



NATIONAL POWER CORPORATION

MinGen

PHILIPPINE BIDDING DOCUMENTS
(Procurement of INFRASTRUCTURE PROJECTS)

FOR

STRENGTHENING AND RETROFITTING OF
AGUS 7 BRIDGES STRUCTURES

P.R. No.: MG-A7T24-009

Contracts Management Office
Logistics Division

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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[e])

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]).

GF1 – 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.

BID DOCUMENTS

SECTION I- INVITATION TO BID

NAME OF PROJECT - STRENGTHENING AND RETROFITTING OF AGUS
7 BRIDGES STRUCTURES

PR NO./REF. NO. MG-A7T24-009/INFRA2024-AG7-012

Section I. Invitation to Bid



NATIONAL POWER CORPORATION

MinGen

Invitation to Bid for *Strengthening and Retrofitting of Agus 7 Bridges Structures*

The *NATIONAL POWER CORPORATION-MINDANAO GENERATION*, through the *approved Corporate Budget of NPC for CY 2024* intends to apply the sum of *Two Million Four Hundred Ninety Nine Thousand Fifty Seven and 41/100 Pesos (PHP 2,499,057.41)* being the Approved Budget for the Contract (ABC) to payments under the contract for *Strengthening and Retrofitting of Agus 7 Bridges Structures (MG-A7T24-009/INFRA2024-AG7-012)*. Bids received in excess of the ABC shall be automatically rejected at bid opening.

1. The *NATIONAL POWER CORPORATION-MINDANAO GENERATION* now invites bids for the above Procurement Project. Completion of the Works is required *One Hundred (100) calendar days*. Bidders should have completed a contract similar to the Project. The description of an eligible bidder is contained in the Bidding Documents, particularly, in Section II (Instructions to Bidders).
2. 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.
3. Interested bidders may obtain further information from *BAC Secretariat, NATIONAL POWER CORPORATION-MINDANAO GENERATION* and inspect the Bidding Documents at the address given below from *8:00 AM – 5:00 PM Monday to Friday*.
4. A complete set of Bidding Documents may be acquired by interested Bidders on *March 4-25, 2024* from the 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 *Five Thousand Pesos (PHP5,000.00)*. The Procuring Entity shall allow the bidder to pay online and present its proof of payment for the fees in person, by facsimile, or through electronic means. For those prospective bidders who wish to pay online, below are the details of the account:

LandbankAccount name : NPC GENCO 5 COLLECTIONS FUND
LandbankAccount number : 0321-1689-14


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

5. The *NATIONAL POWER CORPORATION-MINDANAO GENERATION* will hold a Pre-Bid Conference on *March 11, 2024 at 1:30 PM* at *Bidding Room, NPC-Mindanao Generation Headquarters, Maria Cristina, Iligan City* and/or through videoconferencing/webcasting via *ZOOM*, which shall be open to prospective bidders. Interested online attendees are required to pre-register one (1) day before the scheduled pre-bidding conference. For pre-registration, contact tel. no. (063)-222-3459 or email logistics_afd_mingen@napocor.gov.ph.
6. Bids must be duly received by the BAC Secretariat through manual submission at the office address as indicated below, on or before *March 25, 2024 at 9:30 AM*. Late bids shall not be accepted.
7. All bids must be accompanied by a bid security in any of the acceptable forms and in the amount stated in ITB Clause 15.
8. Bid opening shall be on *March 25, 2024 at 9:30 AM* at the *Bidding Room, NPC-Mindanao Generation Headquarters, Maria Cristina, Iligan City*. Bids will be opened in the presence of the bidders' representatives who choose to attend the activity.
9. *This project requires submission of at least:*
 - *Certificate of Site Inspection*
10. The *NATIONAL POWER CORPORATION- MINDANAO GENERATION* 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. For further information, please refer to:

*BAC Secretariat
Contracts Management Office
Logistics Division
Mindanao Generation Headquarters
National Power Corporation
Maria Cristina, Iligan City
cmo_logistics_afd_mingen@napocor.gov.ph
Fax No.: (063)223-8355/(063)223-4604
www.napocor.gov.ph*

12. You may visit the following websites:

For downloading of Bidding Documents: <https://www.philgeps.gov.ph/> or
<https://www.napocor.gov.ph/BCSD/bids.php>


R. T. CIRUELA
Chairman, Bids and Awards Committee
Mindanao Generation Headquarters

Date of PhilGEPS Publication: 4 March 2024

Section II. Instructions to Bidders

1. Scope of Bid

The Procuring Entity, **NATIONAL POWER CORPORATION-MINDANAO GENERATION** invites Bids for the *Strengthening and Retrofitting of Agus 7 Bridges Structures, with Project Identification Number INFRA2024-AG7-012.*

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 CY 2024 in the amount of *Two Million Five Hundred Thousand Pesos (PHP2,500,000.00)*
- 2.2. The source of funding is:
 - a. GOCC and GFIs, the proposed Corporate Operating Budget.

3. Bidding Requirements

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

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

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

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

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

5. Eligible Bidders

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

A contract is considered to be "similar" to the contract to be bid if it has the major categories of work stated in the BDS.
- 5.3. For Foreign-funded Procurement, the Procuring Entity and the foreign government/foreign or international financing institution may agree on another track record requirement, as specified in the Bidding Document prepared for this purpose.
- 5.4. The Bidders shall comply with the eligibility criteria under Section 23.4.2 of the 2016 IRR of RA No. 9184.

6. Origin of Associated Goods

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

7. Subcontracts

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

The Procuring Entity has prescribed that:

- a. Subcontracting is not allowed.

8. Pre-Bid Conference

The Procuring Entity will hold a pre-bid conference for this Project on the specified date and time and either at its physical address and/or through videoconferencing/webcasting as indicated in paragraph 6 of the IB.

9. Clarification and Amendment of Bidding Documents

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

10. Documents Comprising the Bid: Eligibility and Technical Components

- 10.1. The first envelope shall contain the eligibility and technical documents of the Bid as specified in Section IX. Checklist of Technical and Financial Documents.
- 10.2. If the eligibility requirements or statements, the bids, and all other documents for submission to the BAC are in foreign language other than English, it must be accompanied by a translation in English, which shall be authenticated by the appropriate Philippine foreign service establishment, post, or the equivalent office having jurisdiction over the foreign bidder's affairs in the Philippines. For Contracting Parties to the Apostille Convention, only the translated documents shall be authenticated through an apostille pursuant to GPPB Resolution No. 13-2019 dated 23 May 2019. The English translation shall govern, for purposes of interpretation of the bid.
- 10.3. A valid 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 tradable 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 *One Hundred Twenty (120) Calendar Days from the Scheduled Bid Opening*. 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: Construction, Rehabilitation, Retrofitting of Bridge		
7.1	Subcontracting is not allowed.		
10.3	None		
10.4	The key personnel must meet the required minimum years of experience set below:		
	<u>Key Personnel</u>	<u>General Expertise</u>	<u>Relevant Experience</u>
	1 –Project Engineer	License Civil Engineer	At least five (5) years experience in similar works
	1 - Construction Foreman	B.S. Civil Engineering Graduate	At least three (3) years experience in similar works
		Civil Engineering Technology Graduate	At least five (5) years experience in similar works
		Non-graduate	At least five (5) years working experience as Construction Foreman in similar works
	1 - Construction Safety and Health Officer (SO2)	Construction Safety Officer 2	At least forty (40) hours of Construction Safety and Health (COSH) Training from Occupational Safety and Health Center (OSHC) or Safety Training Organizations (STOs) accredited by the Department of Labor and Employment (DOLE).

	<p>2- Welders NC II Certified</p> <p>Must be present during the whole duration of the project. At least three (3) years experience as Safety Officer. At least three (3) years experience in welding works</p> <p><i>The following key personnel information indicated above must be included in Standard Form NPCMGNST-INFRR-05: List of Key personnel proposed to be assigned to the Contract. Filled up Standard Form NPCMGNST-INFRR-05 must be included in the technical component envelope.</i></p> <p>Project Engineer or Foreman and Construction Safety & Health Officer maybe one person, as long as he meets the requirements of the two positions. Provided however, that there is no overlapping of projects undertaken by the same contractor and supervised by the same person.</p> <p>The above key personnel must be either employed by the applicant or contracted by the applicant to be employed for the contract to be bid.</p>																								
<p>10.5</p>	<p>The minimum equipment requirements are the following:</p> <table border="1" data-bbox="438 1137 1348 1489"> <thead> <tr> <th><u>Equipment</u></th> <th><u>Capacity</u></th> <th><u>Number of Units</u></th> </tr> </thead> <tbody> <tr> <td>Backhoe</td> <td>0.80 cu.m.</td> <td>One (1)</td> </tr> <tr> <td>Mini Dump Truck</td> <td>3.0 cu.m.</td> <td>One (1)</td> </tr> <tr> <td>Concrete Mixer</td> <td>1-bagger</td> <td>One (1)</td> </tr> <tr> <td>Concrete Vibrator, Pen Type</td> <td>4 HP</td> <td>One (1)</td> </tr> <tr> <td>Pumperete</td> <td>At least 25 cu.m. /hr.</td> <td>One (1)</td> </tr> <tr> <td>Transit Mixer</td> <td>At least 6.0 cu.m.</td> <td>One (1)</td> </tr> <tr> <td>Welding Machine</td> <td>300 Amp</td> <td>Two (2)</td> </tr> </tbody> </table>	<u>Equipment</u>	<u>Capacity</u>	<u>Number of Units</u>	Backhoe	0.80 cu.m.	One (1)	Mini Dump Truck	3.0 cu.m.	One (1)	Concrete Mixer	1-bagger	One (1)	Concrete Vibrator, Pen Type	4 HP	One (1)	Pumperete	At least 25 cu.m. /hr.	One (1)	Transit Mixer	At least 6.0 cu.m.	One (1)	Welding Machine	300 Amp	Two (2)
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<p>12</p>	<p>N/A</p>																								
<p>15.1</p>	<p>The bid security shall be in the form of a Bid Securing Declaration or any of the following forms and amounts:</p> <p>a. The amount of not less than PHP49, 981.15(2% of ABC), if bid security is in cash, cashier's/manager's check, bank draft/guarantee or irrevocable letter of credit;</p>																								

	b. The amount of not less than PHP124, 952.87 (5% of ABC), if bid security is in Surety Bond.
19.2	Partial bids are not allowed.
20	<p>Additional documents to be submitted during Post-Qualification:</p> <ol style="list-style-type: none"> 1. Other appropriate licenses and permits required by law and stated in the Bidding documents. <ol style="list-style-type: none"> a. Original Bank Statement year ending prior to bid opening; b. Valid and updated PhilGEPS Registration (Platinum Membership) (all pages); c. 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; d. Mayor's or Business permit issued by the city or municipality where the principal place of business of the prospective bidder is located, or the equivalent document for Exclusive Economic Zones or Areas; e. Valid Tax clearance per E.O. No. 398, s. 2005, as finally reviewed and approved by the Bureau of Internal Revenue (BIR). Quarterly Income Tax Returns filed and paid through the BIR Electronic Filing and Payment System (eFPS); f. 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; g. Philippine Contractors Accreditation Board (PCAB) License; h. Board of Accountancy (BOA) Certificate; 2. Contract and/or Notice of Award as supporting documents for NPC MinGen Form No. NPCMGNSF-INFRA-01, if applicable; 3. (a) Valid Professional Regulation Commission (PRC) license for professional personnel; (b) Certificate of Training with accreditation from DOLE for the Construction Safety & Health Officer and (c) Diploma and/or Service Record/Certificate of Employment of previous and/or current employer for Construction Foreman - as supporting documents for NPC MinGen Form No. NPCMGNSF-INFRA-05, if applicable. 4. Certificate of Site Inspection issued by Department Manager or his authorized representative.
21	<p>Additional contract documents relevant to the Project that may be required by existing laws and/or the Procuring Entity, <u>prior to contract signing</u>, such as:</p> <ol style="list-style-type: none"> a) Approved construction schedule and S-curve b) Approved manpower schedule c) Construction methods d) Approved equipment utilization schedule

	c) Construction safety and health program approved by the DOLE d) Approved Project Evaluation Review Technique/Critical Path Method (PERT/CPM)
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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. Day works

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 Day works 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.

