

BULACAN AGRICULTURAL STATE COLLEGE

Upgrading of Five (5) Units of Greenhouses at BASC College of Agriculture Campus and One(1) Unit at DRT Campus to Automated Greenhouses.

Preface

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

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

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

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

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

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

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

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Glossary of Terms, Abbreviations, and Acronyms

ABC – Approved Budget for the Contract.

ARCC – Allowable Range of Contract Cost.

BAC – Bids and Awards Committee.

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

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

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

BIR – Bureau of Internal Revenue.

BSP – Bangko Sentral ng Pilipinas.

CDA – Cooperative Development Authority.

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

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

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

CPI – Consumer Price Index.

DOLE – Department of Labor and Employment.

DTI – Department of Trade and Industry.

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

GFI – Government Financial Institution.

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

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

GOP – Government of the Philippines.

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

LGUs – Local Government Units.

NFCC – Net Financial Contracting Capacity.

NGA – National Government Agency.

PCAB – Philippine Contractors Accreditation Board.

PhilGEPS - Philippine Government Electronic Procurement System.

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

PSA – Philippine Statistics Authority.

SEC – Securities and Exchange Commission.

 ${\bf SLCC-Single\ Largest\ Completed\ Contract}.$

UN – United Nations.

Section I. Invitation to Bid

Notes on the Invitation to Bid

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

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

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

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



Bulacan Agricultural State College San Ildefonso, Bulacan, 3010

INVITATION TO BID

Invitation to Bid for Upgrading of Five(5) Units of Greenhouses at BASC College of Agriculture Campus and One(1) Unit at DRT Campus to Automated Greenhouses

- 1. The Bulacan Agricultural State College, through the General Appropriations Act (GAA) for the FY 2022 intends to apply the sum of Thirty Million pesos (Php 30,000,000.00) being the Approved Budget for the Contract (ABC) to payments under the contract for 2022-01-INFRA: Upgrading of Five (5) Units of Greenhouses at BASC College of Agriculture Campus and One (1) Unit at DRT Campus to Automated Greenhouses. Bids received in excess of the ABC shall be automatically rejected at bid opening.
- 2. The *Bulacan Agricultural State College* now invites bids for the above Procurement Project. Completion of the Works is required *[on or before the two hundred forty (240) calendar days]*. Bidders should have completed a contract similar to the Project. The description of an eligible bidder is contained in the Bidding Documents, particularly, in Section II (Instructions to Bidders).
- 3. Bidding will be conducted through open competitive bidding procedures using non-discretionary "pass/fail" criterion as specified in the 2016 revised Implementing Rules and Regulations (IRR) of Republic Act (RA) No. 9184.
- 4. Interested bidders may obtain further information *Bulacan Agricultural State College* and inspect the Bidding Documents at the address given below from *[insert office hours]*.
- 5. A complete set of Bidding Documents may be acquired by interested bidders on November 13, 2021 to December 2, 2021 from given address and website/s below and upon payment of the applicable fee for the Bidding Documents, pursuant to the latest Guidelines issued by the GPPB, in the amount of Thirty Thousand pesos (Php 30,000.00). Procuring Entity shall allow the bidder to present its proof of payment for the fees by presenting the receipt upon submission of their bid documents.
- 6. The *Bulacan Agricultural State College* will hold a Pre-Bid Conference on *November* 19, 2021 at *via Google Meet* (<u>https://meet.google.com/ahd-xdck-ebm</u>) which shall be open to prospective bidders.
- 7. Bids must be duly received by the BAC Secretariat through manual submission at the office address as indicated below on or before *08:30 AM of December 2, 2021*. Late bids shall not be accepted.

- 8. All bids must be accompanied by a bid security in any of the acceptable forms and in the amount stated in **ITB** Clause 16.
- 9. Bid opening shall be on *December 2, 2021, 9:00AM* at the *Cayetano Hall, BASC, San Ildefonso, Bulacan*. Bids will be opened in the presence of the bidders' representatives who choose to attend the activity.
- 10. Observers will be invited to attend and witness the bid proceedings.
- 11. The *Bulacan Agricultural State College* reserves the right to reject any and all bids, declare a failure of bidding, or not award the contract at any time prior to contract award in accordance with Sections 35.6 and 41 of the 2016 revised IRR of RA No. 9184, without thereby incurring any liability to the affected bidder or bidders.
- 12. For further information, please refer to:

CORAZON R. ABABA

BAC Secretariat
BULACAN AGRICULTURAL STATE COLLEGE
Brgy. Pinaod, San Ildefonso, Bulacan
(044) 697-1240 and 0955-367-2231
ababa75corazon@gmail.com
www.basc.edu.ph

13. You may visit the following websites:

For downloading of Bidding Documents:

ababa75corazon@gmail.com

http://www.basc.edu.ph

November 12, 2021

RONALDÆEAGAN T. ALONZO,Ph.D.

BAC Chairperson

Section II. Instructions to Bidders

Notes on the Instructions to Bidders

This Section on the Instruction to Bidders (ITB) provides the information necessary for bidders to prepare responsive bids, in accordance with the requirements of the Procuring Entity. It also provides information on bid submission, eligibility check, opening and evaluation of bids, post-qualification, and on the award of contract.

1. Scope of Bid

The Procuring Entity, [indicate name] invites Bids for the Upgrading of Five(5) Units of Greenhouses at BASC College of Agriculture Campus and One(1) Unit at DRT Campus to Automated Greenhouses, with Project Identification Number 2022-01-INFRA.

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

2. Funding Information

- 2.1. The GOP through the source of funding as indicated below for *GAA FY 2022* in the amount of *Php30,000,000.00*.
- 2.2. The source of funding is:
 - a. NGA, the National Expenditure Program.

