be subject to the periodic review and adjustments as may be deemed appropriate by the GPPB; and
 - ii) The subcontracted portion shall be limited to components that are not deemed "significant or material" to the project as determined by the Procuring Entity.
- b) Subcontracting arrangement, if allowed, including the time of submission of the eligibility documents of the subcontractor, shall be disclosed in the Bidding Documents;
- c) Subcontractors must meet the eligibility criteria and shall submit the same eligibility documents as the general contractor.

Failure of a subcontractor to meet the eligibility criteria does not affect the eligibility of the general contractor for the procurement project. In such case, the portion intended to be subcontracted to the ineligible subcontractor shall be assumed by the general contractor;
- d) The general contractor shall remain liable for the subcontractor's actions, defaults, delays, and negligence;
- e) The general contractor and the subcontractor are obliged to comply with the provisions of the contract and shall share liability, jointly and severally, in cases of violation of safety standards or other labor standards insofar as the subcontracted portion is concerned; and
- f) For purposes of post-qualification in accordance with its objective and process under the IRR, the value of the entire completed and accepted Project, including the subcontracted portion, shall be credited as experience of the general contractor. In the case of the subcontractor, the following rules shall apply:
 - i) The subcontractor shall get credit for one hundred percent (100%) of the value of the subcontracted portion of the project performed;
 - ii) Subcontractors shall be eligible to concessional windows of GFIs that treat receivables from the government as loan security; the receivables of subcontractors due from their general contractor shall similarly be accepted as loan security by GFIs; and

- iii) Contract performance monitoring, such as the use of CPES, among others, shall also be mandatorily applied to the work experience of the subcontractors.

8) Advance Payment

- 8.1 The Procuring Entity shall make an advance payment on the Contract Price 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**.
- 8.2 The advance payment shall be made only upon:
 - i) Written request of the contractor which shall form part of the contract document; and
 - ii) Submission of an irrevocable standby Letter of Credit of equivalent value from a bank as confirmed by the Procuring Entity; a bank guarantee; or a surety bond callable upon demand issued by a duly licensed surety or insurance company, at the option of the Procuring Entity.
- 8.3 The advance payment shall be recovered from the Contractor through deductions in amounts equivalent to the percentage of the total contract price that corresponds to the value of the advance payment granted.
- 8.4 Once a month, Contractors may submit documents, such as Monthly Certificates,⁵ to show the progress or partial completion of a project. The Contractor may reduce its standby letter of credit or guarantee instrument by the amounts refunded by the Monthly Certificates, or any equivalent document subject to auditing and accounting rules, in the advance payment.

9) Progress Payments

- 9.1 Once a month, the Contractor may submit a statement of work accomplished (SWA) or progress billing and corresponding request for progress payment for work accomplished. The SWA should show the amounts which the Contractor considers itself to be entitled to up to the end of the month, to cover (i) the cumulative value of the Works it executed to date, based on the items in the Bill of Quantities, and (ii) adjustments made for approved Variation Orders executed. Alternatively, the Procuring Entity may require in the Bidding Documents that the SWA or progress billing and the corresponding request for progress payment may only be submitted upon actual completion of the Infrastructure Project or a specific portion, segment, milestone or phase thereof.

The Procuring Entity or Project Engineer shall check the Contractor's SWA and certify the amount to be paid to the Contractor as progress payment. Materials and equipment delivered onsite but not yet incorporated in the Works shall not be included for payment, except as otherwise stipulated in the **SCC**.

⁵ Commission on Audit (COA) Circular 2012-001.

- 9.2 The Procuring Entity shall deduct the following from the certified gross amounts to be paid to the Contractor as progress payment:
- a) Cumulative value of the work previously certified and paid for.
 - b) Portion of the advance payment to be recouped.
 - c) Retention money in accordance with the conditions of the contract.
 - d) Amount to cover third-party liabilities.
 - e) Amount to cover uncorrected discovered defects in the Works.
- 9.3 Payments shall be adjusted by deducting therefrom the amounts for advance payments and retention. The Procuring Entity shall pay the Contractor the amounts certified by the Procuring Entity within twenty-eight (28) days from the date each certificate was issued. No payment of interest for delayed payments and adjustments shall be made by the Procuring Entity.
- 9.4 The first progress payment may be paid by the Procuring Entity to the Contractor, as indicated in the **SCC**; Provided, That at least a percentage of the Works has been accomplished as certified by the Procuring Entity and as indicated in the **SCC**.
- 9.5 Items of the Works for which a price of "0" (zero) has been entered will not be paid for by the Procuring Entity and shall be deemed covered by other rates and prices in the Contract.

10) Payment Documents

- 10.1 Subject to existing accounting and auditing rules and regulations,⁶ the Contractor shall submit to the Procuring Entity monthly statements of the estimated value of the work executed less the cumulative amount certified previously.
- 10.2 The Procuring Entity shall check the Contractor's monthly statement and certify the amount to be paid to the Contractor.
- 10.3 The value of Work executed shall:
- a) be determined by the Procuring Entity;
 - b) comprise the value of the quantities of the items in the Bill of Quantities completed; and
 - c) include the valuations of approved variations.
- 10.4 The Procuring Entity may exclude any item certified in a previous certificate or reduce the proportion of any item previously certified in any certificate in the light of later information.

⁶ COA Circular No. 2012-001.

11) Retention

- 11.1 The Procuring Entity shall retain from each payment due to the Contractor an amount equal to a percentage thereof using the rate as specified in GCC Clause 11.2. The said amount will serve to guarantee indemnity for uncorrected discovered defects and third-party liabilities arising from this Contract. This retention money shall be utilized if the contractor fails to repair the discovered defects. Should the retention money be insufficient, the PE may forfeit the performance security, which may ultimately lead to the termination of the contract.⁷
- 11.2 Progress payments are subject to retention of ten percent (10%) referred to as the retention money. Such retention shall be based on the total amount due to the Contractor prior to any deduction and shall be retained from every progress payment until fifty percent (50%) of the value of the Works, as determined by the Procuring Entity, are completed.
- If, after fifty percent (50%) completion, the work is satisfactorily done and on schedule, no additional retention shall be made; otherwise, the ten percent (10%) retention shall be imposed, which may be decreased to 5 percent (5%) by the Procuring Entity based on justifiable causes.⁸
- 11.3 The total retention money shall be due for release upon final acceptance of the Works. The Contractor may, however, request the substitution of the retention money for each progress billing with irrevocable standby Letters of Credit from a bank, bank guarantees or surety bonds callable on demand, of amounts equivalent to the retention money substituted for and acceptable to Government; Provided, That the project is on schedule and is satisfactorily undertaken. Otherwise, the ten (10%) percent retention shall be made. Said irrevocable standby letters of credit, bank guarantees and/or surety bonds, to be posted in favor of the Government shall be valid for a duration to be determined by the concerned implementing office/agency or Procuring Entity and will answer for the purpose for which the ten (10%) percent retention is intended, *i.e.*, to cover uncorrected discovered defects and third party liabilities.
- 11.4 On completion of the whole Works, the Contractor may substitute retention money with an “on demand” Bank guarantee in a form acceptable to the Procuring Entity.

12) Performance Security

- 12.1 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 winning Contractor shall furnish the performance security in any of the forms prescribed in **ITB** Clause 30 in relation to **BDS** Clause 30.2 and 30.3.

⁷ Supreme Court rulings (e.g. New Bian Yek Commercial, Inc. vs. Office of the Ombudsman, et. al., GR No. 169338[2009], and Tondo Medical Center vs. Rante, G.R. No. 230645 [2019] have affirmed this purpose, stating that retention money is a form of security to ensure the satisfactory completion of works and to cover any defects or third-party claims that may arise after project completion.

⁸ Section 71.2.8 of the IRR.

- 12.2 The performance security posted in favor of the Procuring Entity shall be forfeited in the event it is established that the Contractor is in default in any of its obligations under the contract.
- 12.3 The performance security shall remain valid until issuance by the Procuring Entity of the Certificate of Final Acceptance. In case the performance security issued is valid for a specific period shorter than the term of the contract, including the defects liability period, the same shall be renewed or extended as often as necessary and immediately submitted to the Procuring Entity. In case of approved contract time extensions, the Contractor shall cause the extension of the validity of the performance security to cover the said extensions.
- 12.4 The performance security may be released by the Procuring Entity after the issuance of the Certificate of Final Acceptance; Provided, That the Procuring Entity has no claims filed against the performance security.
- 12.5 The Contractor shall post an additional performance security following the amount and form specified in **ITB** Clause 30 to cover any cumulative increase of more than ten percent (10%) over the original value of the contract as a result of change orders, extra work orders and supplemental agreements, as the case may be.
- 12.6 In case of a reduction in the contract value or for partially completed Works under the contract which are usable and accepted by the Procuring Entity the use of which, in the judgment of the implementing agency or the Procuring Entity, will not affect the structural integrity of the entire project, the Procuring Entity shall allow a proportional reduction in the original performance security, provided that any such reduction is more than ten percent (10%) and that the aggregate of such reductions is not more than fifty percent (50%) of the original performance security.
- 12.7 Unless otherwise indicated in the **SCC**, the Contractor, by entering into the Contract with the Procuring Entity, acknowledges the right of the Procuring Entity to institute action pursuant to Act No. 3688⁹ 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.

13) Detailed Engineering and Site Investigation Reports

- 13.1 The Contractor, in preparing the Bid, shall rely on all Site Investigation Reports referred to in the **SCC** supplemented by any information obtained by the Contractor.
- 13.2 Detailed engineering shall proceed only on the basis of the feasibility or preliminary engineering study made which establishes the technical viability of the project and conformance to land use and zoning guidelines prescribed by existing laws. The findings contained in the feasibility study, if undertaken for the project, shall be examined. If, in the course of this exercise, it is found that amendments would be desirable in the design standards of principal features, as proposed, specific recommendations for such changes shall be

⁹ Also known as "An Act for the Protection of Persons Furnishing Material and Labor for the Construction Of Public Works".

supported by detailed justifications, including their effects on the cost, and the economic justifications, if necessary.

13.3 A schedule of detailed engineering activities shall include the following:

- a) Survey;
- b) Site Investigation;
- c) Soils and Foundation Investigation;
- d) Construction Materials Investigation;
- e) Preparation of Design Plans;
- f) Preparation of Technical Specifications;
- g) Preparation of Quantity and Cost Estimates;
- h) Preparation of Scope of Work;
- i) Preparation of Proposed Construction Schedule (and estimated Cash Flow for projects with Schedule over six (6) months);
- j) Preparation of Site or Right-of-Way Plans including Schedule of Acquisition;
- k) Preparation of Utility Relocation Plan;
- l) Preparation and Submission of Design Report;
- m) Environmental Impact Statement for critical project, as defined by the Department of Environment and Natural Resources;
- n) Preparation of minimum requirements for a Construction Safety and Health Program for the project being considered;
- o) Value Engineering Studies; and
- p) Preparation of report on asset climate hazards, risk assessment, disaster response strategies, and readiness planning.

13.4 Work under detailed architectural and engineering design shall include, among others, the items stated in Section 8.3 of the IRR.

14) Licenses and Permits

The Procuring Entity may, if requested by the Contractor, assist him in applying for permits, licenses or approvals, which are required for the Works.

15) Contractor's Risk and Warranty Security

15.1 From the time project construction commenced up to final acceptance, the Contractor shall assume full responsibility for any damage or destruction of the works, except those occasioned by force majeure; and the safety, protection, security, and convenience of its personnel, third parties, and the

public at large, as well as the works, equipment, installation and the like to be affected by its construction work.

- 15.2 The defects liability period for infrastructure projects shall be one (1) year from project completion up to final acceptance by the Procuring Entity. During this period, the Contractor shall undertake the repair works, at its own expense, of any damage to the Works on account of the use of materials of inferior quality, defects in the construction, or due to any violation of the terms of the contract, within ninety (90) calendar days from the time the HoPE has issued an order to undertake repair. In case of failure or refusal to comply with this mandate, the Procuring Entity shall undertake such repair works and shall be entitled to full reimbursement of expenses incurred therein upon demand.
- 15.3 The defects liability period shall be covered by the performance security of the Contractor required in Section 68 of the IRR, which shall guarantee that the Contractor performs its responsibilities stated in **GCC** Clause 15.1 Unless otherwise indicated in the **SCC**, in case the Contractor fails to comply with the preceding paragraph, the Procuring Entity shall forfeit its performance security, subject its properties to attachment or garnishment proceedings, and may impose the appropriate penalty under Sections 99, 100, and 101 of the IRR. All payables of the GoP in its favor shall be offset to recover the costs.
- 15.4 The following persons shall be held responsible for “Structural Defects,” i.e., major faults or flaws or deficiencies in one or more key structural elements of the project which may lead to structural failure of the completed elements or structure, or “Structural Failures,” i.e., where one or more key structural elements in an infrastructure facility fails or collapses, thereby rendering the facility or part thereof incapable of withstanding the design loads, and/or endangering the safety of the users or the general public:
- a) Contractor – Where Structural Defects or Failures arise due to faults attributable to improper construction, use of inferior quality/substandard materials, and any violation of the contract plans and specifications, the Contractor shall be held liable;
 - b) Consultants – Where Structural Defects or Failures arise due to faulty and/or inadequate design and specifications as well as construction supervision, then the consultant who prepared the design or undertook construction supervision for the project shall be held liable;
 - c) Procuring Entity’s Representatives or Project Manager or Construction Managers and Supervisors – The project owner’s representative, project manager, construction manager, and supervisor shall be held liable in cases where the Structural Defects or Failures are due to their willful intervention in altering the designs and other specifications; negligence or omission in not approving or acting on proposed changes to noted defects or deficiencies in the design and/or specifications and the use of substandard construction materials in the project;
 - d) Third Parties - Third Parties shall be held liable in cases where Structural Defects or Failures are caused by work undertaken by them such as leaking pipes, diggings or excavations, underground cables and electrical wires, underground tunnel, mining shaft and the like, in

which case the applicable warranty to such structure should be levied to third parties for their construction or restoration works; and

- e) Users - In cases where Structural Defects or Failures are due to abuse or misuse by the End-User or Implementing Unit of the constructed facility and/or non-compliance by a user with the technical design limits and/or intended purpose of the same, then the user concerned shall be held liable.

15.5 The warranty against Structural Defects or Failures, except those occasioned by force majeure, shall cover the period specified in the **SCC** reckoned from the date of issuance of the Certificate of Final Acceptance by the Procuring Entity. On the other hand, such warranty shall likewise be applied against non-structural defects for instances that pertain to faults or deficiencies in non-load bearing components or finishes of the Project, such as minor cracks, leaks, or defects in workmanship or materials, which do not affect the stability or safety of the structure but may impact its appearance, functionality, or usability.

15.6 To guarantee that the Contractor shall perform its responsibilities, it shall be required to post a warranty security, which shall be stated in Philippine Peso, in the form chosen by the Procuring Entity in accordance with the following schedule:

Form of Warranty	Amount of Warranty Security Not less than the Percentage (%) of Total Contract Price
<p>(a) Cash or letter of credit issued by bank; Provided, however, that the letter of credit shall be confirmed or authenticated by a local bank, if issued by a foreign bank.</p> <p>For biddings conducted by LGUs, the Letter of Credit may be issued by other banks certified by the BSP as authorized to issue such financial instrument.</p>	Five Percent (5%)
<p>(b) Bank guarantee confirmed by bank.</p> <p>For biddings conducted by LGUs, the bank draft/guarantee may be issued by other banks certified by the BSP as authorized to issue such financial instrument.</p>	Ten Percent (10%)
<p>(c) Surety bond callable upon demand issued by GSIS or any surety or insurance company duly certified by the Insurance Commission</p>	Thirty Percent (30%)

15.7 The warranty security shall be stated in Philippine Peso and shall remain effective within one (1) year from the date of issuance of the Certificate of Final Acceptance by the Procuring Entity, and returned only after the lapse of the said one (1) year period. This one (1) year period shall cover both structural and non-structural defects or failures; Provided, That in cases of

structural defects or failures, warranties beyond the one (1) year period shall be subject to applicable laws, rules, and regulations such as the New Civil Code of the Philippines.

- 15.8 In case of structural/non-structural defects or failure occurring during the applicable warranty period provided in **GCC** Clause 15.5, the Procuring Entity shall undertake the necessary restoration or reconstruction works and shall be entitled to full reimbursement by the parties found to be liable for expenses incurred therein upon demand, without prejudice to the imposition of administrative sanctions as prescribed by RA No. 12009 and without prejudice to the imposition of civil and criminal sanctions as provided under applicable laws against the responsible persons as well as the forfeiture of the warranty security posted in favor of the Procuring Entity.

16) Procuring Entity's Risk

- 16.1 From the Start Date until the Certificate of Final Acceptance has been issued, the following are risks of the Procuring Entity:
- a) The risk of personal injury, death, or loss of or damage to property (excluding the Works, Plant, Materials, and Equipment), which are due to:
 - i) any type of use or occupation of the Site authorized by the Procuring Entity after the official acceptance of the Works; or
 - ii) negligence, breach of statutory duty, or interference with any legal right by the Procuring Entity or by any person employed or contracted by it, except the Contractor.
 - b) The risk of damage to the Works, Plant, Materials, and Equipment to the extent that it is due to a fault of the Procuring Entity or in the Procuring Entity's design, or due to war or radioactive contamination directly affecting the country where the Works are to be executed.

17) Insurance

- 17.1 The Contractor shall, under its name and at its own expense, obtain and maintain, for the duration of this Contract, the following insurance coverage:
- a) Contractor's All Risk Insurance, with an exception for Simple Infrastructure Projects, as applicable;
 - b) Transportation to the project Site of Equipment, Machinery, and Supplies owned by the Contractor;
 - c) Personal injury or death of Contractor's employees; and
 - d) Comprehensive insurance for third party liability to Contractor's direct or indirect act or omission causing damage to third persons.
- 17.2 The Contractor shall provide evidence to the Procuring Entity that the insurances required under this Contract have been effected and shall, within a reasonable time, provide copies of the insurance policies to the Procuring Entity.

- 17.3 The Contractor shall notify the insurers of changes in the nature, extent, or program for the execution of the Works and ensure the adequacy of the insurances at all times in accordance with the terms of this Contract and shall produce to the Procuring Entity the insurance policies in force including the receipts for payment of the current premiums.

The above insurance policies shall be obtained from any reputable insurance company approved by the Procuring Entity.

- 17.4 If the Contractor fails to obtain and keep in force the insurances referred to herein or any other insurance required to be obtained under the terms of this Contract, the Procuring Entity may obtain and keep in force any such insurances and pay such premiums as may be necessary for the purpose. From time to time, the Procuring Entity may deduct the amount it shall pay for said premiums including twenty five percent (25%) therein from any monies due, or which may become due, to the Contractor, without prejudice to the Procuring Entity exercising its right to impose other sanctions against the Contractor pursuant to the provisions of this Contract.

- 17.5 In the event the Contractor fails to observe the above safeguards, the Procuring Entity may, at the Contractor's expense, take whatever measure is deemed necessary for its protection and that of the Contractor's personnel and third parties, and/or order the interruption of dangerous Works. In addition, the Procuring Entity may refuse to make the payments under **GCC** Clause 9 until the Contractor complies with this Clause.

- 17.6 The Contractor shall immediately replace the insurance policy obtained as required in this Contract, without need of the Procuring Entity's demand, with a new policy issued by a new insurance company acceptable to the Procuring Entity for any of the following grounds:

- a) The issuer of the insurance policy to be replaced has:
- i) become bankrupt;
 - ii) been placed under receivership or under a management committee;
 - iii) been sued for suspension of payment;
 - iv) been suspended by the Insurance Commission and its license to engage in business or its authority to issue insurance policies has been cancelled; or
 - v) Where reasonable grounds exist that the insurer may not be able, fully and promptly, to fulfill its obligation under the insurance policy.

18) Liquidated Damages

- 18.1 When the Contractor fails to satisfactorily complete the Works under the contract within the specified contract duration, inclusive of duly granted time extensions, if any, the Contractor shall be liable for liquidated damages in an amount equal to at least one-tenth (1/10) of one percent (1%) of the cost of the unperformed portion of the Works for every day of delay.

- 18.2 In computing liquidated damages, the Procuring Entity shall determine the usability of the project. A project or a portion thereof may be deemed usable when it starts to provide the desired benefits as certified by the End-User or Implementing Unit and approved by the HoPE.
- 18.3 To be entitled to liquidated damages, the Procuring Entity does not have to prove that it has incurred actual damages. Such amount shall be deducted from any money due, or which may become due the Contractor under the contract, collected from the retention money or other securities posted by the Contractor, or a combination thereof, whichever is convenient to the Procuring Entity.
- 18.4 In case the total sum of liquidated damages reaches ten percent (10%) of the total contract price, the Procuring Entity may rescind or terminate the contract, without prejudice to other courses of action and remedies available under the circumstances.
- 18.5 If the Intended Completion Date is extended after liquidated damages have been paid, the Procuring Entity shall correct any overpayment of liquidated damages by the Contractor by adjusting the next payment schedule.

19) Settlement of Disputes

- 19.1 Any dispute arising from the implementation of a contract covered by the Act and the IRR shall primarily be resolved and settled amicably by mutual consultation or agreement.
- 19.2 In case of failure to settle the dispute amicably, the parties may mutually agree in writing to resort to other modes of alternative dispute resolution (ADR) to promote efficiency in the procurement process. Accordingly, they are encouraged to select the most expeditious mode of ADR available.

If arbitration is chosen as the ADR method, this shall be incorporated as a provision in the contract and referred to the Arbitrator specified in the **SCC**.
- 19.3 If the dispute remains unresolved after exhausting the remedies provided above, it may be submitted to other forms of ADR, such as mediation, conciliation, early neutral evaluation, mini-trial, or any combination thereof, in accordance with RA No. 9285, otherwise known as the "Alternative Dispute Resolution Act of 2004". However, disputes that are within the competence or jurisdiction of the Construction Industry Arbitration Commission shall be referred to the same for resolution.¹⁰

20) 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.

¹⁰ Executive Order No. 1008 (Construction Industry Arbitration Law); and Construction Industry Arbitration Commission Revised Rules of Procedure.

21) Termination for Breach of Contract

- 21.1 The Procuring Entity shall terminate the contract for breach thereof when any of the following conditions are present:
- a) Due to the Contractor's fault and while the project is on-going, it has incurred negative slippage of fifteen percent (15%) or more in accordance with Presidential Decree No. 1870, s. 1983;
 - b) Due to the Contractor's fault and after the contract time has expired, it has incurred a negative slippage of ten percent (10%) or more in the completion of the work;
 - c) The Contractor abandons the contract works, plainly demonstrates an intention not to continue the performance of the Contractor's obligations under the contract, refuses or fails to comply with the Procuring Entity's instructions, or fails to proceed expeditiously and without delay despite a written notice by the Procuring Entity;
 - d) When the Contractor, without reasonable excuse, fails to comply with the Notice of Rejection given by the Project Engineer that, after examination therein, the Infrastructure Project is found to be defective or otherwise not in accordance with the Contract, or a Project Engineer's instruction to conduct remedial work, within 30 days after receiving the said notice;
 - e) The Contractor does not actually have on the project site the minimum essential equipment listed on the Bid necessary to prosecute the Works in accordance with the approved work plan and equipment deployment schedule as required for the project;
 - f) The Contractor does not execute the Works in accordance with the contract or persistently or flagrantly neglects to carry out its obligations under the contract;
 - g) The Contractor neglects or refuses to remove materials or to perform a new work that has been rejected as defective or unsuitable;
 - h) The Contractor subcontracts any part of the contract works without approval by the Procuring Entity; or
 - i) The Contractor becomes bankrupt or insolvent; goes into liquidation, administration, reorganization, winding-up, or dissolution; becomes subject to the appointment of a liquidator, receiver, administrator, manager, or trustee; enters into a composition or arrangement with the Contractor's creditors; or any act is done or any event occurs which is analogous to or has a similar effect to any of these acts or events under applicable laws.
- 21.2 All materials on the Site, Plant, Works, including Equipment paid under this Contract, including those identified by the Procuring Entity in the **SCC** pursuant to GCC Clause 9.1, shall be deemed to be the property of the Procuring Entity if this Contract is terminated because of the Contractor's breach.