BID DOCUMENTS

NAME OF PROJECT - STRENGTHENING AND RETROFITTING OF
AGUS 7 BRIDGES STRUCTURES

SECTION V- SPECIAL CONDITIONS OF CONTRACT

PR NO./REF. NO.: MG-A7T24-009/INFRA2024-AG7-012

Section V. Special Conditions of Contract

Special Conditions of Contract

GCC Clause	
2	Sectional completion is not specified.
4.1	The Procuring Entity shall give possession of the Site to the Contractor <i>on the start date.</i>
6	The site investigation reports are: NONE
7.2	Fifteen (15) years
10	Day works are not applicable to the contract.
11.1	The Contractor shall submit the Program of Work to the Procuring Entity's Representative <u>upon contract signing</u> or within <u>three (3) days</u> of delivery of the Notice of Award.
11.2	The amount to be withheld for late submission of an updated Program of Work is Fifty (50) % of the billed amount. The updating of Program of Work shall be done bi-monthly.
13	The amount of the advance payment is 15% of contract amount and paid in lump sum.
14	For all projects with ABC of Five Million Pesos (PHP5,000,000.00) and below, no progress payment is allowed. First and Final Payment will be made upon the completion of the project. For all projects with ABC of above Five Million Pesos (PHP5,000,000.00), only one (1) progress payment is allowed with an actual progress accomplishment of at least fifty percent (50%). The second payment will be made upon the completion of the project.
15.1	The date by which operating and maintenance manuals are required is upon completion of the project. The date by which "as built" drawings are required is upon completion of the project.
15.2	The amount to be withheld for failing to produce "as built" drawings and/or operating and maintenance manuals by the date required is one hundred percent (100%) of the final billing.

Section VI. Specifications

PROJECT HIGHLIGHTS

PH - 1.0 GENERAL

The Purpose of Strengthening and Retrofitting of Agus 7 Bridges Structures is to prevent a possible collapse of the bridge structure and scouring of its foundation resulted in the loss of life and property.

PH - 2.0 LOCATION

The project is located at Agus 6 & 7 HEP Complex, Fuentes, Maria Cristina, Iligan City.

PH - 3.0 SCOPE OF WORK

The major activities shall include but not limited to the following:

Mobilization

Part I. General Requirements

- a. Occupational Safety and Health Program
- b. Material Testing (Cement , Fine and Coarse Aggregates , Reinforcing Steel Bars, and Compressive Strength of the Concrete 6000 PSI)

Part II. Civil Works

- C.W.1. Structural Excavation
- C.W.2. Sand and Gravel Bedding
- C.W.3. Concrete (6000 PSI)
- C.W.4. Reinforcing Steel Bars
- C.W.5. Construction of Grouted Riprap (Class A)
- C.W.6. Guard Rail
- C.W.7. Painting Works

Clean – Up and Demobilization

PH - 4.0 CONTRACT PERIOD

The work duration of the entire project is **One Hundred (100) Calendar Days** reckoned from receipt of the Notice to Proceed.

The total contract period is inclusive of five (5) rainy/unworkable days considered unfavourable for the execution of works at site. The contract period shall be reckoned from the date of contract effectively as specified in the Notice to Proceed.

PH - 5.0 CONTRACTOR'S CLASSIFICATION

The contractor must have a valid Philippine Contractor's Accreditation Board (PCAB) license of at least **Category C or D- General Engineering** with inter-agency registration of at least **Small B - (Road, Highways, Pavement, Railways, Airport Horizontal Structure and Bridges)**.

TECHNICAL SPECIFICATIONS

In accordance with the specifications provided in the plans, the contractor shall furnish all materials, labor, tools, equipment and other incidentals, and shall undertake the complete at Agus 6 & 7 HEP, Fuentes, Maria Cristina, Iligan City.

All materials to be used shall conform to applicable standard. If upon visual inspection the materials appear to be of poor quality or fail to meet the standard, the NPC inspector has the authority to reject the same out rightly.

The Contractor shall perform all activities necessary for the completion of the project satisfactory to NPC and in accordance with the approved plans and these specifications.

Scope

This section covers the construction and/or maintenance of access roads, drainage system and other appurtenant structures, moving-in of the Contractor's construction equipment, setting up of the Contractor's camp and the disposition of the Contractor's various facilities at the end of the Contract.

MOBILIZATION

The Contractor upon receipt of the Notice-to-Proceed shall immediately mobilize and transport his plant, equipment, materials and labor forces to the site and demobilize or remove the same at the completion of project and level/ clear the site acceptable to the Engineer and the Owner. Mobilization and Demobilization are incidental to other items of work and will not be measured for payment.

Moving-in

The contractor shall bring to the site all his necessary construction equipment and plant and install all stationary construction equipment and plant at location and in the manner approved by the NPC. The Contractor shall submit sufficient detailed plans showing the proposed location of such stationary equipment and

plant and other pertinent data. No installation of such stationary equipment shall be undertaken unless the corresponding plans have been approved by the NPC.

Contractor's Camp Facilities

The Contractor shall provide and grade his camp site, construct his camp, employee housing, warehouse, machine and repair shops, fuel storage tanks and provide such related facilities and sanitary conveniences that the Contractor deems necessary for maintaining health, peace and order in the camp and work areas. The areas that may be used by the Contractor within the plant site shall be designated by the NPC.

The Contractor shall provide, maintain and operate, under competent direction, such camps and facilities as are necessary for the housing, feeding and accommodation of his employees.

Water Supply

The Contractor shall, at his own expense, be responsible for the supply, installation, operation and maintenance of a safe and adequate supply of drinking and domestic water.

Sewerage Disposal and Sanitation

The Contractor shall, at his own expense, be responsible for the installation, operation and maintenance of an adequate sewerage disposal and sanitation system and shall provide adequate toilet and wash-up facilities for his employees at his camp and in the areas where work is being carried out.

The Contractor shall execute the work with due regard to adequate sanitary provisions and applicable codes and shall take all necessary steps to prevent the pollution of water in any spring, river, or other sources of water supply. All toilets or wash-up facilities shall be subject to the prior and continuing approval of the NPC.

Fire Protection

The Contractor shall observe all necessary precautions against fire, shall provide and maintain at his own expense, portable fire-fighting equipment he may deem necessary, and shall comply with all applicable laws of the Philippines relating thereto.

In the event of an uncontrollable fire occurring in the area of the Contractor's operation, the Contractor shall have to extinguish the fire

immediately at his own expense, to the full extent of the manpower and equipment employed under the contract at the time of the fire.

The Contractor shall indemnify NPC against all liabilities, claims, damages and/or lawsuits arising thereto.

Construction Power

The Construction shall be responsible for providing his own electric power supply required for construction and erection/installation. If power is available from NPC and should the Contractor elect to utilize the NPC's power supply, he shall make an arrangement with NPC concerned group as to the billing rates and other requirements needed for direct connection to NPC.

Camp Security

The Contractor shall provide sufficient security in the construction site to prevent illegal entry or work damaged during nights; holidays and other period when work is not executed; and during working hours. The Contractor shall take ample precautions against fire by keeping away flammable materials, and ensure that such materials are properly handled and stored. Fires shall not be allowed within the area of construction, except when permitted by the NPC End-User or Representative.

Construction Material Storage

The Contractor is required to put up warehouse(s) with capacities sufficient to store the construction materials required in the work. the warehouse(s) shall be specifically for this contract, notwithstanding his other facilities in the site that may serve the purpose.

Removal of Camp and Construction Facilities

After the completion of the work covered by the contract and prior to acceptance of the completed work, the entire camp facilities of the Contractor, including its water supply system, electric distribution system, quarters, warehouses, shops, dining halls, commissaries, temporary shed and other facilities therein shall be removed by the Contractor. The site shall be cleared and cleaned as directed by the NPC.

Care of Water during Construction

In accordance with the specifications contained in this section or otherwise directed, the Contractor shall construct and maintain all necessary temporary drainage ditches and other temporary protective works and he

shall also furnish, install, maintain and operate necessary pumping equipment and other devices to protect construction operation free from water coming from any source, including rain.

Drainage and Dewatering

The Contractor shall be responsible for dewatering foundation areas so that work can be carried out on a suitably dry condition. The Contractor shall construct drainage ditches, holes, culverts, furnish, maintain and operate at his own expense all necessary pumps and other dewatering devices to keep all work area free from water.

After the work is completed and before it is accepted by the NPC, the Contractor shall remove all pumping equipment and shall remove, fill or plug all temporary drainage structures as directed, all at his expense.

Disposal Area

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

Disposal of all Rubbish, Demolition Waste etc.

The Contractor shall be entirely responsible for and ensure the safe and hygienic collection, transportation and disposal of all rubbish, tires, liquid/solid waste material off-site arising from construction activities and from site offices, canteen and etc., and for disposal of demolition waste that cannot be recycled. Fires and burning of rubbish and waste on the Site will not be permitted, nor the burying of rubbish and waste. Particular care shall be taken in identification and safe disposal of hazardous materials (if any).

Relationships with Local Communities and Authorities

In siting and operating his facilities and in executing the Works, the Contractor shall, at all times, and to the extent possible, minimize the impact of his activities on existing communities. Where communities are likely to be affected by major activities such as the establishment of a camp or extensive road closure or bypassing, he shall liaise closely with the concerned communities and their representatives and, if so directed, shall attend additional meetings arranged by the Engineer to resolve issues and claims and minimize impacts on local communities. Any problems arising from his operations and which cannot be resolved by the

Contractor shall be referred to the Engineer. The Contractor shall be responsible for any compensation due to reinstatements necessary with respect to any damage caused by him to areas outside the Site and no separate payment will be made in this regard.

Cleaning-up

The Contractor shall at all times keep the construction area including storage area used by him free from accumulations of waste material or rubbish. Upon completion of construction, the Contractor shall leave the work and premises in a clean, neat and workmanlike conditions satisfactory to the Engineer.

MEASUREMENT AND PAYMENT

No separate measurement and payment shall be made for the Contractor's Construction Facilities. The entire cost thereof shall be included in the various pay items in the Bill of Quantities.

No separate measurement and payment will be made for the Care of Water During Construction operations. The cost of furnishing, constructing, maintaining, operating and removing of temporary drainage structure, pumping system and other dewatering devices necessary to keep construction operations free from water, shall be included in the various pay items in the Bill of Quantities for structures where such care of water is required.

GENERAL REQUIRMENTS

a. Occupational Safety and Health Program

Scope

This Section pertains to the environmental and safety provisions, requirements and conditions that shall govern during the execution of all civil works under this project.

General Conditions

The Contractor shall ensure compliance with the applicable environmental and safety regulations, as well as ECC conditions, during installation/construction of this project through the implementation of measures that include, but not limited to the following:

- a. Designate a Safety Officer and a Pollution Control Officer who shall respectively handle all safety and environmental concerns of the project.

- b. Prepare and submit Construction Safety Health Plan (CSHP)
- c. Properly manage debris and various waste generated during installation/construction, such as the following:
 - Dispose of demolition and construction debris in a designated or NPC approved disposal area(s);
 - Stockpile (and cover if possible) or haul to the designated and/or pre developed dump sites (spoil disposal areas) that shall be provided with suitable drainage-equipped with sediments traps, stripped top soil, spoils from quarry/borrow sites and excavated materials;
 - Segregate solid wastes, such as empty cement sacks, scraps of tin or wood, used wires and other domestic, garbage, for recycling or storage in NPC-approved temporary storage areas and further disposal to LGU-designated disposal sites
 - Properly handle, store and dispose off, through DENR-accredited transporter/treater, hazardous wastes i.e. used oils, paints, thinner, Etc.
- d. Limit construction activities that generate excessive noise to daytime works only to prevent nuisance to nearby residents during rest hours.
- e. As far as practicable, undertake site stripping, grading and excavation during dry weather.
- f. Construction/Installation shall be carried-out in a manner where landslides and erosions are minimized.
- g. Avoid unnecessary opening/clearing of areas outside construction sites or destruction of vegetable cover, especially cutting of existing trees; and to revegetate disturbed areas.
- h. Spray water, whenever and wherever necessary, to minimize dust generation,
- i. Provide PPE's and other safety provisions required by DOLE, for its project/site works.