3. Bidding Requirements

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

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

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

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

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

5. Eligible Bidders

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

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

- 5.3. For Foreign-funded Procurement, the Procuring Entity and the foreign government/foreign or international financing institution may agree on another track record requirement, as specified in the Bidding Document prepared for this purpose.
- 5.4. The Bidders shall comply with the eligibility criteria under Section 23.4.2 of the 2016 IRR of RA No. 9184.

6. Origin of Associated Goods

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

7. Subcontracts

- 7.1. The Procuring Entity has prescribed that:
 - a. Subcontracting is not allowed.

8. Pre-Bid Conference

The Procuring Entity will hold a pre-bid conference for this Project on the specified date and time via online platform as indicated in paragraph 6 of the **IB**.

9. Clarification and Amendment of Bidding Documents

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

10. Documents Comprising the Bid: Eligibility and Technical Components

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

- 10.2. If the eligibility requirements or statements, the bids, and all other documents for submission to the BAC are in foreign language other than English, it must be accompanied by a translation in English, which shall be authenticated by the appropriate Philippine foreign service establishment, post, or the equivalent office having jurisdiction over the foreign bidder's affairs in the Philippines. For Contracting Parties to the Apostille Convention, only the translated documents shall be authenticated through an apostille pursuant to GPPB Resolution No. 13-2019 dated 23 May 2019. The English translation shall govern, for purposes of interpretation of the bid.
- 10.3. A valid PCAB License is required, and in case of joint ventures, a valid special PCAB License, and registration for the type and cost of the contract for this Project. Any additional type of Contractor license or permit shall be indicated in the **BDS**.
- 10.4. A List of Contractor's key personnel (e.g., Project Manager, Project Engineers, Materials Engineers, and Foremen) assigned to the contract to be bid, with their complete qualification and experience data shall be provided. These key personnel must meet the required minimum years of experience set in the **BDS**.
- 10.5. A List of Contractor's major equipment units, which are owned, leased, and/or under purchase agreements, supported by proof of ownership, certification of availability of equipment from the equipment lessor/vendor for the duration of the project, as the case may be, must meet the minimum requirements for the contract set in the **BDS**.

11. Documents Comprising the Bid: Financial Component

- 11.1. The second bid envelope shall contain the financial documents for the Bid as specified in **Section IX. Checklist of Technical and Financial Documents**.
- 11.2. Any bid exceeding the ABC indicated in paragraph 1 of the **IB** shall not be accepted.
- 11.3. For Foreign-funded procurement, a ceiling may be applied to bid prices provided the conditions are met under Section 31.2 of the 2016 revised IRR of RA No. 9184.

12. Alternative Bids

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

13. Bid Prices

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

14. Bid and Payment Currencies

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

15. Bid Security

- 15.1. The Bidder shall submit a Bid Securing Declaration or any form of Bid Security in the amount indicated in the **BDS**, which shall be not less than the percentage of the ABC in accordance with the schedule in the **BDS**.
- 15.2. The Bid and bid security shall be valid until *April 2022*. Any bid not accompanied by an acceptable bid security shall be rejected by the Procuring Entity as non-responsive.

16. Sealing and Marking of Bids

Each bidder shall submit one copy of the original of the first and second components of its Bid and plus two (2) copies of each kind, labeled as copy 1 and copy 2.

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

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

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

17. Deadline for Submission of Bids

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

18. Opening and Preliminary Examination of Bids

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

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

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

19. Detailed Evaluation and Comparison of Bids

- 19.1. The Procuring Entity's BAC shall immediately conduct a detailed evaluation of all Bids rated "passed" using non-discretionary pass/fail criteria. The BAC shall consider the conditions in the evaluation of Bids under Section 32.2 of 2016 revised IRR of RA No. 9184.
- 19.2. If the Project allows partial bids, all Bids and combinations of Bids as indicated in the **BDS** shall be received by the same deadline and opened and evaluated simultaneously so as to determine the Bid or combination of Bids offering the lowest calculated cost to the Procuring Entity. Bid Security as required by **ITB** Clause 16 shall be submitted for each contract (lot) separately.
- 19.3. In all cases, the NFCC computation pursuant to Section 23.4.2.6 of the 2016 revised IRR of RA No. 9184 must be sufficient for the total of the ABCs for all the lots participated in by the prospective Bidder.

20. Post Qualification

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

21. Signing of the Contract

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

Section III. Bid Data Sheet

Notes on the Bid Data Sheet (BDS)

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

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

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

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

Bid Data Sheet

ITB Clause		
5.2	For this purpose, contracts similar to the Project refer to contracts which the same major categories of work, which shall be: [construction, renovation, rehabilitation, repair of automated greenhous]	
7.1	Subcontracting is not allowed.	
10.3	Appropriate PCAB License commensurate to the Project.	
10.4	The key personnel must meet the required minimum years of experied below:	ence set
	Key Personnel General Experience Relevant Experience	
	Civil Engineer/ Architect at least 5 years at least 5 years	
	Materials Engineer at least 5 years at least 5 years	
	Foreman at least 5 years at least 5 years	
	Safety Officer at least 5 years at least 5 years	
	Skilled Laborer at least 3 years at least 3 years	
	Laborer	
10.5	The minimum major equipment requirements are the following:	
	Equipment Capacity Number of Units	
	Mini dump truck or Elf truck 1	
	Concrete Mixer one bagger 2	
	Cut Off - 2	
	Bar Bender - 2	
	Concrete Vibrator - 2	
	Welding Machine heavy duty 2	
12	Alternative Bids are not allowed.	
15.1	The bid security shall be in the form of a Bid Securing Declaration or the following forms and amounts: a. The amount of not less than Php600,000.00 [Insert two percelof ABC], if bid security is in cash, cashier's/manager's checkdraft/guarantee or irrevocable letter of credit;	nt (2%) k, bank
	b. The amount of not less than Php1,500,000.00 [Insert five perce of ABC] if bid security is in Surety Bond.	m (570)

19.2	Partial bids are allowed
20	[Beilding and Change Funity of the control of the c
20	[Building permit, Occupancy permit, Locational Clearance, Environmental
	Compliance Certificate, Certification that the project site is not within a
	geohazard zone.etc.]
21	Additional contract documents relevant to the Project that may be required by
	existing laws and/or the Procuring Entity, such as construction schedule and S-
	curve, manpower schedule, construction methods, equipment utilization
	schedule, construction safety and health program approved by the DOLE, and
	(PERT/CPM) or other acceptable tools of project scheduling.

