

Republic of the Philippines Department of Agriculture AGRICULTURAL TRAINING INSTITUTE

ATI Building, Elliptical Road, Diliman, Quezon City, Metro Manila 1100 Tel. Nos. (63-2) 8929-8541 to 49 & 8928-7397 Fax No. (63-2) 8920-9792 Email: ati_director@ati.da.gov.ph & ati_director@yahoo.com URL: http://www.ati.da.gov.ph; www.e-extension.gov.ph

BIDDING DOCUMENTS FOR THE PROCUREMENT OF THE REHABILITATION OF MAIN FEEDER LINE FROM ATS ROOM TO MAIN PANEL OF ATI-CO MAIN BUILDING at ATI Central Office

ITB-ATI-CO-2023-07 June 1, 2023

Reference:

Philippine Bidding Documents Sixth Edition, July 2020

TABLE OF CONTENTS

Gl	ossar	y of Terms, Abbreviations, and Acronyms	4
Sec	ction	I. Invitation to Bid	6
Sec	ction	II. Instructions to Bidders	9
	1.	Scope of Bid	10
	2.	Funding Information	10
	3.	Bidding Requirements	10
	4.	Corrupt, Fraudulent, Collusive, Coercive, and Obstructive Practices	10
	5.	Eligible Bidders	11
	6.	Origin of Associated Goods	11
	7.	Subcontracts	11
	8.	Pre-Bid Conference	12
	9.	Clarification and Amendment of Bidding Documents	12
	10.	Documents Comprising the Bid: Eligibility and Technical Components	12
	11.	Documents Comprising the Bid: Financial Component	13
	12.	Alternative Bids	13
	13.	Bid Prices	13
	14.	Bid and Payment Currencies	13
	15.	Bid Security	14
	16.	Sealing and Marking of Bids	14
	17.	Deadline for Submission of Bids	14
	18.	Opening and Preliminary Examination of Bids	14
	19.	Detailed Evaluation and Comparison of Bids	14
	20.	Post Qualification	15
	21.	Signing of the Contract	15
Sec	ction	III. Bid Data Sheet	16
Sec	ction	IV. General Conditions of Contract	19
	1.	Scope of Contract	20
	2.	Sectional Completion of Works	20
	3.	Possession of Site	20
	4.	The Contractor's Obligations	20
	5.	Performance Security	21
	6.	Site Investigation Reports	21

Section	IX. Checklist of Technical and Financial Documents	50
Section	VIII. Bill of Quantities	48
Section	VII. Drawings	47
Section	VI. Specifications	25
Section	V. Special Conditions of Contract	23
15.	Operating and Maintenance Manuals	22
14.	Progress Payments	22
13.	Advance Payment	22
12.	Instructions, Inspections and Audits	22
11.	Program of Work	22
10.	Dayworks	22
9.	Termination for Other Causes	21
8.	Liability of the Contractor	21
7.	Warranty	21

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 PROCUREMENT OF THE REHABILITATION OF MAIN FEEDER LINE FROM ATS ROOM TO MAIN PANEL OF ATI-CO MAIN BUILDING AT ATI CENTRAL OFFICE

- 1. The *Agricultural Training Institute* through the *FY 2023 General Appropriations Act* (GAA) intends to apply the sum of *ONE MILLION ONE HUNDRED THOUSAND PESOS ONLY (Php1,100,000.00)*, being the Approved Budget for the Contract (ABC) to payments under the contract for *REHABILITATION OF MAIN FEEDER LINE FROM ATS ROOM TO MAIN PANEL OF ATI-CO MAIN BUILDING (ITB NO. ATI-CO-2023-07*). Bids received in excess of the ABC shall be automatically rejected at bid opening.
- 2. The *Agricultural Training Institute* now invites bids for the above Procurement Project. Completion of the Works is required *Thirty (30) Calendar Days*. Bidders should have completed a contract similar to the Project within *five (5) years* from the date of submission and receipt of bids. The description of an eligible bidder is contained in the Bidding Documents, particularly, in Section II (Instructions to Bidders).
- 3. Bidding will be conducted through open competitive bidding procedures using non-discretionary "pass/fail" criterion as specified in the 2016 Revised Implementing Rules and Regulations (IRR) of Republic Act (RA) No. 9184.
- 4. Interested bidders may obtain further information from the *Agricultural Training Institute* and inspect the Bidding Documents at the address given below from 8:00am to 5:00pm.
- 5. A complete set of Bidding Documents may be acquired by interested bidders on *June 01*, 2023 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 **Ten Thousand Pesos (PhP 5,000.00)**. The Procuring Entity shall allow the bidder to present its proof of payment for the fees.
- 6. The *Agricultural Training Institute* will hold a Pre-Bid Conference on *June 08*, 2023, 02:30pm through videoconferencing/webcasting via Google Meet which shall be open to prospective bidders through this link: meet.google.com/eyu-ujwy-ykr.
- 7. Bids must be duly received by the BAC Secretariat through manual submission at the office address indicated below on or before *June 26, 2023 at 9:00 AM*. 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 *June 26*, *2023*, *at 10:30 AM* at Training Hall 1, Second Floor ATI Main Building, Elliptical Road, Diliman Quezon City. Bids will be opened in the presence of the bidders' representatives who choose to attend the activity.
- 10. In compliance to the Memorandum of the Department of Agriculture (DA) dated December 18, 2020, the public, especially the prospective suppliers/service providers, is hereby informed that 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.
- 11. The *Agricultural Training Institute* reserves the right to reject any and all bids, declare a failure of bidding, or not award the contract at any time prior to contract award in accordance with Sections 35.6 and 41 of the 2016 revised Implementing Rules and Regulations (IRR) of RA No. 9184, without thereby incurring any liability to the affected bidder or bidders.
- 12. For further information, please refer to:

KEMUEL BORROMEO

Head, BAC Secretariat
Agricultural Training Institute
ATI Bldg. Elliptical Road, Diliman, Quezon City
Email address: bacsec@ati.da.gov.ph
Telephone No. 632-8929-8541 / 09190662853
www.ati.da.gov.ph

13. You may visit the following websites:

For downloading of Bidding Documents: https://ati2.da.gov.ph/ati-main/content/bids

June 1, 2023

EDITHA S. VINUYA BAC Chairperson

Section II. Instructions to Bidders

1. Scope of Bid

The Procuring Entity, *Agricultural Training Institute* invites Bids for the REHABILITATION OF MAIN FEEDER LINE FROM ATS ROOM TO MAIN PANEL OF ATI-CO MAIN BUILDING ATI Central Office with Project Identification Number *ITB-ATI-CO-2023-07*.

