

BIDDING DOCUMENT FOR THE IMPROVEMENT OF ROAD ALONG NIA CANAL AND SCREEN HOUSE CITY AT PHILRICE CES PB INFRA 23-01-01



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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.

SLCC - Single Largest Completed Contract.

UN - United Nations.

Section I. Invitation to Bid



INVITATION TO BID FOR THE IMPROVEMENT OF ROAD ALONG NIA CANAL AND SCREEN HOUSE CITY AREA AT PHILRICE CES PB INFRA 23-01-01

- 1. The **Philippine Rice Research Institute Central Experiment Station**, through the **2023 Corporate Fund Budget** intends to apply the sum of **One Million Four Hundred Eighty Thousand Pesos Only (PhP 1,480,000.00)** being the Approved Budget for the Contract (ABC) to payment under the contract. Bids received in excess of the ABC shall be automatically rejected at bid opening.
- 2. The **Philippine Rice Research Institute Central Experiment Station** now invites contractors with PCAB license of at least **Category C & D/Small B** for the above Procurement Project. Completion of the Works is required **One Hundred Twenty Calendar Days (120 CD)**. 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. Prospective Bidders may obtain further information from **PhilRice-Central Experiment Station** through telecommunication or video conferencing during office hours and inspect the Bidding Documents at the PhilGEPS and PhilRice websites. Kindly refer to the schedule below.
- 5. A complete set of Bidding Documents may be acquired by interested bidders from the address and websites 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 *One Thousand Five Hundred Pesos Only (Php 1,500.00)*.

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 deadline of submission of their bids.

Bidders are encouraged to download the Bidding Documents through the PhilGEPS or the PhilRice website and pay through bank. Please coordinate with the BAC Secretariat through the email address and contact number given below for the bank details and procedures.

- 6. The **Philippine Rice Research Institute Central Experiment Station** will hold an online/virtual Pre-Bid Conference on the date specified below which shall be open to all prospective bidders. **Prospective bidders need to signify their intention to participate by sending an email to the address given below.** A Personal Meeting ID will be sent through SMS or email for each participant at least one day before the event.
- 7. Bids must be duly received by the BAC Secretariat at the address below one (1) day before the opening of bids through manual submission at the office address as indicated below.
- 8. All bids must be accompanied by a bid security in any of the acceptable forms and in the amount stated in **ITB** Clause 15.
- 9. Face to face and online/virtual Bid opening shall be held on the given schedule below and bids will be opened in the presence of the bidders' representatives (via video conferencing). Late bids shall not be accepted.



10. The **Philippine Rice Research Institute- Central Experiment Station** reserves the right to reject any and all bids, declare a failure of bidding, or not award the contract at any time prior to contract award in accordance with Sections 35.6 and 41 of the 2016 revised Implementing Rules and Regulations (IRR) of RA No. 9184, without thereby incurring any liability to the affected bidder or bidders.

11. Please refer to the following schedule of activities:

Activity	Date	Remarks
Acceptance of Queries through Telephone or Video Call with the BAC Secretariat	March 20 – April 11, 2023 (except holidays, Saturdays and Sundays) 8:00AM - 5:00PM	Queries on the bid documents only. Queries on the technical specifications should be in formal writing sent through email or fax.
Availability of Bid Documents and Acceptance of Payment	March 20 – April 11, 2023 (except holidays, Saturdays and Sundays) 8:00AM - 5:00PM	Downloadable through PhilGEPS, PhilRice Website and can be requested through email. Please call BAC Secretariat for the procedures of online payment
Pre-Bid Conference	March 30, 2023	Interested bidders shall signify
(Virtual/Online)	Meeting Proper: 2:00PM	intention to bid through email. A Personal Meeting ID will be sent through email to confirmed participants.
Deadline for the Submission of Bids	On or before April 11, 2023 5:00 PM	Through personal delivery at the designated drop off point. Can also be sent through courier.
Bid Opening (Face to	April 12, 2023	A Personal Meeting ID will be sent
Face & Virtual/Online)	Meeting Proper: 2:00 PM	to participants who submitted bid proposal on time.

12. For further information, please refer to:

THE BAC SECRETARIAT

Procurement Management Division Philippine Rice Research Institute Maligaya, Science City of Munoz, Nueva Ecija

Telefax: (044) 456-0285 (661) Mobile No. 0999-2248705 Website: <u>www.philrice.gov.ph</u>

13. You may visit the following websites:

For downloading of Bidding Documents:

www.philrice.gov.ph and www.philgeps.gov.ph

Date: March 16, 2023

FIDELAP, BONGAT

Chairperson, BAC for Civil Works

NOTICE/ANNOUNCEMENT

DA DOES NOT CONDONE ANY FORM OF SOLICITATION ON ANY PROSPECTIVE WINNING AND LOSING BIDDERS BY ANY OF OUR STAFF/EMPLOYEES OR ANY OTHER PARTY. ANY SORT OF THIS KIND SHALL BE REPORTED IMMEDIATELY TO THE OFFICE OF THE SECRETARY OR THE NATIONAL BUREAU OF INVESTIGATION (NBI) FOR ENTRAPMENT AND PROPER INVESTIGATION. EVALUATION (NBI) FOR ENTRAPMENT AND PROPER INVESTIGATION.

Section II. Instructions to Bidders

Instruction to Bidders

1. Scope of Bid

The **Philippine Rice Research Institute- Central Experiment Station** invites Bids for **Improvement of Road along NIA Canal and Screen House City Area at PhilRice CES** with Project Identification Number **PB Infra 23-01-01**.

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

2. Funding Information

- 2.1. The GOP through the source of funding as indicated below for 2023 Corporate Fund Budget in the amount of One Million Four Hundred Eighty Thousand Pesos Only (Php 1,480,000.00).
- 2.2. The source of funding is:
 - a. The **2023 Corporate Fund Budget**.

3. Bidding Requirements

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

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

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

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

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

5. Eligible Bidders

- 5.1. Only Bids of Bidders found to be legally, technically, and financially capable will be evaluated.
- 5.2. The Bidder must have an experience of having completed a Single Largest Completed Contract (SLCC) that is similar to this Project, equivalent to at least fifty percent (50%) of the ABC adjusted, if necessary, by the Bidder to current prices

using the PSA's CPI, except under conditions provided for in Section 23.4.2.4 of the 2016 revised IRR of RA No. 9184.