Section IV. General Conditions of Contract

Notes on the General Conditions of Contract

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

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

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

1. Scope of Contract

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

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

2. Sectional Completion of Works

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

3. Possession of Site

- 4.1. The Procuring Entity shall give possession of all or parts of the Site to the Contractor based on the schedule of delivery indicated in the SCC, which corresponds to the execution of the Works. If the Contractor suffers delay or incurs cost from failure on the part of the Procuring Entity to give possession in accordance with the terms of this clause, the Procuring Entity's Representative shall give the Contractor a Contract Time Extension and certify such sum as fair to cover the cost incurred, which sum shall be paid by Procuring Entity.
- 4.2. If possession of a portion is not given by the above date, the Procuring Entity will be deemed to have delayed the start of the relevant activities. The resulting adjustments in contract time to address such delay may be addressed through contract extension provided under Annex "E" of the 2016 revised IRR of RA No. 9184.

4. The Contractor's Obligations

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

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

5. Performance Security

- 5.1. Within ten (10) calendar days from receipt of the Notice of Award from the Procuring Entity but in no case later than the signing of the contract by both parties, the successful Bidder shall furnish the performance security in any of the forms prescribed in Section 39 of the 2016 revised IRR.
- 5.2. The Contractor, by entering into the Contract with the Procuring Entity, acknowledges the right of the Procuring Entity to institute action pursuant to RA No. 3688 against any subcontractor be they an individual, firm, partnership, corporation, or association supplying the Contractor with labor, materials and/or equipment for the performance of this Contract.

6. Site Investigation Reports

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

7. Warranty

- 7.1. In case the Contractor fails to undertake the repair works under Section 62.2.2 of the 2016 revised IRR, the Procuring Entity shall forfeit its performance security, subject its property(ies) to attachment or garnishment proceedings, and perpetually disqualify it from participating in any public bidding. All payables of the GOP in his favor shall be offset to recover the costs.
- 7.2. The warranty against Structural Defects/Failures, except that occasioned-on force majeure, shall cover the period from the date of issuance of the Certificate of Final Acceptance by the Procuring Entity. Specific duration of the warranty is found in the **SCC**.

8. Liability of the Contractor

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

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

9. Termination for Other Causes

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

10. Dayworks

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

11. Program of Work

- 11.1. The Contractor shall submit to the Procuring Entity's Representative for approval the said Program of Work showing the general methods, arrangements, order, and timing for all the activities in the Works. The submissions of the Program of Work are indicated in the **SCC**.
- 11.2. The Contractor shall submit to the Procuring Entity's Representative for approval an updated Program of Work at intervals no longer than the period stated in the SCC. If the Contractor does not submit an updated Program of Work within this period, the Procuring Entity's Representative may withhold the amount stated in the SCC from the next payment certificate and continue to withhold this amount until the next payment after the date on which the overdue Program of Work has been submitted.

12. Instructions, Inspections and Audits

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

13. Advance Payment

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

14. Progress Payments

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

15. Operating and Maintenance Manuals

- 15.1. If required, the Contractor will provide "as built" Drawings and/or operating and maintenance manuals as specified in the **SCC.**
- 15.2. If the Contractor does not provide the Drawings and/or manuals by the dates stated above, or they do not receive the Procuring Entity's Representative's approval, the Procuring Entity's Representative may withhold the amount stated in the **SCC** from payments due to the Contractor.

Section V. Special Conditions of Contract

Notes on the Special Conditions of Contract

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

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

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

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

Special Conditions of Contract

GCC Clause	
2	The intended completion date of Upgrading of Five(5) Units of
	Greenhouses at BASC College of Agriculture Campus and One(1)
	Unit at DRT Campus to Automated Greenhouses is Two Hundred
	Forty (240) calendar days from the date of the receipt of Notice to
	Proceed.
4.1	The schedule of delivery of the possession of the site to the contractor is
	upon the receipt of the Notice to Proceed.
6	The site investigation reports are: <i>None</i>
7.2	[Select one, delete the other.]
	In case of semi-permanent structures, such as buildings of types 1, 2, and
	3 as classified under the National Building Code of the Philippines,
	concrete/asphalt roads, concrete river control, drainage, irrigation lined
	canals, river landing, deep wells, rock causeway, pedestrian overpass,
10	and other similar semi-permanent structures: J Five (5) years.
10	Described and analysis of the metallicans in the Contract of
	a. Dayworks are applicable at the rate shown in the Contractor's
11 1	original Bid.
11.1	The Contractor shall submit the Program of Work to the Procuring
	Entity's Representative within [7 calendar] days of delivery of the Notice of Award.
11.2	
11.2	The amount to be withheld for late submission of an updated Program of Work is 1% of the progress billing.
13	The amount of the advance payment is <i>fifteen percent</i> (15%) of the
13	contract price to be paid upon written request of the contractor
	reconciling on the date of the Notice to Proceed and upon submission of
	an irrevocable standby letter of credit of equivalent value from a
	commercial bank, and bank guarantee or a surety bond callable upon
	demand, issued by a surety or insurance company duly licensed by the
	insurance Commission.
14	Materials and equipment delivered on the site but not completely put in
	place shall not be included for payment.
15.1	The date by which "as built" drawings are required is fifteen (15)
	calendar days from completion of project.
15.2	The amount to be withheld for failing to produce "as built" drawings
	and/or operating and maintenance manuals by the date required is 0.1%
	of the final contract amount[amount in local currency].