22) Termination Due to Force Majeure

- 22.1 For purposes of this Contract the terms “*force majeure*” and “fortuitous event” may be used interchangeably. In this regard, a fortuitous event or *force majeure* shall be interpreted to mean an event which could not have been foreseen, or though foreseen, was inevitable. It shall not include ordinary unfavorable weather conditions, and any other cause the effects of which could have been avoided with the exercise of reasonable diligence by the Contractor.
- 22.2 If this Contract is discontinued by an outbreak of war or by any other similar event entirely outside the control of either the Procuring Entity or the Contractor, the Procuring Entity shall certify that this Contract has been discontinued. The Contractor shall make the Site safe and stop work as quickly as possible after receiving the certificate and shall be paid for all Works carried out before receiving it and for any Work carried out afterwards to which a commitment was made by the Procuring Entity.
- 22.3 If the event continues for a period of eighty-four (84) days, either party may then give notice of termination, which shall take effect twenty-eight (28) days after the giving of the notice.
- 22.4 After termination, the Contractor shall be entitled to payment of the unpaid balance of the value of the Works executed and of the materials and Plant, in relation to GCC Clause 9.1 and 21.2, adjusted by the following:
- (a) any sum to which the Contractor is entitled under **GCC** Clause 30; and
 - (b) any sum to which the Procuring Entity is entitled.
- 22.5 The net balance due shall be paid or repaid within a reasonable time period from the time of the notice of termination.

23) Termination by Contractor

The Contractor may terminate this Contract with the Procuring Entity if the Works are completely stopped for a continuous period of at least sixty (60) calendar days through no fault of its own, due to any of the following reasons:

- a) Failure of the Procuring Entity to deliver, within a reasonable time, supplies, materials, right-of-way, or other items it is obligated to furnish under the terms of this Contract;
- b) Substantial failure of the Procuring Entity to perform its obligations under the contract, and such failure constitutes a material breach of the Procuring Entity’s obligations under the contract;
- c) Prolonged suspension by the Procuring Entity, through no fault of the Contractor, which affects the substantial part of the Infrastructure Project; or
- d) The prosecution of the Work is disrupted by the adverse peace and order situation, as certified by the Armed Forces of the Philippines Provincial Commander and approved by the Secretary of National Defense.

24) Termination for Convenience

The Procuring Entity, by notice sent to the Contractor, may terminate the Contract, in whole or in part, at any time, if it has determined the existence of any of the following conditions that make contract implementation economically, financially, or technically impractical or unnecessary:

- a) If physical and economic conditions have significantly changed so as to render the project no longer economically, financially, or technically feasible, as determined by the HoPE; or
- b) The HoPE has determined the existence of conditions that make project implementation impractical or unnecessary, such as, but not limited to, fortuitous events, changes in laws and government policies.

25) Termination for Unlawful Acts

The Procuring Entity may terminate the contract in case it is determined prima facie that the Contractor, including any joint venture partner therein, has engaged, before or during the implementation of the contract, in unlawful deeds and behaviors relative to contract acquisition and implementation. These unlawful acts include, but are not limited to, the following:

- a) Corrupt, fraudulent, collusive, coercive, and obstructive practices as defined in **ITB** Clause 3.1, unless otherwise specified in the **SCC**;
- b) Drawing up or using forged documents;
- c) Using adulterated materials, means, or methods, or engaging in production contrary to rules of science or trade; or
- d) Any other act analogous to the foregoing.

26) Termination for Other Causes

26.1 The Procuring Entity may terminate this Contract, in whole or in part, at any time for its convenience. The HoPE may terminate this Contract for the convenience of the Procuring Entity if physical and economic conditions have significantly changed so as to render the project no longer economically, financially, or technically feasible, as determined by the HoPE; or if the HoPE has determined the existence of conditions that make project implementation impractical or unnecessary, such as, but not limited to, fortuitous events, changes in laws and government policies.

26.2 The Procuring Entity or the Contractor may terminate this Contract if the other party causes a fundamental breach of this Contract.

26.3 Other breaches of Contract shall include, but shall not be limited to, the following:

- a) The Contractor stops work for twenty-eight (28) days when no stoppage of work is shown on the current Program of Work and the stoppage has not been authorized by the Procuring Entity;

- b) The Procuring Entity instructs the Contractor to delay the progress of the Works, and the instruction is not withdrawn within twenty-eight (28) days;
 - c) A payment certified by the Procuring Entity is not paid to the Contractor within eighty-four (84) days from the date of the Procuring Entity's certificate;
 - d) The Procuring Entity gives Notice that failure to correct a particular Defect is a fundamental breach of Contract and the Contractor fails to correct it within a reasonable period of time determined by the Procuring Entity;
 - e) The Contractor does not maintain a Security, which is required; and
 - f) The Contractor has delayed the completion of the Works by the number of days for which the maximum amount of liquidated damages can be paid, as defined in the **GCC** 18.
- 26.4 The Funding Source or the Procuring Entity, as appropriate, will seek the imposition of administrative sanctions as prescribed by RA No. 12009 and without prejudice to the imposition of civil and criminal sanctions as provided under applicable against individuals and organizations deemed to be involved with corrupt, fraudulent, or coercive practices.
- 26.5 When persons from either party to this Contract gives notice of a fundamental breach to the Procuring Entity in order to terminate the existing contract for a cause other than those listed under **GCC** Clause 26.3, the Procuring Entity shall decide whether the breach is fundamental or not.
- 26.6 If this Contract is terminated, the Contractor shall stop work immediately, make the Site safe and secure, and leave the Site as soon as reasonably possible.

27) Procedures for Termination of Contracts

- 27.1 The following provisions shall govern the procedures for the termination of this Contract:
- a) **Verification** - Upon receipt of a written report of acts or causes which may constitute grounds for termination as aforementioned, or upon its own initiative, the End-User or Implementing Unit shall, within a period of seven (7) calendar days, verify the existence of such grounds and cause the execution of a Verified Report, with all relevant evidence attached;
 - b) **Notice to Terminate** - Upon recommendation by the End-User or Implementing Unit, the HoPE shall terminate contracts only by written notice to the Contractor conveying the termination of the contract. The notice shall state:
 - (i) that the Contract is being terminated for any of the grounds aforementioned, and a statement of the acts that constitute the grounds constituting the same;

- (ii) the extent of termination, whether in whole or in part;
- (iii) an instruction to the Contractor to show cause as to why this contract should not be terminated; and
- (iv) special instructions of the Procuring Entity, if any.

The Notice to Terminate shall be accompanied by a copy of the Verified Report;

- c) **Show Cause** - Within a period of seven (7) calendar days from receipt of the Notice of Termination, the Contractor shall submit to the HoPE a verified position paper stating why the contract should not be terminated. If the Contractor fails to show cause after the lapse of the seven (7) day period, either by inaction or by default, the HoPE shall issue an order terminating the contract;
- d) **Rescission of Notice of Termination** - The Procuring Entity may, at any time before receipt of the Contractor's verified position paper, withdraw the Notice to Terminate if it is determined that certain items or works subject of the notice had been completed, delivered, or performed before the Contractor's receipt of the notice;
- e) **Decision** - Within a non-extendible period of ten (10) calendar days from receipt of the verified position paper, the HoPE shall decide whether or not to terminate the contract. It shall serve a written notice to the Contractor of its decision and, unless otherwise provided, the contract is deemed terminated from receipt of the Contractor of the notice of the decision. The termination shall only be based on the grounds stated in the Notice to Terminate.
- f) **Contract Termination Review Committee (CTRC)** - The HoPE may create a committee to assist him in the discharge of its functions under the IRR. All decisions recommended by the CTRC shall be subject to the approval of the HoPE
- g) **Take-over of Contracts** - If a Procuring Entity terminates the contract due to default, insolvency, or for cause, it may enter into a Negotiated Procurement (Take-over of Contracts) pursuant to Section 35.3 of the IRR.
- h) **Notice by Contractor** - The Contractor must serve a written notice to the Procuring Entity of its intention to terminate the contract at least thirty (30) calendar days before its intended termination. The contract is deemed terminated if it is not resumed in thirty (30) calendar days after the receipt of such notice by the Procuring Entity.

27.2 Notwithstanding Section 99 of RA No. 12009 and as provided by applicable laws, the Procuring Entity shall impose on Contractors after the termination of the contract, the penalty of suspension for one (1) year for the first offense, suspension for two (2) years for the second offense from participating in the public bidding process, for violations committed during the contract implementation stage, as stated in the **SCC**.

28) Approval of Drawings and Temporary Works by the Procuring Entity

- 28.1 All Drawings prepared by the Contractor for the execution of the Temporary Works, are subject to prior approval by the Procuring Entity before its use.
- 28.2 The Contractor shall be responsible for design of Temporary Works.
- 28.3 The Procuring Entity's approval shall not alter the Contractor's responsibility for design of the Temporary Works.
- 28.4 The Contractor shall obtain approval of third parties to the design of the Temporary Works, when required by the Procuring Entity.

29) Acceleration and Delays Ordered by the Procuring Entity

- 29.1 When the Procuring Entity wants the Contractor to finish before the Intended Completion Date, the Procuring Entity will obtain priced proposals for achieving the necessary acceleration from the Contractor. If the Procuring Entity accepts these proposals, the Intended Completion Date will be adjusted accordingly and confirmed by both the Procuring Entity and the Contractor.
- 29.2 If the Contractor's Financial Proposals for an acceleration are accepted by the Procuring Entity, they are incorporated in the Contract Price and treated as a Variation.

30) Contractor's Right to Claim

If the Contractor incurs cost as a result of any of the events under **GCC** Clauses 22, 23 and 24 in relation to **GCC** Clause 20, the Contractor shall be entitled to the amount of such cost. If as a result of any of the said events, it is necessary to change the Works, this shall be dealt with as a Variation.

31) Dayworks

- 31.1 Subject to **GCC** Clause 40 on Variation Order, and if applicable as indicated in the **SCC**, the Contractor shall determine the Dayworks rates to be included or indicated in the Bid. The Dayworks rates in the Contractor's bid shall be used for small additional amounts of work only when the Procuring Entity has given written instructions in advance for additional work to be paid for in that way.
- 31.2 All work to be paid for as Dayworks shall be recorded by the Contractor on forms approved by the Procuring Entity. Each completed form shall be verified and signed by the Procuring Entity within two (2) days of the work being done.
- 31.3 The Contractor shall be paid for Dayworks subject to obtaining signed Dayworks forms from both the Procuring Entity and Contractor.

32) Early Warning

- 32.1 The Contractor shall warn the Procuring Entity at the earliest opportunity of specific likely future events or circumstances that may adversely affect the quality of the work, increase the Contract Price, or delay the execution of the Works.

32.2 The Contractor shall cooperate with the Procuring Entity in making and considering proposals for how the effect of such an event or circumstance can be avoided or reduced by anyone involved in the work and in carrying out any resulting instruction of the Procuring Entity. Should such events or circumstances arise which increase the Contract price or delay the execution of Works, the provisions on variation order shall apply.

33) Program of Work

33.1 Within the time stated in the **SCC**, the Contractor shall submit to the Procuring Entity for approval a Program of Work showing the general methods, arrangements, order, and timing for all the activities in the Works.

33.2 An update of the Program of Work shall show the actual progress achieved on each activity and the effect of the progress achieved on the timing of the remaining work, including any changes to the sequence of the activities.

33.3 The Contractor shall submit to the Procuring Entity 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 may withhold the amount stated in the **SCC** from the next payment schedule and continue to withhold this amount until the next payment after the date on which the overdue Program of Work has been submitted.

33.4 The Procuring Entity's approval of the Program of Work shall not alter the Contractor's obligations. A revised Program of Work produced by the Contractor shall show the effect of any approved Variations, and shall include all Variations. The Contractor may revise the Program of Work, based on the Variation Order, and submit it to the Procuring Entity again.

33.5 When the Program of Work is updated, the Contractor shall provide the Procuring Entity with an updated cash flow forecast. The cash flow forecast shall include different currencies, as defined in the Contract, converted as necessary using the Contract exchange rates.

34) Management Conferences

34.1 Either the Procuring Entity or the Contractor may require the other to attend a Management Conference. The Management Conference shall review the plans for remaining work and deal with matters raised in accordance with the early warning procedure.

34.2 The Procuring Entity shall record the business of Management Conferences and provide copies of the record to those attending the Conference and to the Procuring Entity. The responsibility of the parties for the actions to be taken shall be decided by the Procuring Entity either at the Management Conference or after the Management Conference. The Procuring Entity shall communicate these responsibilities in writing to all who attended the Conference.

35) Bill of Quantities

- 35.1 The Bill of Quantities shall contain items of work for the construction, installation, testing, commissioning of work, materials, and labor among others, to be done by the Contractor.
- 35.2 The Bill of Quantities is used to calculate the Contract Price. The Contractor is paid for the quantity of the work done at the rate in the Bill of Quantities for each item.
- 35.3 If the final quantity of any work item completed differs from the quantity indicated in the Bill of Quantities, and the difference does not exceed twenty-five percent (25%) of the original quantity for that item, the Procuring Entity shall adjust the Contract accordingly.

This shall be allowed only if the total amount of all such changes does not go beyond ten percent (10%) of the total Contract price, subject to applicable laws, rules, and regulations.

- 35.4 If requested by the Procuring Entity, the Contractor shall provide the Procuring Entity with a detailed cost breakdown of any rate in the Bill of Quantities.

36) Instructions, Inspections and Audits

- 36.1 The Procuring Entity shall at all reasonable times during construction of the Works be entitled to examine, inspect, measure and test the materials and workmanship, and to check the progress of the construction.
- 36.2 If the Procuring Entity instructs the Contractor to carry out a test not specified in the Specification to check whether any work has a defect and the test shows that it does, the Contractor shall pay for the test and any samples. In the absence of any defect, the test shall be a compensation event with no adverse consequences to the contractor.
- 36.3 The Contractor shall permit the Funding Source named in the **SCC** to inspect the Contractor's accounts and records relating to the performance of the Contractor and to have them audited by auditors appointed by the Funding Source, if so required by the Funding Source.

37) Identifying Defects

The Procuring Entity shall check the Contractor's work and notify the Contractor of any defects that are found. Such checking shall not affect the Contractor's responsibilities. The Procuring Entity may instruct the Contractor to check noted defects and test any work that the Procuring Entity considers as substandard and/or defective.

38) Correction of Defects

- 38.1 The Procuring Entity shall give notice to the Contractor of any defects before the end of the Defects Liability Period, which is one (1) year from project completion up to final acceptance by the Procuring Entity.

- 38.2 Every time notice of a defect is given, the Contractor shall correct the notified defect within ninety (90) calendar days from the time the HoPE has issued an order to undertake repair.
- 38.3 The Contractor shall correct the defects which they notice themselves before the end of the Defects Liability Period.
- 38.4 The Procuring Entity shall certify that all defects have been duly corrected.

39) Uncorrected Defects

- 39.1 The Procuring Entity shall give the Contractor at least fourteen (14) days' notice of its intention to use a third party to correct a Defect. If the Contractor does not correct the Defect himself within the period, the Procuring Entity may have the Defect corrected by the third party. The cost of the correction will be deducted from the Contract Price.
- 39.2 The use of a third party to correct defects that are uncorrected by the Contractor will in no way relieve the Contractor of its liabilities and warranties under the Contract.

40) Variation Orders

- 40.1 Variation Orders may be issued by the Procuring Entity to cover any increase or decrease in quantities, including the introduction of new work items that are not included in the original contract or reclassification of work items that are either due to change of plans, design or alignment to suit actual field conditions resulting in disparity between the preconstruction plans used for purposes of bidding and the "as staked plans" or construction drawings prepared after a joint survey by the Contractor and the Government after award of the contract.

Provided, That in case of positive or additive Variation Order/s, the cumulative amount thereof shall not exceed ten percent (10%) of the original contract price; Provided, further, That the scope of works shall not be reduced as to accommodate a positive Variation Order. In all cases, the addition of works under Variation Orders should be within the general scope of the project as bid and awarded.

- 40.2 Any cumulative positive Variation Order beyond ten percent (10%) of the original contract price shall be the subject of another procurement project to be bid out if the Works are separable from the original contract. In exceptional cases where it is urgently necessary to complete the original scope of work, the HoPE, upon the recommendation of the End-User or Implementing Unit, may authorize positive Variation Order/s resulting to a cumulative value of the positive Variation Orders beyond ten percent (10%) but not more than twenty percent (20%) of the original contract price.

All progress payments shall first be charged against the advance payment until the latter has been fully exhausted, at the option of the Procuring Entity.

- 40.3 A Variation Order may either be in the form of a Change Order or Extra Work Order:

- a) A Change Order may be issued by the HoPE or duly authorized representative to cover any increase or decrease in quantities of original work items in the contract.
 - b) An Extra Work Order may be issued by the implementing official to cover the introduction of new work necessary for the completion, improvement or protection of the project which was not included as items of work in the original contract, such as, where there are subsurface or latent physical conditions at the site differing materially from those indicated in the contract, or where there are duly unknown physical conditions at the site of an unusual nature differing materially from those ordinarily encountered and generally recognized as inherent in the work or character provided for in the contract.
- 40.4 For Variation Orders, the Contractor shall be paid for additional work items whose unit prices shall be derived based on the following:
- a) For additional or extra works duly covered by Change Orders involving work items which are exactly the same or similar to those in the original contract, the applicable unit prices of work items original contract shall be used.
 - b) For additional or extra works duly covered by Extra Work Orders involving new work items that are not in the original contract, the unit prices of the new work items shall be based on the direct unit costs used in the original contract (e.g., unit cost of cement, rebars, form lumber, labor rate, equipment rental, etc.). All new components of the new work item shall be fixed prices; Provided, The same is acceptable to both the Government and the Contractor; Provided further, That the direct unit costs of new components shall be based on the Contractor's estimate as validated by the Procuring Entity concerned via documented canvass in accordance with existing rules and regulations. The direct cost of the new work item shall then be combined with the mark-up factor (i.e., taxes and profit) used by the Contractor in its bid to determine the unit price of the new work item.
- 40.5 Under no circumstances shall a Contractor proceed to commence work under any Change Order or Extra Work Order unless it has been approved by the HoPE or its duly authorized representative. However, under any of the following conditions, the Procuring Entity's representative or Project Engineer may, subject to the availability of funds and within the limits of its delegated authority, allow the immediate start of work under any Change Order or Extra Work Order:
- a) In the event of an emergency where the prosecution of the work is urgent to avoid detriment to public service, or damage to life and/or property; and/or
 - b) When time is of the essence;

Provided, however, That such approval is valid on work done up to the point where the cumulative increase in value of work on the project which has not yet been duly fully approved does not exceed five percent (5%) of the adjusted original contract price.

Provided, further, That immediately after the start of work, the corresponding Change Order or Extra Work Order shall be prepared and submitted for approval in accordance with the abovementioned rules. Payments for Works satisfactorily accomplished on any Change Order or Extra Work Order may be made only after approval of the same by the HoPE or its duly authorized representative.

Provided, finally, That for a Change Order or Extra Work Order involving a cumulative amount exceeding five percent (5%) of the original contract price, no work thereon may be commenced unless said Change Order or Extra Work Order has been approved by the HoPE or its duly authorized representative.

41) Contract Completion

Once the project reaches an accomplishment of ninety-five percent (95%) of the total contract amount, the Procuring Entity may constitute an inspectorate team to conduct preliminary inspection and submit a punch-list to the Contractor in preparation for the final turnover of the project. Said punch-list will contain, among others, the remaining Works, Work deficiencies for necessary corrections, and the specific duration/time to fully complete the project within the approved remaining contract time. This, however, shall not preclude the claim of the Procuring Entity for liquidated damages, if applicable.

42) Suspension of Work

42.1 The Procuring Entity shall have the authority to suspend the work wholly or partly by written order for such period as may be deemed necessary, due to *force majeure* or any fortuitous event or for failure on the part of the Contractor to correct bad conditions which are unsafe for workers or for the general public, to carry out valid orders given by the Procuring Entity or to perform any provisions of the contract, or due to adjustment of plans to suit field conditions as found necessary during construction. The Contractor shall immediately comply with such order to suspend the work wholly or partly.

42.2 The Contractor or its duly authorized representative shall have the right to suspend work operation on any or all projects or activities along the critical path of activities after fifteen (15) calendar days from date of receipt of written notice from the Contractor to the district engineer, regional director, consultant or equivalent official, as the case may be, due to the following:

- a) There exist right-of-way problems which prohibit the Contractor from performing work in accordance with the approved construction schedule.
- b) Requisite construction plans which must be owner furnished are not issued to the Contractor precluding any work called for by such plans.
- c) Peace and order conditions that make it extremely dangerous, if not possible, to work. However, this condition must be certified in writing by the Philippine National Police station which has responsibility over the affected area and confirmed by the Department of the Interior and Local Government (DILG) Regional Director.

- d) There was a failure on the part of the Procuring Entity to deliver government-furnished materials and equipment as stipulated in the contract.
 - e) Delay in the payment of Contractor's claim for progress billing beyond forty-five (45) calendar days from the time the Contractor's claim has been certified by the Procuring Entity's authorized representative that the documents are complete, unless there are justifiable reasons for the delay in payment which shall be communicated in writing to the Contractor.
- 42.3 In case of total suspension, or suspension of activities along the critical path, which is not due to any fault of the Contractor, the elapsed time between the effectivity of the order suspending operation and the order to resume work shall be allowed to the Contractor by adjusting the contract time accordingly.

43) Payment on Termination

- 43.1 If the Contract is terminated because of a breach of Contract by the Contractor, the Procuring Entity shall issue a certificate for the value of the work done and Materials ordered less advance payments received up to the date of the issue of the certificate, and less the percentage to apply to the value of the work not completed, as indicated in the **SCC**. Additional liquidated damages shall not apply. If the total amount due to the Procuring Entity exceeds any payment due to the Contractor, the difference shall be a debt payable to the Procuring Entity.
- 43.2 If the Contract is terminated for the Procuring Entity's convenience, or due to a breach of Contract by the Procuring Entity, the Procuring Entity shall issue a certificate for the value of the work done, Materials ordered, the reasonable cost of removal of Equipment, repatriation of the Contractor's personnel employed solely on the Works, and the Contractor's costs of protecting and securing the Works, and less advance payments received up to the date of the certificate.
- 43.3 The net balance due shall be paid or repaid within twenty-eight (28) days from the notice of termination.
- 43.4 If the Contractor has terminated the Contract under **GCC** Clauses 23 to 24, the Procuring Entity shall promptly return the Performance Security to the Contractor.

44) Extension of Contract Time

- 44.1 Should the amount of additional work or other special circumstances warrant the entitlement of the Contractor to an extension of contract time, the Procuring Entity shall determine the amount of such extension; Provided, That the Contractor has notified the Procuring Entity of its claim for extension of contract time prior to the expiration of the contract time, and within thirty (30) calendar days after the additional work has been commenced or the circumstances leading to such claim have arisen, as the case may be, in order to give the Procuring Entity the opportunity to investigate the claim. Failure to provide such notice shall constitute a waiver of such a claim by the Contractor. Upon receipt of full and detailed particulars, the Procuring Entity shall examine the facts and extent of the delay and shall extend the contract

time to complete the contract work when, in the Procuring Entity's opinion, the findings of facts justify an extension.