The Procurement Project (referred to herein as "Project") is for the **REHABILITATION OF MAIN FEEDER LINE FROM ATS ROOM TO MAIN PANEL OF ATI-CO MAIN BUILDING at ATI Central Office,** as described in Section VI (Specifications).

2. Funding Information

- 2.1. The GOP through the source of funding as indicated below for 2023 in the amount of One Million One Hundred Thousand Pesos Only (PhP1,100,000.00)
- 2.2. The source of funding is:
 - a. the General Appropriations Act.

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 allowed. The portions of Project and the maximum percentage allowed to be subcontracted are indicated in the **BDS**, which shall not exceed fifty percent (50%) of the contracted Works.
- 7.1. The Bidder must submit together with its Bid the documentary requirements of the subcontractor(s) complying with the eligibility criteria stated in **ITB** Clause 5 in accordance with Section 23.4 of the 2016 revised IRR of RA No. 9184 pursuant to Section 23.1 thereof.

- 7.2. The Supplier may identify its subcontractor during the contract implementation stage. Subcontractors identified during the bidding may be changed during the implementation of this Contract. Subcontractors must submit the documentary requirements under Section 23.1 of the 2016 revised IRR of RA No. 9184 and comply with the eligibility criteria specified in **ITB** Clause 5 to the implementing or end-user unit.
- 7.3. 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 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 120 Calendar Days. Any bid not accompanied by an acceptable bid security shall be rejected by the Procuring Entity as non-responsive.

16. Sealing and Marking of Bids

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

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

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

17. Deadline for Submission of Bids

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

18. Opening and Preliminary Examination of Bids

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

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

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

19. Detailed Evaluation and Comparison of Bids

- 19.1. The Procuring Entity's BAC shall immediately conduct a detailed evaluation of all Bids rated "passed" using non-discretionary pass/fail criteria. The BAC shall consider the conditions in the evaluation of Bids under Section 32.2 of 2016 revised IRR of RA No. 9184.
- 19.2. If the Project allows partial bids, all Bids and combinations of Bids as indicated in the **BDS** shall be received by the same deadline and opened and evaluated simultaneously so as to determine the Bid or combination of Bids offering the lowest calculated cost to the Procuring Entity. Bid Security as required by **ITB** Clause 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 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: <i>Electrical Feeder Line</i>			
7.1	Not allowed			
10.3	PCAB – Minimum of Small B (General Building)			
The key personnel must meet the required minimum y below:			ed minimum years of	experience set
	Key Personnel Ge	neral Experience	Relevant Experie	nce
	Project Manager	15 years	15 years	
	Project Engineer	10 years	10 years	
	Material Engineer	5 years	5 years	
	Foreman	10 years	5 years	
	Construction safety			
	Health	5 years	5 years	
10.5 The minimum major equipment requirement		ents are the following	:	
	<u>Equipment</u>	Capacity	Number of Units	Remark
	Welding machine	300-500 amp	1	Owned
	Drill Press		1	Owned
	Electric jack hammer		2	Owned
	Hand Drill		2	Owned
	Grinder		2	Owned
12	Not allowed			

15.1	The bid security shall be in the form of a Bid Securing Declaration or any of the following forms and amounts: a. The amount of not less than Twenty-Two Thousand Pesos (PhP22,000.00) (2%) of ABCJ, if bid security is in cash, cashier's/manager's check, bank draft/guarantee or irrevocable letter of credit; b. The amount of not less than Fifty-Five Thousand Pesos
	(PhP55 , 000.00) (5%) of ABC] if bid security is in Surety Bond.
19.2	Partial bids are not allowed
20	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 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

- 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

Special Conditions of Contract

GCC Clause	
2	The Intended Completion Date is: Thirty (30) calendar days.
4.1	Within seven (7) days after issuance of Notice to Proceed.
6	The site investigation reports are: Certificate Site Inspection issued by authorized representative of the Procuring Entity
7.2	Duration of warranty is for Fifteen (15) 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</i> (7) 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 contract price.
13	The amount of the advance payment is amount as percentage of the contract price that shall not exceed 15% of the total contract price and schedule of payment.
14	Materials and equipment delivered on the site but not completely put in place shall be included for payment.
15.1	The date by which operating and maintenance manuals are required before issuance of final payment.
	The date by which "as built" drawings are required before issuance of final payment.

Section VI. Specifications

SPECIFICATION

I. GENERAL REQUIREMENTS

SECTION 1.1

Summary of Works

This includes the furnishing of all materials, labors, tools and equipment and the performance of all operations necessary for the **Rehabilitation of main feeder line from ATS room to main panel of ATI-CO main building at ATI Central Office**, all in accordance with the plans and specifications, and subject to the terms and conditions of the contract documents.

SECTION 1.2

Mobilization and Mobilization

The contractor upon receipt of the Notice to Proceed shall immediately mobilize and transport his equipment, materials and employees to the site within (7) calendar days and demobilized or remove the same at the completion of the project.