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

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

6. Origin of Associated Goods

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

7. Subcontracts

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

The Procuring Entity has prescribed that:

- a. Subcontracting is not allowed.
- 7.1. Subcontracting of any portion of the Project does not relieve the Contractor of any liability or obligation under the Contract. The Supplier will be responsible for the acts, defaults, and negligence of any subcontractor, its agents, servants, or workmen as fully as if these were the Contractor's own acts, defaults, or negligence, or those of its agents, servants, or workmen.

8. Pre-Bid Conference

The Procuring Entity will hold a pre-bid conference for this Project on the specified date and time and either at its physical address **see Schedule of activities above** and/or through videoconferencing/webcasting} as indicated in paragraph 11 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 for **120 calendar days from the date of opening of bids**. Any bid not accompanied by an acceptable bid security shall be rejected by the Procuring Entity as non-responsive.

16. Sealing and Marking of Bids

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

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

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

17. Deadline for Submission of Bids

The Bidders shall submit on the specified date and time and either at its physical address or through online submission as indicated in paragraph 11 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 11 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

Bid Data Sheet

ITB		Diu Data Silee		
Clause				
5.2	For this purpose, contracts similar to the Project refer to contracts which have the same major categories of work, which shall be:			
	General Construction, Re	pair and Improve	ement	
7.1	No further instructions.			
10.3	A valid PCAB license is requi	red for this project	t of at least Ca	tegory C & D/Small B
10.4	•			-
	The minimum work experience Key Personnel	General Experience		Relevant Experience
	Project Manager	Project Managen	nent	10 years
	Project Engineer	General Constru		5 years
	Health and Safety Officer	Occupational He Safety Standard	alth and	5 years
	Foreman	General Constru	ction	5 years
	Carpenter	General Constru	ction	5 years
	Mason	General Constru		5 years
	Steelman	General Constru		5 years
	Laborer / Helper	General Constru	ction	-
10.5	The minimum major equip	ment requirement	s are the follo	wing:
	Power Tools	1		nber of Unit/s
	Electric Drill			1
	Grinder			1
	Circular Saw			1
	Cut-off Machine			1
	Concrete Cutter		1	
	Concrete Vibrator/ Screed Concrete 1 Vibrator		1	
	Equipment / Heavy Equipment Number of Unit/s		nber of Unit/s	
	One-Bagger Mixer		1	
	Welding Machine		1	
	Walk-Behind / Plate Comp	oactor	1	
	Mini Dump Truck	113	1	
	Backhoe with Dozer (Small	•	1	
	Roller Compactor (Rental) Truck Mixer (Ready Mix C			1
12	No further instructions.	oncretej		1
15.1	The bid security shall be in	n the form of a Ri	id Securing D	eclaration or any of the
13.1	following forms and amoun		ia securing b	eclaration of any of the
			Nine Thousa	and Six Hundred Pesos
	a. The amount of not less than Twenty Nine Thousand Six Hundred Pesos Only (Php 29,600.00) Two percent (2%) of ABC, if bid security is in cash,			
				or irrevocable letter of
	credit;			
	b. The amount of not <u>74,000.00).</u> Five pe			sand Pesos Only (Php y is in Surety Bond.
19.2	Partial bids are not allow			
20	Latest income and busines Filing and Payment Systen		-	_
	VAT Returns (Form 2550M of payment	& 2550Q) or Perce	entage Tax Re	turn (2552M) with proof

- Additional contract documents relevant to the Project that may be required by existing laws and/or the Procuring Entity, such as;
 - 1. Construction schedule and S-curve,
 - 2. PERT/CPM
 - 3. Manpower schedule,
 - 4. Construction methods,
 - 5. Equipment utilization schedule,
 - 6. Construction safety and health program approved by the DOLE, and other acceptable tools of project scheduling.

Section IV. General Conditions of Contract

1. Scope of Contract

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

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

2. Sectional Completion of Works

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

3. Possession of Site

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

4. The Contractor's Obligations

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

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

5. Performance Security

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

partnership, corporation, or association supplying the Contractor with labor, materials and/or equipment for the performance of this Contract.

6. Site Investigation Reports

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

7. Warranty

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

8. Liability of the Contractor

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

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

9. Termination for Other Causes

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

10. Dayworks

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

11. Program of Work

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

certificate and continue to withhold this amount until the next payment after the date on which the overdue Program of Work has been submitted.

12. Instructions, Inspections and Audits

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

13. Advance Payment

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

14. Progress Payments

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

15. Operating and Maintenance Manuals

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

Section V. Special Conditions of Contract

Special Conditions of Contract

GCC Clause	
2	The intended completion date is One Hundred Twenty (120) calendar days
4.1	No further instructions
6	No further instructions
7.2	The Warranty against Structural Defects: [In case of semi-permanent structures, such as buildings of types 1, 2, and 3 as classified under the National Building Code of the Philippines, concrete/asphalt roads, concrete river control, drainage, irrigation lined canals, river landing, deep wells, rock causeway, pedestrian overpass, and other similar semi-permanent structures:] Five (5) years.
10	a. Dayworks are applicable at the rate shown in the Contractor's original Bid.
11.1	The Contractor shall submit the Program of Work to the Procuring Entity's Representative within <i>seven (7)</i> days of delivery of the Notice of Award.
11.2	The amount to be withheld for late submission of an updated Program of Work is 1% of the amount of progress billing
13	The amount of the advance payment is not more than 15% of the total contract price.
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 operating and maintenance manuals are required <i>upon project completion</i> . The date by which "as built" drawings are required upon project completion .
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 Fifteen Thousand Pesos Only (PhP 15,000.00). Close-Out Report is required upon completion which includes the following: As-Built Plans (3 copies A3-print and CD for AutoCAD file); Materials Book (including all Materials Sample Approval forms); Manuals/ Warranty Certificates for equipment/ appliances (if applicable); Pictures of Work Progress (in print and in CD for electronic copy) Refer to Section VI for complete details of the Close-Out Report.

Section VI. Specifications

A. GENERAL REQUIREMENTS

A. SUMMARY OF WORKS

- 1. **General** All provisions of the "General Conditions of Contract" shall form part of this section. All general requirements contained in the Bidding Documents and other Contract Documents shall likewise apply.
- **2. Scope -** The work includes the furnishing of all materials, labor, tools and equipment and the performance of all operations necessary for the **Improvement of Road along NIA Canal and Screen House City Area at PhilRice-CES** all in accordance with the Plans and Specifications, and subject to the terms and conditions of the Contract Documents.
- 3. Location The proposed work is located at the PhilRice CES, Science City of Muñoz, Nueva Ecija

B. COORDINATION

Supervision

- **1.** The contractor must employ only **competent and efficient key personnel** experienced in their specialization.
- **2.** Submission of the **complete list of ALL personnel/laborers** employed is **required** before commencement of Works.
- **3.** All personnel/laborers shall wear **proper uniform and IDs** when entering and when within PhilRice Campus.