- 44.2 No extension of contract time shall be granted to the Contractor due to ordinary unfavorable weather conditions and inexcusable negligence of the Contractor to provide the required equipment, supplies, or materials.
- 44.3 Extension of contract time may be granted only when the affected activities fall within the critical path of the PERT, CPM, Precedence Diagram Method or any other project management tool.
- 44.4 No extension of contract time shall be granted when the reason given to support the request for extension was already considered in the determination of the original contract time during the conduct of detailed engineering and in the preparation of the contract documents as agreed upon by the parties before contract perfection.
- 44.5 Extension of contract time may be granted in the cases indicated in the **SCC**.
- 44.6 The written consent of the bank, or surety or insurance company, as the case may be, must be attached to any request of the Contractor for extension of contract time and submitted to the Procuring Entity for consideration and the validity of the Performance Security shall be correspondingly extended.
- 44.7 The Procuring Entity shall extend the Intended Completion Date if a Variation is issued which makes it impossible for the Intended Completion Date to be achieved by the Contractor without taking steps to accelerate the remaining work, which would cause the Contractor to incur additional costs. No payment shall be made for any event which may warrant the extension of the Intended Completion Date.
- 44.8 The Procuring Entity shall decide whether and by how much to extend the Intended Completion Date within twenty (20) days of the Contractor asking the Procuring Entity for a decision thereto after fully submitting all supporting information. If the Contractor has failed to give early warning of a delay or has failed to cooperate in dealing with a delay, the delay by this failure shall not be considered in assessing the new Intended Completion Date.

45) Price Escalation

In the event of an extraordinary increase in prices of specific components of the Infrastructure Project, price escalation may be considered, subject to prior approval of the GPPB. If the cost of construction components increases by more than ten percent (10%) of the unit price of work items, as determined against the prevailing price indices of the PSA, a price escalation may be authorized at a no-loss, no-gain basis, using the appropriate formula prescribed by the GPPB. For the purpose of this Section, the PSA shall ensure that its price indices are region-specific and updated on a monthly basis

46) Completion

The Contractor shall request the Procuring Entity to issue a Certificate of Completion of the Works, and the Procuring Entity will do so upon determining that the work is completed.

47) Taking Over

The Procuring Entity shall take over the Site and the Works within seven (7) days from the date of issuance of a Certificate of Completion; Provided, That it shall not release the Contractor of its responsibilities within the defects liability period.

48) Operating and Maintenance Manuals

48.1 If “as built” Drawings and/or operating and maintenance manuals are required, the Contractor shall supply them by the dates stated in the **SCC**.

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

Section V. Special Conditions of Contract

Special Conditions of Contract

GCC Clause	
1.1	The Intended Completion Date is 301 Calendar Days upon acceptance of Notice to Proceed (NTP).
1.2	The Procuring Entity is City Government of Cagayan de Oro City Hall, Capistrano – Hayes Streets Cagayan de Oro City
1.3	The Site is located at Barangay Bayabas, Cagayan de Oro City and is defined in drawing no. A-1.
1.4	The Start Date is upon acceptance of Notice to Proceed (NTP)..
1.5	The Works consist of 1)Demolition of Existing Structures 2)Complete Construction of Multipurpose Building 3)Air-conditioning and Ventilation Unit 4) Installation of Fire Alarm System and CCTV 5)Supply of Plastic Chairs and Tables 6)Installation of Chalkboard 8)Installation of Concrete Pavers.
2.2	Not Applicable
5.1	The Procuring Entity shall give possession of all parts of the Site to the Contractor upon acceptance of Notice to Proceed (NTP).
6.5	The Contractor shall employ the following Key Personnel: Project Engineer Foreman Skilled Personnel Unskilled Personnel First Aider Safety Officer
7.1	No further instructions.
8.1	The amount of the advance payment is ₱1,499,997.71 (15% of ABC) to be made in lump sum.
9.1	No further instructions.
9.4	The advance payment shall be repaid by the contractor by deducting fifteen percent (15%) from his periodic progress payments a percentage equal to the percentage of the total contract price used for the advance payment. The First Progress payment may be paid by the Procuring Entity to the Contractor; Provided, that at least 15% of the Works has been accomplished as Certified by the Procuring Entity.
12.7	No further instructions.
13.1	The site investigation reports are: <i>none</i>

15.3	No further instructions.
15.5	In case of permanent structures, such as buildings of types 4 and 5 as classified under the National Building Code of the Philippines and other structures made of steel, iron, or concrete which comply with relevant structural codes (e.g., DPWH Standard Specifications), such as, but not limited to, steel/concrete bridges, flyovers, aircraft movement areas, ports, dams, tunnels, filtration and treatment plants, sewerage systems, power plants, transmission and communication towers, railway system, and other similar permanent structures: Fifteen (15) years..
19.2	The Arbitrator is the person appointed jointly by the Procuring Entity and the Contractor: Construction Industry Arbitration Commission (CIAC)
20	No additional provision
25(a)	No further instructions.
27.2	<p>The following violations which will warrant suspension are:</p> <p>a) Failure of the Contractor, due solely to its fault or negligence, to mobilize and start work or performance within the specified period in the Notice to Proceed (“NTP”);</p> <p>b) Failure by the Contractor to fully and faithfully comply with its contractual obligations without valid cause, or failure by the Contractor to comply with any written lawful instruction of the Procuring Entity or its representative(s) pursuant to the implementation of the contract. For the procurement of infrastructure projects or consultancy contracts, lawful instructions include but are not limited to the following:</p> <p>i) Employment of competent technical personnel, competent engineers and/or work supervisors;</p> <p>ii) Provision of warning signs and barricades in accordance with approved plans and specifications and contract provisions;</p> <p>iii) Stockpiling in proper places of all materials and removal from the project site of waste and excess materials, including broken pavement and excavated debris in accordance with approved plans and specifications and contract provisions;</p> <p>iv) Deployment of committed equipment, facilities, support staff and manpower; and</p> <p>v) Renewal of the effectivity dates of the performance security after its expiration during the course of contract implementation.</p> <p>c) Assignment and subcontracting of the contract or any part thereof or substitution of key personnel named in the proposal without prior written approval by the Procuring Entity.</p> <p>d) Poor performance by the Contractor or unsatisfactory quality</p>

	<p>and/or progress of work arising from its fault or negligence as reflected in the CPES rating sheet. In the absence of the CPES rating sheet, the existing performance monitoring system of the Procuring Entity shall be applied. Any of the following acts by the Contractor shall be construed as poor performance:</p> <p>i) Negative slippage of fifteen (15%) and above within the critical path of the project due entirely to the fault or negligence of the Contractor; and</p> <p>ii) Quality of materials and workmanship not complying with the approved specifications arising from the Contractor's fault or negligence.</p> <p>e) Willful or deliberate abandonment or non-performance of the project or contract by the Contractor resulting to substantial breach thereof without lawful and/or just cause.</p> <p> In addition to the penalty of suspension, the performance security posted by the Contractor shall also be forfeited.]</p>
31.1	No dayworks are applicable to the contract.
33.1	The Contractor shall submit the Program of Work to the Procuring Entity within Twelve days (12) of delivery from the Notice of Award.
33.3	<p>The period between Program of Work updates is <i>Fifteen</i> (15) days.</p> <p>The amount to be withheld for late submission of an updated Program of Work is Five Hundred Pesos (PHP 500.00) per day.</p>
36.3	The Funding Source is the Government of the Philippines.
43.1	The percentage to apply to the value of the work not completed is 1/10 of 1% of the cost of the underperformed portion of the works for every day of delay.

44.5	<p>Cases when extension of contract time may be granted:</p> <p>a) rainy/unworkable days considered unfavorable for the prosecution of the Works at the site, based on the actual conditions obtained at the site, in excess of the number of rainy/unworkable days pre-determined by the Procuring Entity in relation to the original contract time during the conduct of detailed engineering and in the preparation of the contract documents as agreed upon by the parties before contract perfection, and/or</p> <p>b) major calamities such as exceptionally destructive typhoons, floods and earthquakes, and epidemics,</p> <p>c) delays attributable to the Procuring Entity, such as non-delivery on time of materials, working drawings, or written information to be furnished by the Procuring Entity, non-acquisition of permit to enter private properties or non-execution of deed of sale or donation within the right-of-way resulting in complete paralyzation of construction activities, and</p> <p>d) other meritorious causes as determined by the Procuring Entity and approved by the HoPE such as shortage of construction materials, general labor strikes, and peace and order problems that disrupt construction operations through no fault of the Contractor may be considered as additional grounds for extension of contract time provided they are publicly felt and certified by appropriate government agencies such as DTI, DOLE, DILG, and DND, among others.</p>
48.1	<p>The date by which operating and maintenance manuals are required is 30 days upon reaching 95% completion of the project.</p> <p>The date by which “as built” drawings are required is within 30 days upon reaching 95% completion of the project.</p>
48.2	<p>The amount to be withheld for failing to produce “as built” drawings and/or operating and maintenance manuals by the date required is withholding the amount equal to the Final progress payment.</p>

Section VI. Specifications

Republic of the Philippines
CITY OF CAGAYAN DE ORO
Department of Engineering & Public Works
OFFICE OF THE CITY ENGINEER

PROJECT : CONSTRUCTION OF TWO-STORY MULTIPURPOSE BUILDING AT BARANGAY BAYABAS
LOCATION : BARANGAY BAYABAS, CAGAYAN DE ORO CITY
SUBJECT : GENERAL SPECIFICATIONS

SECTION	:	GENERAL CONDITIONS
	1.01	General Scope of Work The general scope of work under this project comprises the furnishing of materials, labor, tools and equipment and to faithfully perform necessary supervision and services to properly conduct and produce the desired work in a most substantial and workmanlike manner.
	1.02	The contractor shall provide at least one (1) Project Engineer to monitor and supervise the daily construction activities.
	1.03	All materials to be used herein shall conform to Standard Specifications of Public Works and Highways 1988 to latest Edition, the Philippine Standard and the National Electrical Code and to strictly comply with the schedule of minimum testing requirements.
	1.04	Sampling of fresh concrete and all materials incorporated into work shall be done at jobsite or as permitted by the Material Engineer.
	1.05	Drawings and specifications shall be considered coordinative. Anything not shown in the plans/drawings but specified herein after or vice versa shall have the same effect.
ITEM - 801	:	REMOVAL OF STRUCTURES & OBSTRUCTIONS
	1.	Description 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 to remain. It shall also include the salvaging of designated materials and backfilling the resulting trenches, holes and pits.
	2.	Construction Requirements The contractor shall perform the work after the structures to be demolished are clearly identified by the resident engineer in charge.
	3.	Measurement and payment The accepted quantities to be measured shall be paid for at the Contract unit price or lump sum bid which shall full compensation for removing and disposing of obstructions including all materials, labor, equipment, tools and incidentals necessary to complete the work.
ITEM - 803	:	STRUCTURE EXCAVATION
	1.	Description This item shall consist of the necessary excavation for foundations, under drains, septic vaults and other structures not otherwise provided for in the specifications. This item shall include necessary dewatering of river streams, boring, pumping, draining, sheeting, bracing and the necessary construction of cofferdams and furnishing the material therefore, and the subsequent removal of cofferdams and the placing of all necessary backfill and/or foundation fill materials to replace unsuitable material encountered.
	2.	Construction Requirements The contractor shall verify the Engineer prior to start of excavation works so that cross sectional elevations and measurements may be taken on the undisturbed ground.
ITEM - 804	:	EMBANKMENT
	1.	Description This item shall consist of the construction of embankment in accordance with this specification and in conformity with the lines, grades and dimensions shown on the plans or established by the engineer.
	2.	Material requirement Embankment shall be constructed of suitable material including preparation of the areas which they are to be placed of which its quality shall be as acceptable by the Material Testing and Quality Control Division of this office.
	3.	Construction Method



Embankment is earth materials shown in horizontal layers not exceeding 200 mm (8 inches) loose layer and it shall be graded and compacted before the next layer is to be placed, shall be tested and passed the required degree of compaction.

4. Method of Measurement and Payment

The quality of embankment to be paid for shall be the volume of material compacted in place which price and payment shall be full compensation for placing and compacting all material including all labor, equipment, tools, and incidentals necessary to complete the work prescribed in this item.

ITEM - 804(4) : GRAVEL FILL

1. Description :

This item shall consist of furnishing, placing and compacting gravel bed materialize for foundation and covered court pavement as called for on Plans. Measurement and Payment:

The quantity to be paid for under this item shall be the volume of gravel bed materials which price and payment shall constitute furnishing, placing, grading and compacting including labor, equipment and other necessary to complete the work.

ITEM - 900 : FLAIN AND REINFORCED CONCRETE

1. Description

This item shall consist of furnishing, placing and furnishing concrete for the collection box, reservoir and other water supply related structures in accordance with this specifications and conforming to lines, grades and dimensions shown on plans.

2. Material Requirements

Materials include Portland cement, Concrete Aggregates (washed fine and coarse) water, reinforcing bars, false work, Tie Wires, Ad mixtures, and other materials necessary to complete any concrete and reinforced concrete work as called for on Plan. Proportioning of concrete or Design Mix of concrete shall be as accepted by the Material Testing and Quality Control (MTQC) Division of this office.

All works not stipulated herein, shall be in accordance with all detailed provisions of Item 900 of the Standard specifications for highways and bridges (Latest Edition).

3. Construction Requirement

Quality of Concrete, Proportioning of concrete mix, and water cement ratio of concrete, Sampling, Testing and Strength test of concrete shall conform to the requirements and provisions of item 900.3 Construction Requirements of Item 900.

4. Measurement and Payment

The accepted quantities of structural concrete completed in place will be the quantity shown on the Bid schedule, unless changes in design are made, in which case the quantity will be adjusted. Such prices and payment shall be full compensation for furnishing materials, including metal water stops, joint, joint filers, weep holes, rock backing and timber bumpers; for all forms and false work; for furnishing, bar cutting, fabrication of rebars and its set, for mixing, placing, furnishing and curing the concrete; and for all labor, materials, equipment, tools and incidentals necessary to complete the item.

ITEM - 902 : REINFORCING STEEL

1. Description

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 Engineer.

2. Material requirement

Reinforcing steel shall meet the requirements of item 710, Reinforcing Steel and Wire Rope.

3. Construction Methods

Before materials are ordered, all order lists and bending diagrams shall be furnished by the Contractor, for approval of the Engineer. The approval of order lists and bending diagrams by the Engineer shall in no way relieve the Contractor of responsibility for the correctness of such lists and diagrams. Any expense incident to the revisions of materials furnished in accordance with such lists and diagrams to make them comply with the Plans shall be borne by the Contractor.



Steel reinforcement shall be stored above the surface of the ground on platforms, skids, or other supports and shall be protected insofar as practicable from mechanical injury and surface deterioration caused by exposure to conditions producing rust. When placed in the work, reinforcement shall be free from dirt, detrimental rust, loose scale, paint, grease, oil, or other foreign materials. Reinforcement shall be free from injurious defects such as cracks and laminations, rust, surface seams, surface irregularities or mill scale will not be cause for rejection, provided the minimum dimensions, cross sectional area and tensile properties of a hard wire brushed specimen meets the physical requirements for the size and grade of steel specified.

All reinforcing bars requiring bending shall be cold-bent to the shapes shown on the Plans or required by the Engineer. Bars shall be bent around a 207 circular pin having the following diameters (D) in relation to the diameter of the bar (d). Bends and hooks in stirrups or ties may be bent to the diameter of the principal bar enclosed therein.

All steel reinforcement shall be accurately placed in the position shown on the Plans or required by the Engineer and firmly held there during the placing and setting of the concrete. Bars shall be tied at all intersections except where spacing is less than 300mm in each direction, in which case, alternate intersections shall be tied. Ties shall be fastened on the inside. Distance from the forms shall be maintained by means of stays, blocks, ties, hangers, or other approved supports, so that it does not vary from the position indicated on the Plans by more than 6mm. Blocks for holding reinforcement from contact with the forms shall be precast mortar blocks of approved shapes and dimensions. Layers of bars shall be separated by precast mortar blocks or by other equally suitable devices. The use of pebbles, pieces of broken stone or brick, metal pipe and wooden blocks shall not be permitted. Unless otherwise shown on the Plans or required by the Engineer, the minimum distance between bars shall be 40mm. Reinforcement in any member shall be placed and then inspected and approved by the Engineer before the placing of concrete begins. Concrete placed in violation of this provision may be rejected and removal may be required. If fabric reinforcement is shipped in rolls, it shall be straightened before being placed. Bundled bars shall be tied together at not more than 1.8m intervals.

All reinforcement shall be furnished in the full lengths indicated on the Plans. Splicing of bars, except where shown on the Plans, will not be permitted without the written approval of the Engineer. Splices shall be staggered as far as possible and with a minimum separation of not less than 40 bar diameters. Not more than one-third of the bars may be spliced in the same cross-section, except where shown on the Plans. In lapped splices, the bars shall be placed in contact and wired together. Lapped splices will not be permitted at locations where the concrete section is insufficient to provide minimum clear distance of one and one-third the maximum size of coarse aggregate between the splice and the nearest adjacent bar. Welding of reinforcing steel shall be done only if detailed on the Plans or if authorized by the Engineer in writing. Spiral reinforcement shall be spliced by lapping of least one and a half turns or by butt welding unless otherwise shown on the Plans.

Sheets of mesh or bar mat reinforcement shall overlap each other sufficiently to maintain a uniform strength and shall be securely fastened at the ends and edges. The overlap shall not be less than one mesh in width.

4. Method of Measurement and Payment

The quantity of reinforcing steel to be paid for will be the final quantity placed and accepted in the completed structure. No allowance will be made for tie-wires, separators, wire chairs and other material used in fastening the reinforcing steel in place. If bars are substituted upon the Contractor's request and approved by the Engineer and as a result thereof more steel is used than specified, only the mass specified shall be measured for payment. No measurement or payment will be made for splices added by the Contractor unless directed or approved by the Engineer. When there is no item for reinforcing steel in the Bill of Quantities, costs will be considered as incidental to the other items in the Bill of Quantities.

The accepted quantity, measured as prescribed in Section 404.4, shall be paid for at the contract unit price for Reinforcing Steel which price and payment shall be full compensation for furnishing and placing all materials, including all labor, equipment, tools and incidentals necessary to complete the work prescribed in this item.

ITEM - 908 1

FORMWORKS AND FALSEWORKS

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This item shall consist of designing, constructing and removing forms and falsework to temporarily support concrete, girders and other structural elements until the structure is completed to the point it can support itself.

Material requirement

The materials used for smooth form finish shall be plywood, tempered concrete-form-grade hardboard, metal, plastic, paper or other acceptable material capable of producing the desired finish for form-facing materials. Form-facing materials that produce a smooth, uniform texture on the concrete. Form-facing materials with raised grain, form surfaces, worn edges, patches, dents, or other defects that will impact the texture of concrete surfaces shall not be permitted. No form-facing material shall be specified for rough form finish.

Formwork accessories that are partially or wholly embedded in concrete, including ties and hangers shall be commercially manufactured. The use of non-lubricated wire form ties shall not be permitted. Where indicated in the Contract, use form ties with integral water barrier plates in walls.

Commercially manufactured formwork release agents shall be used to prevent formwork absorption of moisture, prevent bond with concrete, and not stain the concrete surfaces.

The materials to be used in the falsework construction shall be of the quantity and quality necessary to withstand the stresses imposed. It may be timber or steel or a combination of both. The workmanship shall be of such quality that the falsework will support the loads imposed on it without excessive settlement or take up beyond as shown on the falsework drawings.

Construction Methods

Form panels to be used shall be in good condition free of defects on exposed surfaces. If form panel material other than plywood is used, it shall have flexural strength, modulus of elasticity and other physical properties equal to or greater than the physical properties for the type of plywood specified. Furnish and place form panels for exposed surfaces in uniform widths of not less than 1 meter and in uniform lengths of not less than 2 meters except where the width of the member formed is less than 1 meter. Arrange panels in symmetrical patterns conforming to the general lines of the structure. Place panels for vertical surfaces with the long dimension horizontal and with horizontal joints level and continuous. For walls with sloping footings which do not abut other walls, panels may be placed with the long dimension parallel to the footing.

Form panels shall be precisely aligned on each side of the panel joint by means of supports or fasteners common to both panels. Use form ties and anchors that can be removed without damaging the concrete surface. Construct metal ties or anchorages within the forms to permit their removal to a depth of at least 25 millimeters from the face without damage to the concrete. Fill cavities with cement mortar and finish to a sound, smooth, uniform colored surface. Support roadway slab forms of box girder type structures on wales or similar supports fastened, as nearly as possible, to the top of the wall walls. Form exposed curved surfaces to follow the shape of the curve, except on retaining walls that follow a horizontal curve. The wall stems may be a series of short chords if all of the following apply: 1. Chords within the panel are the same length. 2. Chords do not vary from a true curve by more than 15 millimeters at any point. 3. All panel points are on the true curve. When architectural treatment is required, make the angle points for chords in wall stems fall at vertical ratication joints. Earth cuts as forms for vertical or sloping surfaces shall not be used unless otherwise required or permitted by the Contract.

Method of Measurement and Payment

When the Contract stipulates that payment will be made for forms and falsework on lump-sum basis, the pay item will include all materials and accessories needed in the work. Whenever the Bill of Quantities does not contain an item for forms and falsework, the work will not be paid directly but will be considered as a subsidiary obligation of the contractor under other Contract items.

The accepted quantities measured as prescribed description, shall be paid for at the Contract lump-sum price for Forms and Falsework which price and payment shall be full compensation for designing, constructing and removing forms and falsework, all materials and accessories needed and for furnishing all labor equipment tools and incidentals necessary to complete the item.



ITEM - 1001

11. DRAINAGE AND SEWERAGE SYSTEM

ITEM - 1002

PLUMBING

1. Description

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

2. Material Requirement

All piping materials, fixtures, fittings and accessories whether specifically mentioned or not but necessary to complete this item shall be furnished and installed.

All other requirements not stated herein shall be in accordance with the DPWH Standard Specifications.

3. Construction Requirements

Before any installation work is started the contractor shall carefully examine the plans and investigate actual structural and finishing work condition affecting all his work. When actual condition requires rearrangement of the approved pipe layout.

4. Inspection, Warranty Test and Description

All pipes, fittings, traps, fixtures, appurtenances and equipment of the plumbing and drainage system shall be inspected and shall be approved by the engineer to ensure compliance with all requirements of all Codes and Regulations referred to in this Specification.

Upon completion of the roughing in and before connecting fixtures, the entire cold piping system shall be tested at a hydrostatic pressure of 1-1/2 times the expected working pressure in the system during operation and remained tight and leak proofed.

5. Measurement and Payment

The work done under this item shall be quantified per length, number of units and lump sum, lot as provided in the Bill of Quantities, tested and accepted which price and payment shall constitute full compensation for furnishing all materials, labor, equipment, tools and incidentals necessary to complete the item.

ITEM - 1003

CARPENTRY WORKS

1. Description

The work under this item shall consist of furnishing all required materials, fabricated woodwork, tools, equipments, labor and performing all operations necessary for the satisfactory completion of all carpentry and joinery works in accordance with the approved plans, details and these Specifications.

2. Material Requirements

Lumber specie and usage, plywood, plyboard and other subsidiary materials and accessories necessary to complete the work shall be in accordance with what is specified and called for an approved plans and Program of Work. Finished carpentry works shall be free from disfiguring defects and its exposed surfaces shall be machine or hand sanded to an even smooth surface.