Section VI. Specifications

Notes on Specifications

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

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

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

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

Sample Clause: Equivalency of Standards and Codes

Wherever reference is made in the Contract to specific standards and codes to be met by the goods and materials to be furnished, and work performed or tested, the provisions of the latest current edition or revision of the relevant standards and codes in effect shall apply, unless otherwise expressly stated in the Contract. Where such standards and codes are national, or relate to a particular country or region, other authoritative standards that ensure a substantially equal or higher quality than the standards and codes specified will be

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

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

Upgrading of Five(5) Units of Greenhouses at BASC College of Agriculture Campus and One(1) Unit at DRT Campus to Automated Greenhouses

BASC New Site & DRT Campus

TECHNICAL SPECIFICATIONS

BULACAN AGRICULTURAL STATE COLLEGE

Pinaod, San Ildefonso, Bulacan

November 2021

SPECIFICATIONS

1. GENERAL REQUIREMENTS

- **1.1** These specifications are intended to cover all labor and materials required for the complete construction of the proposed projects as shown in the working drawings as described herein.
- 1.2 Materials and/ or work not specifically mentioned in the specifications, working drawings, and other contract documents but is implied and deemed necessary to complete the work shall be supplied by the Contractor and executed in a workman-like manner, of appropriate number, location, and size of the highest quality available without extra cost to the Owner.
- **1.3** The Owner reserves the right to alter and/or omit any part of the plans with the approval of the Architect or Engineer as the case may be. Any extra charge must be situated to the Architect and/or Project Manager for approval before final acceptance.
- **1.4** The Contractor shall secure all permits and licenses as required and also shall be responsable for all the liabilities, under Workmen's Compensation, SSS, Insurance, etc.
- **1.5** The Contractor shall furnish for approval of the Architect/Engineer, with promptness, samples as specified or required. Works shall be in accordance with the approved samples.
- 1.6 The Contractor shall guarantee the words, except for those with specific guarantee for a period of one (1) year after final acceptance by the Owner. He shall repair, replace and make good at his expenses any and all defects, which may arise during that term of guarantee and warranty due to defective workmanship and/or interior quality of materials.

2. METHODS OF CONSTRUCTION

2.1	The construction shall be done in the manner that would cause least disturbance to neighborhood and occupant of the area. The contractor will be allowed to work 24 hours if necessary to complete the work on time subject to approval of the owner.
2.2	All works to be done shall be of the best quality and workmanship.

3. MASONRY

- **3.1** Exterior wall should be CHB 4 inches wall bearing with 10 mm diameter reinforcement bars spaced @ 0.80 meter for vertical and for every 3 layers of CHB for horizontal bars.
- **3.2** Partition wall should be CHB 4 inches with 10 mm diameter reinforcement bars spaced @ 0.80 meter for vertical and for every 3 layers of CHB for horizontal bars.

4. WALL FINISHES

- 4.1. Interior walls finishes should be smooth plain cement plaster.
- 4.2. Exterior wall finishes should be smooth plain cement plaster.

5. CONCRETE WORKS

- 11.1. Class A mixture (1 part portland cement, 2 part sand, and 4 part gravel) for columns, tie beams, column footings, wall footings.
- 11.2. Class B mixture (1 part portland cement, 2-1/2 part sand, and 5 part gravel) for ground floor and all other concrete not mention in 14.1.
- 11.3. Cement plaster must be 1 part portland cement, and 3 part sand.

6. SPECIALTY

1. Climate Control System with Graphic Terminals

a.

The programmable logic controller (PLC) shall be an embedded I/O design, with I/O expansion capability.

Micro850 Programmable Logic Controller

Supplier shall provide up to date letter of appointment from Manufacturer as distributor for Philippines to provide sales and after sales services

A single chassis shall house CPU, memory, embedded I/O circuitry, communications, I/O expansion slot, and power supply.

The PLC shall be designed to operate in an industrial environment with an ambient temperature of -20 °C to 65 °C (-4 °F to 149 °F) and with a relative humidity range of 5% to 95%, non-condensing.

The PLC shall be designed to operate in a free airflow environment (convection cooling only, no fans or other air moving devices shall be required).

The PLC shall be designed and tested to operate in high electrical noise environments.

B.

The system shall support up to 5 front expansion modules (input/output, discrete or analog, communication, memory backup, trim pot) and 4 side expansion I/O modules (input/output, discrete or analog) for a total of up to 132 discrete I/O.

The plug-in and expansion modules shall be front accessible.

Isolation shall be between all internal logic and external circuits.

Each discrete input and output point shall have a visual indicator to display ON/OFF status.

All user wiring to I/O modules shall be through a heavy-duty terminal strip. Pressure-type screw terminals shall be used to provide fast, secure wire connections.

2. PLC CPU

A.

The CPU shall be a self-contained unit and will be capable of:

Providing system timing and scheduling I/O updates.

Controlling all I/O scanning and communications service.

Performing internal diagnostic checks and providing visual indication by illuminating a "green" indicator when no fault is detected and a "red" indicator when a fault is detected.

B.

The CPU's ports shall include:

One dedicated serial port which supports RS-232-C and RS-485 signals.

One RJ-45 port which supports 10/100 Mbps EtherNet/IP.

One USB port.

3. Graphic Terminals/ HMI (Human Machine Interface)

A.

The operator interface terminal shall have a flat panel display with LED backlight.

B.

Touch screen operator interface terminals shall have the entire screen available for object usage, and not be limited by specific templates or function keys.

C.

Keypad-based operator interface terminals shall have function keys that the user can program as required by application specifications.

D.

Shall be PanelViewTM 800 Series

4. Programming Techniques-General

A.