SECTION 1.3

Contractor's Facilities & Utilities

1.3a Field Office

During the performance of the contract, the Contractor shall construct and maintain a field office and facilities at the site of the work at which he or his authorized agent shall be holding office at all times, while the work is in progress. The existing barracks of the previous contractor can be utilized and will be need to informed the ATI representative before using the facilities.

The contractor shall be responsible for the maintenance and protection of all facilities to be provided during the entire duration of the Contract including provision of adequate stock of all expendable items, such as light bulbs, light tubes, equipment and supplies, etc. at all times to ensure proper and continuous functioning of all the facilities.

1.3b **Temporary light and power**

The Contractor shall provide and maintain temporary electrical services including installation of temporary power & lighting within the construction site. The electrical services shall be adequate in capacity to supply power to construction tools and equipment without overloading the temporary facilities and shall be made available to supply power, lighting and construction operation of all trades. All temporary equipment and wiring for power and lighting shall be in accordance with the applicable provisions of the local governing codes. At the completion of the construction works all temporary wiring, lighting, equipment and devices shall be removed.

1.3c **Temporary toilet**

The contractor shall provide (if not available) and maintain in sanitary condition enclosed toilet for the use of all construction personnel located within the contract limits, complete fixtures, water and sewer connections and appurtenance.

1.3d **Temporary water supply**

The contractor shall provide and maintain water supply service, complete with necessary connections and appurtenances. Installed water supply shall be used as a source of water for construction purposes subject to the approval of the ATI Representative/Engineer/Architect.

1.3e **Project Identification and Signage**

The contractor shall provide and maintain a tarpaulin signboard which must be suitably framed for outdoor display at the project location and shall be posted as soon the award has been made.

1.3f First Aid

The contractor shall provide and maintain a first aid kits available on-site office. Location of the kit must be accessible. The contractor shall have a trained and knowledgeable employee on giving a first aid on workers.

1.3g **Disposal area**

The proposed location of disposal area shall be at the site designated by the ATI Representative. It is responsibility of the contractor to disposed-off site all construction debris and considered in the preparation of his proposal.

SECTION 1.4

Temporary works & Services

1.4a **Security**

Efficient watchman shall be provided for watching over the site and on the works from the theft, day and night. Temporary lighting shall be provided to light up hoarding and scaffoldings. Erect complete fence around the perimeter of construction sites to shield from view and prevent unauthorized access.

1.4b Screens

Where works is carried out in or adjacent to existing buildings, protection shall be provided against the spread of dust and other nuisance by means of dust sheets, tarpaulins, boards and the like.

Safety screen net & scaffolding should protect/prevent person from falling down, or to avoid hurting people of property from falling debris from on-going construction.

1.4c **Scaffolding**

All scaffolding, screens, covering, screen framings and the like shall be properly constructed, wedged, braced, secured and maintained in accordance with the best

local practice. All materials shall be of good quality and of adequate strength and stability to carry the loads to be sustained.

Metal scaffold system shall be a scaffold system constructed, as required, with working platform adequately supported and other ancillary members including guardrails, toe boards, access ladders, **slope catch-fans**, safety screen, anchors, support brackets, foundation and the like; and all the structural members of the scaffolding system shall be metal.

The scaffold system shall provide a suitable and sufficient safe means of access and workplace for carrying out work which cannot be conveniently executed from the ground of from a floor in a building, or from a ladder, etc...

The scaffold system shall be used for all construction, alteration, repair and maintenance works. Unless other specified, other alternative scaffolding may be used for screening purposes.

The contractor shall be responsible for the design, planning and coordination, transportation, fabrication, erection, maintenance alteration and dismantling of the scaffold system.

Scaffolding shall be inspected on regular basis, with submission of inspection form and certification by the component and qualified person as per the statutory requirements.

SECTION 1.5

Coordination

1.5a **Supervision**

- The contractor must employ only **competent and efficient key personnel** experienced in their specialization.
- O All personnel/laborers shall wear **proper uniform and ID's** when entering and within ATI premises.

1.5b 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 of workers, or loss of properties.

Sufficient safety helmets, rubber boots, safety shoes, safety belt/harness, lifeline, umbrella, protective and waterproof clothing, personal protective devices such as ear mufflers and glasses and other safety equipment necessary by reason pf hazardous work process or environment, chemical or radiological or other mechanical irritants of hazard capable causing injury or impairment in the function of any part of the body through absorption, inhalation or physical agent shall be provided by the contractor for the use of workers, the ATI representatives and other authorized persons visiting the site.

1.5c Parking and loading/unloading

Availability, locations and time of use of parking and loading/unloading shall be agreed with and approved by the ATI representatives.

SECTION 1.6

Regulatory and Other Requirements

1.6a **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:

- a. Permits and Fees
- b. Materials Testing
- c. 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.

1.6b **Project / Technical Meetings**

o Pre-Construction Conferences

A pre-construction meeting between the Implementing Office, or ATI representatives, and the Contractor shall be held at the site prior to the commencement of works.

The meeting shall be for the purpose of:

- 1. Resolving current problems;
- 2. Further orienting the contractor to the requirements of the Drawings and Specifications;
- 3. Working out with the contractor a general schedule of supervision.

o Progress Meeting

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

1.6c **Progress Report**

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

1.6d Survey Data

The Contractor shall layout his work from established based lines and benchmark indicated in the drawing and shall be responsible for all measurement in connection therewith. The Contractor shall furnish, at his own expense, all stakes, templates, platforms, equipment, tools, materials and labor as may be required in laying out any

part of the work, out of established based lines and bench mark. If shall be the responsibility of the Contractor to maintain and preserve all stakes and other marks until he is authorized to removed them.

1.6e Cleaning-up

The Contractor shall all times keep the construction area including storage area used by him free from accumulations of waste materials material or rubbish. Upon completion of the construction, the Contractor shall leave the work and premises in clean, neat womanlike conditions satisfactory to the Implementing Office or its representative.