Accident Prevention Officer; Accidents

Due precautions shall be taken by the Contractor, at his own cost, to ensure the safety and protection against accidents of all staff and labor engaged on the Works, local residents in the vicinity of the Works, and the public traveling through the Works. The Contractor shall have on his staff on Site a designated Safety Officer qualified to promote and maintain safe working practices. This Safety Officer shall have authority to issue instructions and shall take protective measures to prevent accidents, including but not limited to, the establishment of safe working practices and the training of staff and labor in their implementation.

The Contractor shall be responsible for all costs including medical treatment, transport, accommodation etc. incurred by any member of the public or his labor force whether on direct contract or sub-contract as a result of injuries or illness arising from the execution of the Works.

Protective Clothing and Safety Equipment

The Contractor shall, at his own expense, provide protective clothing and safety equipment to all staff and labor engaged on the Works to the satisfaction of the Engineer. Such clothing and equipment shall include, at a minimum, high visibility vests for workers directing traffic, protective footwear for workmen undertaking concrete mixing work, protective footwear and gloves for workmen performing paving works, dust masks, rubber boots, rain coats and otherwise as appropriate to the job on hand and to the Engineer's satisfaction.

Medical and First-Aid Facilities

The Contractor shall provide and maintain throughout the duration of the Contract, a medical examining room and sickbay together with all necessary supplies and equipment to be sited in the Contractor's main camp. The rooms shall be used exclusively for medical purposes and shall be of good quality construction with electric lighting and otherwise suitable for their purpose. The sickbay shall have at least one bed, and shall be provided with adjacent washing and sanitation facilities. The Contractor shall employ permanently on site at least one fully trained medical aide, nurse or paramedic who shall be engaged solely for medical duties. The Contractor shall, at his own expense, provide first aid equipment at all camps and work sites to the satisfaction of the Engineer, and shall ensure that at all camps and works sites where 20 or more persons are engaged on the Works there shall at all times be a person qualified in first-aid with access to appropriate first-aid equipment. The location of the medical room and other medical and first-aid arrangements shall be made known

to all employees by posting suitable notices at prominent locations around the site and by verbal instruction upon recruitment.

MEASUREMENT AND PAYMENT

Measurement and payment shall be made at the contract unit price or lot price as specified in the Bid Price Schedule. Payment shall include all cost in furnishing labor, materials, tools equipment and other incidentals necessary for the satisfactory implementation of these requirements.

TS – 02 CIVIL WORKS

C.W.1. Structural Excavation

Construction Requirements

General

Rock excavation shall consist of excavation of igneous, sedimentary and metamorphic rocks matrixes with soil or sandy silt, and all boulders or other detached stones each having a volume of one cubic meter or more as determined by physical measurements or visually by the field engineer, which can be excavated using jackhammer, hydraulic excavator backhoe, or hydraulic vibratory breaker/hammer.

To protect workers from injuries and fatalities, preventive measures should be implemented when workers begin excavating. General Safety measures : inspect trenches daily before work begins; don't go near an unprotected trench; check weather conditions before work, be mindful of rain and storms; keep heavy equipment away from trench edges; be mindful of the location of utilities underground. Always wear proper protective equipment; don't work beneath raised loads. Planning and implementation of safety measures must be done by a competent person.

All excavation shall conformed to the line and grade. It shall be finished to reasonably smooth and uniform surfaces and no material shall be wasted without authority of the NPC Engineer . All excavation shall be in accordance with the standard engineering practice. The above mention project shall be furnish only with the approved drawing.

All excavated materials, so far as suitable, shall be utilized as backfill or embankment. The surplus materials shall be disposed of in such manner as not to obstruct otherwise impair the efficiency or appearance of the structure. No excavated materials shall be deposited at any time so as to endanger the partly finished structure.

All excavations shall be finished to reasonably smooth and uniform surfaces. No materials shall be wasted without authority of the Engineer. Excavation operations shall be conducted so that material outside of the limits of slopes will not be disturbed.

Conserving Top Soil

Suitable topsoil encountered in excavation and on areas where embankment is to be placed shall be removed to such extent and to such depth as the Engineer may direct. The removed topsoil shall be transported and deposited in storage piles at locations approved by the Engineer. The topsoil shall be completely removed to the required depth from any designated area prior to the beginning of regular excavation or embankment work in the area and shall be kept separate from other excavated materials for later use.

Utilization of Excavated Materials

All suitable material removed from the excavation shall be used in the formation of the embankment, subgrade, shoulders, slopes, bedding, and backfill for structures, and for other purposes shown on the Plans or as directed.

The Engineer will designate as unsuitable those soils that cannot be properly compacted in embankments. All unsuitable material shall be disposed off as shown on the Plans or as directed without delay to the Contractor.

Only approved materials shall be used in the construction of embankments and backfills. All excess materials, including rock and boulders that cannot be used in embankments shall be disposed off as directed.

MEASUREMENT AND PAYMENT

Measurement and payment shall be made at the contract cubic meter (cu.m.) price as specified in the Bid Price Schedule. Payment shall include all cost in furnishing labor, materials, tools equipment and other incidentals necessary for the satisfactory implementation of these requirements.

C.W.2. Sand and Gravel Bedding

Description

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

Material Requirements

Aggregate for subbase shall consist of hard, durable particles or fragments of crushed slag, or crushed or natural gravel and filler of natural or crushed sand or other finely divided mineral matter. The composite material shall be free from vegetable matter and lumps or balls of clay, and shall be of such nature that it can be compacted readily to form a firm, stable subbase.

Exceptional Case (only upon approval of NPC Engineer) - In some areas where the conventional base course materials are scarce or non-available, the use of 40% weathered limestone blended with 60% crushed stones or gravel shall be allowed, provided that the blended materials meet the requirements of this Item.

The subbase material shall conform to Table 200.1, Grading Requirements.

Sieve Designation		Mass Percent Passing
Standard, mm	Alternate US Standard	
50	2"	100
25	1"	55 - 85
9.5	3/8"	40 - 75
0.075	No. 200	0 - 12

The fraction passing the 0.075 mm (No. 200) sieve shall not be greater than 0.66 (two thirds) of the fraction passing the 0.425 mm (No. 40) sieve. The fraction passing the 0.425 mm (No. 40) sieve shall have a liquid limit not greater than 35 and plasticity index not greater than 12 as determined by AASHTO 89 and T 90, respectively. The coarse portion, retained on a 2.00 mm (No. 10) sieve, shall have a mass percent of wear not exceeding 50 by Los Angeles Abrasion Tests as determined by AASHTO T 96.

The material shall have a soaked CBR value of not less than 25% as determined by AASHTO T 193. The CBR value shall be obtained at the maximum dry density and determined by AASHTO T 180, Method D.

Placing

The aggregate subbase material shall be placed at a uniform mixture on prepared subgrade in quantity which will provide the required compacted thickness. When more than one layer is required, each layer shall be shaped and compacted before the succeeding layer placed.

MEASUREMENT AND PAYMENT

Measurement and payment shall be made at the contract cubic meter (cu.m.) price as specified in the Bid Price Schedule. Payment shall include all cost in furnishing labor, materials, tools equipment and other incidentals necessary for the satisfactory implementation of these requirements.

C.W. 3 Concrete (6000 PSI)

Description

The work to be undertaken under this Section shall include all labor, materials, equipment, plant and other facilities and the satisfactory performance of all work necessary to complete all reinforced concrete work shown on the drawings and specified herein.

Material

a) Cement

Except as maybe otherwise provided in these specifications, cement shall conform to the "Specification for Portland Cement" (ASTM C 150 - Latest Revision) and shall be Type I

b) Concrete Aggregates

1.) Concrete aggregates shall be well graded, clean, hard particles of gravel or crushed rock conforming with the "Standard Specifications for Concrete Aggregates (ASTM C - 33 Latest Revision).

2.) The maximum size of the aggregates shall not be larger than one-fifth (1/5) of the narrowest dimension between form and not larger than three fourth (3/4) of the minimum clear spacing between individual reinforcing bars or bundles of bars, and in no case larger 5.1 cm (2 in) in diameter except that larger diameter may be allowed in massive concreting with written permission from the Engineer.

c) Water

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

d) Reinforcing Steel

All reinforcing steel bars used shall be new and free from rust, oil, defects, greases or kinks. They shall conform to the latest edition of ASTM "SPECIFICATIONS FOR DEFORMED STEEL BARS FOR CONCRETE REINFORCEMENT" Grade 40 as shown or latest equivalent Philippine Bureau of Standard Specifications, Deformed Steel Bars shall have the following unit weights:

SIZE (mm)	Kg/m	SIZE (mm)	Kg/m
6	0.222	20	2.466
8	0.395	25	3.854
10	0.616	28	4.833
12	0.888	32	6.313
16	1.579	36	7.991

e) Admixture:

To increase concrete workability and to control the set of concrete, the engineer can request that an admixture maybe added subject to his approval and it shall be borne by the Contractor.

Water – reducing admixtures, retarding admixtures, accelerating admixtures, water-reducing and retarding admixtures, and water reducing and accelerating admixtures shall conform to "Specification for Chemical Admixtures for Concrete" (ASTM C494). Other admixtures required for specific construction conditions and conforming to ASTM (C494) "Standard Specification for Chemical Admixtures for Concrete" maybe incorporated in separate concrete design mixes and submitted to the responsible engineer for approval prior to their use.

Storage of Materials

Cement and aggregates shall be stored in such a manner as to prevent deterioration or intrusion by foreign matter. Any material which has deteriorated or which has been damaged shall not be used for concrete. Steel shall be stored under cover or otherwise prevented from rusting.

Testing of Materials

Cement and aggregates shall be stored in such a manner as to prevent deterioration or intrusion by foreign matter. Any material which has deteriorated or which has been damaged shall not be used for concrete. Steel shall be stored under cover or otherwise prevented from rusting.

The Owner or his duly authorized representative or the Engineer shall periodically order the test of any material supplied by the Contractor entering into concrete or reinforced concrete to determine its suitability for the intended purpose. Such tests shall be in accordance with the standards of the American Society for Testing and Materials, as noted elsewhere in these specifications. Samples shall be provided by the Contractor without cost to the Owner. Expenses for the testing and cost of transporting samples to testing

laboratory shall be borne by the Contractor. Copies of results of tests shall be furnished to the Owner promptly. Compressive strength specimens for tests of concrete during construction shall be according to "Making and Curing of Concrete Compression and Flexural Strength Test Specimens in the field" (ASTM C-31).

Controlled Strength of Concrete

- 1.0.1 Concrete for structural elements shall develop a minimum 28-day compressive cylinder strength of (6,000 psi), unless otherwise specified in the plans.
- 1.0.2 Concrete for non-structural elements such as cradles, unreinforced encasements, thrust blocks, and partition walls shall develop a minimum 28-day compressive cylinder strength of (6,000 psi), unless otherwise specified in the plans.
- 1.0.3 Test cylinders shall be prepared from the concrete samples and tested. At least one set of four (4) cylinder samples shall be made for each major structural member. Two (2) cylinders shall be tested at 28 days for specification compliance and one shall be tested at 7 and 14 days respectively for information. The acceptance test result shall be the average of the strength of the two cylinders tested at 28 days.
- 1.0.4 The compressive strength of the concrete shall be deemed acceptable if the averages of the three consecutive strength test results is equal to or exceeds the specified strength and no individual test falls below the specified strength by more than 6000 PSI. The compressive strength of the concrete shall be deemed acceptable if the averages of the three consecutive strength test results is equal to or exceeds the specified strength and no specified strength by more than 6000 PSI.
- 1.0.5 Concrete deemed to be not acceptable using the above criteria may be rejected unless the Contractor can provide evidence, by means of core tests, that the quality of concrete represented by the failed test result is acceptable in place. Three (3) cores shall be taken in accordance with ASTM C42 and soaked for 24 hours prior to testing. Concrete in the area represented by the cores will be deemed acceptable if the average strength of the cores is equal to at least 85% of and no single core is less than 75% of the specified strength.