The PLC and operator interface terminal shall be capable of being configured offline, using Connected Components Workbench (CCW) software.

B.

CCW software shall:

Be available for installation on a PC as a free download.

Require at least an Intel Pentium 4, 2.8 GHz, processor with 2 GB RAM and 10 GB free hard disk space.

Create applications that can be transferred to the operator interface terminal using a USB flash or microSD storage card.

Sensors

1. Temperature and Relative Humidity

Filter description: 0.2 µm Teflon membrane

Supply voltage: 5 to 28vdc

RH Measuring range: 0 to 100% RH (non-condensing)

RH Typical Accuracy at -40° to 0°C

Air Temperature Sensing Element: 1000 ohm Platinum

Air Temperature Measuring range: -40° to +60°C

Meteorological Station

SOLAR RADIATION SENSOR

Silicon photovoltaic detector mounted in a cosine-corrected head

ISO Certification- Class C (second class)

Light Spectrum waveband 360 to 1120 nm (wavelengths where response is 10% of maximum)

Absolute Accuracy ±5% for daily total radiation

Spectral range 360 to 1120 nm

Temperature range -40° to $+70^{\circ}$ C

Sensitivity 0.2 mV/W/m2

Supllier shall provide manufacturer's authorization certificate

MESUREMENT DATA LOGGER

Internal Memory: 30MB flash for data storage, 80MB flash for CPU drive / programs, 2MB flash

10/100 Ethernet RJ45 for LAN connection

RS-232C for connecting RS-232 modems or serial sensors

Battery Terminal Pair (-BAT+) for regulated 12V power input or rechargeable 12V VRLA for UPS mode

Charge Terminal Pair (-CHG+) for 16 to 32V from DC power converter or 12 or 24 V solar panel (10W)

One Switched 12V Terminal (SW12V) (VX1, VX2)

Two Pulse Counting Terminals (P_SW_P_LL)

Two Control Terminals (C1,C2)

Wireless Local Area Network (WLAN)

Supported Standards: EEE 802.11 b/g/n, IEEE 802.11/d/e/I, 802.1X, WEP,WPA/WPA2 Personal and Enterprise

SUPPLEMENTARY HORTICULTURE LIGHTS

voltage input range - 100~277VAC 50/60hz

photosynthetic photon flux density - 334.18 micro mol m2/s

Power Rating - 600W

Eff: 93.5% (Max)

Power factor: >/- 0.95

Water Proof - IP65

dimension -(L*W*H) 1206mm x 600mm *80mm

CONTROL BOX

The supplier shall provide all required cables and connectors to interface with other control system equipment.

The supplier shall ensure that communication media, analog signals, and discrete I/O wiring are properly protected in accordance with manufacturer recommendations.

Section VII. Drawings





PERSPECTIVE VIEW

Section VIII. Bill of Quantities

Notes on the Bill of Quantities

Objectives

The objectives of the Bill of Quantities are:

- a. to provide sufficient information on the quantities of Works to be performed to enable Bids to be prepared efficiently and accurately; and
- b. when a Contract has been entered into, to provide a priced Bill of Quantities for use in the periodic valuation of Works executed.

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

Daywork Schedule

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

- a. A list of the various classes of labor, materials, and Constructional Plant for which basic daywork rates or prices are to be inserted by the Bidder, together with a statement of the conditions under which the Contractor will be paid for work executed on a daywork basis.
- b. Nominal quantities for each item of Daywork, to be priced by each Bidder at Daywork rates as Bid. The rate to be entered by the Bidder against each basic Daywork item should include the Contractor's profit, overheads, supervision, and other charges.

Provisional Sums

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

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

Signature Box

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

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

BILL OF QUANTITIES

ITEM	DESCRIPTION	UNIT	QTY	PHP PRICE
ı.	PRELIMINARY AND GENERAL WORKS			
	Mobilization and Demobilization	Lot	1	
	Securing Permits and Licenses	Lot	1	
	Site Survey and Soil Investigation	Lot	1	
	Site Development/ Staging and Disposal Area	Lot	1	
	Temporary Facilities	Lot	1	
	Insurance and Performance Bond	Lot	1	
II.	CIVIL WORKS			
	Clearing, grubbing and grading	Lot	1	
	Excavation Works	Lot	1	
	Concreting/ Reinforcing Bar Works and Formworks	Lot	1	
	Masonry & Plumbing Works	Lot	1	
	Fabricate, install and erect TUNNEL TYPE GREENHOUSE	Lot	1	
	(W10m X L20m X H3.50m)			
III.	Motorized SHADING SCREEN Using Aluminet 40% Shading	Lot	1	
	Motorized Shading Screen using 400W Shading Motor, 40%			
	Shading Aluminet connected to Climate Control			
IV.	GROWING SYSTEM			
	C1. TABLES AND FRAMES FOR ORNAMENTALS			
	Tables for ornamental 1.7m x 2.8m	Lot	1	
	Micro Sprinkler System	Lot	1	
	Irrigation System	Lot	1	
	C2. NFT SYSTEM WITH MOVABLE BENCHES FOR LEAFY			