ITEM - 1007

ALUMINUM GLASS DOORS

1. Description

This item shall consist of furnishing all aluminum glass door materials, labor, tools, equipment and other incidentals required in undertaking the proper installation as shown on the plans and in accordance with this specification.

2. Material Requirements

Frame and panel members shall be fabricated from extruded aluminum sections true to details with clean, straight, sharply defined profiles and free from defects impairing strength and durability, conforming to the specification requirements as defined in ASTM B211.

Screws, nuts, washers, bolts, rivets and other miscellaneous fastening devices shall be made of non-corrosive materials such as aluminum, stainless steel etc.

3. Construction Requirements

For assembly and fabrication works, the cut edges shall be true and accurately jointed free of rough edges, installed and in placed to the alignment and plumbed true.



ITEM - 1008

ALUMINUM GLASS WINDOWS

1. Description
This item shall consist of furnishing all aluminum glass window materials, labor, tools, equipment and other incidentals required in undertaking the proper installation as shown on the plans and in accordance with this specification.
2. Material Requirements
Frame and panel members shall be fabricated from extruded aluminum sections true to details with clean, straight, sharply defined profiles and free from defects impairing strength and durability, conforming to the specification requirements as defined in ASTM B211.
Screws, nuts, washers, bolts, rivets and other miscellaneous fastening devices shall be made of non-corrosive materials such as aluminum, stainless steel etc.
3. Construction Requirements
Sliding and panel windows fabricated/ assembled and installed shall be set and plumb to the details free of rough edges.
4. Method of Measurement and Payment
All works under this item shall be measured in square meters or number of units installed complete with frame and glass or wood slots which price and payment shall be full compensation for furnishing all materials, fabricated wood products, tools, equipment, labor and incidentals necessary to complete the works.

ITEM - 1010

WOODEN DOORS AND WINDOWS

1. Description
This item shall consist of furnishing all materials, hardware, tools, labor and services necessary for complete fabrication and installation of wooden doors and windows of the type and size as shown on the Plans and in accordance with this specifications and applicable specifications under item 1003 on carpentry and Joinery Works.
2. Material requirement
Labor of doors, windows, jambs and panel when required shall be the specie indicated on Plans and/or specified under item 1003 on carpentry and Joinery Works.
Plywood type and thickness shall be in accordance with what is specified on Plan. Adhesive and other materials shall be as accepted by the project in charge /engineer.
3. Construction Requirements
Wooden doors (Flush type hollow core, flush type solid core, panel door) and windows (casement, awning, sliding) shall be in accordance with Plan. Frames shall be set plumb and square in concrete/masonry work or framework of walls or partitions.
4. Measurement and payment
Doors and windows shall be measured and paid for on the basis of number of sets completely installed by the engineer.

ITEM - 1013

CORRUGATED METAL ROOFING

1. Description
This item shall include furnishing all plant, equipment, tools materials and labor required to properly perform and complete the corrugated metal roofing together with related accessories such ridge, hip rolls, valleys, gutters and flashing when called for on Plans and in conformity with these specifications.
2. Material requirement
Corrugated galvanized iron (GI) sheets, including plain GI sheets for roofing accessories shall be as specified on Plans. Strap fasteners shall be Gauge 24 GI. Rivets and washers shall be galvanized mild iron. Soldering lead shall conform to ASTM B32. Roof ventilator when required shall be fabricated from Gauge 24 plain GI sheets or of some materials used per roofing sheets.
3. Construction Requirements
Installation of roofing sheets with end laps shall start at the lower part of the roof with side lap of 2 1/2 corrugations minimum and end laps of 300mm minimum, fastened by accepted fasteners conforming to the roofing materials.
Installation of roofing accessories like ridge/ hip rolls, valleys, flashing, coverlet flashing, Reglets, Gutters, Downspouts and Roof ventilators shall be in accordance with the provisions of Item 1013.



Water leak test shall be conducted on completed roofing for water tightness at side and end laps and at joints of roofing sheets with ridge/hip iron, valleys and flashings by way of water spray system.

4. Measurement and payment

Roofing sheets shall be measured and paid for on an area basis, in square meter or part thereof which price and payment includes all fasteners, rivets and other required roofing accessories based on actual measurement.

ITEM - 1014 :

WATERPROOFING

1. Description

The work under this section 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.

2. Material Requirements

Cement-base Waterproofing powder mix shall be cement-base, aggregate type, heavy duty, water-proof coating for reinforced concrete surface and masonry exposed to water. The aggregates are graded and size so as to mesh perfectly and are selected for purity, hardness, strength and are non-metallic.

Additive binders shall be one of special formulation of acrylic polymers and modifiers in liquid form used as additive with cement-base powder mix that improves adhesion and mechanical properties.

For membrane waterproofing, liquid waterproofing, hydraulic waterproofing, it shall be in accordance with the provisions of item 1014.2.2, 1014.2.4 respectively under item 1014-WATERPROOFING.

3. Measurement and Payment

This item shall be paid for in square meters actually rendered with waterproofing which price and payment shall be full compensation for furnishing and applying waterproofing materials including the use of equipment, tools, labor and incidentals necessary to complete the works.

ITEM - 1018 :

CERAMIC TILES/TILEWORKS

1. Description

This item shall consist of furnishing all ceramic tiles, tools and equipment including labor required in proper installation of works and floor tiles as shown on the Plans and in accordance with these specifications.

2. Material Requirements

Materials include ceramic tiles (glaze or unglazed), tile trims, accessories, cement and sand. Cement shall be Portland conforming to the specification requirements defined in item 700-Hydraulic Cement.

3. Construction Requirements

Tile work shall not be started until roughing IN5 for plumbing, electrical and other trades have been completed and tested. Mortar mix for scratch coat and setting bed shall consist of one-part cement, 3/4 part lime and 3 parts sand by volume. Surface to receive tile shall be level, true to elevation, dry, free from dirt and oil. Allow 7 seven days curing of scratch coat and setting bed. Bond coat for tiles shall be Portland Cement Paste.

4. Measurement and Payment

All works performed under this item shall be measured in square meter for areas actually laid with ceramic tiles accepted to the satisfaction of the Engineer, which price and payment shall be full compensation for furnishing all material, tools, equipment and other incidentals necessary to complete the item.

ITEM - 1022 :

PAINTING WORKS

1. Description

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 other related works indicated on the Plans and in accordance with this Specification.

2. Material Requirements

Paints, finishing colors shall be of first grade quality and that conform to the required specifications of item 709. Color shall be determined or as preferred by the end user. Concrete neutralizer, silicon water repellent, patching compound, varnish, lacquer, shellac, sanding sealer, glazing putty, natural wood paste filler and other related materials shall be as accepted by the engineer.

3. Construction Requirements



The contractor prior to the commencement of the painting, varnishing or related works shall examine the surfaces to be applied in order not to jeopardize the quality and appearance of the painting, varnishing and related works.

All surfaces shall be in proper condition to receive the finish. Wood work shall be hand-sanded, smooth and dusted clean. Interior wood work shall be sand papered. Knots, knots, pith pockets or sappy portions shall be sealed with natural wood filler. Nail holes, cracks or defects shall be carefully puttied making color of paint.

Concrete surfaces shall be coated with concrete neutralizer and allowed to dry before any painting primer coat is applied. Hairline cracks and unevenness shall be patched and sealed with approved putty or patching compound.

Metal shall be clean, dry and free from mill scale and rust. Grease and oil from surfaces shall be removed.

ITEM - 1044

MASONRY WORKS

1. Description

This item shall consist of furnishing masonry work materials, labor, tools and equipment required in undertaking the masonry work as called for on Plans and in accordance with this specification.

2. Material Requirements

Materials like cement, fine aggregates, hollow blocks, reinforcing bars, tie wires and other subsidiary materials necessary shall be delivered on site and shall be accepted/rejected as the case maybe by the Project Engineer of this office per test results submitted.

3. Construction Requirements

Masonry works for walls/partitions and other related structures shall be laid on a concrete laid wall footing/grade as called for on Plans. Reinforcing bars shall be in accordance with what is specified on Plan and Program of Work. Masonry walls and Partitions shall be laid duly checked as to horizontal and vertical alignment, plumbed and properly and anchored to the concrete wall/partition foundation.

Mortars for CHB setting and filler shall conform to Item 705.5.1 of DPWH Standard.

4. Measurement and Payment

Masonry works shall be measured in square meter or part thereof for actual work completed which price and payment shall be full compensation for furnishing all materials including labor and other incidentals necessary to complete the work.

ITEM - 1047

WELDED STRUCTURAL STEEL

1. Description

This item shall consist of the joining of structural steel members with welds and or bolts of the type, dimensions and design shown on the Plans and in accordance with the Specifications.

It is the intent of this specification to provide for work of a quality comparable to that required under the Standard Specifications for welded Highway and Railway Bridges. In case of the dispute or for the situations not adequately provided for in this Specification, those designated Standard Specifications shall be considered as the final authority and shall govern except as amended by the special provisions.

Welding of Structural Steel maybe done only when shown on the plans or authorized in writing by the engineer.

2. Material Requirements

Steel base metal to be welded shall be as indicated on the Plans conforming to AASHTO M 183.

All as welding electrodes shall conform to the requirements of American Welding Society Specifications. Electrodes shall be of classification numbers as required/indicated on the plans.

All sizes of steel members (angle bars, gusset plates, deformed bars, G.I. pipes, base plate) and other related materials shall be referred to the detailed working drawings.

All structural steel members shall be coated with rust converter and red lead primer.

3. Construction Requirements



equipment for welding and glass cutting shall be designed and constructed and in such condition as to enable qualified welders to follow the procedures and attain the results prescribed in these specifications.

Welding generators and transformers shall be designed expressly for welding. They shall be capable of delivering standby current adjustable through a range ample for the work requirements.

The contractor shall enforce the use of approved accessories necessary for the protection and convenience of the welders and for the proper and efficient execution of the work.

Welding shall be done by approved competent experienced and fully qualified welders.

Structural steel which is to be welded shall preferably not be painted until all welding is completed.

The rest of the provisions under material requirements and construction requirements not mentioned in this Specification shall be in accordance with provisions of Item 409-Welded Structural Steel of the DPWH Standard Specifications for Highways and Bridges.

4. Measurement and Payment

The quantity to be paid for under this item is the total weight of structural steel as specified on Bill of Quantities, fabricated, assembled and installed in place which price and payment shall be full compensation for furnishing accepted materials, fabricating, welding, installing, including all equipment, facilities, tools, accessories, subsidiary materials and all incidentals necessary to complete the work.

ITEM - 1100 : ELECTRICAL WORKS

11.01 General Scope of Work

Furnishing of all materials, labor, tools and equipment and to perform necessary operations for the completion of electrical wiring and devices at ground, second and third floor in accordance with the plan and as specified herein.

11.01 The scope of the electrical works called for herein, shall include the electrical wiring installation complete as shown on the plans and specification including circuit breaker, fuses, locks and key, junction boxes, conduit piping, equipment for the above-mentioned system as specified hereunder and all other equipment, devices, fittings and electrical connections of any descriptions that may be required to complete the electrical work ready for service, all in accordance with the requirements of the National Electrical Code although such devices, fittings and electrical connections may not be shown on the plans nor mentioned in the specifications.

11.02 All work shall comply and shall be done in accordance with the latest editions of the National Electrical Code and with the rules and requirements of the local power service for the project. Nothing contained in this specifications or shown on the plans shall be construed as to conflict with the applicable City and National Government Ordinances, codes and/or laws governing the installation of the Electrical work; as all such ordinances, codes and/or laws are hereby made parts of these specifications and the Contractor shall meet the requirements thereof. However, any apparent conflict between such laws, ordinances, codes, rules, regulations and the plans and/or those specifications shall be submitted to the owner or Authorities concerned, prior to the opening of the bids, for a decision.

11.04 Electrical Materials and Equipment

- All electrical materials, supplies, devices and fittings to be used and installed for this project shall be brand new and of the type and manufacture approved in accordance with the Philippine Standard and shall be standard factory products of reputable electrical manufacturers as approved by the electrical designer.
- Electrical materials, supplies, equipment, devices, and fittings may be accepted provided that they are or the equivalent in design, size and quality of materials and workmanship as those approved by the Philippine Standards and provided further that they are approved by the electrical designer or that they are specified herein.
- All lights must be Led Type (Led Fluorescent, Led Bulb) will be used in all lighting fixtures. Switches and outlets shall be in flush type. Fluorescent louver shall be recessed type in 24"x24" dimension, for 2x18W louver, 24"x48" dimension for 2x36W. Down lights shall be in 8" dimension with dotted silver reflector.

11.05 Conduit Work

All metal conduits to be installed hereunder shall be of the approved standard galvanized rigid conduits having smooth inner surfaces. Quality type flexible conduit shall be used in all lighting outlets.

11.06 Guarantee

- The contractor shall guarantee all equipment and wiring free from inherent mechanical and electrical defects for a period of one (1) year from the date of installation.



2. The manufacturer of the equipment or their locally authorized representative shall be responsible for the maintenance and inspection of all equipment with a minimum of two inspections during the contract year.

11.C Test and Guarantee

- a. When the electrical work is reported in writing by the electrical contractor to be complete and ready for acceptance, standard tests as directed shall be made, in the presence of the Owner or his duly authorized representatives, to ascertain whether the work fully complies with the advertised plans and specifications of the project. If said electrical does not comply with plans and specifications, the contractor shall at once remedy all defects and shortcomings therein and any additional test that may be required shall be at the expense of the contractor.
- b. The electrical contractor or his duly authorized representatives shall be present during all tests and a competent man must be left by him to be in charge of all work until written final acceptance will be given by the Owner or Architect. If the installation is found to comply in all installations the revised plans and specifications. All equipment, apparatuses, materials and labor required for making and conducting tests of all work, shall be supplied by the electrical Contractor to his own expense.
- c. The electrical contractor shall furnish a written guarantee covering all his work for the period of one (1) year, (except fluorescent and incandescent bulb which shall have two months guarantee period), from the date of final acceptance of his work, and shall repair and make good at his own expense during the guarantee period. If in the judgement of the owners or authorities concerned, such defects arise from defective workmanship and/or materials. Should repairs be required within the period of guarantee, the electrical contractor shall make the repairs at the convenience of the occupant or owners, and shall repair all damages to the adjacent parts of the project caused by him during the repair or replacement of his work.

ITEM 1105
1105.1

NETWORK CABLING SYSTEM

Description

This item shall consist of furnishing and installation of Network Cabling, equipment and associated components to form a complete coordinated system ready for operation in accordance with the Plans and Specifications.

1105.2

Definition

For the purpose of this item, the following terms shall be defined:

1. American Wire Gauge (AWG) - The standard gauge for measuring the diameter of conductors.
2. Cable - Networking hardware used to connect one network device to other network devices. Different types of network cables, such as coaxial cable, optical fiber cable, and twisted pair cables, are used depending on the network's physical layer, topology, and size.
3. Category 5 (Cat5) and Category 6 (Cat6) - Performance classes for cables, jacks, and other interconnection components.
4. Data Cabinet - A data cabinet is an enclosure with fitted, fixed or removable side panels and doors. The cabinet contains a rack for mounting electronic hardware and equipment.
5. Fiber Optic Cable - A cable containing one or more optical fibers that are used to carry light. The optical fiber elements are typically individually coated with plastic layers and contained in a protective tube suitable for the environment where the cable will be deployed.
6. Insulation Displacement Connector (IDC) - A connector designed to be attached to the conductor(s) of an insulated cable by a connection process which forces a selectively sharpened blade through the insulation, bypassing the need to strip the conductors of insulation before connecting.
7. Lucent Connector (LC) Adapter - A small form factor fiber optic connector.
8. Modular Jack - A connector with a recessed opening for making contact with multiple conductors, usually for 4, 6, or 8 wires. Such a jack, when used with its matching plug, makes for easy connection and disconnection to and from a communications network.
9. Network Cabling System - A complete system of cabling and associated hardware, which provides a comprehensive telecommunications infrastructure. This infrastructure serves a wide range of uses, such as to provide telephone service or transmit data through a computer network.
10. Optical Fiber Connector - A mechanical device mounted on the end of a fiber optic cable, light source, receiver or housing that mates to a similar device. It allows



10. Subscriber Connector (SC) Adapter - This contains the alignment sleeve for the precise alignment of the connector ferrules. Available in simplex, duplex and higher density configurations based on application needs.

11. Patch Cord - A length of cable with connectors on the ends that is used to connect an end device to a power source.

12. Patch Panel - A device or unit featuring a number of jacks, usually of the same or similar type, for the use of connecting and routing circuits for monitoring, interconnecting, and testing circuits in a convenient, flexible manner.

13. U/RU (Rack Unit) - A standard unit of measure for designating the height in computer enclosures and rack cabinets. A U equals 1.75 inches.

14. Subscriber Connector (SC) Adapter - This contains the alignment sleeve for the precise alignment of the connector ferrules. Available in simplex, duplex and higher density configurations based on application needs.

15. Terminal Block - A screw-type electrical connector where the wires are clamped down to the metal part by a screw. It is a connector which allows more than one circuit to connect to another circuit. It often contains two long aluminum or copper strips that are designed to connect different components. These strips create a bus bar for power distribution that is sent to the connected components.

16. Unshielded Twisted Pair (UTP) Cable - A cable made up of a bundle of twisted pairs. The twisted pairs are usually 22 or 24 AWG sized wires twisted around each other. The wires are typically made of copper with polyethylene (PE) or Fluorinated Ethylene Propylene (FEP) insulation which is color coded depending on the application of the cable being made.

1105.3

1105.3.1 Material Requirements

1105.3.1.1 Data Cabinet

The data cabinet shall be made of powder coated metal. It shall have a quick release door, removable side panels and adjustable front and rear panels, integrated locks on doors and side panels for increased security, adjustable front and rear mounting profiles. The data cabinet shall be either wall mounted or free standing.

1105.3.1.1

1105.3.1.1.1 Wall Mounting Data Cabinet

The item cabinet shall either be 6U, 9U, 12U, 15U, 18U or 22U-1

1105.3.1.2

1105.3.1.2.1 Free Standing Data Cabinet

This item shall be a 42U Universal Server Rack fully welded frame to provide multiple supports in all directions.

1105.3.2

1105.3.2.1 Distribution Frame Panel

The distribution panel shall be used for backbone purposes. This item shall be a rack mount fiber optic device with a 19 in. panel and SC Duplex Adapter. It shall have a splicing tray and connector to protect fusion splices and fiber excess.

1105.3.2.1

1105.3.2.1.1 Sub-Distribution Frame Panel

This item shall be used to connect/transmit signal to the main distribution panel. It shall have 12 ports, installed on the data cabinet.

1105.3.2.2

1105.3.2.2.1 Main Distribution Frame Panel

This item shall be used to connect every optical distribution panel in the network. It shall have 24 or 48 ports installed on the free-standing data cabinet.

1105.3.3

1105.3.3.1 Terminal Block

The terminal block shall be made of flame-retardant thermoplastic, with the base consisting of horizontal index strips for terminating UTP cable conductors. It shall have bases available in rack or frame configurations and for rack mounting with cable management hardware. It shall have a minimum continuous current capacity of 1.5A at rated voltage of 380V. The minimum size of terminal blocks shall be 3.5 mm² and be suitable for clamping wire between 0.1 mm² to 2.5 mm². Terminal blocks used to connect cables of different voltage shall be segregated into groups and be preferably identified by different color.

1105.3.4

1105.3.4.1 Patch Panel

1105.3.4.1.1 UTP Patch Panel

The patch panel shall be category 4, 1U high and shall support 24 modular jack ports or 2U high and support 48 modular jack ports. It shall accept RJ-45, 8 position modular plugs. The category 4 UTP modular jack insulation displacement contacts shall be capable of terminating solid conductors from 0.5 mm to 0.65 mm (22 to 24 AWG). The panel shall be used to link wall plate connection to the data switch located on the data cabinet. Patch panels shall terminate the building cabling on an IDC type connector or module.

1105.3.4.2

1105.3.4.2.1 Fiber Connect Panel/Fiber Patch Panel

The fiber connect panel shall be modular with snap in SC or LC adapters. It shall be equipped with a fixing mechanism that ensures cable retention and support of incoming fiber optic cable and be able to accommodate both direct termination and splicing.

1105.3.5

1105.3.5.1 Network Cable

The network cable shall either be fiber optic or copper with compatible connectors.