Method of Determining Strength Trial Batch

The Contractor shall submit design mixed and test results of samples made in accordance with "Standard Method of Making and Curing Concrete Compression and Flexure Test Specimens In the Laboratory" (ASTM C-192 Latest Revision) and "Standard Method of Test for Compressive Strength of Molded Concrete Cylinders" (ASTM Designation C-39) for each strength required, stating the proposed slump and the proportional weights of cement, saturated surface dry aggregates, and water. These mixes shall be proved by the preliminary tests thirty (30) days before concreting and shall show a 28 day strength of fifteen percent (15%) higher than the ultimate strength required. No substitution shall be made in the materials or mixed without additional tests to show that quality of concrete is satisfactory.

Concrete Proportion and Consistency

The proportions of aggregate to cement for any concrete shall be such as to produce a mixture which will work readily into the corners and angles of the forms and around reinforcement with the method of placing employed on the work but without permitting the materials to segregate, or excess free water to collect on the surface. The combined aggregates shall be of such composition of sizes that when separated on the No. 4 standard sieve, the weight passing the sieve (fine aggregate) shall not be less than thirty percent (30%) of the total except that these proportions do not necessarily apply to lightweight aggregates.

The methods of measuring concrete materials shall be such that proportions can be accurately controlled and easily checked at any time during the work. Measurement of materials for ready-mixed concrete shall conform with the "Standard Specifications for Ready mixed Concrete" (ASTM C-94, Latest Revision) where applicable.

- a. Aggregates shall be measured out by weight and to within one percent (1%). Cement shall conform to 40 kg (88 lb.) per bag and this is to be verified from time to time. Water shall be measured by weight or volume to within one and one half (1-1/2 %).
- b. The water shall in no case exceed 21.24 liters, and 25.67 liters (5.62 and 6.79 US gallons) per bag of cement for all concrete with specified strength of f'c respectively. Slumps shall be within the following limits:

Portion of Structure	Slump Millimeters	Inches
Columns and end supported beams, girders	50-100	2-4
Walls and thin Vertical sections	75-125	3-5

Footings, slabs on Grade and cantilevered beams and slabs	50-80	2-3
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Slumps shall be according to "Test of Slump for Portland Cement Concrete" (ASTM C-143).

- c. **Classification and Design Mixture.** The mixtures for all classes of concrete shall be designed by the Contractor and approved by ICWS to obtain the compressive strength at the age of twenty eight (28) days as specified below.

Class	Size of Maximum Dia. of Aggregate	Minimum Compressive Strength	Designated Size of aggregate
Y	1/2" (12.5mm)	6,000 psi	12.5mm to 4.75mm
AA	3/4" (19mm)	6,000 psi	19mm to 4.75mm
A	1-1/2" (37.5mm)	6,000 psi	37.5mm to 4.75mm
B	2" (50mm)	6,000 psi	50mm to 4.75mm
C	3" (75mm)	6,000 psi	75mm to 4.75mm

- d. **Cement Content.** The minimum cement content per cubic meter of concrete for the different classes or gradation of aggregates shall be in accordance with the following:

Class and Gradation of Aggregates	Minimum Cement Content
Y with 1/2"	400 kgs/cu.m
AA with 3/4"	400 kgs/cu.m
A with 1-1/2"	360 kgs/cu.m
B with 2"	600 kgs/cu.m
C with 3"	270 kgs/cu.m

Z with 3"	340 kgs/cu.m
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- e. Job mix adjustments on water content shall be allowed only with Engineer's permission and provided that cement is also added to maintain the original water cement ratio of the design mix.

Exclusion of Water

No concrete shall be placed in any structure until all water entering the space to be filled with concrete has been properly cut off or has been diverted by pipes, or other means, and carried out of the forms, clear of the work. No concrete shall be deposited under water without the explicit permission of the Engineer, and then only in strict accordance with his directions; nor shall the Contractor, without explicit permission allow still water to rise on any concrete until the concrete has attained its initial set. Water shall not be permitted to flow over the surface of any concrete in such manner and at such velocity as will injure the surface finish of the concrete. Pumping or other necessary dewatering operations for removing ground water, if required, will be subject to the approval of the Engineer

Mixing Concrete

No hand mixing shall be allowed, except in case of emergency such as mixer breakdown during pouring operations and shall stop at the first allowed construction joints. All concrete shall be machine mixed for at least 1 minutes after all materials including water are in the mixing drum.

The mixer shall be of approved size and type which will insure a uniform distribution of material throughout the mass, it shall be equipped with a device for accurately measuring and controlling amount of water in each batch.

Placing of material in mixer shall be done in such a way that first batch of concrete materials placed in the mixer shall contain sufficient excess of cement, sand and water to coat the inside of the drum without reducing the cement content of the mix to be discharged.

Retempering, i.e. , remixing with the addition of water to concrete that has been partially hardened shall not be permitted.

Preparation of Surfaces for Concreting

Earth surfaces shall be thoroughly wetted by sprinkling prior to the placing of any concrete, and these surfaces shall be kept moist by frequent sprinkling up to the time

of placing concrete thereon. The surface shall be free from standing water, mud, and debris at the time of placing concrete.

Concrete surfaces upon or against which concrete is to be placed, where the placement of the old concrete has been stopped or interrupted so that, in the opinion of the Engineer, the new concrete cannot be incorporated integrally with that previously placed, are defined as construction joints. The surfaces of horizontal joints shall be leveled with a wooden float to provide a reasonably smooth surface. A surface consisting largely of coarse aggregate shall be avoided. Except where the drawings call for joint surfaces to be painted, the joint surfaces shall be cleaned of all laitance, loose or defective concrete, and foreign material. Such cleaning shall be accompanied by sandblasting followed by thorough washing. All pools of water shall be removed from the surface of construction joints before the new concrete is placed. After the surfaces have been prepared to the satisfaction of the Engineer, all approximately horizontal construction joints shall be covered with a layer of mortar approximately 25mm (1") thick. The mortar shall have the same proportion of cement and sand as the regular concrete mixture, unless otherwise directed by the Engineer. The water-cement ratio of the mortar in place shall not exceed that of the concrete to be placed upon it, and the consistency of the mortar shall be suitable for placing and working in a manner hereinafter specified. The mortar shall be spread uniformly and shall be worked thoroughly into all irregularities of the surface, and wire brooms shall be used where possible to scrub the mortar into the surface. Concrete shall be placed immediately upon the fresh mortar.

When placing of concrete is to be interrupted long enough for the concrete to take a set, the working face shall be given a shape by the use of forms or other means that will secure proper union with subsequent work, provided that construction joints shall be made only where approved by the Engineer.

Placing of Concrete

Concrete which upon or before placing is found not to conform with the requirements specified herein shall be rejected and immediately removed from the work. Concrete which is not placed in accordance with these specifications, or which is of inferior quality, as determined by the engineer, shall be removed and replaced by and at the expense of the Contractor. No concrete shall be placed except in a presence of duly authorized representative of the Engineer. Concrete shall not be placed when unsuitable heat or wind will prevent proper placement and curing, as determined by the Engineer, prior to placing any concrete, the Contractor shall give the Engineer twenty four (24) hours written notice.

Concrete shall be deposited in its final position without segregation, re-handling, or flowing. Placing shall be done preferably with buggies, buckets, or wheelbarrows. No chutes will be allowed except to transfer concrete from hoppers to buggies,

wheelborrows, or buckets in which case, they shall not exceed six (6) meters (20') in aggregate length.

Placing of concrete with a free drop or fall more than 1.20m (4') shall not be allowed, except when approved by the Engineer and when approved sheet metal conduits, pipes or "elephant trunks" are employed. When employed, these conveyors shall be kept full of concrete and the ends kept buried in the newly placed concrete as pouring progresses.

Concrete in forms shall be deposited in uniform horizontal layers not deeper than 450mm (18") and care shall be taken to avoid inclined layers or inclined construction joints except where such care required for sloping members. Each layer shall be placed while the previous layer is still soft. The rate of placing concrete in forms shall not exceed 1.5 meters (5') of vertical rise per hour.

Forms

The Contractor shall provide forms to confine the concrete and shape it to the required lines. Plastering in general, shall not be allowed. The Contractor shall assume full responsibility for the adequate design fall forms and shall be smooth surface. However, forms which in the opinion of the Engineer are unsafe or inadequate in any respect may at any time be condemned by the Engineer; and the Contractor shall promptly remove the condemned forms from the work and replace them at his own expense. A sufficient number of forms of each kind shall be provided to permit the rate of progress to be maintained. Whenever in the opinion of the Engineer, additional forms are necessary to maintain the progress schedule such additional forms shall be provided by the Contractor at his own expense. The design and inspection of concrete forms, falsework, and shoring shall comply with applicable safety regulations, and as may be specified in the General Conditions of these specifications.

Materials

- a) Except as otherwise expressly approved by the Engineer, all lumber brought at the job site for use as forms, shoring, or bracing shall be new material.
- b) All forms shall be smooth surface forms and shall be of the following materials:

Walls	-	Steel or plywood panels
Columns	-	Steel, plywood or surfaced lumber
Roof	-	Plywood
All other work	-	Steel panels, plywood or surfaced lumber

Plywood shall be manufactured especially for concrete form work and shall be oiled with an approved form oil and edge sealed.

- a. Column forms shall be checked for plumbness before concrete is deposited. Hand holes shall be provided in column forms at lowest points of pour lifts to render this space accessible for cleaning.
- b. All girder, beam and slab centerlines shall be crowned at least 6.3mm (1/4in) in all directions for every 4.57 meters (15ft) span. However, cambers from all cantilevers shall be as indicated on the plans or obtained from the Engineer by the Contractor:
- c. The following are the tolerance limits for formwork:

1. Variation from plumb:

In line and surfaces of columns, piers, walls and risers:

In 3.05m (10ft)	6.3mm (1/4")
6.10m (20ft)	9.5mm (3/8")
12.20m (40ft) or more	19.0mm (3/4")

For exposed corner columns and/or piers, control joint grooves and other conspicuous lines:

In any bay 6.10m (20ft) max	6.3mm (1/4")
In 12.20m (40ft) or more	13.00mm (1/2")

2. Variation in cross-sectional dimensions of columns and piers, beams, and thickness of walls and slabs:

Minus	6.3mm (1/4")
Plus	13.00mm (1/2")

3. Footings

Variations in dimensions on drawings (applied to concrete only and not to reinforcing bars or dowels):

Minus	13.00mm (1/2")
Plus	50.00mm (2")

Misplacement of eccentricity, two percent (2%) of the footings width in the direction of misplacement but not to exceed 50.0mm (2").

Reduction in thickness	Five percent (5%) at specified thickness
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4. Variation in steps:

a) In a flight of steps

Rise	3.2mm (1/8")
Tread	6.3mm (1/4")

b.) In consecutive steps

Rise	1.6mm (1/16")
Tread	3.2mm (1/9")

When required for another work, or when requested by the Owner or his Engineer, the Contractor shall remove or relocate shoring; but existing shoring shall not be disturbed until new shores are set in position.

f. Design

- All forms shall be true in every respect to the required shape and size, shall conform to the established alignment and grade, and shall be of sufficient strength and rigidity to maintain their position and shape under the loads and operations incident to placing and vibrating the concrete. Suitable and effective means shall be provided on all forms for holding adjacent edges and ends of panels and sections tightly together and in accurate alignment so as to prevent the formation of ridges, fins, or offsets, or similar surface defects in the finished concrete. Plywood, 16.0mm (5/8") and greater in thickness, may be fastened directly to studding if the studs are close enough to prevent visible deflection marks in concrete. The forms shall be tight so as to prevent the loss of water, cement, and fines during placing and vibrating of the concrete. Adequate clean-out holes shall be provided at the bottom of each lift of forms. The size, number, and location of such cleanouts shall be subject to the approval of the Engineer.
- Concrete construction joints will not be permitted on locations other than those shown or specified, except as may be approved by the Engineer. When a second lift is placed on hardened concrete, special precaution shall not be taken in the way of the number, location, and tightening of ties at the top of the old lift and bottom of the new to prevent any

unsatisfactory effect whatsoever on the concrete. Pipe stubs and anchor bolts shall be set in the form where required.