	VEGETABLE			
	NFT SYSTEM for 200m2 Net Area Greenhouse	Lot	1	
	Capacity: 3,024 Plants at one setting	Lot	1	
	Automatic Fertigation Autogrow - Included	Lot	1	
	NFT Stand	Lot	1	
٧.	CONTROLS AND INSTRUMENTATION	Lot	1	
	Climate Control System with Graphic Terminals / HMI	Lot	1	
1	(Human Machine Interface) and programmable logic controller (PLC) Specifications:			
A.	The programmable logic controller (PLC) shall be an embedded I/O design, with I/O expansion capability.			
	Micro850 Programmable Logic Controller			
	Supplier shall provide up to date letter of appointment from Manufacturer as distributor for Philippines to provide sales and after sales services			
	A single chassis shall house CPU, memory, embedded I/O circuitry, communications, I/O expansion slot, and power supply.			
	The PLC shall be designed to operate in an industrial environment with an ambient temperature of -20 °C to 65 °C (-4 °F to 149 °F) and with a relative humidity range of 5% to 95%, non-condensing.			
	The PLC shall be designed to operate in a free airflow environment (convection cooling only, no fans or other air moving devices shall be required).			
	The PLC shall be designed and tested to operate in high electrical noise environments.			
В.	The system shall support up to 5 front expansion modules (input/output, discrete or analog, communication, memory backup, trim pot) and 4 side expansion I/O modules (input/output, discrete or analog) for a total of up to 132 discrete I/O.			
	The plug-in and expansion modules shall be front accessible.			
	Isolation shall be between all internal logic and external circuits.			
	Each discrete input and output point shall have a visual indicator to display ON/OFF status.			
	All user wiring to I/O modules shall be through a heavy-duty terminal strip. Pressure-type screw terminals shall be used to provide fast, secure wire connections.			
2	PLC CPU	Lot	1	
A.	The CPU shall be a self-contained unit and will be capable of:			
	Providing system timing and scheduling I/O updates.			
	Controlling all I/O scanning and communications service.			
	Performing internal diagnostic checks and providing visual indication by illuminating a "green" indicator when no fault is detected and a "red" indicator when a fault is detected.			

В.	The CPU's ports shall include:			
	One dedicated serial port which supports RS-232-C and RS-485 signals.			
	One RJ-45 port which supports 10/100 Mbps EtherNet/IP.			
	One USB port.			
3	Graphic Terminals / HMI (Human Machine Interface) Specifications:	Lot	1	
A.	The operator interface terminal shall have a flat panel display with LED backlight.			
В.	Touch screen operator interface terminals shall have the entire screen available for object usage, and not be limited by specific templates or function keys.			
C.	Keypad-based operator interface terminals shall have function keys that the user can program as required by application specifications.			
D	Shall be PanelView™ 800 Series			
4	PROGRAMMING TECHNIQUES-GENERAL	Lot	1	
A.	The PLC and operator interface terminal shall be capable of being configured offline, using Connected Components Workbench (CCW) software.			
В.	CCW software shall:			
	Be available for installation on a PC as a free download.			
	Require at least an Intel Pentium 4, 2.8 GHz, processor with 2 GB RAM and 10 GB free hard disk space.			
	Be supported in Windows 7 SP1, Windows 8 (and 8.1), and Windows Server 2008 (R2) environments.			
	Create applications that can be transferred to the operator interface terminal using a USB flash or microSD storage card.			
VI.	SENSORS	Lot	1	
	Temperature and Relative Humidity			
	Supply voltage: 5 to 28vdc			
	Filter description: 0.2 μm Teflon membrane			
	Housing classification11/9/2021 ip65			
	RH Measuring range: 0 to 100% RH (non-condensing)			
	RH Typical Accuracy at -40° to 0°C Air Temperature Sensing Element: 1000 ohm Platinum			
	Air Temperature Sensing Element: 1000 on Fraction Air Temperature Measuring range: -40° to +60°C			
VII.	METEOROLOGICAL STATION			
1	Solar Radiation Sensor	Lot	1	
	Silicon photovoltaic detector mounted in a cosine-corrected head			
	ISO Certification- Class C (second class)			
	Light Spectrum waveband 360 to 1120 nm (wavelengths where response is 10% of maximum)			
	Absolute Accuracy ±5% for daily total radiation			
	Spectral range 360 to 1120 nm			

	TOTAL PRICE			
X.	COOLING EQUIPMENTS	Lot	1	
	accordance with manufacturer recommendations.			
	signals, and discrete I/O wiring are properly protected in			
	The supplier shall ensure that communication media, analog			
	interface with other control system equipment.			
	The supplier shall provide all required cables and connectors to			
IX.	CONTROL BOX	Lot	1	
137	dimension -(L*W*H) 1206mm x 600mm *80mm	l c t	_	
	Water Proof - IP65			
	Power factor: >/- 0.95			
	Eff: 93.5% (Max)			
	Power Rating - 600W			
	photosynthetic photon flux density - 334.18 micro mol m2/s			
	voltage input range - 100~277VAC 50/60hz			
VIII.	SUPPLEMENTARY HORTICULTURE LIGHTS	Lot	1	
	Supported Standards: EEE 802.11 b/g/n, IEEE 802.11/d/e/l, 802.1X, WEP,WPA/WPA2 Personal and Enterprise	1		
	Wireless Local Area Network (WLAN)			
	Two Control Terminals (C1,C2)			
	Two Pulse Counting Terminals (P_SW_P_LL)			
	One Switched 12V Terminal (SW12V) (VX1, VX2)			
	converter or 12 or 24 V solar panel (10W)			
	Charge Terminal Pair (-CHG+) for 16 to 32V from DC power			
	rechargeable 12V VRLA for UPS mode			
	Battery Terminal Pair (-BAT+) for regulated 12V power input or			
	RS-232C for connecting RS-232 modems or serial sensors			
	10/100 Ethernet RJ45 for LAN connection			
	CPU drive / programs, 2MB flash			
2	Measurement Data Logger Internal Memory: 30MB flash for data storage, 80MB flash for	Lot	1	
	Supllier shall provide manufacturer's authorization certificate			
	Sensitivity 0.2 mV/W/m2			
	Temperature range -40° to +70°C			

I hereby	certify	to	comply	with	all	the	above	technical	specifications	as	per	prices
quoted in	the Bill	of	Quantiti	es.								