Demobilization

1.6g **Document to be submitted**

o Construction Schedule

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

Network Analysis Schedules

The Contractor shall prepare a PERT-CPM to indicate the following: a.All activities necessary to complete the project;

Close-Out Report

Upon completion of the works the Contractor shall furnish ATI (Agricultural Training Institute) the required Close-Out Report shall be as 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 (A1-size) and CD for AutoCAD file;

The "As-Built" Plans shall reflect all pertinent information, complete in all aspects of the actual installation, and all new information not originally shown in the contract drawings.

II. EARTH AND SITE WORKS

SECTION 2.1

Clearing and Grubbing

2.1a General

Consist of clearing, grubbing, removing and disposing all vegetation and debris as designated in the contract, except those object that are designated to remain in place or are to be removed in consonance with other provisions of this specification.

All surface objects and all trees, stumps, roots and other protruding obstructions, not designated to remain, shall be cleared and/or grubbed, including mowing as required.

SECTION 2.2

Removal of Structure and Obstruction

2.2a General

Consist of the removal wholly or in part, and satisfactory disposal of all buildings, fences, structures, old pavements, abandoned pipe lines, and any other obstructions which are not designated or permitted to remain, except for the obstruction to be removed and disposed-off under other items in the contract.

2.2b **Protection**

- a. Barricades: Furnish and install any necessary barricades to protect the public or workmen during demolition and dismantling of each structure or part thereof. Barricades to keep the public out of demolition areas shall be left in place until removed by the Contractor after they are no longer required for protection.
- b. Sidewalk overhead protection: The contractor must provide overhead protection around the building, while working is occurring, to protect pedestrian from falling debris.
- c. Warning Signs: Provide necessary warning signs and lights.

2.2c Execution

- 1. Demolish and dismantle structures into sections and dispose them properly and promptly at designated areas or as directed.
- 2. Avoid accumulation of dismantled materials and work demolished on area that will create heavy load to carry to any structure members.
- 3. Care should be taken to protect and maintain all materials and other existing parts such as walls and utilities like conduits, drains, sewers, pipe and wires that are to remain in place. Any damage done in the performance of the work shall be replaced and corrected at the expense of the Contractor.
- 4. Execute demolition and dismantling works in an orderly manner with due consideration to neighbor and public.
- 5. All usable materials taken from the demolition shall be turn over to the Implementing Office.

Structure(s) to be retained

Parts of existing structure(s) which are to be kept in place shall be adequately protected.

Debris shall not overload any part of the structure which is not to be demolished.

Partly demolished structure(s)

Partly demolished structure(s) shall be kept in a stable condition, with adequate temporary support at each stage to prevent risk of uncontrollable collapse. Debris shall not overhead scaffolding platforms. Access of unauthorized persons to partly demolished structure(s) shall be prevented. Partly demolished structures shall be left safe outside working hours.

o Clean up

- 1. Remove from the project site all rubbish and debris found thereon and all materials and debris resulting from dismantling and demolition.
 - 2. Leave site in safe and clean condition.

SECTION 2.3

Earthworks & Site Preparation

2.3a General

• Scope

Consist of furnishing all labor, materials, equipment, plant and other facilities and the satisfactory performance of all work necessary to complete dismantling, clearing, stripping and all site preparation as indicated on drawing and specification.

2.3b **Protection**

Workmen

Provide adequate measures to protect workmen and public in site.

• Surrounding Area

Protect other structure from damage, and repair damage caused by this work at no additional cost to ATI.

• Utilities Lines

Existing utility lines indicated or location of which are made known to the Contractor prior to execution of works, and that which area indicated to be retained, as well as utility lines constructed during operations, shall be protected from damage during the execution of work, and if damaged, shall be repaired at no extra cost. Site survey shall be conducted by the Contractor to acquaint with the existing utility line. Proper measures shall be taken and immediate information forwarded to the Implementing Office when utility lines are encountered within the area of operation.

Survey and Grades

The drawings indicated layout of existing building components. Contractors shall be responsible for verifying the actual and the proposed setting in complete conformity with the drawings.

• Disposal of Cleared Materials

Dismantled refuse materials resulting from the clearing operations shall be disposed of by removing from the site at the Contractor's expense. Materials shall be disposed outside the perimeters of the project site.

• Dismantled Materials

Shall be stored above the ground upon flat forms, skids, or other supports. It shall be kept free from dirt, grease or other foreign matter, and shall be covered to protect against damages.

SECTION 2.4

EARTHWORKS

2.4a General

• Scope

This works consists of furnishing all materials, labor, equipment and the performances of all operations in connection with the excavation, filling and backfilling and compaction complete in accordance with the drawings and specifications stated herein. Also include trenching and backfilling for underground sanitary lines.

Earthworks consist of excavation, backfilling and disposal of surplus materials. Work of this section includes all measures and materials required to complete the design supply, support, use, construction removal of earthworks

Protection

a. Existing Structures

Protect existing buildings, streets and other structures, which are indicated to remain, from damage and repair damage caused by this work at no additional cost to the ATI.

b. Utility Lines

Where utility lines area encountered within the area of operations, the Contractor shall notify the Implementing Office in ample time for the necessary measures to be taken interruption of the service.

2.4b Materials

- Barrow materials shall be selected, laboratory approved materials obtained from off-site sources and having a 3.5 percent liquid limit, and 4 to 12 percent plasticity index.
- Granular fill to form a capillary water barrier shall be clean, crushed non-uniformly graded and of a size which will pass 25millimeter mesh screen and be retained on a No. 4 mesh screen.
- Excavated materials approved for use as backfill shall free of fibers, vegetables or organics materials, boulders, large rocks or pockets, lumps or other concentration of silt, debris, or cinders.
- No fill materials shall be placed when free water is standing in the area where fill is to be placed.