2. Construction Safety and Health/Safety Management

The contractor shall put up and continuously maintain **adequate safety measures** that shall prevent undue loss, damages and injury on workers, or loss of properties.

The contractor shall, at his own expense, furnish his workers with protective equipment for eyes, face, hands and feet, lifeline, safety belt/harness, protective shields and barriers whenever necessary by reason of the hazardous work process or environment, chemical or radiological or other mechanical irritants of hazards capable of causing injury or impairment in the function of any part of the body through absorption, inhalation or physical agent.

C. REGULATORY AND OTHER REQUIREMENTS

Other Requirements

All requirements described in detail in the General Requirements shall be provided and shall be the sole responsibility of the Contractor in the execution of the work. These are, among others:

- 1. Permits and Fees
- 2. Materials Testing
- 3. Project/Technical Meetings and Conferences

The Contractor and others working under his jurisdiction shall perform work in compliance with the rules and regulations and ordinances of any kind required by the governmental authority or other agency having jurisdiction over his work.

He shall also comply with the Integrated Management System (IMS) Policy of PhilRice.

D. PROJECT/TECHNICAL MEETINGS

1. Pre-Construction Conferences

A pre-construction meeting between the Implementing Office, end user, project engineer and other representatives designated by PhilRice, and the Contractor shall be held at the site prior to the commencement of Works.

This meeting shall be for the purpose of:

- a. resolving current problems;
- b. further orienting the Contractor to the requirements of the Drawings and Specifications;
- c. informing the Contractor of the Implementing Office's responsibility to PhilRice for the supervision; and
- d. working out with the Contractor a general schedule of supervision

2. Progress Meetings

The Contractor shall meet with the Implementing Office weekly or as required to verify the progress of the work.

E. SUBMITTALS

1. Construction Schedules

The Contractor shall contact the Implementing Office before covering up any work so that proper inspection may be made.

2. Network Analysis Schedules

The Contractor shall prepare a PERT-CPM Construction Schedule to indicate the following:

- a. All activities necessary to complete the project;
- b. Monthly value of each activity.

3. Shop Drawings, Product Data and Samples

The Contractor shall review, stamp with his approval, and submit shop drawings and submittals for approval of the Implementing Office for conformance of the design concept and information given in the Contract Documents. **The work shall be in accordance with the Drawings and Specifications.**

Where specified or required, the Contractor shall submit samples to the *end user/project engineer with the bill of materials as reference*, together with specification material, affidavits and other documentation as may be required by the *PhilRice*. It is the Contractor's specific responsibility to ascertain that the samples submitted have been checked and approved. The cost of the samples together with the transportation, delivery and any other costs shall be borne by the Contractor.

Where samples are specifically required to be submitted for approval, **no work** involving the samples/materials shall proceed until written approval has been obtained.

4. Close-Out Report

Upon completion of the Works the Contractor shall furnish PhilRice the required **Close-Out Report** as indicated in SCC Clause 51.2 which shall be a **prerequisite for the processing of the final payment.**

The Close-Out Report shall include, but not limited to, the following:

a. "AS-BUILT" Plans - three (3) copies in print (A3-size), and CD for AutoCAD file;

- b. Materials Book containing Materials Sample Approval forms, and list of all materials used, with corresponding pictures and description;
- c. All Operating and Maintenance Manuals and Warranty Certificates for equipment/appliances, if applicable;
- d. Pictures of Work Progress (in print and in CD for electronic copy);
- e. Other compiled pertinent documents such as notices issued by PhilRice or requests forwarded by the Contractor, etc.

The Contractor shall produce and submit the required Close-Out Report, at his own expense, for approval of the institute.

F. CLEANING

Demobilization and Clean-Up

The Contractor shall be responsible for the **general cleaning and demobilization of all tools, surplus materials and equipment** used in the execution of the work.

II. SITEWORK

A. WORK INCLUDED

- a. Staking out of the structure, establishment of lines, grades, and benchmarks.
- b. All backfilling, filling and grading, and removal of excess material from the site.
- c. Protection of property, work and structures, workmen, and other people from damage and injury.

B. GENERAL REQUIREMENTS:

- a. The intent of the plans and these specifications is to prescribe the complete work to undertake in full compliance with the plans and specifications. The Contractor shall furnish unless otherwise provided in the specifications or in general conditions all equipment, materials, tools, supervision and labor necessary to complete the Works;
- b. All fences, structures or encumbrances of any character upon or within the limits of the right-of-way shall be removed by the Contractor or placed carefully on a location stated on plans or to be designated by the owner's authorized representative;
- c. Before final acceptance, the right-of-way, borrow pits, and all ground occupied by the contractor in connection with the Work shall be cleaned of all rubbish, excess materials of temporary structures; and
- d. Contractor shall complete set-up and preserve construction stakes evaluating lines, slopes, profiles required in the working drawings.

C. LINES, GRADES, AND BENCHMARKS

- a. Stake out accurately the lines of the buildings and of the other structures included in the contract, and establish grades, therefore, after which secure approval by the Owner's Representative before any earthfilling work is commenced.
- b. Erect basic batter boards and basic reference marks, at such places where they will not be disturbed during the construction of the foundations.

D. FILLING AND BACKFILLING

All fillings shall be placed in layers not exceeding six (6) inches in thickness, each layer being thoroughly compacted and rammed by wetting, tamping, and rolling.

Required Material Testing: *Field Density Test (FDT)* for Base preparation with a passing mark.

D.1. SCOPE:

This includes the earthfilling, grading, compaction and water rolling of the roadway, structures, including the approaches;

D.2. CONSTRUCTION METHOD

- a. During the construction of the roadway, the road shall be maintained in such conditions that it will be well drained at all times.
- b. Rollers and tampers shall be of required weights so that during the compacting, rolling or tampering, a sun grade is subject to a load minimum of 15 kgs. per sq. centimeters of cross-sectional area.
- c. Before rolling commences, materials shall be watered near their optimum moisture content by sprinkling or controlled spraying. If excessive moisture is placed, the material shall be allowed to dry before rolling is continued.