3. Unless otherwise shown, exterior corners in concrete members shall be provided with 19.0mm (3/4") chamfers. Re-entrant corners in concrete members shall not have fillets unless otherwise shown.
4. Reservoir forms and falseworks supporting the roof slab shall be designed for a minimum additional live load of 0.90 Kpa (20psf).

g. Form Ties

Form ties with Integral water stops shall be provided with a cork or other suitable means for forming a conical hole to insure that the form-tie may be broken off back of the face of the concrete. The maximum diameter or removable cones for rod ties, or of other removable form-tie fasteners having a circular cross-section, shall not exceed 38mm (1-1/2") and all such fasteners shall be such as to leave holes of regular shape reaming. Holes left by the removal of fasteners from the ends of snap-ties or form-ties shall be reamed with suitable toothed reamers so as to leave the surfaces of the holes clean and rough before being filled with mortar as provided in Section 17.20. Wire ties for holding forms will not be permitted. No form tying device or part thereof, other than metal, shall be left embedded in the concrete, nor shall any tie be removed in such manner as to leave a hole extending through the interior of the concrete member. The use of snap-ties which cause spalling of the concrete upon form stripping or tie removal will not be permitted. If steel panel forms are used, rubber grommets shall be provided where the ties pass through the form in order to prevent loss of cement paste. Where metal rods extending through the concrete are used to support or to strengthen forms, the rods shall remain embedded and shall terminate not less than 25mm (1in) back from the formed face or faces of the concrete. Form ties or metal rods left embedded in concrete of water retaining tanks shall be equipped with an Integral metal waterstop not less than 38mm(1-1/2") in diameter.

h. Vertical Surfaces

All vertical surfaces of concrete members shall be formed, except where placement of the concrete against the ground is called for on the drawings or explicitly authorized by the Engineer. Not less than 25mm (1") of concrete shall be added to the thickness of the concrete member as shown where concrete is permitted to be placed against trimmed ground in lieu of forms. Such permission will be granted only for members of comparatively limited

height and where the character of the ground is such that it can be trimmed to the required lines and will stand securely without caving or sloughing until concrete has been placed.

i. Maintenance of Forms

Forms shall be maintained at all times in good condition, particularly as to size, shape, strength, rigidity, tightness, and smoothness of surface. Forms when in place, shall conform to the established alignment and grades. Before concrete is placed, the forms shall be thoroughly cleaned. The form surfaces shall be treated with a non-staining mineral oil or other lubricant approved by the Engineer. Any excess lubricant shall be satisfactorily removed before placing the concrete. In addition, all forms shall be given a preliminary oil treatment by the manufacturer or shall be oiled by the Contractor at least two (2) weeks in advance of their use. Care shall be exercised to keep oil off the surfaces of steel reinforcement and other metal items to be embodied in concrete. Forms may be reused if in good condition and if approved by the Engineer. Light sanding between uses will be required wherever necessary in the opinion of the Engineer to obtain uniform surface texture on all exposed concrete surfaces. Exposed concrete surface are defined as surfaces which are permanently exposed to view. In the case of forms for the inside wall surfaces of hydraulic structures, unused tie rod holes shall be covered with metal caps or shall be filled by other methods approved by the Engineer.

j. Removal of Forms

Directions of the Engineer concerning the removal of forms shall be strictly followed. Forms and shoring shall not be removed until concrete is adequately set and strong enough to withstand anticipated loading and this work shall be done with care so as to avoid injury to the concrete. No heavy loading on green concrete will be permitted. In the case of roof slabs and above-ground floor slabs, forms shall remain in place until test cylinders for the roof concrete attain a minimum compressive strength of 15.52 MPa (2,250 psi) provided that no forms shall be disturbed or removed under an individual panel or unit before the concrete in the adjacent panel or unit has attained a strength of 15.52 MPa (2,250 psi) and has been in place for a minimum of even (7) days. The time required to establish said strength will be determined by the Engineer who will make several test cylinders for this purpose from concrete used in the first group of roof panels placed. If the time so determined is more than the seven-day minimum, then it shall be used as the minimum length of time. Forms for all vertical walls and columns shall remain in place at least three (3) days after the concrete has been placed. Forms for all parts of the work not specifically mentioned herein shall remain in place for periods of time as ordered by the Engineer.

Tamping and Vibrating

As concrete is placed in the forms or in excavations, it shall be thoroughly settled and compacted throughout the entire depth of the layer which is being consolidated, into a dense, homogeneous mass, filling all corners and angles, thoroughly embedding the reinforcement, eliminating rock pockets, and bringing only a slight excess of water to the exposed surface of concrete during placement.

Care shall be used in placing concrete around waterstops. The concrete shall be carefully worked by rodding and vibrating to make sure that all air and rock pockets have been eliminated. Where flat-strip type waterstops are used, the concrete shall be worked under the waterstops are used, the concrete shall be worked under the waterstops by hand making sure that all air and rock pockets have been eliminated.

Concrete in wall shall be internally vibrated and at the same time rammed, stirred, or worked with suitable appliances, tamping bars, shovels, or forked tools until it completely fills the forms or excavations and closes snugly against all surfaces. Subsequent layers previously placed have been worked thoroughly as specified. Except in special cases where their use is deemed impracticable by the Engineer, the Contractor shall use internally vibrated, high speed power vibrators not less than 8000 rpm of an approved immersion type in sufficient numbers, with standby units as required, to accomplish the results herein specified within fifteen (15) minutes after concrete of the prescribed consistency is placed in the forms. The vibrating head shall be kept from contact with the surfaces of the forms. Care shall be taken not to vibrate concrete excessively or to work it in any manner that causes segregation of its face.

Care and Repair of Concrete

The Contractor shall protect all concrete against injury or damage from excessive heat, lack of moisture, over stress, or any other cause until final acceptance by the Owner. Particular care shall be taken to the drying of concrete and to avoid roughening or otherwise damaging the surface. Any concrete found to be damaged or which may have been originally defective at any time prior to the final acceptance of the complete work, or which departs from the established line or grade, or which for any other reason does not conform with the specifications shall be satisfactorily repaired or removed and replaced with acceptable concrete at the Contractor's expense.

Finish of Concrete Surface

All finished or formed surfaces shall conform accurately with the shape, alignment, grades and sections as indicated on the plans or as prescribed by the Engineer. Surfaces shall be free from fins, bulges, ridges, offsets, honeycombing, or roughness of any kind, and shall present a finished, smooth, continuous hard surface.

Except as otherwise provided herein, unformed top surfaces of concrete shall be brought to uniform surfaces and worked with suitable tools to a reasonably smooth woodfloat finish. Excessive floating of surfaces while the concrete is plastic will not be permitted. All surfaces shall be placed monolithically with the base slab. Dusting of dry cement and sand on the concrete surface to absorb excess moisture will not be permitted. Floor slabs and exposed tops of walls and curbs shall be given a steel trowel finish. At the Contractor's option, the above mentioned floor slabs may be finished with a power float after screeding. Subsequent to the aforementioned finish, all sloping surfaces of floor slabs shall be lightly boomed to provide a skid resistant surface.

Treatment of Surface Defects

As soon as forms are removed, all exposed surfaces shall be carefully examined and any irregularities shall be immediately rubbed or ground in a satisfactory manner in order to secure a smooth, uniform, and continuous surface. Plastering or coating of surfaces to be smoothed will not be permitted. No repairs shall be made until after inspection by the Engineer, and then only in strict accordance with his directions. Concrete containing voids, holes, honeycombing, similar depression defects shall be completely removed and replaced; provided that where required or approved by the Engineer, defects shall be repaired with gunite or with cement mortar placed by an approved compressed air mortar gun. In no case will extensive patching of honeycombed concrete be permitted. All repairs and replacements herein specified shall be promptly executed by the Contractor at his own expense.

Depositing Concrete

Depositing:

Depositing shall be done without segregation, remanding or flowing of concrete. It shall be done with the use of buggies, buckets or wheelbarrows. Use of chutes will not be allowed except to transfer concrete from hoppers to buggies, wheelbarrows or buckets in which case shall not exceed 20 feet in aggregate length placing of concrete with a free drop of fall of more than 5 feet are not allowed. Conveyors when used shall be kept full of concrete and ends shall be kept buried in the newly placed concrete as pouring progresses.

Vibrations:

No placing of concrete will be allowed without vibrators. Segregation due to over vibration shall be avoided.

Construction Joints:

If possible concreting shall be done continuous until section is complete. When stoppage of concrete operations occur, construction joints shall be placed either horizontally or vertically as indicated by the Engineer and provided with shear keys or dowels to develop bond. Construction joints shall be per plan or shall be approved or as directed by the Engineer.

MEASUREMENT AND PAYMENT

Measurement and payment shall be made at the contract cubic meter (cu.m.) price as specified in the Bid Price Schedule. Payment shall include all cost in furnishing labor, materials, tools equipment and other Incidentals necessary for the satisfactory implementation of these requirements.

C.W.4. Reinforcing Steel Bars**Description**

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

Material Requirements Reinforcing steel shall conform to the requirements of the

Deformed Billet-Steel Bars For Concrete Reinforcement	AASHTO M 31 (ASTM A 615)
Deformed Steel Wire For Concrete Reinforcement	AASHTO M 225 (ASTM A 496)
Welded Steel Wire Fabric For Concrete Reinforcement	AASHTO M 55 (ASTM A 185)
Cold-Drawn Steel Wire For Concrete Reinforcement	AASHTO M 32 (ASTM A 82)
Fabricated Steel Bar or Rod Mats For Concrete Reinforcement	AASHTO M 54 (ASTM A 184)
Welded Deformed Steel Wire Fabric of Concrete Reinforcement	AASHTO M 221 (ASTM A 497)
Plastic Coated Dowel Bars	AASHTO M 254 Type A
Low Alloy Steel Deformed Bars For Concrete Reinforcement	ASTM A 206

following Specifications:

Bar reinforcement for concrete structures, except No.2 bars shall be deformed in accordance with AASHTO M 42, M 31 and M 53 for Nos. 3 through 11.

Dowel and tie bars shall conform to the requirements of AASHTO M 31 or AASHTO M 42 except that rail steel shall not be used for the bars that are to be bent and restraightened during construction. Tie bars shall be deformed bars. Dowel bars shall be plain round bars. They shall be free from burring or other deformation restricting slippage in the concrete. Before delivery to the site of the work, a minimum of one half (1/2) the length of each dowel bar shall be painted with one coat of approved lead or tar paint/ The sleeves for dowel bars shall be metal of an approved design to cover 50 mm (2 inches), plus or minus 6.3 mm of the dowel, with a closed end, and with a suitable stop to hold the end of the sleeve at least 25 mm (1 inch) from the end of the dowel bar. Sleeves shall be of such design that they do not collapse during construction. Plastic coated dowel bar conforming to AASHTO M 254 may be used.

Construction Requirements

Order lists

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

Protection of Material

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

Bending

All reinforcing bars requiring bending shall be cold-bent to the shapes shown on the Plans or required by the Engineer. Bars shall be bent around a circular pin having the following diameters (D) in relation to the diameter of the bar (d).

Bends and hooks in stirrups or ties may be bent to the diameter of the principal bar enclosed therein.

Placing and Fastening

All steel reinforcement shall be accurately placed in the position shown on the Plans or required by the Engineer and firmly held there during the placing and setting of the concrete. Bars shall be tied at all intersections except where spacing is less than 300mm in each directions, in which case, alternate intersection shall be tied. Ties shall be fastened on the inside. Distance from the forms shall be maintained by means of stays, blocks, ties, hangers, or other approved supports, so that it does not vary from the position indicated on the Plans by more than 6mm. Blocks for holding reinforcement from contact with the forms shall be precast mortar blocks of approved shapes and dimensions. Layers of bars shall be separated by precast mortar blocks or by other equally suitable devices. The use of pebbles, pieces of broken stone or brick, metal pipe and wooden blocks shall not permitted. Unless otherwise shown on the Plans or required by the Engineer, the minimum distance between bars shall be 40 mm. Reinforcement in any member shall be placed and then inspected and approved by the Engineer before the placing of concrete begins. Concrete placed in violation of this provision may be rejected and removal may be required. If fabric reinforcement is shipped in rolls, it shall be straightened before being placed. Bundled bars shall be tied together at not more than 1,8m intervals.

Splicing

All reinforcement shall be furnished in the full lengths indicated on the Plans. Splicing of bars, except where shown on the Plans, will not be permitted without the written approval of the Engineer. Splices shall be staggered as far as possible and with a minimum separation of not less than 40 bar diameters. Not more than one-third of the bars may be spliced in the same cross-section, except where shown on the Plans.