2.4c Execution

• <u>Preparation</u>

a. Stakes and Batter Board

- o Stake out the building accurately and established grades. Secure the approval of the Implementing office and/or ATI.
- o Erect batter boards and reference mark where they will not be disturbed during construction.
- o Store the materials and conduct work in such manner as to preserve all reference marks.
- o Re-establishment of lines and grades where necessary shall be done at Contractor's expense.

b. Rough Grading

- OCut and fill and grade the site area
- o Deposit materials in horizontal layers not exceeding 0.20 meters (8 inches) in depth and compact 95 of maximum density.

• Excavation

a. Foundations

- o Excavate to grade indicated
- o Excavate trenches to a neat size, leveled to line at the bottom ready to receive the foundation.

Dewatering

- Water encountered during the excavation shall be removed by pail or pump; care being taken that the surrounding particles of soil are not disturbed or removed.
- o Pump water out of excavated areas throughout the construction

• Trenching for Sub-Drainage

Excavated trenches for underground utility system and drain lines. Grade and tamp to provide firm bed trenches for drain line

• Soil Compaction

All existing earth within the building lines that has been disturbed should be placed in 15 centimeters layers and compacted 95% of maximum density required for fill.

• <u>Disposal of Excavated Materials</u>

Surplus materials resulting from the site excavating and grading operations shall be removed from the site and disposed-off in a proper manner if not needed.

• Backfilling and Grading

a. Backfilling

- o Commence after approval of construction below finish grade, underground utility systems inspected and tested, forms removed and the excavation cleaned of trash and debris.
- o Place in layers not more than 15 centimeters thick and evenly compact and ram by wetting, tamping or rolling until the correct grade.

b. Finish Grade

OPlace filling materials in horizontal loose layers not exceeding 15 centimeter in thickness and spread, mix and place in such a manner as to produce a uniform thickness of material.

- o Start in deepest area and progress approximately parallel to finished grade.
- o Grade finish surface to drain water from the building.

III. CONCRETE AND REINFORCED CONCRETE

SECTION 3.1

General

3.1a **Scope**

This works includes the furnishing, bending, placing and finishing concrete in accordance with the plans and specifications.

Unless otherwise specified herein, concrete works shall conform to the requirements of the ACI Building Code. Full cooperation shall be given other trades to install embedded items. Provisions shall be made for setting items not placed in the forms. Before concrete is placed, embedded items shall have been inspected and tested for concrete aggregates and other materials shall have been done.

SECTION 3.2

Materials

3.2a **Products**

• Portland Cement

Cement for the concrete shall conform to the requirements of specifications for Portland Cement (ASTM C-150, Type I) by Union, Republic, Pacific Cement only

Water

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

• Fine Aggregates/ Sand

Fine Aggregates/Sand shall consist of hard, tough, durable, uncoated, and clean 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/Gravel

Coarse Aggregates shall consist of WASHED AGGREGATES. 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 ³/₄" for all concreting work.

• Reinforcing Steel Bar

Reinforcing Bars shall conform to the requirements of the ASTM standard specifications ASTM-1562-2T, 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). For passing and acceptable standard of structural steel.

Reinforcing steel bars to be used shall bear the distinctive markings identify-ing the manufacturer by their initials, bar size number, including the type of steel such as:

N	= for Billet
A	= for Axial
R	= for rail steel

Reinforcing bar shall have structural steel grade, as follows;

10mm in diameter & below - A36, F's 32KSI

12 - 16mm in diameter - A441, F's 40KSI

20mm in diameter & above - A572, F's 60KSI

Other Materials

Provide other materials, not specified described but required for the complete and proper installation, as selected by the contractor subject to the approval of the Implementing Office.

3.2b **Proportioning and Mixing of Concrete**

• <u>Proportion</u>

Proportions of all materials entering into the concrete shall be as follows:

MIX	CEMENT	SAND	GRAVEL
Class AA	1	1-1/2	3
Class A	1	2	4
Class B	1	2-1/2	5
Class C	1	3	6

• Design of Concrete

Unless otherwise specified / indicated in the plans, concrete mix shall be Class A, and shall have 28-days strength of 3000psi, for all concrete work (with "fly ash" additive).

Structure	Concrete Design
Cast against earth	3000 PSI
Foundation / Footing tie beam	3000 PSI
Slab on fill	3000 PSI
Suspended Slab	4000 PSI
Beams and Girder	4000 PSI
Column	4000 PSI

Mixing

Concrete shall be machine mix. Mixing shall begin with 30 minutes after the cement has been added to the aggregates. In the absence of the concrete mixer, manual mixing is allowed, provided sampling shall be done 3 days be-fore pouring (to attain the good result).

SECTION 3.3

Execution

3.3a Placing of Reinforcement

Steel reinforcement shall be provided as indicated, together with all necessary wire ties, chairs, spacers, supported and other devices necessary to install and secure the reinforcement properly. All reinforcement, when placed, shall be free from loose, flaky crust and scale, oil, grease, clay, and other coating and foreign substances that would reduce or reduce its bond with concrete.

Bar Spacing

The ACI Code on bar spacing specifically provides that:

- 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.
- Where beam reinforcement is 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.
- 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.
- Shrinkage and temperature reinforcement shall not be placed farther apart than 5 times the slab thickness nor more than 45 cm.

Minimum covering of bars

For concrete slabs permanently in contact

with the earth -75mm min; 80mm max

Exposed to earth or weather Not exposed to weather nor in contact with the ground

in contact with the ground - 40mm min; 50mm max

Slab, walls, and joist - 20 mm min; 40mm max

Beams, girders, and columns - 40mm min

Refer to the structural schedule of reinforcements and slabs.