D.3 BASE COURSE

a. The foundation course shall be constructed in one or more layers composed of gravel, crushed gravel or stone and a filler constructed on the prepared sub-grade in accordance to these specifications and in compliance to the lines, grades and typical cross-section shown in the plans.

b. Materials:

Gravel, crushed gravel, or stone base course shall consist of hard, durable fragmented of stone or gravel and a file of sand, or other finely divided mineral matter passing the No. 5 sleeve.

c. Construction Methods:

- i. All base course materials shall be placed on the prepared subgrade and compacted in layers not more than 300 millimeters (loose measurement).
- ii. The material shall be deposited and spread in a uniform layer and without segregation of size.
- iii. Mixing of the base course shall be done using an approved self-propelled blade grader whose blade is at least 3 meters long and a wheel base of at least 30 kgs.
- iv. Along curbs, headers and at not accessible to the roller, the base course shall be tampered thoroughly with a mechanical tamper to a degree stated above.

E. PLACING AND COMPACTING FILL

Select fill - shall be placed where indicated and shall consist of crushed gravel, crushed rocks or a combination thereof. The material shall be free from adobe, vegetable matter and shall be thoroughly tamped after placing.

F. DISPOSAL OF SURPLUS MATERIALS

Any excess material remaining after completion of the earthwork shall be disposed of by hauling and spreading in nearby spoil areas designated by the Owner's Authorized Representatives.

III. PORTLAND CEMENT CONCRETE PAVEMENT

A. DESCRIPTION

This item shall consist of the construction of a pavement of Portland cement concrete, with or without reinforcement, on a prepared sub base in accordance with these specifications and in conformity with the lines, grades, thickness and typical cross section shown in the plan.

B. MATERIALS

Portland Cement:

The type of cement to be use shall be Portland Cement Type D (ASTM C150). Different brand of cement shall not be use. Partially set cement or which contains lump of cement cake shall be rejected. Cement salvaged from discarded or used bags shall not be used. Sample testing shall be in accordance with ASSTHO T 1217.

Fine Aggregates:

It shall consist of natural sand, stone screening, having hard, strong, durable particles, or S-1. The shape of the particles shall be generally rounded or cubicle and reasonably free from flat or elongated particles. The stipulated percentages of fines in the sand shall be obtained either by the processing of natural sand or by the production of a suitably graded manufactured sand. Signs of more than 10% soil content for every delivery shall be rejected. Fine aggregates from different sources shall not be mixed at storage or stockpile area. Beach sand shall not be allowed. This shall be free from injurious effect of organic impurities. It shall be well graded from course to fine and shall conform to the following table:

Grading Requirements for Fine Aggregate

Sieve Designation	Mass Percent Passing
9.5 mm (3/8 in)	100
4.75 mm (No. 4)	95 – 100
1.18 mm (No. 16)	45 – 80
0.300 mm (No. 5)	5 – 30

0.150 mm (No. 100)	0 – 10
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Course Aggregate:

It shall consist of washed stone, gravel, or other approved materials of similar characteristics; having hard, strong, durable pieces and free from any adjacent coatings. Coarse aggregates shall consist of hard, tough, durable, clean particles. The size of coarse aggregates to be used in the various parts of the work shall be 34" for all concreting work.

Grading Requirement for Course Aggregate

Sieve Designation		Mass Percent Passing			
Standard	Alternate	Grading	Grading	Grading	
mm	U.S. Standard	A	В	С	
75	3 "	100			
63	2 ½"	90 - 100	100	100	
50	2"		90 - 100	95 – 100	
37.5	1 ½"	25 – 60	35 – 70		
25	1"		0 – 15	35 – 70	
19	3/4"	0 - 10			
12.5	1/2"	0 - 5	0 – 5	10 - 30	
4.75	No. 4				

Water:

Water to be used shall be clean and free from oil, acid alkali, grass or other substances impervious to finish product. Potable water maybe used without tests.

Reinforcing Steels:

Reinforcing steel dowel to be used shall conform to the requirements of the ASTM standard specifications for Billet Steel Bars for concrete reinforcement (A15-625) and to specifications for minimum requirements for the deformed steel bars for concrete reinforcement (A 305-56). During its use, dowels shall be free from rust, oil, or grease coatings.

All structural steel reinforcement shall be taken every batch of delivery and shall be subject to tensile strength by Government Testing Laboratories or from private testing laboratories (Geotechniks, etc.) accredited by the DPWH.

Ioint Filler:

Poured joint fillers shall be mixed asphalt and mineral or rubber filler conforming to the applicable requirement of joint filler materials.

All materials shall be stored in proper places. Cement shall be stored on a weather proof building which will protect the cement from dampness. Floor shall be raised from the ground. Fine aggregates and course aggregates shall be stored and or stockpiled separately to avoid contamination from injurious substances. Steel bars shall be stored properly to keep away from rust.

All billings submitted by the Contractor for all civil works must be accompanied by a certificate of laboratory test for all structural steel, and concrete samples with passing mark.

C. PROPORTIONING OF CONCRETE MIX

1. Proportions of all materials entering int	to the concrete shall be as follows:
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Mix	Cement	Sand	Gravel	
Class AA	1	2	3	
Class A:	1	2	4	
Class B:	1	2-1/2	5	
Class C:	1	3	6	

- 2. Class of Concrete unless otherwise specified/indicated in the plans, concrete mix shall be Class A, and shall have a 28-day compressive strength of 3,500 psi, for all concrete work (with "fly ash" additive). All concrete mix shall be ready mix from batching plant unless otherwise specified.
- *3.Cylinder Samples.* Concrete samples in cylinders shall be taken for every batch of concrete mix taken in 3 samples each. Sampling shall be taken by trained engineers and subsequently cured and dried properly (in a moist atmosphere at not more than 21°C to attain accurate results). Test should be done at 7 and 28 days period.

D. MIXING OF CONCRETE

The concrete maybe mixed at the site, in a central mix plant or in truck mixers or bagger concrete mixer. Mixing shall begin within 30 minutes after the cement has been added to the aggregates. In the absence of a concrete mixer, manual mixing is allowed, provided sampling shall be done 3 days before pouring (to attain good result). The mixer shall be of an approved type and capacity. Mixing time will be measured from the time all materials, except water are in drum.

When mixed at site or in a central mixing plant, the mixing time shall not be less than fifty (50) minutes or more than ninety (90) minutes.

Four second shall be added to the specified mixing time if timing starts the instant the skip reaches its maximum raised position. Mixing time ends when the discharge chute opens. Transfer time in multiple drum mixers is included in mixing time. The contents of an individual mixer drum shall be removed before a succeeding batch is emptied therein.