Name of Company/Bidder	Signature over Printed Name of	Date
	Representatives	

Section IX. Checklist of Technical and Financial Documents

Notes on the Checklist of Technical and Financial Documents

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

- a. GPPB Resolution No. 09-2020 on the efficient procurement measures during a State of Calamity or other similar issuances that shall allow the use of alternate documents in lieu of the mandated requirements; or
- b. any subsequent GPPB issuances adjusting the documentary requirements after the effectivity of the adoption of the PBDs.

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

Checklist of Technical and Financial Documents

I. TECHNICAL COMPONENT ENVELOPE

Class "A" Documents

Legal Documents

- (a) Valid PhilGEPS Registration Certificate (Platinum Membership) (all pages);
- (b) Registration certificate from Securities and Exchange Commission (SEC), Department of Trade and Industry (DTI) for sole proprietorship, or Cooperative Development Authority (CDA) for cooperatives or its equivalent document;

and

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

<u>and</u>

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

Technical Documents

- (f) Statement of the prospective bidder of all its ongoing government and private contracts, including contracts awarded but not yet started, if any, whether similar or not similar in nature and complexity to the contract to be bid; and
- Statement of the bidder's Single Largest Completed Contract (SLCC) similar to the contract to be bid, except under conditions provided under the rules; and
- (h) Philippine Contractors Accreditation Board (PCAB) License;

or

Special PCAB License in case of Joint Ventures;

and registration for the type and cost of the contract to be bid; and

② (i) Original copy of Bid Security. If in the form of a Surety Bond, submit also a certification issued by the Insurance Commission;

or

?

?

Original copy of Notarized Bid Securing Declaration; and

- (j) Project Requirements, which shall include the following:
 - a. Organizational chart for the contract to be bid;
- b. List of contractor's key personnel (*e.g.*, Project Manager, Project Engineers, Materials Engineers, and Foremen), to be assigned to the contract to be bid, with their complete qualification and experience data:
- c. List of contractor's major equipment units, which are owned, leased, and/or under purchase agreements, supported by proof of ownership or certification of availability of equipment from the equipment lessor/vendor for the duration of the project, as the case may be; and
- ② (k) Original duly signed Omnibus Sworn Statement (OSS);
 and if applicable, Original Notarized Secretary's Certificate in case of a

corporation, partnership, or cooperative; or Original Special Power of Attorney of all members of the joint venture giving full power and authority to its officer to sign the OSS and do acts to represent the Bidder.

Financial Documents

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

Class "B" Documents

(n) If applicable, duly signed joint venture agreement (JVA) in accordance with RA No. 4566 and its IRR in case the joint venture is already in existence;

or

duly notarized statements from all the potential joint venture partners stating that they will enter into and abide by the provisions of the JVA in the instance that the bid is successful.

II. FINANCIAL COMPONENT ENVELOPE

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

Other documentary requirements under RA No. 9184

- (p) Original of duly signed Bid Prices in the Bill of Quantities; and
- Quly accomplished Detailed Estimates Form, including a summary sheet indicating the unit prices of construction materials, labor rates, and equipment rentals used in coming up with the Bid; and
- (r) Cash Flow by Quarter.

Bid Form for the Procurement of Infrastructure Projects

[shall be submitted with the Bid]

BID FORM Date : ______ Project Identification No. : ______

To: [name and address of Procuring Entity]

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

- a. We have no reservation to the PBDs, including the Supplemental or Bid Bulletins, for the Procurement Project: [insert name of contract];
- b. We offer to execute the Works for this Contract in accordance with the PBDs;
- c. The total price of our Bid in words and figures, excluding any discounts offered below is: [insert information];
- d. The discounts offered and the methodology for their application are: [insert information];
- e. The total bid price includes the cost of all taxes, such as, but not limited to: [specify the applicable taxes, e.g. (i) value added tax (VAT), (ii) income tax, (iii) local taxes, and (iv) other fiscal levies and duties], which are itemized herein and reflected in the detailed estimates,
- f. Our Bid shall be valid within the a period stated in the PBDs, and it shall remain binding upon us at any time before the expiration of that period;
- g. If our Bid is accepted, we commit to obtain a Performance Security in the amount of *[insert percentage amount]* percent of the Contract Price for the due performance of the Contract, or a Performance Securing Declaration in lieu of the the allowable forms of Performance Security, subject to the terms and conditions of issued GPPB guidelines¹ for this purpose;
- h. We are not participating, as Bidders, in more than one Bid in this bidding process, other than alternative offers in accordance with the Bidding Documents;
- i. We understand that this Bid, together with your written acceptance thereof included in your notification of award, shall constitute a binding contract between us, until a formal Contract is prepared and executed; and
- j. We understand that you are not bound to accept the Lowest Calculated Bid or any other Bid that you may receive.
- k. We likewise certify/confirm that the undersigned, is the duly authorized representative of the bidder, and granted full power and authority to do, execute and perform any and all acts necessary to participate, submit the bid, and to sign and execute the ensuing contract for the [Name of Project] of the [Name of the

¹ currently based on GPPB Resolution No. 09-2020

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

l.

Name:	-
Legal Capacity:	_
Signature:	
Duly authorized to sign the Bid for and behalf of:	
Date:	