As a rule, the ground floor concrete slab shall be reinforced with 10~mm - de-formed bars spaced at 400~mm on center both ways. It shall be connected to the walls with 10~mm dowels spaced at 600~mm on center.

3.3b Conveying and Placing of Concrete

• Conveying Concrete

Concrete shall be conveyed form mixer to form as rapidly as practicable by methods, which will prevent segregation, or loss of ingredients. There will be no vertical drop greater than 1.5 meters except where suitable equipment is provided to prevent segregation and where specifically authorized.

• Placing

Placing concrete shall be worked readily into the corners and angles of the forms and around all reinforcement and embedded items 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. The discharge shall be so controlled that the concrete may be effectively compacted into horizontal layers not exceeding 30 centimeters in depth within the maximum lateral movement specified.

• 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.

• Consolidation of Concrete

Concrete shall be consolidated with the aid of mechanical vibrating equip-ment 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.

• Placing Concrete

Through reinforcement in placing concrete through reinforcement, care shall be taken that no segregation of the coarse aggregate occurs. On the bottom of beams and slabs, where the congestion of steel near the form

• Concrete Vibrator

The contractor shall provide at least two (2) concrete vibrators always available on site.

• 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.

• 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.

3.3d **Finishing**

• Concrete Slab on Fill

Shall be laid on a prepared foundation consisting of sub grade and granular fill with thickness equal to the thickness of overlaying slab except as otherwise indicated.

Pour water cement grout on back filled sand before pouring concrete on slab on fill.

3.3e 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.

SECTION 3.4

Material Testing

3.4a **Material Testing**

• Slump Test and Cylindrical Samples

Test shall be conducted before pouring of mixed concrete. Use standard slump mold, taken in 3 layers, rodded separately by 6mm rod 25 times. Slump should be within 15 cm (max) and 7.5 cm (min). Concrete samples in cylinders shall be taken for every batch of concrete mix (footings, columns, beams, and slabs) taken in three (3) samples each. Sampling shall be taken by trained engineers and subsequently cured and dried properly (in moist atmosphere at not more than 21°C to attain accurate results).

Test should be done at **14- and 28-days period**.

• Material Testing for Reinforcing Bar

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 (Geotechnics, 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

IV. PAINTING WORKS

SECTION 4.1 General

4.1a **Scope**

This includes all materials, labor, tools and equipment, and performance of all operations to complete painting and varnishing work as indicated on drawing and specification herein.

It covers complete painting and finishing of wood, plasters, concrete, metal, or other surfaces, external or internal part of the building

4.1b Samples

Submit samples panels of selected color or shade on a 30cm x 30cm plywood panels for the approval of implementing office. It shall be approval before ordering.

A sample panel of any finishing shall be prepared for approval, if directed. The applied finished shall not vary in quality or color from the approved sample.

4.1c **Delivery and Storage**

Deliver on job site in original containers with label containing manufacturer's name, color of paints, and manufacturer's instruction, if any intact and seals unbroken. Storage of paints and paint materials at the site shall be restricted to locations designated by the Project Architect/Engineer or ATI's

Representative and such place shall be kept neat and clean at all time. Necessary precaution to avoid fire must be observed by removing oily rags, waste, etc. at the end of daily work.

4.1d **Protection**

Provide all drop cloth and other covering requisite to protection of floors, walls, aluminum, glass finishes and other works.

4.1e **General Painting**

General Painting shall be interpreted to mean and include sealers, primers, fillers, intermediate and finish coats, emulsions, varnish, shellac, stain, or enamels.

All paint and necessary materials incorporated in or forming a part thereof shall be subject to prior approval and selection for color, tint, finish, or shade by the Project Architect/Engineer or ATI"s

Representative.

In connection with the Project Architect/Engineer or ATI"s Representative determination of color or tint of any particular surface, the depth of any color or tint selected or required shall in no instance be a subject for an additional cost to the owner.

4.1f Schedule

• Interior concrete & masonry wall surfaces

1st coat: Acrylic flat latex paint (white) 2nd & 3rd coats: Acrylic semi-gloss latex paint

• Concrete Floor

1st coat: Epoxy Primer (white)

2nd & 3rd coats: Epoxy Enamel

Ceiling

1st coat: Acrylic flat latex paint (white)

2nd & 3rd coats: Acrylic flat latex paint

• Steel

1st coat: Red Oxide

2nd & 3rd coat: Water-based acrylic epoxy

SECTION 4.2 **Materials**

4.2a **Products**

• Painting Materials

All paint materials meet the requirements of paint materials under classification class "A" as prepared by the Bureau of Product Standards. Substitutes shall only be entertained once the quoted preferred brands are not available in the market.

Except for ready mixed materials n original containers, all mixing shall be done in the jobsite. No materials are to be reduced, changed, or mixed except as specified by the manufacturer of said materials.

• Tinting Colors

Shall be first grade quality, pigment ground in alkyd resin that disperses and mixes easily with paint to produce the color desired. Use the same brand of paint and tinting color to effect good paint body.

• Concrete Neutralizer

Shall be first grade quality concentrate dilute with clean water and applied as surface conditioner of new interior and exterior walls thus improving paint adhesion and durability.

<u>Lacquer</u>

Shall be any type of coating that dries rapidly and solely be evaporation of the solvent. Typical solvents are acetates, alcohols and ketone. Although lacquer was generally based on nitrocellulose, manufacturers currently use vinyl resin, plasticizer and reached drying oils to improved adhesion and elasticity.

• Shellac

Shall be a solution of refine lac resin in denatured alcohol. It dries by evaporation of the alcohol. The resin is generally furnished in orange and bleached grades.

Sanding Sealer

Shall be quick drying lacquer, formulated to provide quick dry, good holdout of succeeding coats and containing sanding agents such as zinc stearate to allow dry sanding of sealer.