The mixer shall be operated at the drum speed as shown on the manufacturer's nameplate attached on the mixer. Any concrete mixed less than the specified time shall be discarded and disposed off by the contractor at his expense. The volume of concrete mix per batch shall not exceed the mixer's nominal capacity in cubic meter, as shown on the manufacturer's standard rating plate on the mixer, except that an overload up to ten (10) percent above the mixer's nominal capacity permitted provided concrete test data strength, segregation, and uniform consistency are satisfactory, and provide no spillage of concrete take place.

Mixed concrete from the central mixing plant shall be transported in truck mixers, truck agitators, or non-agitating trucks. The time elapsed from the time water is added to the mix until the concrete is deposited in place at the site of the work shall not exceed forty five (45)

minutes when the concrete is hauled in non-agitating trucks, nor ninety (90) minutes when hauled in truck mixers to truck agitators.

Re-tampering of concrete by adding water or by other means shall not be permitted, except that when concrete is delivered in truck mixers, additional water may be added to the batch material and additional mixing be performed to meet the specified requirements, if permitted by the Project Engineer, provided all these operations are performed within forty-five (45) minutes after the initial operation and water-cement ration is not exceeded.

E. LIMITATION OF MIXING

No concrete shall be mixed, placed or finished when natural light is insufficient.

Concrete not in place within ninety (90) minutes from the time the ingredients were charged into the mixing drum or that has developed initial set shall not be used. Re tampering of concrete or mortar, which has partially hardened, that is remixing with or without cement, aggregate and water shall not be permitted.

F. FORMS

- a. *GENERAL*. Forms shall be used wherever necessary to confine the concrete and shape it to the required lines, or to prevent the concrete of contamination with materials caving from the adjacent, excavated surfaces. Forms shall have sufficient strength to withstand the pressure resulting from placement of the concrete, and shall be maintained rigidly in correct position. Forms shall be sufficiently tight to prevent loss of mortar from the concrete.
- b. *Cleaning and Oiling of Forms*. Before placing the concrete, the contact surfaces of the form shall be cleansed from encrustations of mortar, the grout of other foreign materials, and shall be coated with a commercial form of oil that will effectively prevent sticking and will not stain the concrete surfaces.
- c. *Removal of Forms*. Forms shall be removed in a manner, which will prevent damage to the concrete. Forms shall not be removed without approval from the Project Engineer. Any repair to the surface imperfections shall be performed at once and airing shall be started as soon as the surface is sufficiently hard to prevent further damage.

G. CONVEYING AND PLACING CONCRETE

- a. *Conveying Concrete*. Concrete shall be conveyed form mixer to forms as rapidly as practicable by methods, which will prevent segregation, or loss of ingredients.
- b. *Placing.* Placing concrete shall be worked readily into the corners and angles of the forms and around all reinforcement and embedded items without permitting the material to segregate. Concrete shall be deposited as close as possible to its final position in the forms so that flow within the mass does not exceed two (2) meters and consequent segregation is reduced to a minimum near forms or embedded items, or elsewhere as directed. Concrete shall be deposited upon the sub base evenly and in a manner that requires a minimum of handling and redistribution. Unless truck mixers or nonagitating hauling equipment are equipped with means to discharged concrete without segregation of the materials, the concrete shall be unloaded into an approved spreading device and mechanically spread on the grade in such a manner as to prevent segregation. Placing shall be continuous between transverse joints without the use of intermediate

bulkheads. Necessary hand spreading shall be done with shovels.

- c. *Time Interval between Mixing and Placing*. Concrete shall be placed before initial set has occurred and before it has contained its water content for more than 45 minutes.
- d. *Consolidation of Concrete*. Concrete shall be consolidated with the aid of mechanical vibrating equipment and supplemented by hand spading and tamping. Vibrators shall not be inserted into lower course that have commenced initial set; and reinforcement embedded in concrete beginning to set or already set shall not be disturbed by vibrators. Consolidation around major embedded parts shall be by hand spading, and tamping, and vibrators shall not be used.
- e. *Placing Concrete through Reinforcement*. In placing concrete through reinforcement, care shall be taken that no segregation of the coarse aggregate occurs.
- f. During the pouring of concrete, the Owner's Representatives shall be present.

H. FINISHING

The finishing of the surface is perhaps the most important step in pavement construction. The riding public is entitled to expect a smooth-riding, skid resistant surface. Properly constructed joints, uniform texture of final finish and freedom from irregularities are all important in obtaining good riding qualities.

<u>Finishing at Joints</u>. The concrete adjacent to joints shall be compacted or firmly placed without voids or segregation against the joint material, also under and around all load-transfer transfer devices, joint assembly units, and other features designed to extend into the pavement.

Machine Finishing

a.) Non-Vibratory Method – The concrete shall be distributed or spread as soon as it is in place, it shall be struck off and screened by an approved finishing machine. The machine shall go over each area of pavement as many times and at such intervals as necessary to compact the freshly laid concrete and leave a surface of uniform texture. Excessive operation over a given area shall be avoided. The tops of the forms shall be kept clean so that the machine may ride directly on them without wobbling or other variation tending to affect the precision finish.

During the first pass of the finishing machine, a uniform ridge of concrete shall be maintained ahead of the front screed in its entire length. Workmen should not track dust or mud into it, nor should the sub-grade or base materials be sprinkled in such a way that dust is thrown on the exposed edge of the slab. Footprints made on the concrete after it has been struck off are dug out with a shovel and the depression thus formed shall be filled with concrete.

Wherever the mixer is shut down for more than thirty (30) minutes a construction joint should be installed. If this is not done, a sloping plane of weakness will be left which may push up when the concrete expands or cause a crack as the slab contracts. When the mixer is stopped for a shorter period the new and old concrete should be thoroughly mixed with the spreader or sliced together with shovels to make sure that no cleavage plane is left.

Concrete shall be deposited as near possible to the expansion and construction joints without disturbing them, but shall not be dumped from the discharged bucket or hopper into a joint assembly unless the hopper is well centered on the joint assembly.

b.) <u>Vibratory Method</u> – Concrete shall be vibrated with the method that will results to the satisfactory placing of denser and stronger mixes than possible by hand tamping. Vibrators should not be used to move concrete laterally and should not be inserted and withdrawn vertically at close intervals. A systematic pattern of vibration should be used to insure that all concrete have been adequately consolidated.

Vibration shall be of sufficient duration to provide through compaction, but not prolonged so as to cause segregation.

Vibrators shall operate at a frequency of 8,300 to 9,600 impulses per minute under load at a maximum spacing of 60 cm.