1105.3.5.1	<p>Unshielded Twisted Pair (UTP) Cable It shall be Cat5 or Cat6 cable with compatible 10Base-T, 100base-TX, and 1000base-T Ethernet connection that shall be used to connect wall plate ports to the UTP Patch Panel. When using Cat6 cable, it shall be ensured that all cabling components - jacks, patch panels, patch cords and the like - must be Cat6 certified, and extra caution shall be given to the proper termination of the cable ends.</p>
1105.3.5.2	<p>Fiber Optic Cable It shall be an 8-core fiber (OM3 Multi-mode for indoor application and OM Single-mode for outdoor application) with either the subscriber connector (SC) or Lucent connector (LC) that shall be used to connect the Sub-Distribution Frame Panel to Main Distribution Frame Panel. The configuration of the cable shall be such that it is arranged in tubes of 12 fibers. Fill tubes will be used as required.</p>
1105.3.6	<p>Patch Cord Patch cords shall be provided when patching of voice and/or data circuits is required at the cross-connections. The patch cords supplied shall be able to support the designed applications. Color coding of patch cords in the telecommunication closet shall be considered, an example of this would be: blue colors for work stations, gray colors for voice, red colors for servers, green colors for hub-to-hub connections, and yellow for other type of connectors.</p>
1105.3.6.1	<p>UTP Patch Cord The UTP Patch Cord shall be a Cat5 or Cat6 with a data rate of 100Mbps. It shall be assembled with a 3 or 5 meter cable length and RJ-45 male connector on both ends. This shall be used to connect computers and peripherals to the network and data switches.</p>
1105.3.6.2	<p>Fiber Patch Cord The Fiber Patch Cord shall be a 1 to 3 meter long, multimode graded index fiber with a 50 micron core with 125 micron cladding (multi-mode) and 9 micron core with 125 micron cladding (single mode) to suit the installed fiber optic cable with LC or SC ceramic connector at each end. It shall be used to connect optical network equipment to the main distribution panel.</p>
1105.3.7	<p>Wall Plate The wall plate shall either be single, 2 or 3-gang port and shall have a modular outlet with RJ-45, coaxial video, RCA, s-video, and fiber optic connectors to connect computers and peripherals to the network.</p>
1105.3.8	<p>Modular Jack The modular jack shall be made of durable terminal with 8 pins compatible with Cat5 and Cat6 cables for data connections or 4 pins compatible with standard six-position modular connectors (RJ11) for Voice/analog connection.</p>
1105.3.9	<p>Floor Mounted Port The floor mounted port shall either be a 2 or 3 gang port. It shall be made of steel/metal with either gold or silver finish. The ports shall be made of a durable terminal with 8 pins compatible with Cat5 and Cat6 cables/connectors.</p>
1105.3.10	<p>Network Equipment</p>
1105.3.10.1	<p>Core Switch The core switch shall be used to interconnect data switches and shall serve as a gateway to a wide area connection (WAN) or the Internet. It shall have the following specifications:</p> <ol style="list-style-type: none"> 1. Type: Layer 3 2. Port: 48 ports (non PoE) with 2 slots for Small Form-Factor Pluggable (SFP) uplink 3. Interface: 48 10/100/1000 mbps 4. Capacity: 104 Gbps 5. Form Factor: Rack Mounted 6. Power: 100 - 240 VAC / 50/60 Hz
1105.3.10.2	<p>Access Switch The access switch shall link the connections coming from the patch panel to the core switch. The following are the specifications for the access switch:</p> <ol style="list-style-type: none"> 1. Type: Layer 2 2. Port: 48 ports/24 ports with 1 slot Small Form-factor Pluggable (SFP) uplink 3. Interface: 10/100/1000 mbps 4. PoE: optional 5. Capacity: 104 Gbps for 48 ports / 48 Gbps for 24 ports 6. Switch Form: Rack Mounted 7. Power: 100 - 240 VAC / 50/60 Hz
1105.3.10.3	<p>Router The router shall be used to connect satellite offices to the central connection, it shall have the following specifications:</p> <ol style="list-style-type: none"> 1. Port: 8 ports with 2 WAN Ports 2. Interface: 10/100/1000 mbps



3. Form Factor: Rack Mounted
 4. Power: - 240 VAC / 50/60 Hz
- 1105.4 Construction Requirements
- 1105.4.1 General
 Installation of Network Cabling System shall comply with the governing laws and applicable codes and standards such as the Philippine Electronic Code and the ANS/TIA-568, Telecommunications Standards.
- 1105.4.2 Installation
 Install all system components and cross-connect hardware according to manufacturer's specifications and instruction as well as all applicable local codes and standards. All horizontal and backbone cables shall be installed in the following manner:
1. Cables shall be installed in continuous lengths from origin to destination.
 2. All horizontal cables shall not exceed 90 meters from the telecommunications outlets in the work area to the horizontal cross connect or FD.
 3. The cable's minimum bend radius of 4 times the cable diameter.
 4. The maximum cable pulling tension of 25 lbs. Shall not be exceeded.
 5. The cabling system and support hardware shall be installed so that it does not obscure any valves, fire alarm conduit, boxes, or other control devices.
 6. Cables shall be dressed and terminated in accordance with the standards, Manufacturer's recommendations and best industry practices.
 7. Cables shall be neatly bundled and dressed to their respective panels or blocks.
 8. Each panel or block shall be fed by an individual bundle separated and dressed back to the point of cable entrance into the rack or frame.
 9. Each cable shall be clearly labeled on the cable jacket behind the patch panel at a location that can be viewed without removing the bundle support ties.
 10. The cable jacket shall be maintained as close as possible to the termination point.
 11. Optic fiber cable shall be of non-metallic construction. The optic fibers shall not be constrained firmly against other fiber, strength members, moisture barrier compound or any other cable components in order that the fiber strain is decoupled from the strain in other components when the cable is under tension.
 12. The wall plate shall be fully near the work station, that the maximum length from the work station can be no longer 5 m.
- 1105.4.3 Personnel Qualification
 The installation of network cabling system, including wiring, cable termination and testing shall be done by a certified installer under the supervision of a duly registered Professional Electronics Engineer (PECE) and / or certified designer for Network Cabling System. The installer shall be certified and experienced in the proper installation and testing of network cabling and trained by a cabling system manufacturer.
- 1105.5 Testing
 All cables and hardware shall be 100% tested for defects in installation and to verify cable performance under installed conditions. All conductors of each installed cable shall be verified usable by the Contractor prior to system acceptance. All UTP and fiber optic cable field testing shall be performed with an approved test device. 100% of cables installed shall be tested and shall of result to PASS remarks channel or permanent link. All field testers shall be factory calibrated each calendar year by the field test equipment manufacturer.
- 1105.6 Method of Measurement
 The work under this item shall be measured by lump sum actually placed and installed network cabling system as indicated on the plans. Cables shall be measured by roll while other components shall be measured by set.
- 1105.7 Basis of Payment
 The quantity as determined in Section 1105.4 shall be paid for at unit price stipulated in the Contract's Bill of Quantities. The payment shall constitute the full compensation for furnishing all the necessary materials, providing necessary equipment and tools in installing the Network Cabling System, labor cost and all the incidental expenses necessary to complete the work.

Pay Item Number	Description	Unit of Measurement
1105 (1) a	Data Cabinet, Wall Type	Set
1105 (1) b	Data Cabinet, Free Standing	Set
1105 (2) a	Distribution Frame Panel, Sub	Set
1105 (2) b	Distribution Frame Panel, Main	Set
1105 (3)	Terminal Block	Set
1105 (4)	UTP Patch Panel	Set
1105 (5)	Fiber Connect Panel	Set
1105 (6)	UTP CAT5 Cable	Roll
1105 (7)	UTP CAT6 Cable	Roll
1105 (8)	Fiber Optic Cable	Roll



1105 (9)	Fiber Connector		Set
1105 (10)	Patch Cord CAT5		Set
1105 (11)	Patch Cord CAT6		Set
1105 (12)	Fiber Patch Cord		Set
1105 (13)	Modular Jack		Set
1105 (14) a1	Wall Plate, Single		Set
1105 (14) a2	Wall Plate, 2 port		Set
1105 (14) a3	Wall Plate, 3 port		Set
1105 (15)	Floor Mounted, 3 port		Set
1105 (15)	Floor Mounted, 3 port		Set
1105 (16)	Network Equipment		Set
1105 (17)	Network Cabling		Lump Sum

ITEM - 1106

CLOSED CIRCUIT TELEVISION SYSTEM

1.1 REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to within the text by the basic designation only.

INSTITUTE OF ELECTRICAL AND ELECTRONICS ENGINEERS (IEEE) IEEE C2	(2012; Errata 2012; INT 1-4 2012; INT 5-7 2013) National Electrical Safety Code
IEEE C62.41.1	(2002; R 2008) Guide on the Surges Environment in Low-Voltage (1000 V and Less) AC Power Circuits
IEEE C62.41.2	(2002) Recommended Practice on Characterization of Surges in Low-Voltage (1000 V and Less) AC Power Circuits

NATIONAL CABLE AND TELECOMMUNICATIONS ASSOCIATION (NCTA)

NCTA RP (2003) NCTA Recommended Practices for Measurements on Cable Television Systems

NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION (NEMA) ANS/NEMA OS 1	(2008; Amd 2010) Standard for Sheet-Steel Outlet Boxes, Device Boxes, Covers, and Box Supports
NEMA TC 2	(2013) Standard for Electrical Polyvinyl Chloride (PVC) Conduit

UNDERWRITERS LABORATORIES (UL)

UL 1 (2005; Reprint Jul 2012) Standard for Flexible Metal Conduit

UL 1581 (2001; Reprint Aug 2013) Electrical Wires,

Cables, and Flexible Cords UL 1660	(2004; Reprint Apr 2013) Liquid-Tight Flexible Nonmetallic Conduit
UL 1666	(2007; Reprint Jun 2012) Test for Flame Propagation Height of Electrical and Optical-Fiber Cables Installed Vertically in Shafts
UL 360	(2013; Reprint May 2013) Liquid-Tight Flexible Steel Conduit
UL 5	(2011) Surface Metal Raceway and Fittings
UL 514B	(2012) Conduit, Fitting and Cable Fittings
UL 514C	(1996; Reprint Nov 2011) Nonmetallic Outlet Boxes, Flush-Device Boxes, and Covers
UL 6	(2007; reprint Nov 2010) Electrical Rigid Metal Conduit-Steel
UL 651	(2011; Reprint Mar 2012) Standard for Schedule 40 and 80 Rigid PVC Conduit and Fittings
UL 651A	(2002; Rev thru Sep 2007) Type EB and A Rigid PVC Conduit and HDPE Conduit
UL 98	(2004; Rev thru Apr 2006) Enclosed and Dead-Front Switches
UL 969	(1995; Reprint Nov 2008) Standard for Marking and Labeling Systems

1106.1

Description

The Contractor shall install a complete CCTV system as shown on the plans and Drawings.

The work includes supply and installation for the complete Close Circuit Television System, but not limited to camera, camera enclosure, relay box, remote controller, cooling system, and related accessories.

Closed circuit television system, commonly referred to as CCTV, also known as video surveillance is the use of video cameras to transmit a signal to a specific place, on a



1106.1.1
 1106.1.1.1
 1106.1.1.2
 1106.1.1.3
 1106.1.2
 1106.1.3

...offer a... It offers from broadcast television that the signal is not being...
 ...though it may employ point to point (P2P),... to endpoints (P2MP), or...
 ...mesh wired or wireless links. Though almost all video cameras fit this definition, the term...
 ...is most often applied to those used for surveillance in areas that may need monitoring...
 ...such as banks, stores, and other areas where security is needed.

Submit Manufacturer's Data
 Submit manufacturer's data for all materials and equipment to be incorporated in the work.

Shop Drawings
 Submit shop drawings for the overall system and each major component. Drawing shall illustrate how each item of equipment will function, system schematic diagram, one line diagram and equipment layout.

Operation and Maintenance
 Submit three copies of operating and maintenance manual.

Material Requirements
 Product

NVR should be extremely reliable, easy-to-install NETWORK VIDEO RECORDER that delivers essential video recording features in an economic package. The units must utilize a chassis no larger than two rack units in height, and be suitable for either a desktop situation or mounting into a standard 19" equipment rack. The unit must feature power recovery upon interruption, and an operation status record log. The NETWORK VIDEO RECORDER shall feature full triplex operation to allow for simultaneous live or playback viewing and recording operations. It shall be available in four, nine, and sixteen channel configurations, all with a minimum of two audio channels. All configurations must be offered in 80GB, 160GB, 320GB, or 640GB hard drive capacities. The NVR must include a Main Monitor output to display the video in full-screen format, multi-screen format, or sequential format. The system must also have a Call Monitor output to display any selected camera in fullscreen call up, sequential display, and alarm call up operations. The front panel must provide immediate control of all recording, searching, and management functions, as well as controlling PTZ cameras. A minimum of the following manufacturer's PTZ cameras must be compatible:

The NETWORK VIDEO RECORDER must offer the following dome control functions from the front panel:
 Select Preset number, Go to Preset, Set Preset, Focus Near, Focus Far, Tilt Up, Tilt Down, Pan Left, Pan Right, Iris Open, Iris Close, Zoom In, Zoom Out, Display PTZ Hint It shall be compatible with the Touch Tracker Series dome controller.

The NETWORK VIDEO RECORDER must be able to easily be added to an existing network via TCP/IP or viewed via a web browser to search for video, monitor and configure cameras, and receive alarm notifications from a remote workstation using a built-in web server. Up to eight users shall be allowed to simultaneously connect to the unit using the Viewer. It shall include a minimum of four live viewing modes, to include, but not necessarily be limited to; basic live view, freeze, 2X digital zoom, and custom sequencing. In addition, the user must be able to set up to eight recording schedules, and play back the recorded video in speeds ranging from 1/100 to 100X the original speed. The NETWORK VIDEO RECORDER shall offer highly refined search capability, with multiple search modes and conditions that include event lists, time, alarm lists, and filters. To make it quick and easy to find specific video clips, the ability to utilize thumbnail searches with eight different time intervals must be available. In addition, the unit must support adjustable motion detection and covert cameras for enhanced security. The adjustable motion detection conditions shall include sensitivity, target area, target size, motion duration, and track direction. The Unit must include both a built-in CD-RW and Secure Digital (SD) card slot to archive a still image (.JPEG), archive .AVI format video clips, backup system settings, and update System software. Unalterable digital signatures of recorded video shall ensure the image Authenticity.

1106.1.4

Performance Specifications - NVR
 the NVR system shall meet the following minimum performance specifications:

System Design	Non-PC-based, embedded operating system with DSP hardware and upgradeable system firmware
Archiving	80 GB, 160 GB, 320 GB and 640 GB Hard Drive (Full/Alarm/Select): SD memory card (.JPG or .AVI format); CD-RW Video input
Video Input	1.0 Vpp (signal 714mV, sync 286mV) 75 ohms (BNC unbalanced)
AGC Range	0.5-2.0 Vpp
Chrominance	0.286 Vpp



Video Input	CV Range	200Hz
Video Output Level		1.0 Vpp ± 10% 75 ohms (BNC unbalanced)
Video Output Frequency		3dB ± 1dB at 3 MHz 30 FPS NTSC/25 fps PAL, best recording Mode
Video Output Burst Level		285mV ± 10% or Vector ± 10°
Compression Format		720 x 240 NTSC (720 x 288 PAL)
Impedance		75 ohms/HI Impedance x 1 & switchable
Number of Audio Tracks		Two
Audio Compression		8/22/44 kHz sampling, u-law
Audio Input		10k ohms, 2.5Vp-p (RCA)
Audio Output		1k ohms, 2.5Vp-p, 100-2k Hz (RCA)
Audio Output Level		-15dB ± 4dB (input -8dBs 1kHz sine wave)
Network Interface		Ethernet (RJ-45, 10/100V)
Network Protocol		TCP/IP, DHCP, HTTP, UDP
Network Capabilities		Live/Playback/PTZ control/System Setup Serial Port, RS-232, RS-485-variable bit rates from 1200 up to 115200 bps, 8 data bits, no parity, 1 stop bit, RS-485 signals are provided to the rear panel with a push-in type terminal block connector.
Recording Rate		60 fps for 720 x 240 (NTSC) / 50 fps for 720 x 288 (PAL)
Password Protection		Menu Setup, Remote Access
Software Upgrade		Via SD memory card
Picture Compression		M-JPEG
Recording Capacity		80, 160, 320 or 640 GB (1 or 2 fixed HDD) 1 CD-RW
Memory Card		Supports SD memory card
Features Access		Via front panel, client software or web browser
Composite Monitor Outputs		Main and Spol
Controller Compatibility		AD Touch Tracker

1106.1.5

Minimum Electrical Requirements

The NVR system should meet the following minimum requirements:

a. Electrical Power

- (1) Power Supply (Adaptor) Input: 100-240 VAC, 47-63 Hz, Output: 12 VDC, 3A
- (2) Power Consumption 33 Watts (12 VDC, 3A) without Hard Drive; Up to 53 Watts (12 VDC, 3 A) with Hard Drive
- (3) Power Interrupt Auto recovery to recording mode

b. Physical Dimensions

- (1) Unit Dimensions (WxHxD) 430 x 55 x 405 mm (17 x 2 x 16 in)
- (2) Unit Weight 15.45 lbs/34.06 kg (two hard drives)

c. Environmental

- (1) Operating Temperature 5°C to 40°C (41°F to 104°F)
- (2) Humidity 30% to 80%
- (3) Storage Temperature -20°C to 60°C (-4°F to 40°F)

d. Regulatory

- (1) Emissions FCC 15b, Class B EN55022 1998/A1: 2000/A2:2003
Class B EN61000-3 2:1995/A1:1998/A2:2003 EN61000-3-3:1995/A1:2001
EN50130-4 (1996)
- (2) Immunity EN50130-4 (1996)
- (3) Safety CE UL 60950-1 TUV EN 60950-1: 2001+A11 C-Tick
Australia PSE Japan

1106.1.6

Minimum Specifications for Client Software

The client software for the NVR system shall meet the following minimum specifications:

- a. Processor Intel-Pentium, 4MHz
- b. Memory 512 MB RAM Operating
- c. System Windows® 2000, and XP
- d. Video Card 64 MB of RAM capable of 32-bit true color display
- e. Free Hard Disk Space 160 MB for software installation
- f. Network Card 10base-T network for LAN operation

1106.1.7

Dome Fix Camera Description

The Discover™ dome contains either a high-resolution, high resolution wide dynamic range, or standard resolution color fixed camera with choice of 2.5-6 mm, 3.8-9.5 mm



and 9-22 mm variable focal auto iris lens mounted in a high impact vandal resistant housing.

Performance Specifications

The assembly shall be a low-profile housing, which is made from polycarbonate and composite materials with a polycarbonate viewing bubble.

- a. The vandal resistant housing and camera.
- b. Within the housing there shall be a mounting bracket with a gimbal arrangement to allow adjustment of the camera in the x, y and z-axis. The gimbals shall have locking screws to resist movement once the camera is adjusted.
- c. The housing shall include tamper resistant fasteners to prevent entry without a special tool. Tamper resistant fasteners shall be pin-in Torx type.
- d. Installed within shall be a high-resolution, high resolution wide dynamic range or standard resolution fixed camera with choice of 2.5-4 mm, 3.6-9.5 mm and 9-22 mm variable focal auto iris lens.
- e. The housing shall be mountable in two base configurations: surface mount dome and flush mount dome.
- f. Optional wall, pendant, inside corner, external corner, pole and electrical box mounting options will also be available.
- g. The housing shall include a threaded hole for 1/2" conduit in the back, as well as a 1/2" side entry.
- h. The housing shall meet the requirements of NEMA 4X (IP66) for weather resistance. An optional field installed heater shall be available.
- i. The housing cover shall include a gasket and retain the fasteners for easier installation. A lanyard shall retain the housing cover to aid installation.
- j. The bubble shall meet impact resistance equivalent to 120 pounds (54.4 kg) of force with repeated strikes. The bubble shall have a thickness of 2.5mm (±0.1mm).
- k. The high-resolution camera shall be a high-resolution color 1/3-inch CCD type with 540 lines of resolution and light sensitivity of 0.65 lux at F1.2.
- l. The camera shall be available in NTSC and PAL formats.
- m. Dip-switch settings shall control Night-Saver, White Balance (Normal, Extended), line lock, flickerless mode, backlight compensation and automatic gain control.
- n. The Wide Dynamic Range camera shall be a high-resolution color 1/3" Flaim type with 504 lines of resolution and light sensitivity of 0.95 lux at F1.2.
- o. The camera shall support NTSC and PAL formats.
- p. The camera shall support on screen menu display and shall control Night-Saver, NVR-Saver, White Balance, Wide Dynamic Range, line lock, video format (NTSC, PAL), Digital Slow Shutter, digital zoom and general picture adjustment.
- q. The standard resolution camera shall be a high-resolution color 1/3" CCD type with 330 lines of resolution and light sensitivity of 3.0 lux at F1.4. The camera shall be available in NTSC and PAL formats.
- r. Three lens options shall include a 2.5-4 mm (F-stop 1.3) variable focal, 3.6-9.5 (F-stop 1.2) variable focal and 9-22 mm (F-stop 1.3) variable focal lens. Each shall feature DC auto iris with level control.
- s. The camera shall operate from 12Vdc or 24Vac (60 Hz NTSC or 50 Hz PAL) and draw a maximum of 3 watts.

1104.3

Construction Requirements

1104.3.1

Installation

All work shall be in accordance with the manufacturer's recommendation.

1104.3.2

Commissioning and Testing

Commissioning and testing shall be carried out on the entire installation, fully carried out in part or as whole in accordance with the requirements of this specification.

1104.3.3

Training

Training shall be provided of the Owner's staff until they are familiar with the operation and maintenance of the complete installation.

1104.4

Method of Measurement

NETWORK VIDEO RECORDER, Closed Circuit TV Camera of the type specified will be measured by the number of set installed and accepted.

Cable / wiring will not be measured including Testing and Commissioning which will be measured and considered by one (1) lot.

1104.5

Basis of Payment

The quantities accepted as provided in Method of Measurement, shall be paid for at the Contract Unit Price per unit of measurement for each of the Pay Items listed below and shown in the Bill of Quantities, which price and payment shall be full compensation for furnishing and placing of materials, including all labor, equipment, tools and incidentals necessary to complete the work prescribed in this Section. Payment will be made in accordance with the Bill of Quantities.

Pay Item Number	Description	Unit of Measurement
1104	CCTV (including roughing-in and fittings)	Lump Sum



Description

This Item shall consist of furnishing all materials and supplies, tools, and equipment including all labor and the orientation as required in undertaking the complete installation of the Public Address (PA) System as shown on the approved Plans and in accordance with this Technical Specification. The system shall consist of, but not limited to, the following:

Management system amplifier, power amplifier, mixer pre-amplifier with equalizer, voice announcement board, remote microphone, ceiling speaker, wall mount speaker, CD/DVD player, AM/FM tuner, fabricated rack/cabinet rack, pre-standing loudspeaker booster transformer, conduits and wiring.

Definitions

For the purpose of this Item, the following definitions shall apply.

Amplifiers. Amplifier, Audio Amplifier or Pre-Amplifier is an electronic equipment that increases or boosts the direct current or voltage, or both, potential of an audio signal intended for use by another piece of audio equipment.

Loudspeaker. An equipment that converts an AC electric signal into an acoustic signal. The term speaker is commonly used to mean loudspeaker.

Decibel (dB). Originally a measuring system developed and used by the telecommunications industry, referring to one-tenth of a Bel. It has no units, and always must be related to some reference point, which is designated by a letter following the "dB" indication. 0 dBu is a voltage reference point equal to 0.775V rms.

Distortion (Electronics). Refers to a measure of the difference between the output and input signals in a linear component, such as an amplifier.

Distortion (PA). An undesirable, audible effect, usually due to the overloading of one or more components of the PA system.

Sound Pressure Level (SPL). Sound level is a logarithmic measure of the effective pressure of a sound relative to a reference value. It is measured in decibels (dB) above a standard reference level.

Audio Power Rating. The measure of continuous power in watts that an amplifier can deliver, or a loudspeaker can handle in root mean square value (RMS).

System Description

The PA System shall be designed to serve the multi-purpose of making general announcement, playing music, or transmitting fire tone under fire condition.

A specially designed PA System is a Voice Alarm System that can be seen in many situations, especially in public assembly areas such as schools, stations, airports, shopping centers and similar locations. The PA System shall be integrated with the fire detection and alarm system to provide the specified cause and effect/alarm sequencing in the event of a fire being detected within the building. Typical voice evacuation messages shall be played to provide clear instructional information about the alarm, emergency and evacuation procedures. Fire alarm shall be announced immediately on receipt of fire signal from the panel to all zones.

Quality Assurance

All products/equipment shall be brand new, of a single manufacturer and conforming to the recognized internationally accepted standards.

Installation of the system shall be governed by the provision of the latest edition of the Philippine Electronic Code (PEC) and other existing rules and regulations of the locality and governing agencies. Where applicable codes and standards differ, apply the more stringent requirement. Where codes and standards conflict, consult with Engineer for proper resolution prior to action.

The Contractor shall be responsible for all supervision, commissioning, tests and adjustment for the system. Such work shall be performed by or under direct supervision of a duly-licensed/registered Electronics Engineer.

Upon completion, of the work, the Contractor shall present documentation to the Owner before testing/commissioning and orientation of the system.





The Contractor shall submit all related documents which shall be subjected to the approval of the Designer or Engineer. The final documentation shall be submitted by the Contractor based on the Engineer's comments.

Product data

The contractor shall provide two (2) sets of documents with the following information:

1. User's Manuals and Installation Manuals.
2. Manufacturer's original catalog and technical data sheets for all components that provides details for all proposed products/equipment, wire and conduit, and others. Where a page shows more than one type of product, identify the intended item to be used for the project.
3. Identification of items or components furnished on the job by tag number, model numbers, manufacturer.
4. Complete description, function, specifications and statement as to whether the item is "as specified" or "equivalent".

One (1) copy shall be for the Engineer and one (1) for the end user. One (1) set of soft copy shall also be submitted for backup. Submitted manuals must be up-to-date reflecting any changes which occurred during installation.

Shop Drawings

The Contractor shall submit complete shop drawings for the whole system and not pieces of equipment from various systems subject for review and approval prior to purchase or installation. Shop drawing shall include, but not limited to, the following:

1. Floor plans of the building identifying locations of all pertinent equipment and loudspeakers.
2. Riser diagram of the system, including wire count and conduit sizes.
3. Direct voltage or power supply calculations/voltage calculation analysis.
4. Loudspeakers installation details plan or shop drawing.
5. Sequence of operation of the system.

As-Built Drawings

The Contractor shall submit Record Drawings of work as actually constructed, as specified in this Section, prior to system acceptance, with the following information:

1. Schematics, wiring diagrams, installation drawings and other pertinent details.
2. Floor plans of the building identifying locations of all pertinent equipment and loudspeakers.
3. Identifying and tag system riser and branch conduits, and junction and pull boxes.
4. Riser diagram of the system, including wire count and conduit size installed.