In lapped splices, the bars shall be placed in contact and wired together. Lapped splices will not be permitted at locations where the concrete section is insufficient to provide minimum clear distance of one and one-third the maximum size of coarse aggregate between the splice and the nearest adjacent bar. Welding of reinforcing steel shall be done only if detailed on the Plans or if authorized by the Engineer in writing. Spiral reinforcement shall be spliced by lapping at least one and half turns or by butt welding unless otherwise shown on the Plans.

Lapping of Bar Mat

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

MEASUREMENT AND PAYMENT

Measurement and payment shall be made at the contract per kilograms (kgs.) price as specified in the Bid Price Schedule. Payment shall include all cost in furnishing labor, materials, tools equipment and other incidentals necessary for the satisfactory implementation of these requirements.

C.W.5. Construction of Grouted Riprap (Class A)**Piling Of Boulders, Grouting And Plastering**

In accordance with the specifications contained in this section, the Contractor shall furnish all materials, labor, equipment and tools and perform all works from the construction of Fully-Grouted Hand Laid Rock Riprap and/or Stone Masonry, when required and as may be applicable in accordance with the drawings, or as otherwise directed/required by NPC.

Materials**Boulders**

Some large boulders are scattered within the vicinity area which can be utilized, provided however, that these boulders are of no use. The Contractor shall furnished the remaining volume of large boulders needed for the completion of the works.

The Contractor shall supply and install sizes of 6" – 12" dia. and 12" – 20" dia. of boulders or as shown on the approved drawing. The Boulders shall be carefully picked and arranged so that adjacent rock surfaces match within the top elevation and along the vertical exposed face or channel side of rock.

Prior to placing the grout, any type of debris, fines, smaller rock, or silt shall be removed from around or under and on the boulders.

Grout Placement shall begin at the bottom of the lowest boulder and proceed upward to ensure no air voids exist between the grout, sub-base and boulders.

Grouted boulders shall be placed at the location as shown on the approved drawings.

Cobblestone

Small boulders considered to be cobblestones are to be furnished and placed. Cobblestones shall consist hard, durable and selected stones free from seams, weathered parts, dirt or any other injurious material that may prevent the proper adhesion of the mortar. Minimum size shall be 10 centimeter id diameter or 0.0005 cubic meter. Stones placed beside the boulders shall be equal or less than the size in volume with the exception that smaller rocks maybe used for pinning and for filling the interstices or voids between them.

Mortar for Stone Masonry Works

This part deals with the proportion, mixing and transportation of the mortars to be used for the grouted rip-rap and other relevant stone masonry works.

Materials

1. Portland Cement – shall be furnished by the Contractor

2. Sand – Coarse and fine Sand shall consist of hard, tough, durable, uncoated particles acceptable to NPC. All foreign materials and dust shall be removed by processing.

3. Water – Water for mortar shall be free from oil, acid, alkali, vegetable matter or other deleterious substances and shall be reasonable clear and clean.

Proportioning

The mortars shall be proportioned by volume as specified in the following table:

Class of Mortar	Portland Cement	Hydrated Lime	Sand
A	1 PART	-	2 PARTS
B	1 PART	-	3 PARTS
C	1 PART	1/2 PART	3 PARTS
D	1 PART	1 1/2 PART	3 PARTS

The method of measuring materials for the mortar shall be such that the specified proportions of the mortar materials can be controlled and accurately maintained during the progress of the work.

The quantity of water shall be necessary one to obtain a satisfactory workability for the specific use of each mortar.

Mixing

The mortar shall be mixed for a minimum of 2 minutes in a mechanically operated drum type mixer approved by NPC.

The mixer shall be rotated at the speed recommended by the manufacturers and the total quantity of materials mixed in any batch shall not exceed the rated capacity of the mixer.

The gauged amount of water shall be gradually introduced into the mixer, partly before the loading of the dry materials and partly immediately after the loading of the same has been completed.

The entire content of the drum shall be discharged before a new cycle of batching is started, and at all times, the inside of the drum shall be kept free from build-up of materials. The mixer drum shall be thoroughly cleared-up prior to change of mix or on cessation of mixing.

Hand-mixing for small batches is permissible provided that the mortar is mixed up to the degree obtained with the mechanically operated mixer. If hand mixing of the mortar is permitted by NPC, the fine aggregates and cement shall be mixed dry in a tight box until the mixture assumes a uniform color, after which, water shall be added as the mixing continues.

Placing

Stone shall be thoroughly wetted before placing and shall be laid by hand in full mortar beds, in courses approximately horizontal both in longitudinal and transverse directions. Stones will not be considered to be properly bedded until mortar exudes from the underside of the bedded stones. No voids in any part of the riprap will be permitted.

Transportation

The equipment and the tools for transportation and for placing batched mortar shall ensure that contamination or loss of ingredients do not take place.

Weep holes

Install three (3) rows of 4" diameter PVC Pipe S-1000 spaced at 1.50 meter center to center along the grouted riprap which will serve as weep holes.

Geotextile Filter Fabric

Usually placed beneath riprap to maintain separation from underlying soils. Also, geotextile filter fabric is necessary within stream channels to avoid loss of fine-grained soils. In particular, use geotextile filter fabric at the inlet and outlet of culverts, where turbulence is normally expected. The equivalent opening size (EOS) of a geotextile filter fabric is typically between US standard sieve size No. 40 and No. 70 for use with most soils. The minimum recommended size for a geotextile filter fabric is No. 100, intended for use with fine-grained silts and clays. The geotextile filter fabric should be

anchored securely using anchor trenches, stakes, staples, sewing or a combination of methods.

MEASUREMENT AND PAYMENT

Measurement and payment shall be made at the contract per cu.m. (cu.m.) price as specified in the Bid Price Schedule. Payment shall include all cost in furnishing labor, materials, tools equipment and other incidentals necessary for the satisfactory implementation of these requirements.

C.W.6. Guard Rail

General

This specification covers the furnishing and supply of materials including equipment, and performing labor necessary to complete the installation of additional 2" x 4" x 1.20mm thk. C-purlin Railings as shown on drawings and as specified herein.

Material

1. All materials shall be A36 steel unless otherwise noted in the Plans.
2. All arc-welding electrodes shall conform to the requirements of the American Welding Society "SPECIFICATIONS FOR IRON AND STEEL ARC- WELDING ELECTRODES" latest edition.

WORKMANSHIP

a. Connections

1. Shed connections shall be welded unless otherwise indicated in the Plans. All connections shall develop full strength of members.
2. Horizontal and diagonal brace shall be connected to Angle Bars to support the frame.

3. Unless otherwise specified or shown on Plans, roofing sheets shall be 1mm thick x 1200mm x 2440mm provided in long span sizes to minimize end lapping.
4. Sheets shall weigh not less than 0.888kg/m and shall be marked or stamped showing the thickness, size, amount of zinc coating, brand and name of manufacturer.
5. Test specimens shall stand being bent through 180 degrees flat on itself without fracture of the base metal and without flaking of the zinc coatings.

b. Workmanship and Fabrication

1. Workmanship and fabrication shall be in accordance with AISC "Specification for Fabrication and Erection of Structural steel for Buildings" and with the following outline.
2. Bearing surfaces shall be planned to true beds. Abutting surfaces shall be closely fitted.
3. All columns and bearing stiffeners shall be milled to give full bearing over the cross section. It shall not be necessary to plane bottom surfaces of plate on grout beds.
4. Assembled parts shall be brought into close contact, and drift pin shall be used only for bringing members into position, not to enlarge or distort holes.

c. Welding

1. Welding in shop and field shall be done by operators having been previously qualified by test prescribed in the American Welding society "Standard Qualification Procedure" to perform the type of work required.
2. Equipment shall be of the type, which produce proper current so that operator may produce satisfactory welds. The welding machine shall be of 200 - 400 amperes, 200 -240 volts capacity.
3. Unless otherwise shown on the Plans, the following low hydrogen electrodes shall be used and shall be suitable for positions and other

conditions of intended use in accordance with the instruction with each container.

<u>Welding</u>	<u>Electrode</u>	<u>Submerged Arc Process</u>
A-7 to A-7	E - 60 Series	Grade SAW-2
A-7 to A-36	E - 70 Series	Grade SAW-2
A-36 to A-36	E - 70 Series	Grade SAW-2

1. The technique of welding employed, the appearance and quality of welds made, and the methods of correcting defective work shall conform to the American Welding society code for arc welding in Building Construction, "Section 4, and Workmanship.
2. Surfaces to be welded shall be free from loose scale, rust, grease, paint and other foreign material except that mill scale, which withstands vigorous wire brushing, may remain
3. Finish members shall be true to line and free from twists, bends and open joints.

MEASUREMENT AND PAYMENT

Measurement and payment shall be made at the contract linear meter (l.m.) price as specified in the Bid Price Schedule. Payment shall include all cost in furnishing labor, materials, tools equipment and other incidentals necessary for the satisfactory implementation of these requirements.

C.W.7. Painting Works

General

The work to be executed under this section shall provide all labor, materials, and equipment and perform all operations necessary for all painting work specified including Removing of Rust by application of Rust Converter for Existing Steel Bridges, Application of Primer Paint before Repainting and Repainting Activities.

Inspection of Surfaces

Before starting the work, the Contractor shall inspect all surfaces to be painted. If the surfaces cannot be put in proper condition to receive paint by customary cleaning methods or sanding or sparking, the Contractor shall notify the NPC representative in writing. The commencing of the work by the Contractor indicates his acceptance of the surfaces to be painted and assumes responsibility for the rectification of any unsatisfactory finishing, resulting from his negligence.

MATERIALS

All paint materials shall meet the requirements of the Philippine National Standard Specifications for Paintings. Paint to be used shall be odorless

Paints shall be brought to the Site in tightly closeable, convenient, original containers, if nothing to the contrary is stipulated in the Specifications. The containers shall be marked in a durable manner with the following particulars:

- Maker
- Paint and relevant thinner
- Gross and net weights
- Date of supply by the maker's factory

Only thinners supplied by makers of the paint or those described by them as suitable shall be used for adjusting paints to working consistency. The instructions of the maker shall be followed in this respect.

With the exception of ready-mixed materials in original containers, all mixing shall be done at the job site. No materials are to be reduced or changed except as specified by the Manufacturer of said materials.

All paints shall be epoxy paint or approved equivalent and should be environment friendly and odorless. Sample of paint to be used shall be brought to end-user's office for approval before it will be used at site.

Colors and Samples

All colors shall be subject to the approval of the NPC representative. Tinting of matching colors shall be done under the supervision of the NPC representative. In all cases, a sample shall be applied on the job and the NPC Representative must give his approval before work is commenced. If required, three panels, 200mm x 250mm

(8"x 10") of each color and finish shall be prepared in advance, for the approval of the NPC Representative

WORKMANSHIP

All work shall be done by skilled painters in a workmanlike manner. All paints shall be evenly applied so as to be free from sags, runs, crawls or other defects. All painting materials shall be meet the requirements of stress and shall be in accordance with the relevant standards. All coatings shall be of proper consistency and well brushed out so as to show the minimum of brush marks, except varnish and enamel which shall be uniformly flowed on. All brushes shall be clean and in good condition, with heavy brushes preferred. Light brushes shall not be permitted.

a. Paint Application

1. Materials which are subject to working instructions, shall be treated according to these instructions, unless stipulated differently by the relevant paint manufacturer:
2. Paint, gloss and coating may be worked manually or by machines, unless a particular execution has been stipulated in the Specifications.
3. Paint, gloss and coat shall be bond firmly and be of even surface without scars and strips.
4. The surface shall be smooth, if not otherwise stipulated in the Specifications, such as finely or coarsely granulated.
5. Any paint, gloss or coating shall be applied without filling to create a uniform surface or when gloss is being applied, a flowing surface with the required materials according to instructions manuals, of white or light shade, unless otherwise stated in the Specifications.
6. Top finish shall be high-gloss, unless otherwise stated in the Specifications.
7. If flat levels are to be formed, the prime coated surfaces shall be completely being covered with suitable undercoat filler ribbed and smoothed.
8. Primer protective coating shall be applied on woodwork according to manufacturer's instruction. If several coats are requested, the preceding coat shall be dried before applying the subsequent one. This does not apply for wet-on-wet techniques.