Floating

After the concrete has been struck off and consolidated, it shall be further smoothed by means of a longitudinal float, either by hand or mechanical method.

- a.) <u>Hand Method</u> A manually operated longitudinal float should be used. It may be made of a plank not less than 265 cm length and 15 cm in width, properly stiffened to prevent flexibility and warping. Two men who stand on bridges spanning the pavement handle this longitudinal float. It is laid on the pavement at one edge and pulled toward the other edge with a wiping motion, leveling transverse ridges and other high spots and filling depressions. The longitudinal float is an efficient tool for getting a smooth-riding surface because it eliminates the transverse ridge sometimes left by screeds.
- b.) Mechanical Method The mechanical longitudinal float shall be of a designed and approved by the Project Engineer, and shall be in good working condition. The float shall be operated transversely across the pavement with its longitudinal axis approximately parallel to the centerline and shall pass at least two times over each area of the pavement. Excessive operation over a given area will not be permitted. Any excess water or soupy materials shall be wasted over the side forms on each pass.

<u>Straight-Edge Testing and Surface Correction</u> – Following longitudinal floating, the surface is scrapped to remove small ridges left by the transverse finisher or longitudinal float. While the concrete is still plastic, the surface of the concrete shall be tested for ridges with 300 cm long straight-edge. Straightedge testing and surface corrections shall be continued until the entire surface is found to be free from observable departures from the straightedge and the slab conforms to the required grade and cross section.

Final Finish

If the surface texture is *broom finish*, it shall be applied when the water sheen has practically disappeared. The broom shall be drawn from the center to the edge of the pavement with adjacent stokes slightly overlapping. The brooming operation shall be executed that the corrugation produced in the surface shall be uniform in appearance and shall not be more than 1.5 mm in depth. Brooms shall be of the quality, size and construction and be operated so as to produce a surface finish meeting the approval of the Project Engineer.

If the surface texture is *belt finish*, when straight-edge is complete and water sheen has practically disappeared and just before the concrete becomes non-plastic, the surface shall be betted with a 2-ply canvass belt not less than 20 cm wide and at least 100 cm longer than the pavement width. The object of belting is the even distribution of the surface mortar and the production of a granular, gritty surface that provided uniform fraction.

Edging

After the final finish, and prior to the initial sitting of concrete the edges of the pavement along each side of each slab, transverse expansion joints, formed joints, transverse construction joints, shall be worked with an approved tool and rounded to the radius required in the plan.

In all joints, any tool marks appearing on the slab adjacent to the joints shall be eliminated by brooming the surface. In doing this, the rounding of the corner of the slab shall not be disturbed.

At all joints, care must be taken to prevent the newly finish surface overhanging the body of the adjacent slab.

Surface Test

As soon as the concrete pavement has hardened sufficiently, the surface shall be test with a 3-m straight edge or any specified device. Any area showing high spot greater than 3 mm but not exceeding 12 mm in 3-m shall be marked and immediately ground down with an approved grinding tool to an elevation where the area will not surface deviation in excess of 3 mm. Where the departure from correct cross-section exceeds 12 mm, the pavement shall be removed and replaced by and at the expense of the Contractor.

Any area or sections on the pavement so removed shall not less than 1.5 m in length and not less than the full width of the lane involved.

Curing

Curing is the treatment or protection given to the concrete during the hardening period. Proper curing consists of keeping the concrete moist and sufficient warm to insure adequate hydration of the cement and to protect the concrete against early shrinkage due to the loss of moisture or abrupt changes in temperature. Strength lost due to lack of warmth or moisture during the first few days cannot be regained by subsequent curing. Pavement, which has been properly cured, has higher strength and better durability than the poorly cured pavement.

- a. *General.* All concrete shall be moist cured for a period not less than 7 consecutive days by an approved method or combination applicable to local conditions.
- b. *Moist curing*. The surface of the concrete shall be kept continuously wet by covering with burlap, plastic, or other approved materials thoroughly saturated with water and covering wet spraying or intermittent hosing.

Removal of Forms

Forms for concrete shall remain in place undisturbed for not less than twenty-four (24) hours after concrete pouring. Crowbars should be used in the removal of forms by pulling out nails and pins. Care must be taken so as not to break edges nor disturb the pavement. Major honeycombed area will be considered as defective work and shall be removed and replaced at the expense of the Contractor. Any area or section so removed shall not be less than the distance between weakened plane joint nor less than the full width of the lane involved.

Sealing Joints

After the concrete has sufficiently hardened and before the pavement is opened to traffic, all joints must be filled with sealing materials. All joints to be sealed must cleaned in such a manner those all-loose and foreign material, including membrane curing compound is removed.

For easy application of sealing joints concrete pouring activity shall be done in such a manner that concrete materials will not be spilled on the exposed surfaces of the concrete. The sealing materials shall be applied to each joint opening to conform to the details shown on the plans or as directed by the Engineer.

Seal should be install by suitable tools, without elongation and secured in place with an approved lubricant adhesive that shall cover both sides of the concrete joints.

Protection of Pavement

The Contractor should protect the pavement and its appurtenances against both public traffic and traffic caused by its own employees and agent by designating watchmen to direct traffic and the erection of warning signs, lights, pavement bridges or cross-over.

Any damage to the pavement occurring prior to final acceptance shall be removed and replaced at the expense of the Contractor. Remedial measures such as; provision of asphalt, cement grout and patching of concrete mix to the damage section of the pavement shall not be allowed and or permitted.

All roads leading the construction site and batching plant shall be moist during the entire works operation to prevent the blowing up of dust particles.

During work operation, precautionary signboards shall be provided by the Contractor to prevent accidents and damage to the freshly laid concrete.

IV. POURING PERMIT REQUIRED

All concrete pouring shall be approved by the Project Engineer. The Contractor must accomplish the prescribed form indicating the details of the pouring, date, time, duration, list of manpower, engineer-in-charge, psi requirement, quantity and position of rebars, etc. Pouring permit must be approved by the Project Engineer before any pouring activity is made. No permit, no pouring.

IV. STEEL/STEEL WORKS & REINFORCEMENTS

1. Markings. Reinforcing steel bars to be used for PhilRice Projects shall bear the distinctive markings identifying the manufacturer by their initials, bar size number, including the type of steel such as:

N	= for Billet
_	
Α	= for Axial
R	= for rail steel
1.	TOT TAIL SECON

2. Reinforcing Bars shall conform to the requirements of the ASTM standard specifications for Billet Steel Bars for concrete reinforcement (A15-625) and to specifications for minimum requirements for the deformed steel bars for concrete reinforcement (A 305-56).