Operation and Maintenance Manuals

1. As-Built Drawings/Plans.
2. Product Submittal for all installed equipment.
3. Manufacturer's Maintenance Manual and Procedures.
4. Complete Operating Instructions or User's Manual.

Certificates

1. System Certificate signed by Contractor certifying that the system complied with Contract Documents and applicable codes.
2. Product Certificate signed by manufacturers of equipment certifying that products furnished comply with specified requirements.
3. Installer Certificates signed by manufacturer certifying that installers or technicians are capable of complying with requirements.
4. Manufacturer Certificates signed by manufacturers certifying that they comply with requirements.

1213.2 Material Requirements
1213.2.1 System Management Amplifier



It shall be a transistorized amplifier available in an EIA standard equipment rack (3-unit size), it shall have five (4) audio inputs including background music (BGM) input, and a speaker output section which has an internal attenuator and zone selector.

General purpose broadcast can be made from a remote microphone or from the amplifier; it shall be also capable of emergency broadcast, linked in fire alarm system, that gives pre-recorded voice instructions/chime through a Voice Announcement Board as specified in Section 1213.2.3.

Table 1. Technical Specification of System Management Amplifier

Property	Requirement
Frequency Response	40 Hz to 16 kHz \pm 2dB at 240W rated output
Distortion	Less than 1% (at rated output F=100Hz)
Signal to Noise (S/N)	60 dB or more
Tone Control	Bass: 100Hz \pm 15dB (Inputs 1-3 and BGM individually adjustable)
Output Voltage/ Impedance	100V/400 (selectable by the internal wiring change)
Power Source	Operate on both 220V AC and 24V/35A DC
Cable Diameter	ANSI22 - AWG24
Microphone Connection/ Expansion Amplifier Connection	Connector: 2 R/M female connectors for microphone and expansion amplifier Total maximum distance: 500m Linked cable: Category 5 Shielded Number microphone slot connection: up to 4 Twisted-Pair straight cable: TIA/EIA-568A standard

1213.2.2 Power Amplifier

The power amplifiers can be a single or multi-channel amplifier. It shall have adequate continuous RMS power output to meet the requirement of the configuration. The output voltage and impedance shall meet with the system requirements. It shall have a built-in transformer for 90V, 70V or 100V line operation. Amplifiers shall be protected against over loads and output shorts and a special thermal overload on the heat sink.

The front panel shall provide indication of program and unit status. Output connection shall be by screw terminal block mounted at the rear of the unit. For multi-channel amplifier, there shall be a priority function.

The system shall have an Input Selector Module which shall accept different audio sources such as microphones, AM/FM Radios, CD/DVD Players and other similar devices. The program of audio sources can be user selected. The module shall have priority settings so that a priority signal will mute all other signals.

The distributed audio amplifiers shall be magnetically coupled switch mode type with two input signal sources selectable manually or automatically by the fire alarm system. Output voltage shall be as shown in the schedule of work or as required to meet the needs of the PA system.

Power amplifier/audio amplifier shall be mounted in suitable wall mounted / floor standing enclosures.

Table 2. Technical Specification of Power Amplifier

Property	Requirement
Distribution Line	10V, 70V, or 100V
Power Amplifiers / Power Power Amplifiers	Fully transistorized and capable of delivering 1.5L, 6L, 30-watts (RMS) audio power
Output Power	100V / 8 Ohm
Frequency Response	40 Hz to 16 kHz \pm 2dB at rated output
Distortion	Less than 1% (at rated output F=100Hz)
Input	2 program and 2 priority inputs with program input muting during priority operation
Power Source	Operate on both 220V AC mains and 24V DC
Housing	compact 1U, 2U & 3U high housing for tabletop use and rack mounting



It shall have a single source playback mode, with a total number of eight (8) playback programs. It shall offer two (2) emergency announcements, five (5) commercial announcements, and one (1) chime.

1213.2.4 Remote Microphone

Input microphone shall be gooseneck-type and have zone-selector, press-to-talk switched, and all-call buttons. It shall have a reset button to deactivate initiated zones and its locations shall be found in the Plans. Additional extension units can be connected, however, the maximum number of extensions may differ per system type.

Table 3. Technical Specifications of Desk Microphone Assembly

Property	Requirement
Design Suitability	Designed to suit the number of zones required (24 zones)
Remote Controls	12 individual controls and 1 all-call control
Distortion	Less than 1%
Signal to Noise (S/N)	60 dB or more
Microphone	Unidirectional dynamic microphone with sensitivity -75 dB ± 3 dB
Program Function	2-user programmable function (first in, first served) priority
Connector	8Ω 45 connector

1213.2.5 CD/DVD Player, MP3 Player, USB and AM/FM Tuner

This unit shall consist of CD/DVD player, MP3 Player, USB and digitally controlled FM/AM tuner housed in a 19-inch, 2U high housing. FM/AM tuner shall have 10 presets and digital control and remote control. The operator shall be able to operate the player and tuner simultaneously.

There shall be a separate outputs and levels for player and tuner and provides player priority for the combined CD/DVD-Player / Tuner output.

1213.2.6 Speakers

It shall be especially designed for broadcasting high quality, integrated emergency fire alarm signals and voice communications and approved by an appropriate authority for use in such situations.

The speakers shall be distributed in the entire floor and shall be interconnected in the different zone configuration. The announcement can be made in zone wise or to all the speakers simultaneously in All-Call mode.

It can be either ceiling mounted or wall mounted as shown in the schedule of work and shall have a dynamic loudspeaker driver. The ceiling unit shall be a spring-mount type while the wall-mounted unit shall have an appropriate enclosure made of rigid material and both shall have complete mounting brackets and other accessories.

Table 4. Technical Specification of Ceiling and Wall Mount Speaker

Property	Requirement
Capacity (Ceiling Mounted)	4 W capacity
Capacity (Wall Mounted)	20 W to 10 W capacity as specified indoor type
Input	Rated 6 W, maximum 8 W
Frequency Response	40 Hz to 16kHz, or better
Sound Pressure Level	90dB at 1W/1m (minimum)
Effective Coverage Angle	90° (minimum)
Usable Voltage Line	100 V line
Line-switching Transformer	Provided with multiple power taps at 50V, 70V or 100V line operation.
Casement/mounting of Ceiling Mounted	10 cm baffle gray HPS case cone speaker with silver aluminum punching For recessed round type, appropriate fire-resistant enclosure (back-box) Rugged metal housing with vandal resistant grille if specified
Casement/mounting of Wall Mounted	Metal case type or rugged metal housing with vandal resistant grille if specified



1213.2.7 Fabricated Rack

Fabricated or Equipment Rack shall be a 48.26cm rack mountable to comply with Electronics Industries Association (EIA) (universal spacing) and IEC mounting pitch and shall have Pale Irony (Off-white) leather tone color.

It shall have sufficient air ventilation fan(s), mounting brackets, blank panels, terminal boards, and other necessary equipment.

1213.2.8 Booster Transformer

Audio transformers and autotransformers shall be used only for audio signals in a manner so as not to exceed the manufacturer's stated input or output voltage, impedance, or power limitations. The input or output wires of an audio transformer or auto-transformer shall be allowed to connect directly to the amplifier or loudspeaker terminals. No electrical terminal or lead shall be required to be grounded or bonded.

1213.2.9 External Volume Control

This shall be able to control up to ten (10) speakers and shall have a minimum input capacity of one watt (1W). At minimum, it shall have three steps of attenuation control.

1213.3 Construction Requirements

1213.3.1 Power Supply

A. Primary Power Supply shall be from a dedicated branch circuit with emergency power and shall be used for Public Address System only.

B. Secondary Power Supply Module shall be capable of AC/DC switching with voltage level and input supply failure monitoring. Upon loss or even drop of main supply, the module will switch to the secondary source for continued function. Battery capacity shall be computed in order to support the system for two (2) hours. Computations shall be submitted to support that the calculated rating complies with the minimum requirement.

1213.3.2 PA System Wiring

PA system wiring shall be done with Twisted wire (black/red) 1.6mm² or TF wire cable in 20 mm diameter PVC conduit including termination, complete as required.

The speakers in each zone are connected in parallel and are connected to the respective output. The cables from each zone are separately routed and terminated in the Panel.

Wiring methods shall be in accordance to the requirements of Philippine Electrical Code (PEC).

1213.4 Delivery, Storage, and Handling

PA System shall be delivered, handled and stored manufacturer's instruction together with the following provisions:

1. It shall be transported, handled and stored carefully in such a way which avoids product damage.
2. It shall not be stored directly on floor store room. Adequate support shall be provided. Amplifiers, loudspeakers, and other equipment shall be so located and protected as to guard against environmental exposure or physical damage, such as might result in fire, shock, or personal hazard.
3. It shall be moved as directed by the Engineer.
 - a. Any equipment damaged during delivery, storage or installation shall be marked and set aside.
 - b. Proposals for repair of any damaged equipment shall be submitted in writing to the Engineer for approval.
 - c. No repairs to damaged equipment shall be attempted without the Engineer's approval.
 - d. Any damaged equipment deemed unsuitable for repair according to the Engineer shall be removed from site and replaced at the Contractor's expense.

1213.6 Test and Acceptance



Upon completion of installation of this Item, the Contractor shall test and certify that the installed system is working properly and as intended. Testing shall be comprehensive and sufficient to demonstrate compliance with each requirement and as per system manufacturer recommendations. A written report of tests and verification shall be submitted to the Engineer and shall be approved by the Engineer for final acceptance. The written report shall include, but not limited to the following:

1. The power and data conduits and cables are routed to the correct terminal cabinet.
2. Adequate room is available for installation of the master controller and that there is room to open the cabinet door.
3. The Contractor has protected the installed cables and speaker units from physical and water damage.
4. The installation meets minimum code requirements of PEC/NEC and NFPA 70.
5. The Contractor has corrected all punch list items prior to beginning the tests.
6. The PAS mounting channel is square and level.
7. The data wiring has been terminated in the terminal cabinet in the proper manner.
8. The Contractor has recorded the results of performed tests for Public Address System as required by the specifications to check its functionality, such as:
 - a. acceptable audibility in all spaces
 - b. sound pressure levels of the Public address such as the ambient noise levels
9. Combined systems has been tested for the overriding feature for prioritizing fire alarm and life safety requirements.

1213.6

Warranty

The Contractor shall guarantee that the electrical installation is done in accordance with the approved Plans and Specifications.

The Contractor shall provide warranty for the entire Public Address System for a period of one (1) year or twelve (12) months from the date of final acceptance of the system by the Engineer.

The warranty includes, but not limited to the following:

1. All components shall be free of defects in materials and in workmanship. Defective components shall be replaced or repaired as required without cost to the Owner.
2. There shall be a response team that will respond to service request on-site, if required.
3. There shall be assigned personnel responsible for routine and breakdown maintenance of the equipment during the warranty period.

1213.7

The Contractor shall provide training course for the operator conducted by the qualified/trained professional instructor, at no additional cost.

The work under this Item shall be measured either by lump sum, meter, unit and set of what is actually placed and installed as shown on the approved Plans and accepted to the satisfaction of the Engineer. In computing the quantity, the dimensions shall be those as measured in place and completed based on the preceding requirements.

1213.8

Boils of Payment

All works performed, accepted quantity measured as prescribed in Section 1213.7 and as provided in the Bill of quantities, shall be paid for at the Contract Unit Price for Public Address System, which price and payment shall be full compensation for furnishing and placing of materials, including all labor, materials, tools and incidentals necessary to complete the work prescribed in this Item.

Payment will be made under:

File Item Number	Description	UNIT OF MEASURE/REMARK
1213 (1)	Public Address System	Lump Sum
1213 (2)	System Management Controller	Set
1213 (3)	Power Amplifier	Set
1213 (4)	Voice Encouragement System	Set
1213 (5)	Remote Microphone	Set
1213 (6)	Optical Speaker	Set
1213 (7)	Wall Mount Speaker	Set
1213 (8)	CD / DVD Player	Unit
1213 (9)	MP / MP3 Player	Unit
1213 (10)	Reinforced Wall	Set
1213 (11)	Speaker Transformer	Set

ITEM - 1300 : AIRCONDOMING



1. **Definition**
This item shall consist of furnishing & installation of air conditioning, refrigeration and ventilation systems, inclusive of all necessary electrical connections, ductwork, grilles, pipes and condensate drains and all other necessary accessories, ready for service in accordance with the Plans and Specifications.
2. **Material Requirements**
The types, sizes, capacities, quantities and power characteristics of the compressor, evaporator, condenser chilled water pump and condenser water pump shall be as specified or as shown on the Plans.
- 2.1 **Refrigerant Pipes**
Refrigerant pipes shall be copper tubing, type L or K, or black steel pipe, Schedule 40 for size of 100 mm diameter and smaller. Pipes over 100 mm shall be black steel pipe Schedule 40.
Black steel pipe shall be standard seamless, lap-welded, or electric resistant welded for size 50 mm diameter and larger, screw type for size 38 mm diameter and smaller, fittings for copper tubing shall be cast bronze fitting designed expressly for brazing.
- 2.2 **Pipes for Cooling Water**
Chilled and condenser cooling water pipes shall be black steel pipe, Schedule 40.
Pipes and fittings for size 50 mm diameter and smaller shall be screwed type. Pipes and fittings for size 62 mm diameter and larger shall be welded or flanged type.
- 2.3 **Pipe Insulations**
Insulations shall be performed fiberglass or its equivalent.
The insulating materials shall be covered with 100 mm x .13 mm thick polyethylene film which shall be overlapped not less than 30 mm. Pipe insulations shall be adequately protected at point of support by means of suitable metal shield to avoid damage from compression. Insulated pipes, valves and fittings located outdoors shall be provided with metal jackets.
- 2.4 **Ductwork**
Ducts shall be galvanized sheet steel of not less than the following gages.
1. No. 24 for 300 mm wide and smaller
2. No. 24 for 350 mm to 750 mm wide
3. No. 22 for 775 mm to 1500 mm wide
4. No. 20 for 1525 mm to 2250 mm wide
5. No. 18 for 2275 mm to 2500 mm or larger
6. For aluminum sheets use one gage higher.

Joints and stiffeners of ducts using lap joints shall be as follows:
a. 300 mm wide and smaller, without brazing
b. 325 mm to 750 mm wide, brace with 25 mm x 25 mm x 3 mm steel angles
c. 775 mm to 1500 mm, brace with 31 mm x 31 mm x 3 mm steel angles
d. 1525 mm up, brace with 38 mm x 38 mm x 3 mm steel angles

Stiffeners shall be located not more than 1200 mm from each joint.
- 2.5 **Ductwork Installation**
The application insulation materials shall be rigid board made of styrofoam or equivalent 25 mm thick for ground and top floor, 13 mm thick for intermediate floor.
Galvanized metal bands for ducts shall be secure and spaced 300 mm minimum center to center and corners shall be protected with galvanized metal angles.
- 2.6 **Diffusers**
The type, shape, capacity, size and location shall be as shown in the Plans.
Diffusers shall be complete with frame and gasket, equalizing deflector and volume control as indicated or specified and shall have factory-applied prime coat of paint.
Samples of supply and return air diffusers shall be submitted for approval before mass fabrication and installation.
- 2.7 **Dampers**
Dampers shall be of same material as duct, at least one gage heavier and shall have accessible location, complete with locking device for adjusting and locking damper in position.



Where necessary, splitters, butterfly and louvers damper deflecting or control of air volume and direction and balancing the system shall be provided whether or not they are indicated on the Plans.

- 2.8 **Fire Damper**
Main duct shall be provided with proper fire dampers of the fusible link actuated type.
Access door shall be provided in ductwork for renewal of fusible link and to reset damper.
- 2.9 **Equivalent Foundation**
Foundation shall be provided and shall conform to the recommendation of the manufacturer of the equipment. Equipment shall be leveled on foundation by means of jacks or steel wedges. All spaces between equipment bases and concrete foundation shall be filled with cement mortar.
- 2.10 **Electrical Works**
Power supply shall be provided by the Contractor at the pull box installed inside the machine room and shall furnish and install the main circuit breaker and starter with suitable ratings and capacities, conduits, wiring, fittings, devices and all other equipment and electrical connections needed to complete the electrical installation of the system. All electrical works shall comply with the latest edition of the Philippine Electrical Code, with the applicable ordinance of the local government and all the rules and requirements of the local power company.
3. **Construction Requirements**
The air conditioning system shall be entirely automatic in operation and shall not require the presence of an attendant except for periodic inspection for lubrication. All equipment and materials shall be inspected upon delivery and shall be tested after installation. Piping shall not be buried, concealed, or insulated until it has been inspected, tested and approved. Walls, floor and other parts of the building and equipment damaged by contractor in the prosecution of the work shall be replaced as shown on the Plans.
- 3.1 **Operating Tests**
Refrigerating equipment shall be tested for 8-hours per day for three consecutive days or longer when so directed, under the supervision of manufacturer qualified and authorized representative, who will make necessary adjustments and instruct designated plant operating personnel for each operation and maintenance of refrigerating equipment and controls.
Operating test of complete air conditioning system shall be 8-hour minimum for each system. Tests of air flow, temperature and humidity shall be made to demonstrate that each complies with the requirements of the Plans and Specifications.
- 3.2 **Guarantee and Service**
All equipment, materials and workmanship shall be guaranteed for a period of one (1) year from date of acceptance at any time within the period of guarantee and upon notification, the contractor shall repair and rectify the deficiencies, including replacement of parts or entire units.
- 3.3 **Miscellaneous**
The owner shall be provided with three (3) bound copies "A5 SIZE" diagrams, shop drawings, part lists, serial number and inventory of equipment including manufacturer's operating and maintenance manuals.
All standard tools and equipment shall be furnished for proper and regular maintenance of installed equipment.
4. **Method of Measurement**
The work under this item shall be measured either by set, piece, length, square meter actually placed and installed as shown on the Plans.
Compressor, condenser and evaporator shall be measured by set, grilles, diffusers and valve by piece, pipe by length, duct and insulation by square meter.
5. **Basis of Payment**
All work performed and measured and as provided for in the Bill of Quantities shall be paid for at the Unit Bid or Contract Unit Price which payment shall constitute full compensation including labor, materials, tools and incidentals necessary to complete this item.

Payment shall be made under:

Pay Item	Description	Unit of Measurement
(a)	Compressor, Condenser set and Evaporator	
(b)	Diffuser, Grilles and Valves	piece



(c) Pipes
 (d) Ducts and Insulation
 (e) Pipe Insulation



length
 square meter
 meter

ITEM - 1202 : FIRE PROTECTION SPRINKLER SYSTEM

ITEM - 1208 : FIRE ALARM, SMOKE DETECTION AND FIRE HYDRANT SYSTEM

1. Description
 This item shall consist of furnishing & installation of fire alarm system, smoke detection system and fire hydrant system inclusive of all pipings and pipe fitting connections, valves, controls, electrical wiring connections & all other accessories ready for service in accordance with plans & specifications.
2. Material Requirements
 Smoke Detector shall be PHOTO-ELECTRIC with fire alarm sounder with strobe light, manual call point, twisted wires # 16-18, PVC flexible hose, 4 Zone Fire Alarm Control Panel with all its consumables.
 Fire Alarm System shall be Fire Alarm Control Panel MS-LOUD-7E, 4-Zone with MF batteries, System Sensor Bell detector, sensor bell and all accessories & incidentals necessary for the system.
3. Measurement and Payment
 The quantity to be paid for shall be all work performed and measured by set actually in place & installed @ the Contract Unit Bid Price which shall include all the materials, equipment, tools, labor and incidentals necessary to complete the work, tested and accepted by the engineer.

SPL - 01 : SIGNAGES

SPL - 02 : FAVERS

SPL - 03 : HEAD SIZE BOULDERS

SPL - 04 : PERMITS

SPL - 05 : COMMUNITY ANTENNA TELEVISION

1. Description
 - a. This item shall consist of furnishing and installation of Community Antenna Television, equipment and associated components to form a complete coordinated system ready for operation in accordance with the Plans and Specifications.
 - b. Provide complete system including antennae, antennae mounts, lightning protection, head-end equipment, RF amplification and distribution systems splitters, taps, cross-connection blocks including panels and associated hardware, telecommunication outlets (TCO), coaxial distribution wires, power supplies, cables, connectors, "patch" cables and internal communications system ground, required for reception and distribution of cable.
2. Related Work
 - a. System Tests.
 - b. Submittals (including samples, test reports, certificates, and manufacturers' literature): SHOP DRAWINGS, PRODUCT DATA, AND SAMPLES.
 - c. Sealant and caulking materials and their application around conduit penetrations through building envelope to prevent moisture migration into building: JOINT SEALANTS.
 - d. Electrical conductors and cables in electrical systems rated 600 V and below: LOW VOLTAGE ELECTRICAL POWER CONDUCTORS AND CABLES (600 VOLTS AND BELOW).
 - e. Wiring devices: WIRING DEVICES.
 - f. Lightning protection system: FACILITY LIGHTNING PROTECTION.
 - g. General electrical requirements that are common to more than one section in Division: REQUIREMENTS FOR COMMUNICATIONS INSTALLATIONS.
 - h. Requirements for personnel safety and to provide a low impedance path for possible ground fault currents: GROUNDING AND BONDING FOR COMMUNICATIONS SYSTEMS.
 - i. Conduits for cables and wiring: RACEWAYS AND BOXES FOR COMMUNICATIONS SYSTEMS.



Low voltage cabling system infrastructure:
CONTROL, COMMUNICATION AND SIGNAL CABLEING.
 Voice and data cable distribution system and
 associated equipment; **COMMUNICATIONS STRUCTURED CABLING.**

3. RF Cabling Requirements/Column Explanation:

Column	Explanation
FLOOR	Identify floor by number (i.e. 1st, 2nd, etc.)
TR ROOM NUMBER	Identify room, by number, from which cabling will be installed
TO FLOOR TR	Identify building, by number or location, to which cabling will be installed
NUMBER OF CONDUCTORS	Identify the number of conductors in each run of RF cable
INSTALLATION METHOD	Identify the method of installation
NOTES	Identify note numbers for special features or equipment
BUILDING MTR	Identify building by number or title //

4. Analog Video (and Audio) Cabling Requirements/Column Explanation:

Column	Explanation
FROM BUILDING	Identify building, by number or location, from which cabling will be installed
TR ROOM NUMBER	Identify the room, by number, from which cabling will be installed
TO BUILDING INR	Identifies building, by number or title, to which cabling will be installed
TR ROOM NUMBER	Identify the room, by number, to which cabling will be installed
NUMBER OF CONDUCTORS	Identify the number of conductors in each run of cable
INSTALLATION METHOD	Identify method of installation
NOTES	Identify a note number for special features or equipment
BUILDING MTR	Identifies the building by number or title

5. Performance and Design Criteria

1. Design Criteria:

1. Coordinate features to provide components forming an integrated system. Match components and interconnections for optimum performance of specified functions.
2. Provide system with capacity to increase quantity by 40 percent above indicated without adding any internal or external components or main trunk cable conductors.
3. Distribute HDTV television signal to simple connection of Digital Television Standard Parts 1-16 HDTV receivers.
4. Deliver all HDTV or Analog television channel signals.
5. Provide reception quality at each, that received in area with individual antennas. Deliver minimum +4.0 dBmV (2,000 microvolts across 75 Ohms) and maximum of +20 dBmV (20,000 microvolts) for each HDTV channel at each.
6. Only employ interfacing methods accepted by AHJ. Selected interface or interconnecting methods require physical and mechanical connections, matching signal, voltage, processing levels and impedance that provides described signal levels and quality.
7. Interface telephone, RED, Nurse Call, PA, and CATV systems with system only as accepted by AHJ.
8. Provide passive distribution equipment to meet or exceed -80 dB radiation shielding specifications and provide screw type audio connectors.
9. Terminate trunk, branch, and interconnecting cables and unused equipment ports or taps with terminating resistors designed for RF, audio, and digital cable systems without adapters.
10. Utilize microprocessor components for signaling and programming circuits and functions. Use non-volatile system program memory, or protected from erasure during power outages for a minimum of 24 hours.
11. Provide UPS for system (including each distribution cabinet/point) to allow normal operation and function in event of an AC power failure or during input power fluctuations for a minimum of 30 minutes.
12. Use coaxial cable connections recommended and approved for coaxial cable distribution points and RF transmission lines.
 - a. Utilize barrier terminal screw type connectors, minimum of base band cable systems.