9. Drying periods prescribed by the manufacturer shall be observed, for open surfaces, as well as for edges or irregular surfaces. All edges at doors, windows, skirting, sockets, etc. shall be of sharp and straight line.
10. New concrete and masonry surfaces must be thoroughly neutralized either by brush or spray with a solution of 2kg of zinc sulfate to each gallon of water.
11. When applying paints by spray-gun, the object to be sprayed shall not be contaminated by water or oil in the compressed air.
12. In paint systems involving coats, the various coats of paints shall be distinguishable from each other by their shade.
13. All coats of paint shall be applied only to clean, dry and non-greasy surfaces. In multi-coat paint systems, the coat last applied shall always be sufficient dry, free from any superficial moisture and from dust and dirt before applying the next coat; only when using the moist oil type of paints may it be necessary for the previous coat to be hard dry.
14. The Contractor shall inform the NPC representative in good time before starting to apply the next coat so that the NPC representative shall have the opportunity of approving the previous coat.
15. Painting work shall not be carried out at a temperature below +5 °C and above 50 °C. In addition, painting work shall not be carried out on surface affected by the action of rain, for and moisture or water of condensation; work started on such surfaces may not be continued until the surfaces to be painted are completely dry.

MEASUREMENT AND PAYMENT

Measurement and payment shall be made at the contract per square meter (sq.m.) as specified in the Bid Price Schedule. Payment shall include all cost in furnishing labor, materials, tools equipment and other incidentals necessary for the satisfactory implementation of these requirements.

CLEARING AND DEMOBILIZATION

Before moving out, the contractor shall restore the orderly state of worksite by clearing all temporary structures. Remove all excess/waste materials and store in designated areas.

Before the Contractor will demobilize its construction equipment/ tools, materials and crew, he shall secure approval from NPC security office for the release of the contractor's equipment and to surrender the workers identification (I.D) cards. A joint inspection with the NPC inspector and Contractor will be conducted to make sure that all his accomplishment / work that needs remedial attention or correction shall be done prior to the issuance of the Certificate of Completion. The Certificate of Completion will serve as basis for the processing of payments.

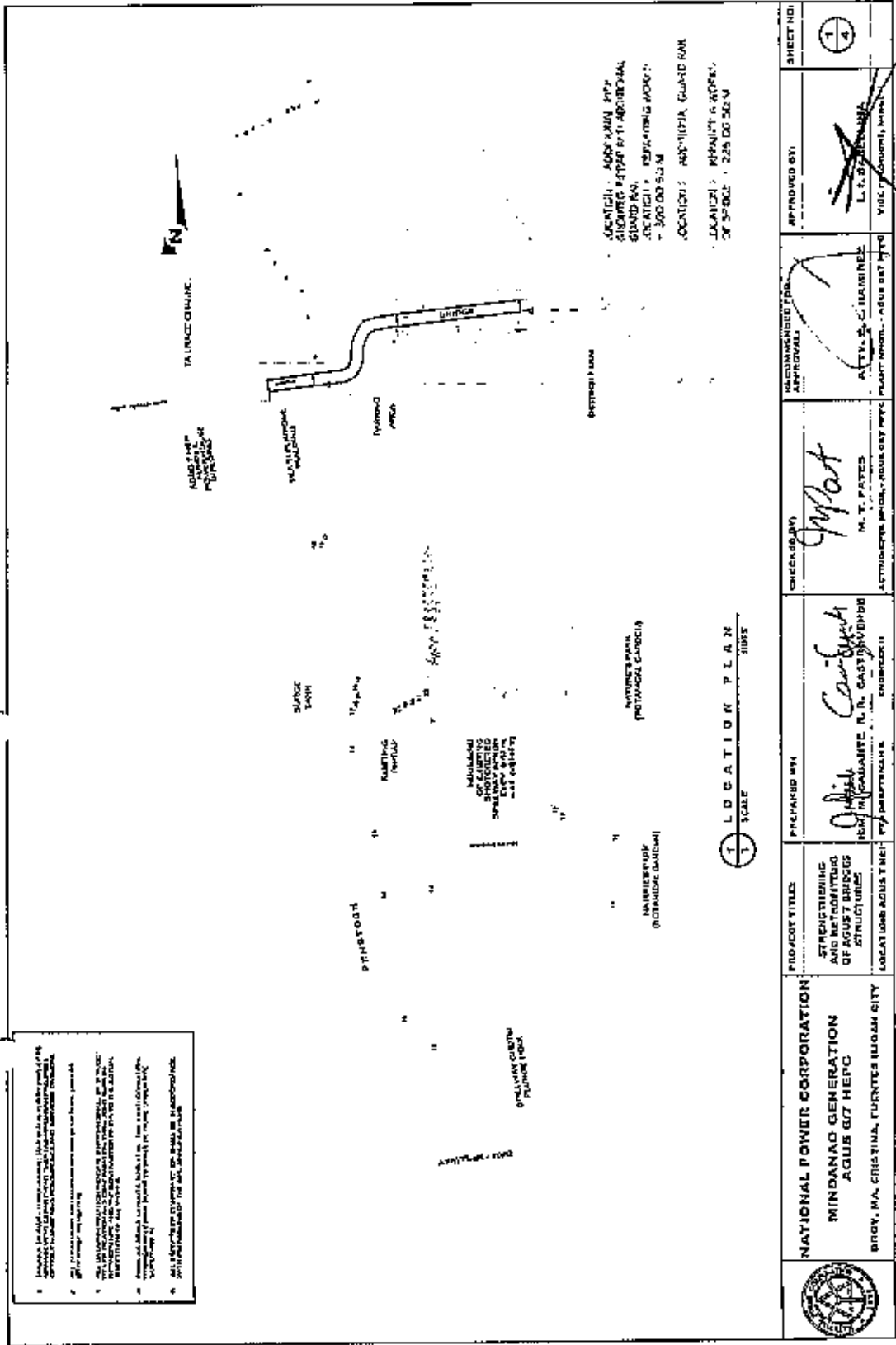
Section VII. Drawings

SHEET NO. 1/4 – LOCATION PLAN

**SHEET NO. 2/4 – PERSPECTIVE, TYP. LAYOUT PLAN, SECTION A-A, SECTION
B-B, SECTION C-C**

SHEET NO. 3/4– GROUTED RIPRAP, SECTION D-D , SECTION E-E

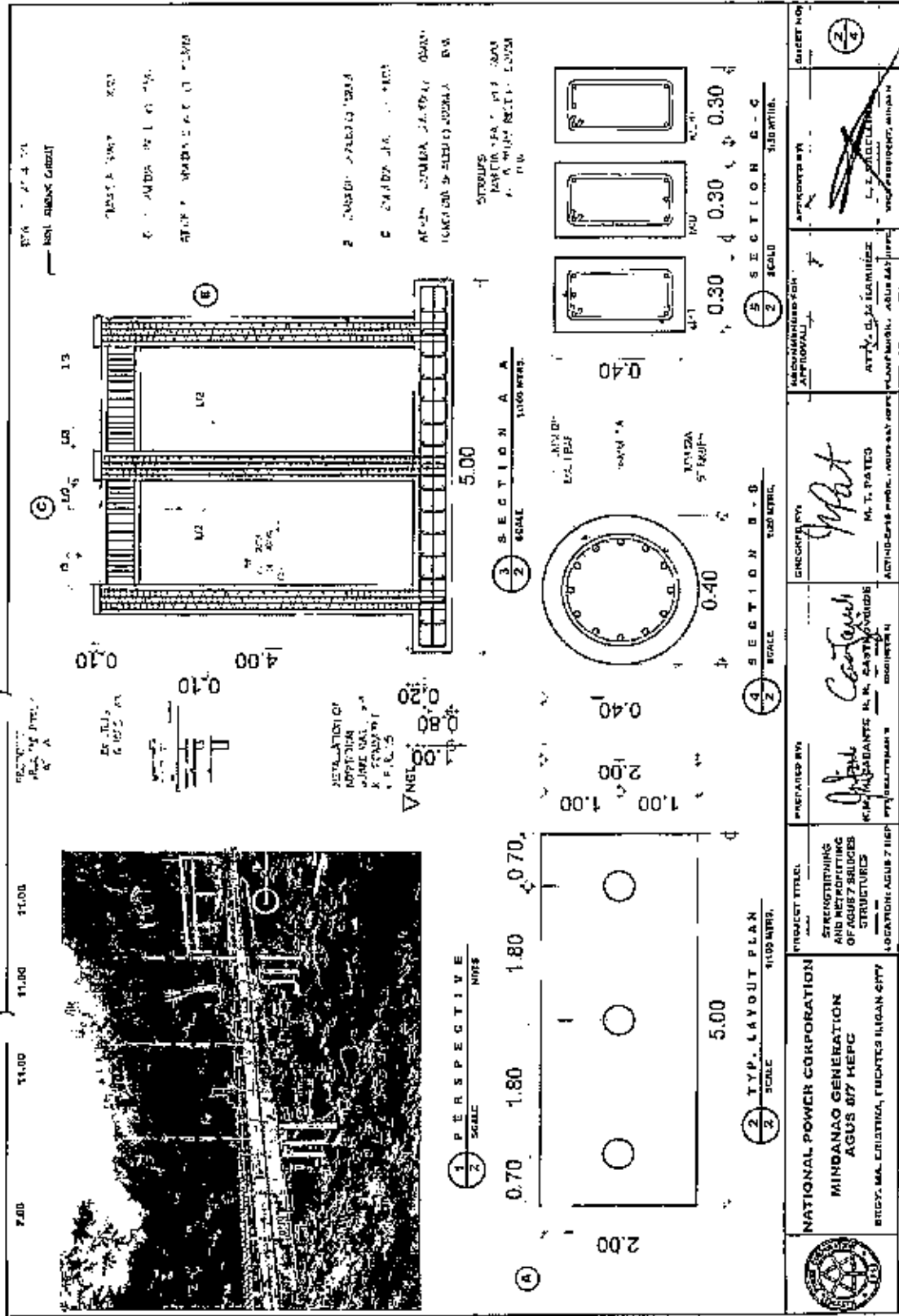
SHEET NO. 4/4– LOCATION 2- REPAINTING WORKS