All secondary ties such, as stirrups, spirals and inserts may be plain bars. The main reinforcing bars shall be as follows:

No. 3 (3/8") 10mm	(228 MPa) 33,000 psi min. yield strength
No. 4 (½") 12mm	(275 MPa) 40,000 psi min. yield strength
No. 5 (5/8") 16mm	(414 MPa) 60,000 psi min. yield strength
No. 6 (3/8") 20mm	- do -
No. 7 (7/8") 22mm	- do -
No. 8 (1") 25mm	- do -

3. Bar Spacing. The ACI Code on bar spacing specifically provides that:

- **a.** The minimum clear distances between the adjacent steel bars shall not be less than the normal diameter of the bars or 25 mm for column. This requirement was increased to 1-1/2 bar diameter or 4 centimeters.
- **b.** Where beam reinforcements are placed in 2 or more layers, the clear distance between layers must not be less than 25 mm or 1 inch and the bars in the upper layer should be placed directly above those in the bottom layers.
- **c.** In walls and slabs, other than the concrete joist construction, the principal reinforcement shall be spaced not farther apart than three times the wall or slab thickness, nor more than 45 cm.
- **d.** The clear spacing between spirals shall not exceed 7.5 centimeters or less than 25 cm having a minimum diameter of 10 mm. Spiral splices shall be 48 bar diameter minimum but not less than 30 centimeters or welded. Lateral ties shall be at least 10 mm spaced not to exceed 16 times the longitudinal bar diameter or 48 ties bar diameter or the least dimension of the column.
- **e.** Shrinkage and temperature reinforcement shall not be placed farther apart than 5 times the slab thickness nor more than 45 cm.

4. Minimum Covering of Bars

- **a.** For concrete slabs permanently in contact with the earth: maximum of 80mm; minimum of 75mm.
- **b.** Exposed to earth or weather: maximum of 50mm, minimum of 40mm.
- **c.** Not exposed to weather nor in contact with the ground:

Slab, walls, and joists – maximum 40mm, minimum 20mm; Beams, girders, and columns – minimum 40mm.

5. Number of Reinforcements

Refer to the structural schedule of reinforcements, schedule of beams, footings, columns, and slabs.

As a rule, the ground floor concrete slab shall be reinforced with $10\ mm$ - deformed bars spaced at $450\ mm$ on center both ways. It shall be connected to the walls with $10\ mm$ dowels spaced at $600\ mm$ on center.

6. Materials Testing

All structural steel reinforcement shall be taken every batch of delivery and shall be subject to tensile strength by Government Testing Laboratories or from private testing laboratories (Geotechniks, etc.) accredited by the DPWH.

Steel bars must pass the standard test before any steel works shall be commenced. All billings submitted by the Contractor for all civil works must be accompanied by a certificate of laboratory test for all structural steel, with passing mark.

Section VII. Drawings

(attached separately)

Section VIII. Bill of Quantities

BID PROPOSAL

PROJECT: Improvement of Road along NIA Canal and Screen House City Area LOCATION: PhilRice CES, Science City of Muñoz, Nueva Ecija

	Company Name
	Name of Bidder
	Position
	1 distributi
A	Address of Bidder
Si	gnature of Bidder
31	gnature of Blader
(Sı	ıbmit in Duplicate)
	 Date

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 Security Declaration in lieu of 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 Procuring Entity].

¹ currently based on GPPB Resolution No. 09-2020

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

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

Project: Improvement of Road along NIA Canal and Screen House City Area at PhilRice CES Location: PhilRice CES, Science City of Muñoz, Nueva Ecija
Subject: Summary of Bid Proposal/Breakdown of Values of Work

A. SCOPE OF V	VORK		
ITEM	DESCRIPTION	PERCENTAGE	AMOUNT
LOT I - IMPRO	VEMENT OF ROAD ALONG NIA CANAL		
I.	SITE WORKS		
II.	CONCRETE WORKS		
III.	REINFORCING STEEL BARS		
IV.	FORMWORKS		
V.	MASONRY WORKS		
VI.	ROAD IMPROVEMENT		
VII.	OTHERS		
	SUB-TOTAL		
LOT II - IMPRO	UNITED VEMENT OF ROAD ALONG SCREEN HOUSE CI	 TY AREA	
I.	BASE COURSE PREPARATION		
II.	CONCRETE WORKS		
III.	OTHERS		
	SUB-TOTAL		
	TOTAL		
B. BREAKDOV	NN OF ESTIMATED EXPENDITURE		
I. DIRECT COS	Т		
	MATERIAL COST	Php	
	LABOR COST + EQUIPMENT RENTAL COST	Php	
	TOTAL DIRECT COST	Php	
II. INDIRECT (COST	_	
	OCM		
	PROFIT		
	TAX		
	TOTAL INDIRECT COST	Php	
TOTAL ESTIM	ATED PROJECT COST	Php	

Project : Improvement of Road along NIA Canal and Screen House City Area at PhilRice CES

Subject : Bill of Quantities

Location : PhilRice-CES, Brgy. Maligaya, Science City Of Muñoz, Nueva Ecija

LOT I - IMPROVEMENT OF ROAD ALONG NIA CANAL

FEATURES AND SCOPE OF WORKS

SITE WORKS

- Site clearing works
- Excavation works for flood control canal and RC pepe laying
- Backfill, gravel bedding and compaction works
- Cutting and uprooting of affected trees

CONCRETE WORKS

- Concrete works for base, stiffener column and lintel beam of open canal
- Use Type-1 cement for all concrete works

REINFORCING STEEL BARS

- 12mm dia. DRSB Grade 40 as main bars of all reinforced concrete including CHB laying bars
- 10mm dia. DRSB Grade 33 for ties of stiffener column

FORMWORKS

- 9mm phenolic board and 2" x 2" form lumber for all formworks

MASONRY WORKS

- 6" CHB laying for open canal
- Stone boulders for masonry slope protection
- 18" diameter RC pipe
- 2-Side plastering works

ROAD IMPROVEMENT

- Cut and fill of existing road along NIA canal as part of road base preparation
- Topping of rounded gravel and compaction using roller compactor

OTHERS

- Professional Fees / Permits / Testing Fees / PPE'S / Signage
- Technical Personnel
- Supply of indigenous species of seedlings as required for replacement of trees to be cut