- b. Strip type connectors installed with a rat-rat type installation tool are acceptable alternative if cable dress, shielding, grounding, connections and labeling are same as barrier terminal strip connectors.
 - c. Tape of any type, wire nuts or solder type connections are not permitted.
13. Utilizing LAN/WAN cable systems for control, management and distribution of equipment and distribution of CATV signals is not permitted. Connect system ensuring NFPA Critical Care and Life Safety Circuit separation guidelines are satisfied. Connections to Telephone and LAN/WAN systems are not permitted.
14. Telephone cable to distribute CATV signals, carrying system or sub-system AC or DC voltage is not permitted.
15. Audio Level Processing: Provide control location equipment to ensure system produces audio channel capacity identified on drawings of each TV/speaker.
16. Provide weather-resistant equipment listed by National Telecommunication Commission (NTC) for installation outdoors or in damp locations.
- l. Performance Criteria:**
- 1. RF Service:**
- a. "Off air" RF High Definition (HDTV) or Analog Television service (considered to be at RF (below 900 mhz in frequency bandwidth). RF television systems require backbone coaxial cable, from antenna farm to antenna head end room, and to each TR and distribution coaxial cable to each HDTV outlet location.
 - b. Isolation (outlet-outlet): 14 dB.
 - c. Impedance: 75 Ohms, unbalanced.
 - d. Signal Level: 10 dBmV, +/- 5.0 dBmV.
 - e. Bandwidth: Minimum 6.0 MHz per channel fully loaded.
- 2. Analog Video Service: Baseband below 100 MHz in frequency bandwidth.**
- a. Isolation (outlet-outlet): Minimum 24 dB.
 - b. Impedance: 75 Ohm, unbalanced.
 - c. Output Level: 1.0 V peak to peak (P-P), for 87.5 percent depth of Modulation (Mod).
 - d. Diff Gain: ±1.0 dB at 87.5 percent Mod.
 - e. Diff Phase: ±1.5 at 87.5 percent Mod.
 - f. Signal to Noise (S/N) ratio: Minimum 44 dB.
 - g. Hum Modulation: -55 dB.
 - h. Return Loss: Maximum -14 dB or 1.5 Voltage Standing Wave Ratio (VSWR).
 - i. Bandwidth: Minimum 6.0 MHz per channel, fully loaded.
- 3. Analog Audio Service: is baseband below 10 MHz in frequency bandwidth. Analog audio circuits require separate audio connectors and video connectors even though both are considered baseband signals. Each has multiple 600 (or 120) Ohm BAL line pairs.**
- a. Impedance: 600 Ohm, BAL.
 - b. Input Level: Minimum 39 mV RMS.
 - c. Output Level: 0 dBm.
 - d. S/N ratio: Minimum 55 dB.
 - e. Hum Modulation: Minimum -50 dB.
 - f. Return Loss: Maximum -14 dB (or 1.5 VSWR).
 - g. Isolation (outlet-outlet): Minimum 24 dB.
 - h. Frequency Bandwidth: Minimum 100 Hz - 10 KHz.
- iv. Provide accessories and miscellaneous equipment for a complete and operating HDTV or analog system.**
- iv. Equipment:**
- 1. Modular type rated for continuous duty.
 - 2. Provide NTC listed equipment that is a commercial business enterprise manufacturing items of equipment and which:
 - a. Maintains replacement parts for equipment in stock.
 - b. Maintains engineering drawings, specifications, and operating manuals for equipment.
- v. For protection from input power surges and to ensure noise is not induced into circuits, provide noise filters and surge protectors for each equipment interface, distribution and head end cabinet, control console, and local and remote amplifier locations. Provide lightning/surge suppression of the antenna farm and ground.
- vi. Provide stainless steel, anodized aluminum or AHJ accepted faceplates.
- 4. DISTRIBUTION EQUIPMENT**
- l. Distribution Devices:**
- 1. Distribution Amplifier:
 - a. Description: Broadband, very low distortion, cable television system quality, HDTV distribution amplifier.
 - b. Characteristics:

- iv. Frequency Range: 49MHz to 1,000MHz.
 - v. Channel Loading: 150.
 - vi. Flatness: ± 0.75 dB.
 - vii. Gain: 32dB.
 - viii. Output Level: +40dBmV.
 - ix. Gain Control Range: 10dB.
 - x. Slope Control Range: 8dB.
 - xi. Plug-in Equalizers: As needed.
 - xii. Attenuator Options: As needed.
 - xiii. Programming: Minimum 35-HDTV channels.
 - xiv. Gain of the Preamp: 32dB, with an output level of 48dBmV for each HDTV channel processed.
 - xv. Amplifier Module: Hybrid push-out.
 - xvi. Gain and Slope Control Ranges: 8dB and 9dB, respectively.
- E. Combiners:**
1. Provide 8-port passive combiner for combining RF signals into one main trunk run for distribution to building locations.
 2. Bandwidth of Combiner: 0 to 1,000 MHz.
- F. Cable:**
1. Provide RG-6, RG-11, or appropriate hardline minimum 13 mm (1/2 inch) coaxial cable to achieve specified signal level.
 - a. Provide RG-11 or 13 mm (1/2 inch) hardline coaxial cable for runs over 45.72 m (150 feet) in length.
 - b. Provide plenum or riser rated coaxial cable with a nominal characteristic impedance of 75 Ohms throughout entire frequency spectrum utilized in this system.
 2. Sweep-test and return-loss test each reel of cable, over frequency range 50 MHz to 750 MHz, at manufacturer prior to shipping.
 3. Trunk Cable:
 - a. Description: 13 mm (1/2 inch), semi-rigid coax, riser rated.
 - b. Maximum Attenuation:
 - i. 2.92 dB/100ft at 700 MHz.
 - ii. 3.78 dB/100ft at 1000 MHz.
 - iii. Impedance: 75 Ohm.
 4. RG6 Cable:
 - a. Description: RG6 double shielded cable or CMR or CMP Rated
 - b. Attenuation:
 - i. 1.48 dB/100ft at 50 MHz.
 - ii. 7.45 dB/100ft at 1000 MHz.
 - iii. Impedance: 75 Ohm.
 5. General Purpose Analog RF:
 - a. Size:
 - i. Minimum coaxial cable size RG-6 type (or equv).
 - ii. Increase size (i.e. RG-8, 13 mm (1/2 inch), 19 mm (3/4 inch), etc.) to meet system design signal level.
 - iii. Use for baseband signals as approved by OEM.
 - b. Technical Characteristics:
 - i. Impedance: 75 Ohm, unbalanced.
 - ii. Center Conductor: 20 AWG, solid or stranded copper, or copper plated steel or aluminum.
 - iii. Dielectric: Cellular polyethylene.
 - iv. Shield Coverage: 95 percent, copper braid.
 - v. Connector type: BNC or UHF.
 - vi. Attenuation:
 1. Frequency 10 kHz: Maximum 0.20 dB/30.5 M (100 ft.)
 2. Frequency 100 kHz: Maximum 0.22 dB/30.5 M (100 ft.)
 3. Frequency 1 MHz: Maximum 0.25 dB/30.5 M (100 ft.)
 4. Frequency 4.5 MHz: Maximum 0.85 dB/30.5 M (100 ft.)
 5. Frequency 10 MHz: Maximum 1.40 dB/30.5 M (100 ft.)
 6. Frequency 100 MHz: Maximum 5.00 dB/30.5 M (100 ft.)
 6. RG11 Cable:
 - a. Description: RG11 cable or CMR or CMP Rated.
 - b. Attenuation:
 - i. 0.90 dB/100ft at 50 MHz.
 - ii. 5.04 dB/100ft at 1000 MHz.
 - iii. Impedance: 75 Ohm.
- iv. Line Splitters:**



1. Provide low-radiation line splitters with a flat frequency response from 30 MHz to 30 MHz. Provide units of a hybrid design with a 75-ohm match on input and outputs and a VSWR no greater than 1.4:1.
 2. Provide two-way line splitters with signal loss of not more than 3.5 dB at each output.
 3. Provide four-way line splitters with signal loss of not more than 7.2 dB at each output.
 4. Terminate unused splitter outputs with 75-Ohm terminations.
- v. RF signal splitters:
1. Frequency Range: 5MHz to 900MHz.
 2. Output: 2, 3, 4 and 8.
 3. Splitter Loss: less than 12 dB.
 4. RF Shielding: 120 dB.
- vi. HDTV Outlets:
1. Provide HDTV outlets at each location shown. Install outlets in 10.2 cm (4 inch) square, 5.1 cm (2 inch) deep minimum flush electrical boxes.
 2. Incorporate provisions in the network to prevent 60 Hz AC or DC feedback into distribution lines.
 3. Outlets:
 - a. Frequency Range: 10 MHz to 900 MHz, minimum
 - b. Insertion Loss: less than 1.0 dB at any frequency within designated frequency range for a 17 dB isolation network.
 - c. Back-matched from 10 to 1,000 MHz.
 - d. One F-type or BNC connector on front and two F-type or BNC connectors on rear.
 - e. Minimum Isolation Value between any Two Outlets: 24 dB.
- vii. Taps:
1. Description: Directional coupler type taps.
 2. Rated for installation in TR or accessible area of cable tray.
 3. Frequency Range: 5 MHz to 900 MHz.
 4. Output: 2, 4 and 8.
- viii. Wall plates and Bulkhead Connectors:
1. Provide wall plates for termination of CATV signals at television sets.
 2. Impedance: 75 Ohms.
 3. Frequency Band: SUB/VHF/CATV-HDTV/UHF.
- ix. Combiners, Traps, and Filters and Passive Devices such as Splitters, Couplers, "Patch" Cables, or Devices:
1. Use coaxial cable connections recommended by cable OEM and approved by system OEM for coaxial cable distribution points and RF transmission lines.
 - a. Utilize barrier terminal screw type connectors minimum at base-band cable systems.
 - b. Crimp type connectors installed with a ratchet type installation tool are an acceptable alternative if cable dress, pairs, shielding, grounding, connections and labeling are provided same as barrier terminal strip connectors.
 - c. Tape of any type, wire nuts, or solder type connections are not permitted.
 2. Analog RF terminating panels:
 - a. "Patch" type:
 - i. 48.26 cm (19 inches) EIA/ECA 310-E rack dimensions.
 - ii. Minimum 12 double female "F" connector rows.
 - iii. Expansion capability of a maximum of 24 double row "F" sets that can be field activated.
 - iv. In a lockable cabinet or enclosure. Stacking of "patch" panels is permitted if installation guidelines are met.
 3. "Patch" Cords:
 - a. Analog RF:
 - i. Provide a connection cable for each TCO analog RF connector in system with 10 percent spares. Provide analog RF connection cable of length to connect analog RF instrument to TCO analog RF jack.
 - ii. Technical Characteristics:
 1. Length: Minimum 1.8M (6 ft.).
 2. Cable: Minimum flexible RG-6.
 3. Connector: "F" male on each end.
- x. Analog Video:
1. Provide a connection cable for each TCO analog video jack in system with 10 percent spares. Provide analog video connection cable of length to connect analog video instrument to TCO analog RF jack.
 2. Technical Characteristics:
 - a. Length: Minimum 1.8M (6 ft.).



- b. Cable: Minimum flexible RG-59/U.
- c. Connector: BNC Male on each end.



xi. System Connectors:

1. Solderless (Forked Connector):
 - a. Crimp-on coupling for quick connect/disconnect of wires or cables.
 - b. Designed to fit wire or cable.
 - c. Insulated and color-coded connector barrel.
 - d. Technical Characteristics:
 - i. Impedance: As required.
 - ii. Working Voltage: 500 V.
2. Multipin:
 - a. Crimp-on coupling for quick connect/disconnect of wires or cables.
 - b. Designed to fit wire or cable.
 - c. Enclosed and shielded housing.
 - d. Secure to cable group by screw type compression sleeves.
 - e. Technical Characteristics:
 - i. Impedance: As required.
 - ii. Working Voltage: 500 V.
 - iii. Number of Pins: As required. Minimum 25 pins.
3. "BNC" Type:
 - a. Bayonet locking coupling for quick connect/disconnect of coaxial cable/terminations.
 - b. Crimp-on (twist on are acceptable) connector designed to fit coaxial cable.
 - c. Technical Characteristics:
 - i. Impedance: 50 or 75 Ohms, unbalanced.
 - ii. Working Voltage: 500 V.
4. "F" Type Connectors:
 - a. Coaxial cable connectors and connector inserts designed to provide maximum performance with cable to be used.
 - b. Hex type crimp or a "Snap and Seal" type connectors. Use Housing to housing (KS to KS) type or 90-degree type connector where specified by OEM.
 - c. Screw type coupling for quick connect/disconnect of coaxial cable/terminations.
 - d. Crimp-on connector designed to fit coaxial cable with integral 12.7 mm [1/2 inch] ferrule.
 - e. Technical Characteristics:
 - i. Impedance: 75 Ohms, unbalanced.
 - ii. Working Voltage: 500 V.
 - f. Coaxial cables connected with head end quality 360-degree F or BNC connectors as applicable, meeting or exceeding standard industry and cable manufacture's specifications.

xii. Terminators:

1. Coaxial:
 - a. Description: 75-Ohm terminator.
 - b. Metal-housed precision types in frequency ranges selected. Screw-on type that has low VSWR when installed and proper impedance to terminate system unit or coaxial cable.
 - c. Technical Characteristics:
 - i. Frequency: 0-1 GHz.
 - ii. Power Blocking: As required.
 - iii. Return Loss: 25 dB.
 - iv. Connectors: Minimum "F", "BNC".
 - v. Impedance: 75 Ohms, unbalanced.
 - vi. DC blocking.
 - vii. Bandwidth: 50 MHz-890 MHz.

xiii. Mounting Strips and Blocks:

1. Barrier Strips for AC Power, and Control Cable or Wires:
 - a. Accommodate size and type of audio spade (or fork type) lugs used with insulating and separating strips between terminals for securing separate wires in an orderly fashion.
 - b. Provide each cable or wire end with an audio spade lug, connected to individual screw terminal on barrier strip.
 - c. Surface secured to a console, cabinet, rail, panel, etc.
 - d. 120 VAC power wires are not permitted to be connected to signal barrier strips.
2. Technical Characteristics:



- a. Terminal Size: Minimum 6-32.
 - b. Terminal Count: Any combination.
 - c. Wire size: Minimum 20 AWG.
 - d. Voltage Handling: Minimum 100 V.
 - e. Protective Connector Cover: Required for Class II and 120 VAC power connections.
- xiv. Coaxial Cable Kit: Coaxial connectors, cable tying straps, heat shrink tubing, hangers, clamps, etc., required to accomplish neat and secure installation.
1. Solderless Connectors: Install crimp-on connector using a standard F connector crimping tool.
 2. Cables: Connectors designed for specific size cable being used and installed with OEM's approved installation tool. Typical system cable connectors include; but, are not limited to F, N, BNC, etc.
- xv. Communication Ground System: provide this system to conform to Section 27 05 26, GROUNDING AND BONDING FOR COMMUNICATIONS SYSTEMS.

7. INSTALLATION

i. General:

1. Install for ease of operation, maintenance, and testing.
2. Install work neatly, plumb and square and in a manner consistent with standard industry practice.
3. Install system to prevent direct pickup of signals from building structure and follow NTC requirements regarding low radiation or interference of RF signals.
4. Protect work from dust, paint and moisture as dictated by site conditions.
5. Contractor is responsible for protection of work during construction phase up until final acceptance by Government.
6. Install equipment according to OEM's recommendations. Provide any hardware, adaptors, brackets, rack mount kits or other accessories recommended by OEM for correct assembly and installation.
7. Secure equipment firmly in place, including equipment racks, system cables, etc.:
 - a. Install supports, mounts, fasteners, attachments and attachment points to support their loads with a safety factor of 5:1 or better.
 - b. Do not impose weight of equipment on supports provided for other trades or systems.
 - c. Suspended equipment or associated hardware must be certified by OEM for overhead suspension.
8. Locate overhead ceiling-mounted equipment as shown on drawings, with minor changes not to exceed 12 inches in any direction.
 - a. Mount transformers securely to brackets or enclosures using screws.
 - b. Adjust torsion springs as needed to securely support assembly.
9. Install Analog RF coaxial cable distribution systems in a "home run" configuration from each associated riser TR to identified locations and as indicated on drawings.
10. Coordinate finishes for any exposed work such as plates, racks, panels, speakers, etc. with design professional, Government and 0050P38.
11. Coordinate cover plates with field conditions. Size and install cover plates to cover spaces between back boxes and surrounding wall.
12. Do not allow cable to leave or enter boxes without cover plates installed. Where cover plates are not fitted with connectors, provide grommeted holes in size and quantity required.

ii. Equipment Racks:

1. Fill unused equipment mounting spaces with blank panels or vent panels. Match color to equipment racks.
2. Provide security covers for devices not requiring routine operator control.
3. Follow manufacturer's recommendations regarding ventilation space between amplifiers. Provide adequate ventilation space between equipment for cooling. Provide vent panels and cooling fans for operation of equipment within OEM specified temperature limits.
4. Provide insulated connections of electrical raceway from equipment racks.
5. Provide continuous raceway and conduit for cable with no more than 40 percent fill between wire troughs and equipment racks. Ensure systems are mechanically separated from each other in wireway.

iii. Wiring Practice:

1. Comply with requirements for raceways and boxes specified in Division 26, Section 26 05 33, RACEWAY AND BOXES FOR ELECTRICAL SYSTEMS.
2. Where raceway is conduit, install wiring of differing classifications in separate conduits. Where raceway is to be in an enclosure (e.g. rack, tray, wire trough, utility box, install wiring of differing classifications, sharing same enclosure, with



- mechanical partition and separate by at least 1/4 inches. Where wiring of different classifications must cross, cross wires perpendicular to one another.
3. Do not splice cabling anywhere along entire length of run. Ensure cables are insulated and shielded from each other and from the raceway for entire length of run.
 4. Do not pull wire through any enclosure where a change of raceway alignment or direction occurs. Do not bend wires to less than radius recommended by manufacturer.
 5. Replace entire length of run of any wire or cable that is damaged or abraded during installation. There are no acceptable methods of repairing damaged or abraded wiring.
 6. Use wire pulling lubricants suitable for cable jacket and do not exceed pulling tension recommended by OEM.
 7. Use grommets around cut-outs and knock-outs where conduit or chase nipples are not installed.
 8. Do not use tape-based or glue-based cable anchors.
 9. Bond shields and drain wires to ground.
 10. Terminate field wiring entering equipment racks as follows:
 - a. Provide ample service loops at harness break-outs and at plates, panels and equipment. Loops must be of length to allow plates, panels and equipment to be removed for service and inspection.
 - b. Where terminal blocks are not designed for rack mounting, utilize 19 mm (3/4 inch) plywood or 3 mm (1/8 inch) thick aluminum plates/blank panels as a mounting surface. Do not mount on bottom of rack.
 - c. Employ permanent strain relief for any cable with an outside diameter of 25 mm (1 inch) or greater.
 11. Make connections using rosin-core solder or mechanical connectors appropriate to application.
 - a. For crimp-type connections, use only tools that are specified by manufacturer for the application.
 - b. Use only insulated spade lugs on screw terminals sized to fit wire gauge; do not exceed two lugs per terminal.
 - c. Twist-on wire connectors or electrical tape connections are not permitted for any application.
- iv. Cable Installation:
1. Support cable on maximum 122 cm (4 feet) centers. Acceptable means of cable support are cable tray and conduit (EMT, Flexible Metallic Tubing, and Communications Raceway). Attach cable bundles loosely to cable trays with plenum-rated hook and loop straps. Tie wraps are not permitted as a means to bundle.
 2. Run cables parallel to walls.
 3. Do not lay cables on top of luminaires, ceiling tiles, mechanical equipment, or ductwork. Maintain minimum 61 cm (2 feet) clearance from shielded electrical apparatus.
 4. Test cables after the total installation is complete. Test results must document cables pass test requirements and levels. Remedy cabling problems or defects to pass testing, including installation of new cable as required.
 5. Terminate ends of cables on both ends, per industry and OEM's recommendations.
 6. Provide proper temporary protection of cable after pulling is complete and until final dressing and terminations are complete. Do not leave cable lying on floor. Bundle and tie cables up off of the floor until ready to terminate.
 7. Cover end of overall jacket with a minimum 25 mm (1 inch) length of transparent heat-shrink tubing. Cut unused insulated conductors minimum 51 mm (2 inches) past heat-shrink, fold back over jacket and secure with cable tie. Cut unused shield/drain wires minimum 51 mm (2 inches) past heat shrink and serve as indicated below.
 8. Cover shield/drain wires with heat-shrink tubing extending back to overall jacket. Extend tubing 6 mm (1/4 inch) past end of unused wires, fold back over jacket and secure with cable tie.
 9. For each solder-type connection, cover bare wire and solder connection with heat-shrink tubing.
 10. Terminate conductors; no cable can contain unterminated elements. Make terminations only at outlets and terminals.
 11. Splices, Taps, and Terminations: Arrange on numbered terminal strips in junction, pull, and outlet boxes; terminal cabinets; and equipment enclosures. Cables cannot be spliced.
 12. Bundle, lace, and train conductors to terminal points without exceeding OEM's limitations on bending radii. Install lacing bars and distribution spools.