SECTION 4.3

Execution

4.3a Surface Preparation

• General Requirement

All surfaces to be painted shall be examined carefully before beginning any work and see that all work of other trades or subcontractors are installed in workmanlike manner; to receive paint, stain or particular finish.

Before proceeding with any painting or finishing, thoroughly clean, sand and seal, if necessary, by removing from all surfaces all dust, dirt, grease, or other foreign substances which would affect either the satisfactory execution or permanency of the work.

No work shall be done under the conditions that are unsuitable for the painting, nor at any time when the plastering is in progress, or is being cured, or dried.

Finished hardware, lighting fixtures, plates, and other similar items shall be removed from all positions before painting is started. Each piece shall be installed in position once painting is finished and dried.

Neither paint nor any other finish treatment shall be applied over wet or damp surfaces. Allow at least two (2) days of drying time before application of succeeding coat.

Voids, cracks, nick, etc. will be repaired with proper patching metal and finished flushed with surrounding surfaces.

Painting and varnishing works shall not commence when it is too hot or cold.

Begin work only when the Project Architect/Engineer has inspected and approved the prepared surface otherwise no credit of coat shall be given. The Contractor shall assume full responsibility to recoat work in question. Notify the Project Architect/Engineer when the particular coat applied is complete, ready for inspection and approval.

• Concrete and Masonry Surfaces

All loose grid or mortar, contaminants, dirt, grease, oil, dust and other deposits must be removed on the surface. Surfaces shall be coated with concrete neutralizer, apply either with brush or spray solution one kilogram of zinc sulfate to four and 1 half liters of water. Allow to dry before any painting primer coat is applied. When surface is dried apply one coating. Hairline cracks and unevenness shall be patched and sealed with approved putty or patching compound. After detects are corrected apply the finish coats as specified on the plans (Color scheme approved.)

• Metal

Surfaces shall be clean, dry and free from mill scale and rust. Remove all grease and oil from surfaces. Rusty metal exposed to weathering for some time must be sanded, wire brushed or scraped. Wash unprimed galvanized with etching solution and allow it to dry before application of applicable primer

4.3b **Workmanship**

All paints shall be evenly applied. Coats shall be of proper consistency and well brushed out as to show a minimum of brush marks. All coats shall be thoroughly dry before the succeeding coat is applied. When surfaces are not fully covered or cannot be satisfactorily finished in the number of coats as may be required shall be applied to attain the desired evenness of surface. Where surface is not in proper condition to receive the coat, the project supervisor/Owner's Representative shall be notified immediately. Hardware, lighting fixture and other similar item shall be removed or protected during the painting, varnishing and other related work operations and reinstalled after.

V. ELECTRICAL WORK

SECTION 5.1

General

5.1a **Scope**

The work consists of furnishing of all materials and labor, tools and equipment, and all necessary services to complete and make ready for operation electrical works as indicated on electrical plans and in accordance with the Drawing & Specification.

The work shall include the furnishing and installing of the following each complete and in proper operating condition unless otherwise stated in the Specification.

- Wiring system including respective conduits, fittings wire gutter, junction box, utility boxes and any other type of box and support and accessories required and/ or as indicated on the Drawing;
- All the necessary feeder and branch circuit with all necessary conductors, conduits, fitting and other items as indicated on the Drawings;
- All the necessary wiring devices, such as utilization outlets, wall switches, receptacles all complete with their appropriate cover plates;
- All lighting fixtures and accessories including necessary supports;
- All conduits, boxes, wires and equipment.

5.1b Codes and Regulation

The Electrical Works shall be done in accordance with all the requirements of the latest issue of the Building Code of the Philippines, Philippine Electrical Code, with rules and regulations and ordinances of the local enforcing authorities of local electrical cooperative.

5.1c Guarantee

The Contractor shall guarantee that the electrical system is free from all grounds and defective material and workmanship for a period of one (1) year from the date of acceptance of work. All defects arising within the guarantee period shall be remedied by the Contractor at their own expense.

5.1d **Drawing and Specification**

- Any apparent conflict between the Drawings and Specifications and any controversial or unclear points either shall be referred to the Project Architect/Engineer for final decision.
- All dimensions and location shown on the Plans are approximate and shall be verified in the field, as actual locations, distances and levels are governed by actual conditions.
- No deviation from the plans shall be made unless with written consent or approval from Project Architect/Engineer

5.1d **Samples**

The contractor shall submit a sample of any item he intended to install or use in this project to the Project Architect/Engineer for approval.

SECTION 5.2 Material

5.2a **Products**

All materials shall be unused, brand new and shall be of the approved type meeting all the requirements of the Philippines Electrical Code.

Conduits

Shall be UPVC pipes, electrical grade, must be flexible type. Conduits inside ceiling shall be properly supported by steel braces other than the ceiling joist with spacing as specified by the Philippine Electrical Code.

Conduits box

Shall be UPVC boxes, electrical grade. Utility/Octagon boxes shall be provided with adaptors to connect PVC conduits to the box. Utility/Octagon boxes shall be provided with proper cover plates.

• Wires and Cables

Wires should conform to the JIS, and ASTM standards. No wire shall be drawn into a raceway until it is complete with all necessary fittings, boxes, and supports. Connections shall be securely fastened such as not to loosen under vibration or normal strain. All connections and splices shall be made with approved methods.

• Receptacles, Switches, Outlet

Shall be standard product of reputable Electrical Manufacturers and cover with proper cover plate.

• Lighting Fixtures

Unless otherwise specified shall be furnished and installed by the contractor. All fixtures shall be as required on Plans, of good quality materials. Contractor shall submit samples for approval of the Architect before installation.

Insulation

All splices shall be properly insulated using 3M electrical type or approved equal. Application of insulation tape shall be equivalent to the insulation of the wire concerned.