Contract Agreement Form

] of the l	GREEMENT made the day of _ Philippines (hereinafter called "the Entity ier] (hereinafter called "the Supplier") of	y") of the one part and [name	
	nd servic	EAS the Entity invited Bids for certain ges] and has accepted a Bid by the Suppprice in words and figures] (hereinafter	olier for the supply of those g	
	NOW T	HIS AGREEMENT WITNESSETH AS	FOLLOWS:	
1. them in		Agreement words and expressions shall halitions of Contract referred to.	nave the same meanings as are	e respectively assigned to
2. viz.:	The foll	owing documents shall be deemed to for	m and be read and construed a	as part of this Agreement,
	(a)	the Supplier's Bid, including the documents/statements submitted (e.g. b corrections to the bid resulting from the	idder's response to clarification	ons on the bid), including
	(b)	the Schedule of Requirements;		
	(c)	the Technical Specifications;		
	(d)	the General Conditions of Contract;		
	(e)	the Special Conditions of Contract;		
	(f)	the Performance Security; and		
	(g)	the Entity's Notice of Award.		
	r hereby	deration of the payments to be made by covenants with the Entity to provide the respects with the provisions of the Contra	e goods and services and to r	
	and the	tity hereby covenants to pay the Supplication remedying of defects therein, the Controls of the contract at the time and in the	ract Price or such other sum	as may become payable
with the		NESS whereof the parties hereto have the Republic of the Philippines on the day		executed in accordance
Signed,	sealed, d	elivered by	the	(for the Entity)
Signed	sealed d	elivered by	_ the	(for the Supplier)
~-5	, u			· / ~~~~~~~/

Omnibus Sworn Statement (Revised)

[shall be submitted with the Bid]

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

AFFIDAVIT

- I, [Name of Affiant], of legal age, [Civil Status], [Nationality], and residing at [Address of Affiant], after having been duly sworn in accordance with law, do hereby depose and state that:
- 1. [Select one, delete the other:]

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

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

2. [Select one, delete the other:]

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

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

- 3. [Name of Bidder] is not "blacklisted" or barred from bidding by the Government of the Philippines or any of its agencies, offices, corporations, or Local Government Units, foreign government/foreign or international financing institution whose blacklisting rules have been recognized by the Government Procurement Policy Board, by itself or by relation, membership, association, affiliation, or controlling interest with another blacklisted person or entity as defined and provided for in the Uniform Guidelines on Blacklisting;
- 4. Each of the documents submitted in satisfaction of the bidding requirements is an authentic copy of the original, complete, and all statements and information provided therein are true and correct;
- 5. [Name of Bidder] is authorizing the Head of the Procuring Entity or its duly authorized representative(s) to verify all the documents submitted;
- 6. [Select one, delete the rest:]

[If a sole proprietorship:] The owner or sole proprietor is not related to the Head of the Procuring Entity, members of the Bids and Awards Committee (BAC), the Technical Working Group, and

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

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

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

- 7. [Name of Bidder] complies with existing labor laws and standards; and
- 8. [Name of Bidder] is aware of and has undertaken the responsibilities as a Bidder in compliance with the Philippine Bidding Documents, which includes:
 - a. Carefully examining all of the Bidding Documents;
 - b. Acknowledging all conditions, local or otherwise, affecting the implementation of the Contract;
 - c. Making an estimate of the facilities available and needed for the contract to be bid, if any; and
 - d. Inquiring or securing Supplemental/Bid Bulletin(s) issued for the [Name of the Project].
- 9. [Name of Bidder] did not give or pay directly or indirectly, any commission, amount, fee, or any form of consideration, pecuniary or otherwise, to any person or official, personnel or representative of the government in relation to any procurement project or activity.
- 10. In case advance payment was made or given, failure to perform or deliver any of the obligations and undertakings in the contract shall be sufficient grounds to constitute criminal liability for Swindling (Estafa) or the commission of fraud with unfaithfulness or abuse of confidence through misappropriating or converting any payment received by a person or entity under an obligation involving the duty to deliver certain goods or services, to the prejudice of the public and the government of the Philippines pursuant to Article 315 of Act No. 3815 s. 1930, as amended, or the Revised Penal Code.

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

[Insert NAME OF BIDDER OR ITS AUTHORIZED REPRESENTATIVE]

[Insert signatory's legal capacity]

Affiant

[Jurat]

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

Bid Securing Declaration Form

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

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

BID SECURING DECLARATION

Project Identification No.: [Insert number]

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

I/We, the undersigned, declare that:

- 1. I/We understand that, according to your conditions, bids must be supported by a Bid Security, which may be in the form of a Bid Securing Declaration.
- 2. I/We accept that: (a) I/we will be automatically disqualified from bidding for any procurement contract with any procuring entity for a period of two (2) years upon receipt of your Blacklisting Order; and, (b) I/we will pay the applicable fine provided under Section 6 of the Guidelines on the Use of Bid Securing Declaration, within fifteen (15) days from receipt of the written demand by the procuring entity for the commission of acts resulting to the enforcement of the bid securing declaration under Sections 23.1(b), 34.2, 40.1 and 69.1, except 69.1(f),of the IRR of RA No. 9184; without prejudice to other legal action the government may undertake.
- 3. I/We understand that this Bid Securing Declaration shall cease to be valid on the following circumstances:
 - a. Upon expiration of the bid validity period, or any extension thereof pursuant to your request;
 - b. I am/we are declared ineligible or post-disqualified upon receipt of your notice to such effect, and (i) I/we failed to timely file a request for reconsideration or (ii) I/we filed a waiver to avail of said right; and
 - c. I am/we are declared the bidder with the Lowest Calculated Responsive Bid, and I/we have furnished the performance security and signed the Contract.

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

[[Insert NAME OF BIDDER OR ITS AUTHORIZED REPRESENTATIVE]

[Insert signatory's legal capacity]

Affiant

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

NET FINANCIAL CONTRACTING CAPACITY

_			
			Year 20
	1	Total Assets	
	2	Current Assets	
	3	Total Liabilities	
	4	Current Liabilities	
	5	Net Worth (1-3)	
	6	Net Working Capital (2-4)	
	NFCC = all outs ongoing coincidir The valu	[(Current assets – current liabilities) (15)] minus canding or uncompleted portions of the project contracts including awarded contracts yet to be given the contract to be bid. The domestic bidder's current assets and a shall be based on the latest Audited Financial States	ts under e started d current
	submitted to the BIR. NFCC = PhP		
	Submitted by:		
	Name o	f Bidder	
	Signatur	e of Authorized Representative over Printed Name	
: :			