13. Cold-Weather Installation: Bring cable to room temperature without using heat or before de-icing.
 14. Install cable without passing through structural members or in contact with pipes, ducts, or potentially damaging items.
- v. Labeling:
1. Permanently label outlets, connectors, jacks, electronics and other equipment.
 2. Engrave and paint in patch panel labels using minimum 3 mm (1/8 inch) high lettering and contrasting paint.
 3. For rack-mounted equipment, use engraved Lamacold labels with white minimum 3 mm (1/8 inch) high lettering on black background. Label front and back of rack-mounted equipment.
 4. Where multiple pieces of equipment reside in same rack group, label each indicating to which room, channel, outlet locations, etc. they correspond.
 5. Permanently label cables at each end, including intra-rack connections. Cover labels by same, transparent heat-shrink tubing covering end of overall jacket. Alternatively, machine printed labels including a clear protective wrap can be used.
 6. Label racks with contractor's name no more than once on each continuous set of racks; do not label wall plates or portable equipment with contractor's name.
 7. Ensure each piece of OEM equipment has permanently attached NTC Label indicating service the equipment is to perform. Equipment not bearing NTC marks will not be permitted as part of system.
- NOTE:
1. Check roof space for adequate antenna mounting space.
- vi. Antenna Installation: Mount antennae on masts attached to building walls, penthouse walls or other solid parts of building free of all obstructions.
1. Fasten mounting brackets with lag bolts or expansion anchors 9.5 mm (3/8 inch) diameter. Attachments to mortar or grout joints not permitted.
 2. For building and penthouse walls, attach masts with three or more brackets spaced at no less than 450 mm (18 inch) intervals.
 3. Obtain approval from COR prior to installation of an antenna or mast directly on roof or penthouse.
 4. Do not install more than three antennas on a single mast. Install additional mast as required maintain proper spacing between masts and between antennas on each mast.
 5. Securely tighten mounting hardware, antenna hardware and terminals.
 6. Orient antennas to ensure optimum signal to noise ratio.
 7. Ensure assembly will survive winds of 200kph (125MPH).
- vii. Protect HDTV or Analog network devices during unpacking and installation by wearing electrostatic discharge (ESD) wrist straps tied to chassis ground for prevention of electrical shock.
- viii. Cutting and Patching:
1. Keep work area clear of debris and clean area daily at completion of work.
 2. Patch and paint any wall or surface that has been disturbed by execution of this work.
 3. Provide any additional cutting, drilling, fitting or patching, not indicated as provided by others, to complete work or to make its parts fit together.
 4. Do not damage or endanger a portion of work of the Government or separate contractors by cutting, patching, excavation or otherwise altering such construction. Prior to cutting or otherwise altering such construction obtain written consent of COR and of such separate contractor. Do not unreasonably withhold from COR or a separate contractor, contractor's consent to cutting or otherwise altering CATV work.
 5. Where coring of in-place concrete is required, including coring indicated under unit prices, clearly identify location of such coring in the field and have location accepted by COR prior to commencement of coring.
- ix. Fireproofing:
1. Where CATV cables penetrate rated walls, floors and ceilings, fireproof openings to restore rating.
 2. Provide conduit sleeves for cables that penetrate rated walls.
 3. After cabling installation is complete, install fire proofing material in and around conduit sleeves and openings to restore rating. Install fire proofing material thoroughly and neatly.
 4. Seal floor and ceiling penetrations. Use only materials and methods that preserve the integrity of the fire stopping system and its rating.
- x. Grounding:



1. Ensure lightning protection system is in place per Section 26 41 00, FACILITY LIGHTNING PROTECTION.
2. Communication Ground: provide this system in accordance with Section 27 05 26, GROUNDING AND BONDING FOR COMMUNICATIONS SYSTEMS, and:
 - a. Bond cable shields and equipment to ground to eliminate shock hazard and to minimize ground loops, common mode returns, noise pickup, crosstalk, and other impairments.
 - b. Signal Ground Terminal: Locate at main equipment cabinet. Isolate from power system and equipment grounding.
 - c. Do not connect system ground to building's external lightning protection system.
 - d. Do not "mix grounds" of different systems. Do not use electrical system conductors for ground.

xi. Clearing: Refer to Section 27 05 11, REQUIREMENTS FOR COMMUNICATIONS INSTALLATIONS.

- SPL - 06 : SEPTIC TANK
- SPL - 07 : CHALKBOARD
- SPL - 08 : POLYPROPYLENE PLASTIC CHAIR & TABLE
- SPL - 09 : UTILITY CONNECTION APPLICATION
- SPL - 10 : ENGINEERING FACILITIES
- SPL - 11 : MOBILIZATION/DEMOBILIZATION
- SPL - 12 : CONSTRUCTION SAFETY & HEALTH

Safety precautions shall be used at all times during the progress of the work. As appropriate, workmen shall be furnished with hard hats, safety shoes, respirators, and any other safety apparel that will reduce the possibility of injury from accidents. All Occupational Safety and Health Act requirements shall be observed.

- SPL - 13 : PROJECT BILLBOARD

CLEANING-UP :

The contractor shall protect the work at all times and upon completion, the contractor shall remove from premises, all rubbish, accumulated materials of whatever nature caused by the work. The contractor shall leave the work-area in a clean, orderly and acceptable condition.

PREPARED:

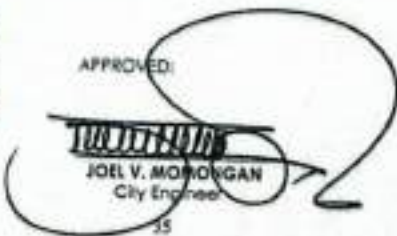

 RYAN G. BENIQUEZ
 Architect IV - VPD

CHECKED:


 MA. SOCORRO L. GALORPORT
 Asst. City Engineer for Admin



APPROVED:


 JOEL V. MONONGAN
 City Engineer

Section VII. Drawings

See City Engineer's Office, Brgy. Kauswagan, Cagayan de Oro City.

Section VIII. Bill of Quantities

Republic of the Philippines
CITY ENGINEER'S OFFICE
Cagayan de Oro City

VERTICAL INFRASTRUCTURE PLANNING DIVISION

Project Title : CONSTRUCTION OF TWO-STOREY MULTIPURPOSE BUILDING AT BRGY. BAYABAS
Location : BARANGAY BAYABAS, CAGAYAN DE ORO CITY
Subject : Bill of Quantities

SPECS ITEM NO.	DESCRIPTION	UNIT	QUANTITY
801	: REMOVAL OF STRUCTURES AND OBSTRUCTIONS	sq.m	141.57
803	: STRUCTURE EXCAVATION	cu.m	217.43
804	: EMBANKMENT	cu.m	198.05
804(A)	: GRAVEL FILL	cu.m	13.50
900	: REINFORCED CONCRETE	cu.m	85.71
902	: REINFORCING STEEL	kg	9,882.15
903	: FORMWORKS AND FALSEWORKS	sq.m	477.29
1001	: STORM DRAINAGE AND SEWERAGE SYSTEM	unit	4.00
1002	: PLUMBING WORKS	lot	1.00
1003	: CARPENTRY AND JOINERY WORKS	sq.m	290.65
1007	: ALUMINUM FRAMED GLASS DOOR	lot	1.00
1008	: ALUMINUM GLASS WINDOW	lot	1.00
1010	: WOODEN DOORS AND WINDOW	lot	1.00
1013	: CORRUGATED METAL ROOFING & ACCESSORIES	sq.m	115.95
1016	: WATERPROOFING	sq.m	181.65
1018	: TILE WORKS	sq.m	231.63
1032	: PAINTING WORKS	sq.m	1,212.23
1046	: MASONRY WORKS	sq.m	495.11
1047	: METAL STRUCTURES	lot	1.00
1100	: ELECTRICAL WORKS	lot	1.00
1105	: DATA (NETWORK CABLING SYSTEM)	lot	1.00
1106	: CLOSED CIRCUIT TELEVISION	lot	1.00
1107	: PUBLIC ADDRESS SYSTEM	lot	1.00
1200	: AIRCONDITIONING AND VENTILATING SYSTEMS	lot	1.00
1202	: FIRE PROTECTION SPRINKLER SYSTEM	lot	1.00
1208	: FIRE DETECTION & ALARM SYSTEM	lot	1.00
SPL-01	: SIGNAGES	lot	1.00
SPL-02	: PAVERS	sq.m	19.99
SPL-03	: BOULDER FILL	cu.m	9.21
SPL-04	: PERMITS	lot	1.00
SPL-05	: COMMUNITY ANTENNA TELEVISION	lot	1.00
SPL-06	: SEPTIC TANK	lot	1.00
SPL-07	: CHALKBOARD	lot	1.00
SPL-08	: POLYPROPYLENE PLASTIC CHAIR & TABLE	lot	1.00
SPL-09	: UTILITY CONNECTION APPLICATION	lot	1.00
SPL-10	: ENGINEERING FACILITIES	ls	1.00
SPL-11	: MOBILIZATION/DEMobilIZATION	ls	1.00
SPL-12	: CONST. SAFETY & HEALTH	lot	1.00
SPL-13	: PROJECT BILLBOARD	sets	2.00

Prepared:


RYAN C. BENOIGNO
Architect IV

Submitted:


MA. SOCORRO GALOSPORT
Asst City Engineer - for Admin



Section IX. Philippine Bidding Documents Related Forms

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Bid Form for Procurement of Infrastructure Projects

[Note: The duly accomplished form shall be submitted with the Bid]

BID FORM

Project Identification No.: CEO26-22030

To: *[Name of Procuring Entity]*

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

- a) I/We have no reservation to the PBD, including the Supplemental Bid Bulletins, for the Procurement Project *[Project Title]*;
- b) I/We offer to execute the Works for this Contract in accordance with the PBD;
- c) The total price of our Bid in words and figures, excluding any discount offered below, is *[insert information]*
- d) The discounts offered and the methodology for their application, if any, are: *[insert information]*; or indicate N/A if no discount offered
- e) The total bid price in words and figures, after applying the applicable discount, 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 in the Detailed Estimates.
- f) This Bid shall remain valid within a period stated in the PBD, and it shall be binding upon me/us at any time before the expiration of that period;
- g) If our bid is accepted, I/we commit to enter to a contract and provide a performance security in the form, amounts, and within the times prescribed in the PBD, and hereby acknowledge the consequences under the IRR of RA No. 12009 on forfeiture of Bid Security or enforcement of Bid Securing Declaration and on Blacklisting.

Until a formal Contract is prepared and executed, this Bid, together with your written acceptance thereof and your Notice of Award, shall be binding upon the Bidder.

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

I/We certify/confirm that we comply with the eligibility requirements pursuant to the PBD.

The undersigned is authorized to submit the bid on behalf of *[Name of the Bidder]* as evidenced by the attached *[State the Written Authority]*.

I/We acknowledge that failure to sign each and every page of this Bid Form, including the attached Schedule of Prices, shall be a ground for the rejection of our bid.

Duly authorized to sign the Bid for and behalf of:

[Insert Bidder's Name]

[Signature over Printed Name]

[Position/Designation]

[Date]

Contract Form

[Note: The duly accomplished form is not required to be submitted with the Bid but shall be submitted within ten (10) days after receiving the Notice of Award]

CONTRACT FOR [Insert Project Title]

THIS CONTRACT executed on the _____ day of _____ 20____ between:

[Name of Procuring Entity], a government agency of the Republic of the Philippines, hereinafter called "the Entity";

-and-

[Name of Contractor] Filipino of legal age or a company duly organized and existing under the laws of [city and country], with principal office at [insert address], hereinafter called "the Contractor".

WHEREAS, the Entity invited Bids for certain goods and ancillary services, particularly *[Brief description of Project]*;

WHEREAS, the Contractor submitted a responsive bid and was awarded the contract for the procurement in the total amount of *[Contract price in words and figures, including currency]*, hereinafter referred to as the "Contract Price."

NOW, THEREFORE, for and in consideration of the foregoing premises, the parties hereby agree as follows:

- 1) Unless otherwise stated, terms and expressions used in this Contract shall have the same meanings as those assigned to them in the Conditions of Contract, which form an integral part of this Contract.
- 2) The following documents as required by the Implementing Rules and Regulations of Republic Act No. 12009 shall be deemed to form and be read and construed as integral part of this Contract, *viz.*:
 - a) Philippine Bidding Documents (PBD);
 - i. Drawings/Plans;
 - ii. Scope of Work;
 - iii. Invitation to Bid;
 - iv. Instructions to Bidders;
 - v. Bid Data Sheet;
 - vi. Bid Form, including all the documents/statements contained in the Bidder's bidding envelopes, as annexes, and all other documents submitted (e.g., Bidder's response to request for clarifications on the bid), including corrections to the bid, if any, resulting from the Procuring Entity's bid evaluation;
 - vii. Bill of Quantities;
 - viii. General and Special Conditions of Contract;
 - ix. Supplemental Bid Bulletins, if any; and
 - x. Other contract documents that may be required by existing laws and/or the Entity.

- b) Winning bidder's bid, including the Eligibility Requirements, Technical and Financial Proposals, and all other documents or statements submitted;
 - c) Performance Security;
 - d) Notice of Award of Contract; and the Bidder's Conforme thereto; and
 - e) Other contract documents that may be required by existing laws and/or the Procuring Entity concerned in the PBD, such as but not limited to the Notice to Proceed and Warranty Security.
- 3) In consideration of the Contract Price of *[Contract Price in words and figures]*, or such other sums as may be determined in accordance with the terms of the Contract, the Supplier agrees to deliver and perform the items and related services for the *[Project Title]* described herein in accordance with the terms and conditions specified in the Contract and its annexed documents.
- 4) The *[Name of the Procuring Entity]* agrees to pay the above-mentioned sum to the Supplier in accordance with the schedule and manner provided in the Bidding Documents and its annexes.
- 5) Any dispute, difference, or claim arising out of or relating to this Contract, including its existence, validity, interpretation, breach, or termination thereof, may be submitted to arbitration or other form of alternative dispute resolution in accordance with the applicable law, such as Republic Act (RA) No. 9285 (Alternative Dispute Resolution Act of 2004) or Executive Order No 1008, series 1985 (Construction Industry Arbitration Law).

IN WITNESS WHEREOF, the parties hereto have caused this Contract to be executed in accordance with the laws of the Republic of the Philippines on the day and year first above written

For the Procuring Entity
 Head of the Procuring Entity or Duly
 Authorized Representative

For the Bidder
 Duly authorized to sign the Contract
 for and behalf of *[Bidders Name]*:

*[Signature over Printed
 Name][Position/Designation]*
[Date]

[Signature over Printed Name]
[Position/Designation]
[Date]

Signed in the presence of:

[Name and Signature]

[Name and Signature]

Witness – Procuring Entity

Witness- Supplier

ACKNOWLEDGMENT

BEFORE ME, A Notary Public for and in the _____, City/Province of _____, this _____ day of _____, 20____, personally appeared the above-named persons who have satisfactorily proven to me their identity, through their identifying documents written below their names and signatures, that they are the same persons who executed and voluntarily signed the foregoing instrument consisting of _____ pages, including this page where this Acknowledgement is written, which they acknowledged before me as their free and voluntary act and deed.

WITNESS MY HAND AND SEAL this _____ day of *[month]* *[year]*.

NAME OF NOTARY PUBLIC

Notarial Commission No. _____

Notary Public for _____ until _____

Roll of Attorneys No. _____

PTR No. ____, *[date issued]*, *[place issued]*

IBP No. ____, *[date issued]*, *[place issued]*

Doc. No. _____

Page No. _____

Book No. _____

Series of _____

Omnibus Sworn Statement Form

[Note: The duly accomplished form shall be submitted with the Bid]

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

OMNIBUS SWORN STATEMENT

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

1) *Select one, delete the others:*

- *If sole proprietorship:* I am the sole proprietor or authorized representative of *[Name of Bidder]* with office address at *[Address of Bidder]*;
- *If partnership, corporation, cooperative, or joint venture:* I am the duly authorized and designated representative of *[Name of Bidder]* with office address at *[Address of Bidder]*;
- *If individual consultant not registered under a sole proprietorship, in case of Consulting Services:* I am the individual consultant or authorized representative of *[Name of Bidder]* with office address at *[Address of Bidder]*;

2) *Select one, delete the others:*

- *If sole proprietorship:* As the owner and sole proprietor or authorized representative of *[Name of Bidder]*, I have full power and authority to do, execute and perform any and all acts necessary to participate, submit the bid, and to sign and execute the ensuing contract for *[Project Title]* of the *[Name of the Procuring Entity]**[insert "as supported by the attached duly notarized Special Power of Attorney" for authorized representative]*;
- *If partnership, corporation, cooperative, or joint venture:* I am granted full power and authority to do, execute and perform any and all acts necessary to participate, submit the bid, and to sign and execute the ensuing contract for *[Project Title]* of the *[Name of the Procuring Entity]*, as supported by the attached duly notarized Special Power of Attorney, Board/Partnership Resolution, or Secretary's Certificate, whichever is applicable;
- *If individual consultant not registered under a sole proprietorship, in case of Consulting Services:* As the individual consultant or authorized representative of *[Name of Bidder]*, I have full power and authority to do, execute and perform any and all acts necessary to participate, submit the bid, and to sign and execute the ensuing contract for *[Project Title]* of the *[Name of the Procuring Entity]*, as

supported by the attached duly notarized Special Power of Attorney for authorized representative;

- 3) *[Name of Bidder]* is not “blacklisted” or barred from bidding by the Government of the Philippines or any of its agencies, offices, corporations, or Local Government Units, foreign government/foreign or international financing institution whose blacklisting rules have been recognized by the Government Procurement Policy Board; by itself or by relation, membership, association, affiliation, or controlling interest with another blacklisted person or entity;
- 4) Each of the documents submitted in satisfaction of the bidding requirements is an authentic copy of the original, complete, and all statements and information provided therein are true and correct;
- 5) *[Name of Bidder]* is authorizing the Head of the Procuring Entity or its duly authorized representative(s) to verify all the documents submitted;
- 6) *Select one, delete the others:*
 - *If sole proprietorship* : The *[Name of Bidder]* and its spouse are not related by consanguinity or affinity up to the third civil degree to the Head of the Procuring Entity, Procurement Agent (if engaged), End-User or Implementing Unit, project consultants, head of the Project Management Office, or the members of the Bids and Awards Committee (BAC), the Technical Working Group, and the BAC Secretariat;
 - *If partnership* : The partnership itself and the partners of *[Name of Bidder]* are not related by consanguinity or affinity up to the third civil degree to the Head of the Procuring Entity, Procurement Agent (if engaged), End-User or Implementing Unit, project consultants, head of the Project Management Office, or the members of the Bids and Awards Committee (BAC), the Technical Working Group, and the BAC Secretariat;
 - *If cooperative*: The cooperative itself and members of the board of directors, general manager, or chief executive officer of *[Name of Bidder]* are not related by consanguinity or affinity up to the third civil degree to the Head of the Procuring Entity, Procurement Agent (if engaged), End-User or Implementing Unit, project consultants, head of the Project Management Office, or the members of the Bids and Awards Committee (BAC), the Technical Working Group, and the BAC Secretariat;
 - *If corporation, or joint venture*: The corporation or joint venture itself, and officers, directors, and controlling stockholders of *[Name of Bidder]* are not related by consanguinity or affinity up to the third civil degree to the Head of the Procuring Entity, Procurement Agent (if engaged), End-User or Implementing Unit, project consultants, head of the Project Management Office, or the members of the Bids and Awards Committee (BAC), the Technical Working Group, and the BAC Secretariat;
 - *If individual consultant not registered under a sole proprietorship, in case of Consulting Services*: The individual consultant and its spouse are not related by consanguinity or affinity up to the third civil degree to the Head of the Procuring

Entity, Procurement Agent (if engaged), End-User or Implementing Unit, project consultants, head of the Project Management Office, or the members of the Bids and Awards Committee (BAC), the Technical Working Group, and the BAC Secretariat;

- 7) It is understood that failure to faithfully disclose its relationship with the HoPE, members of the BAC, the TWG, and the BAC Secretariat, the head of the PMO or the end-user unit or implementing unit, and the project consultants of the Procuring Entity, or of the procurement agent by consanguinity or affinity up to the third civil degree, as well as its submission of beneficial ownership information containing false entries shall be subject to blacklisting under Section 100 of the IRR of RA No. 12009, without prejudice to criminal and civil liabilities under applicable laws, including their accessory penalties, if any.

Select one, delete the rest:

- *In case of corporations: [Name of Bidder] declares its beneficial ownership information consistent with its updated General Information Sheet or Beneficial Ownership Declaration Form or any other document duly submitted to the SEC and has maintained a valid and updated file therein in compliance with Sections 20.2.9.1, 81, and 82 of the IRR of Republic Act (RA) No. 12009.*
- *In case of Foreign Bidders: [Name of Bidder] submitted an appropriate equivalent document in English issued by the country of the bidder concerned in accordance with Section 20.2.9.2 of the IRR of RA No. 12009.*

- 8) *[Name of Bidder] complies with existing labor laws and standards; and*

- 9) *[Name of Bidder] is aware of and has undertaken the following responsibilities as a Bidder:*

- a) Carefully examine all of the Bidding Documents;
- b) Acknowledge all conditions, local or otherwise, affecting the implementation of the Contract;
- c) Made an estimate of the facilities available and needed for the contract to be bid, if any; and
- d) Inquire or secure Supplemental Bid Bulletin(s) issued for the *[Project Title]*.

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

- 11) *In case advance payment was made or given to [Name of Bidder], failure to perform or deliver any of the obligations and undertakings in the contract shall be sufficient grounds to constitute criminal liability under existing laws.*

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

Duly authorized to sign the Bid for and behalf of:

[Insert Bidder's Name]

[Affiant's Signature over Printed Name]

[Position/Designation]

[Date]

JURAT

SUBSCRIBED AND SWORN to before me this _____ day of *[month]* *[year]* at *[place of execution]*, Philippines. Affiant/s is/are personally known to me and was/were identified by me through competent evidence of identity as defined in the 2004 Rules on Notarial Practice (A.M. No. 02-8-13-SC). Affiant/s exhibited to me his/her *[insert type of government identification card used]*, with his/her photograph and signature appearing thereon, with no. _____.

WITNESS MY HAND AND SEAL this ____ day of *[month]* *[year]*.

NAME OF NOTARY PUBLIC

Notarial Commission No. _____

Notary Public for _____ until _____

Roll of Attorneys No. _____

PTR No. __, *[date issued]*, *[place issued]*

IBP No. __, *[date issued]*, *[place issued]*

Doc. No. _____

Page No. _____

Book No. _____

Series of _____.

Bid Securing Declaration Form

*[The duly accomplished form shall be submitted with the Bid
if bidder opts to provide this type of bid security]*

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

BID SECURING DECLARATION

Project Identification No.: CEO26-22030

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

I/We, the undersigned, declare that:

- 1) I/We understand that, according to your conditions, bids must be supported by a Bid Security, which may be in the form of a Bid Securing Declaration;
- 2) I/We accept that:
 - a) I/We shall enter into contract with the Procuring Entity and furnish the required performance security within ten (10) calendar days as indicated in the Bidding Documents, from receipt of the Notice of Award;
 - b) I/we will be automatically disqualified from bidding for any procurement contract with any Procuring Entity upon receipt of your Blacklisting Order; and
 - c) I/We will pay the applicable fine within fifteen (15) days from receipt of the written demand by the Procuring Entity for the commission of acts resulting to the enforcement of the Bid Securing Declaration under Sections 52.2 (a), 63.2, 69.1 and 100, except 100.3 (c), of the IRR of RA No. 12009; without prejudice to other legal action the government may undertake;

	<i>Applicable Fine</i>
a) in the case of a single bidder	i) two percent (2%) of the Approved Budget for the Contract (ABC); or ii) the difference between the evaluated bid price and the ABC whichever is higher
b) in the case of multiple bidders	i) two percent (2%) of the ABC; or ii) the difference between the

	evaluated bid prices with the bidder with Lowest Calculated/Highest Rated Bid and the bidder with the next Lowest Calculated/Highest Rated Bid, and so on whichever is higher
c) in case of violations committed prior to the opening of the financial envelope	i) a fixed amount of two percent of the ABC,

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

- a) Upon expiration of the bid validity period, or any extension thereof pursuant to your request;
- b) I am/we are declared ineligible or post-disqualified upon receipt of your notice to such effect, and (i) I/we failed to timely file a request for reconsideration or (ii) I/we filed a waiver to avail of said right;
- c) I am/we are declared the bidder with the *[Insert Award Criterion¹]* and I/we have furnished the performance security and signed the Contract.

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

Duly authorized to sign the Bid for and behalf of:

[Insert Bidder's Name]

[Signature over Printed Name]

[Position/Designation]

[Date]

JURAT

SUBSCRIBED AND SWORN to before me this _____ day of *[month]* *[year]* at *[place of execution]*, Philippines. Affiant/s is/are personally known to me and was/were identified by me through competent evidence of identity as defined in the 2004 Rules on Notarial Practice (A.M. No. 02-8-13-SC). Affiant/s exhibited to me his/her *[insert type of government identification card used]*, with his/her photograph and signature appearing thereon, with no. _____.

WITNESS MY HAND AND SEAL this ____ day of *[month]* *[year]*.

NAME OF NOTARY PUBLIC

Notarial Commission No. _____

Notary Public for _____ until _____

Roll of Attorneys No. _____

PTR No. __, *[date issued]*, *[place issued]*

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