TECHNICAL SPECIFICATION FOR ELECTRICAL FEEDER LINES

A. WIRES & CABLES

- THWN wire 250mm2, 500MCM with Jacket of Clear nylon per UL Standard 83, Insulation using Lead-Free Flame-Retardant PVC per UL Standard 83, Color coding (Red, Blue and Yellow color) UGF-RW ((2 SETS))
- THWN wire 50mm2 with Jacket of Clear nylon per UL Standard 83, Insulation using Lead-Free Flame-Retardant PVC per UL Standard 83, Color Green (Ground Wire)

B. CONDUITS, BOXES & FITTING (Conduit Works / Conduit Rough-Ins)

- Orange Polyvinyl Chloride Pipes (PVC/uPVC), 100 mm dia. (Powerhouse to LGF Electrical Room)
- Electrical Consumables (Electrical tape, G.I. wires, tie wrap, etc)
- Conduit Consumables (PVC elbow, c-clamp, PVC contact cement, wire pulling lubricant or powder, etc)

SECTION 5.3

Execution

5.3a **Workmanship**

All works throughout shall be executed in the best practice in a womanlike manner by qualified and experience electricians under the immediate supervision of a duly licensed Electrical Engineer.

Wiring method shall be color coded.

Line 1 - red

Line 2- yellow

Line 3- blue

Ground - green.

SECTION 5.4

Testing

5.4a General

Upon completion of the electrical construction work, the Contractor shall provide all test equipment and submit written copies of all test results.

VIII. GENERAL GUIDELINES

Equipment and materials to be used in the work shall be standard products. Substitutes will only be resorted or considered if the preferred original is not available and must be referred to the Project Architect/Engineer or ATI's Representative for approval. If, however, decision shall be made between two equivalent products, the one with the higher

price shall be chosen. Other brands intended for substitute, which is not approved by Project Architect/Engineer or ATI's Representative shall not be used. Submission of brochures and sample of materials shall be required of the Contractor (and approved by the ATI's Representative) prior to implementation.

Section VII. Drawings

Drawings included in the Bidding Documents

Section VIII. Bill of Quantities

Project :REHABILITATION OF MAIN FEEDER LINE FROM ATS ROOM TO MAIN PANEL OF ATI-CO MAIN BUILDING

Location: ATI COMPOUND, Elliptical Road, Diliman, Quezon City

Subject : BILL OF QUANTITIES

Date: April 18, 2023

Date:	, ipii	PARTICULARS	MATERIAL COST		LABOR COST					
QTY	UNIT		UNIT MATERIAL COST	MATERIAL COST	UNIT LABOR	LABOR COST	UNIT DIRECT COST	DIRECT COST (DC)	INDIRECT COST (IDC)	TOTAL AMOUNT (DC + IDC)
I. GENERA	L REQ	UIREMENTS								
1.00	lot	Temporary construction safety screen, platform, barricades, warning signs, temporary access roads and scaffolding								
1.00	lot	Hauling of debris & Site Clearing								
		sub-total I								
II. Conduits, Boxes & Fitting (Conduit Works / Conduit Rough- Ins)										
10.00	pcs	Orange Polyvinyl Chloride Pipes (PVC/uPVC), 100 mm dia.								
3.00	pcs	Terminal lags 2 hole for 250mm2 wire								
1.00	lot	Electrical Consumables (Electrical tape, G.I. wires, tiewrap, etc)								
		sub-total II (ELECTRICAL WORKS)								
III. Wires	& cab	les								
120.00	l.m	THWN wire 250mm2, 500MCM (Red color) 2 sets								
120.00	l.m	THWN wire 250mm2, 500MCM (Yellow color) 2 sets								
120.00	l.m	THWN wire 250mm2, 500MCM (Blue color) 2 sets								
60.00	l.m	THWN wire 50mm2 (Ground Wire)								
		sub-total III (WIRE & CABLE WORKS)								
IV. CIVIL WORKS										
10.00	l.m	Chipping works for embedment of pipes at the road								
1.00	lot	Restoration of affected areas								
30.00	l.m	Cable Pulling Works								
1.00	lot	Termination Works								
1.00	lot	Pipe Laying Works								
		sub-total IV (CIVIL WORKS)								
			6			SUMMARY OF	COST :			
						DIRECT COST				
						Material Cost :				
						Labor Cost:				
						INDIRECT COST				
						OCM(12%)				
						Profit(8%)				
						Tax (5%):				
GRAND TOTAL PROJECT COST:										

Section IX. Checklist of Technical and Financial Documents

Checklist of Technical and Financial Documents

I. TECHNICAL COMPONENT ENVELOPE

Class "A" Documents

Legal D	ocuments_
(a)	Valid PhilGEPS Registration Certificate (Platinum Membership) (all
	pages);
	<u>or</u>
(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 Mayor's or Business Permit issued by the city or municipality where the
(c)	principal place of business of the prospective bidder is located, or the
	equivalent document for Exclusive Economic Zones or Areas;
	and
(e)	Tax Clearance per E.O. No. 398, s. 2005, as finally reviewed and approved
	by the Bureau of Internal Revenue (BIR).
	•
<u>Technic</u>	al 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
(g)	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
(i)	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; and
(j)	<u>Project Requirements</u> , 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,
	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
(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.
□ (l)	Certificate of Site Inspection.
Financia (m)	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
(n)	The prospective bidder's computation of Net Financial Contracting Capacity (NFCC).
(o)	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.
	IAL COMPONENT ENVELOPE Original of duly signed and accomplished Financial Bid Form; and
	cumentary requirements under RA No. 9184 Original of duly signed Bid Prices in the Bill of Quantities; and
(r)	Duly accomplished Detailed Estimates Form , including a summary shee indicating the unit prices of construction materials, labor rates, and equipment rentals used in coming up with the Bid; <u>and</u>
(s)	Cash Flow by Quarter.