ITEM NO.	DESCRIPTION	QUANTITY	UNIT	MATERIAL COST	LABOR + EQUIPMENT COST	ESTIMATED DIRECT COST
I.	SITE WORKS					
	A. Cutting and Clearing of Trees	1.00	lot			
	B. Excavation Works	1.00	lot			
	C. Backfill, Gravel Bedding & Compaction	1.00	lot			
>	River Mixed					
>	Ordinary Gravel - G1					
Total - I			Php			
			-		•	
II.	CONCRETE WORKS					
>	Portland Cement, 40kgs/bag	12.00	cu.m			
>	Washed Sand (S-1)					
>	Crushed Gravel (3/4)					
Total - II			Php			
III.	REINFORCING STEEL BARS				_	
>	12 mm dia DRSB x 6.0m, Grade 40	1,205.67	kgs			
>	10 mm dia DRSB x 6.0m, Grade 33					
>	#16 G.I. Tie Wire					
Total - III			Php			
IV.	FORMWORKS					
>	Phenolic Board 9mm thk (4ft x 8ft)	1.00	lot			
>	Form Lumber 2" x 2"	1.00	100			
>	Consumables (CWN, Tie Wire, etc.)					
Total - IV			Php			

V.	MASONRY WORKS				
	A. CHB Laying and Plastering Works	100.00	sq.m		
>	6" thk CHB				
>	Portland Cement, 40kgs/bag				
>	Washed Sand				
>	Consumables (Tie Wire, Cutting Disk, etc.)				
	B. Stone Masonry and RC Pipe Laying	1.00	lot		
>	4" – 5" Dia. Stone Boulders				
>	18" Diameter RC Pipe				
>	Portland Cement, 40kgs/bag				
>	Sand				
>	Consumables (Tansi, PVC for Weep Holes, etc.)				
Total - V			Php		
VI.	ROAD IMPROVEMENT				
>	Mixed G1-G2 Rounded Gravel with Binder	211.80	l.m.		
Total - VI			Php		
VII.	OTHERS				
>	Professional Fees / Permits / Testing Fees / PPE'S / Signage	1.00	lot		
>	Technical Personnel				
>	Temporary Facilities/ Perimeter Fence			 	
Total - VII			Php		

LOT II- IMPROVEMENT OF ROAD ALONG SCREEN HOUSE CITY AREA

FEATURES AND SCOPE OF WORKS

BASE COURSE PREPARATION

- Additional base course materials to level the road
- Compaction works using roller compactor

CONCRETE WORKS

- Use ready mix concrete for the road concreting
- Provide dowels for all temnination of concrete works
- Provide even scratch at road, grooves and cutting
- Construction of box culvert type canal crossing to the concrete road

OTHERS

- Provide FDT testing prior to concreting and other necessary for road concreting

ITEM NO.	DESCRIPTION QUANTITY		UNIT	MATERIAL COST	LABOR + EQUIPMENT COST	ESTIMATED DIRECT COST
I.	BASE COURSE PREPARATION					
>	Selected Earthfill Materials (Mixed Sand, Gravita and Soil)	430.00	sq.m.			
>	3/4 Gravel Mixed of Round and Crushed					
TOTAL SUMM	IARY OF COST					
>	Ready Mix Concrete (3000 - 3500 psi)	64.50	cu.m		LABOR +	
>	Formworks (6" C-Purlins)	04.30	cu.III	MATERIAL	EQUIPMENT	ESTIMATED
>	16mm Dia. Round Bar (Dowel Bars)			COST	COST	DIRECT COST
>	Construction of 0.60m width x 0.60m depth x 5.0 linear meter					
	box culvert type canal					
Direct Cost	Consumables (Asphalt Sealant, Curing Compound, 14" Disk					
Material Cost	£oncrete Cutter, etc.)		PhP			
Labar- (lost +	Equipment Rental Cost		PlPphP			
Total Direct (Cost		PhP			
III.	OTHERS					
Indirect Cost	Professional Fees / Permits / Testing Fees / PPE'S / Signage	1.00	lot			
>	Technical Personnel	OC				
>	Temporary Facilities/ Perimeter Fence	PROFI				
Total - III		TA	P			
		Total Indirect Cos	st PhP			
CDAND TO	FAL ECTIMATED DEGLECT COCT			Dl-D		
GRAND 10	TAL ESTIMATED PROJECT COST			PhP		

Section IX. Checklist of Technical and Financial Documents

Checklist of Technical and Financial Documents

I. TECHNICAL COMPONENT ENVELOPE

Class "A" Documents

<u>Leg</u>	(a)	cuments Valid PhilGEPS Registration Certificate (Platinum Membership) (all pages) in accordance with Section 8.5.2 of the IRR;
<u>Teo</u>	(b) S	tatement of the prospective bidder of all its ongoing government and private ontracts, including contracts awarded but not yet started, if any, whether similar r not similar in nature and complexity to the contract to be bid; and
	(c)	Statement of the bidder's Single Largest Completed Contract (SLCC) similar to the contract to be bid, except under conditions provided under the rules; <u>and</u>
	(d)	Special PCAB License in case of Joint Ventures <u>and</u> registration for the type and cost of the contract to be bid; <u>and</u>
	(e)	Original copy of Bid Security. If in the form of a Surety Bond, submit also a certification issued by the Insurance Commission <u>or</u> original copy of Notarized Bid Securing Declaration; <u>and</u>
	(f)	Project Requirements, which shall include the following: a. Organizational chart for the contract to be bid; b. List of contractor's key personnel (e.g., Project Manager, Project Engineers, Materials Engineers, and Foremen), to be assigned to the contract to be bid, with their complete qualification and experience data;
		c. List of contractor's major equipment units, which are owned, leased, and/or under purchase agreements, supported by proof of ownership or certification of availability of equipment from the equipment lessor/vendor for the duration of the project, as the case may be; and
	(g)	Original duly signed Omnibus Sworn Statement (OSS) <u>and</u> 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.
<u>Fin</u>	ancia (h)	<u>I Documents</u> The prospective bidder's computation of Net Financial Contracting Capacity (NFCC).
	(i)	Class "B" Documents 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.

11.	FINA	ANCI	AL COMPONENT ENVELOPE
		(j)	Original of duly signed and accomplished Financial Bid Form; and
	<u>Oth</u>	er doc	cumentary requirements under RA No. 9184
		(k)	Original of duly signed Bid Prices in the Bill of Quantities; and
		(1)	Duly accomplished Detailed Estimates Form, including a summary shee
			indicating the unit prices of construction materials, labor rates, and equipmen
			rentals used in coming up with the Bid; and
		(m)	Cash Flow by Quarter.