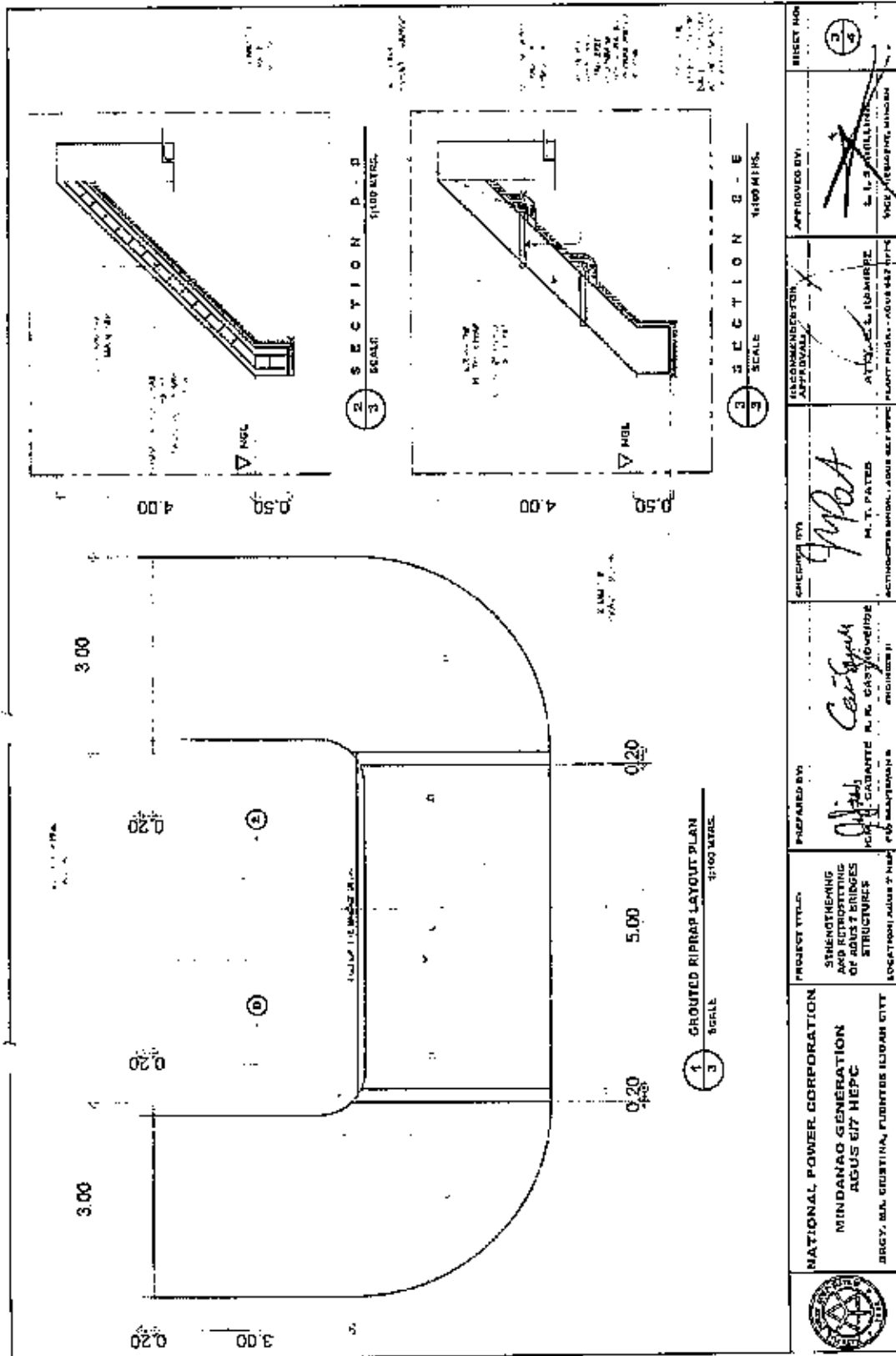


1. Engineer's Office - Mindanao Generation Agus 7 HEP Co. (MAG 7 HEP Co.)
 2. Engineer's Office - Mindanao Generation Agus 7 HEP Co. (MAG 7 HEP Co.)
 3. Engineer's Office - Mindanao Generation Agus 7 HEP Co. (MAG 7 HEP Co.)
 4. Engineer's Office - Mindanao Generation Agus 7 HEP Co. (MAG 7 HEP Co.)
 5. Engineer's Office - Mindanao Generation Agus 7 HEP Co. (MAG 7 HEP Co.)
 6. Engineer's Office - Mindanao Generation Agus 7 HEP Co. (MAG 7 HEP Co.)

DESIGNER : AGUS 7 BRIDGE
 DRAWING NO. : REF: A7T24-009/INFRA2024-AG7-012
 LOCATION : MINDANAO GUARD RAIL
 SCALE : 1:2500

	NATIONAL POWER CORPORATION MINDANAO GENERATION AGUS 07 HEP CO. BRGY. MA. CRISTINA, TURKES BLOOM CITY		PROJECT TITLE: STRENGTHENING AND RETROFITTING OF AGUS 7 BRIDGES STRUCTURES LOCATION: AGUS 7 HEP CO.	PREPARED BY: M. N. CASTAÑEDA ENGINEER II	CHECKED BY: M. T. PATES ATTENDING ENGINEER - CIVIL	RECOMMENDED FOR APPROVAL: L. S. B. REYES VICE CHIEF ENGINEER	APPROVED BY: L. S. B. REYES VICE CHIEF ENGINEER	SHEET NO.: 1 / 4
	LOCATION PLAN SCALE: 1:2500							





LOCATION 2 - REPAINTING WORKS

SCALE: $\frac{1}{4}$ NOTES

PROJECT TITLE: STRENGTHENING AND RETROFITTING OF AGUS 7 BRIDGES STRUCTURES
 LOCALITY: ILAGAN, ILAGAN CITY

PREPARED BY: *[Signature]*
 M. L. CASTRILLON
 ENGINEER II

DESIGNED BY: *[Signature]*
 M. L. CASTRILLON
 ENGINEER II

APPROVED BY: *[Signature]*
 M. L. CASTRILLON
 ENGINEER II

APPROVED BY: *[Signature]*
 M. L. CASTRILLON
 ENGINEER II

APPROVED BY: *[Signature]*
 M. L. CASTRILLON
 ENGINEER II

SHEET NO: 1

Section VIII. Bill of Quantities

SECTION VIII - BILL OF QUANTITIES

Name of Project STRENGTHENING AND RETROFITTING OF AGUS 7 BRIDGES STRUCTURES
 PR No MG-AT724-D09

SECTION VIII - BILL OF QUANTITIES

BILL OF QUANTITIES

Item No.	Description of Work or Materials	Unit	Estimated Quantity		Total Amount
	PART 1. GENERAL REQUIREMENTS				
	A. Occupational Safety and Health Program	ks	1.00		PHP
				(PHP)	
	B. Civil Works				
	CW 1 Structural Excavation	cu m	22.00		PHP
				(PHP)	
	CW 2 Sand and Gravel Bedding	cu m	3.00		PHP
				(PHP)	
	CW 3 Concrete (6000 PSI)	cu m	49.00		PHP
				(PHP)	
	CW 4 Reinforcing Steel Bars	kg	3,329.00		PHP
				(PHP)	
	CW 5 Construction of Grouted Repair (Class A)	cu m	46.00		PHP
				(PHP)	
	CW 6 Guard Rail	lm	56.00		PHP
				(PHP)	
	CW 7 Paving Works	sq m	525.00		PHP
				(PHP)	
				TOTAL	PHP

Name of Firm

Name and Signature of Authorized Representative

Designation

BID DOCUMENTS

NAME OF PROJECT : STRENGTHENING AND RETROFITTING
OF AGUS 7 BRIDGES STRUCTURES

SECTION IX- CHECKLIST OF TECHNICAL &
FINANCIAL DOCUMENTS

PR NO./REF. NO MG-AT724-009/INFRA2024-AG7-012

Section IX. Checklist of Technical and Financial Documents

Checklist of Technical and Financial Documents

- I. TECHNICAL COMPONENT ENVELOPE [Submit in three (3) copies- one (1) marked Original with the understanding that the Pass/Fail evaluation will be based only on the copy marked "Original"]

Class "A" Documents

Legal Documents

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

Technical Documents

- (b) Statement of the prospective bidder of all its ongoing government and private contracts, including contracts awarded but not yet started, if any, whether similar or not similar in nature and complexity to the contract to be bid, using NPC-MinGen Standard Form No. NPCMGNSF-INFR-01; 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, using NPC-MinGen Standard Form No. NPCMGNSF-INFR-02 supported with the following documents:
- Contract and/or Notice to Proceed;
 - For project completed less than one year from the scheduled date of bid opening, submit Certificate of Completion;
 - For project completed at least one year from the scheduled date of bid opening, submit Owner's Certificate of Final Acceptance issued by the project owner other than the contractor, or a final rating of at least Satisfactory in the Constructor's Performance Evaluation System (CPES);
 - In case of contracts with the private sector, an equivalent document (Ex. Official receipt) shall be submitted.
- (d) and Special PCAB License in case of Joint Ventures; and registration for the type and cost of the contract to be bid; and
- (e) Original copy of Bid Security. If in the form of a Surety Bond, using NPC-MinGen Standard Form No. NPCMGNSF-INFR-03a, submit also a certification issued by the Insurance Commission;
or
Original copy of Notarized Bid Securing Declaration using NPC-MinGen Standard Form No. NPCMGNSF-INFR-03b; and
- (f) Project Requirements, which shall include the following:
- a. Organizational chart for the contract to be bid using NPC-MinGen Standard Form No. NPCMGNSF-INFR-04;

SECTION IX- CHECKLIST OF TECHNICAL &
FINANCIAL DOCUMENTS

PR NO./REF. NO. MG-AT724-009/INFRA2024-AG7-012

- 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 using NPC-MinGen Standard Form No. NPCMGNSF-INFR-05;
- 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, using NPC-MinGen Standard Form No. NPCMGNSF-INFR-06 and its supporting documents; and
- (g) Original duly signed Omnibus Sworn Statement (OSS), using any of the following NPC-MinGen Standard Forms No.:
NPCMGNSF-INFR-07a – for Sole Proprietorship;
or
NPCMGNSF-INFR-07b – for Partnership/Cooperative/Corporation/
Joint Venture with the following supporting documents:

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

Financial Documents

- (h) The prospective bidder's computation of Net Financial Contracting Capacity (NFCC) using NPC-MinGen Standard Form No. NPCMGNSF-INFR-08.

Class "B" Documents

- (i) If applicable, duly signed joint venture agreement (JVA) in accordance with RA No. 4566 and its IRR in case the joint venture is already in existence, using NPC-MinGen Standard Form No. NPCMGNSF-INFR-09;
or
duly notarized statements from all the potential joint venture partners stating that they will enter into and abide by the provisions of the JVA in the instance that the bid is successful.

II. FINANCIAL COMPONENT ENVELOPE [Submit in three (3) copies- one (1) marked Original with the understanding that the Pass/Fail evaluation will be based only on the copy marked "Original"]

- (j) Original of duly signed (each and every page) and accomplished Financial Bid Form, using NPC-MinGen Standard Form No. NPCMGNSF-INFR-10;
and

Other documentary requirements under RA No. 9184

- (k) Original of duly signed (each and every page) Bid Prices in the Bill of Quantities, using given form in Section VIII; and

SECTION IX- CHECKLIST OF TECHNICAL &
FINANCIAL DOCUMENTS

PR NO./REF. NO.. MG-AT724-009/INFRA2024-AG7-012

- (l) Duly signed (each and every page) and accomplished Detailed Estimates Form using NPC-MinGen Standard Form No. NPCMGNSF-INFR-11, including a summary sheet indicating the unit prices of construction materials, labor rates, and equipment rentals used in coming up with the Bid using NPC form NPCMGNSF-INFR-12; and
- (m) Cash Flow by Quarter or Month, as applicable (duly signed each and every page)

STANDARD BIDDING FORMS NPC-MINDANAO GENERATION

- NPCMGNSF-INFR-01 - List of all Ongoing Government & Private Construction Contracts Including Contracts Awarded but not yet Started
- NPCMGNSF-INFR-02 - Statement of the Bidder's Single Largest Completed Contract (SLCC) similar to the contract to be bid
- NPCMGNSF-INFR-03a - Form of Bid Security : Surety Bond
- NPCMGNSF-INFR-03b - Bid Securing Declaration Form
- NPCMGNSF-INFR-04 - Contractor's Organizational Chart for the Project
- NPCMGNSF-INFR-05 - List of Key Personnel Proposed to be Assigned to the Project
- NPCMGNSF-INFR-06 - List of Equipment, Owned or Leased and/or under Purchase Agreement, Pledged to the Proposed Project
- NPCMGNSF-INFR-07a - Omnibus Sworn Statement (Sole Proprietorship)
- NPCMGNSF-INFR-07b - Omnibus Sworn Statement (Partnership/ Cooperative/Corporation//Joint Venture)
- NPCMGNSF-INFR-08 - Computation of Net Financial Contracting Capacity (NFCC)
- NPCMGNSF-INFR-09 - Joint Venture Agreement
- NPCMGNSF-INFR-10 - Bid Form
- NPCMGNSF-INFR-11 - Detailed Cost Estimate Form
- NPCMGNSF-INFR-12 - Summary Sheets of Materials Prices, Labor Rates and Equipment Rental Rates

BID DOCUMENTS

NAME OF PROJECT : STRENGTHENING AND RETROFITTING
OF AGUS 7 BRIDGES STRUCTURES

SECTION IX- CHECKLIST OF TECHNICAL &
FINANCIAL DOCUMENTS

PR NO./REF. NO . MG-AT724-009/INFRA2024-AG7-012

BID DOCUMENTS

**NAME OF PROJECT : STRENGTHENING AND RETROFITTING
OF AGUS 7 BRIDGES STRUCTURES**

**SECTION IX- CHECKLIST OF TECHNICAL &
FINANCIAL DOCUMENTS**

PR NO./REF NO : MG-AT724-009/INFRA2024-AG7-012

Standard Form Number : NPC/MGMSF-INFRR-01

List of All Ongoing Government and Private Construction Contracts Including Contract Awarded But Not Yet Started

Business Name : _____
Business Address : _____

Name of Contract/Location/ Project Cost	a. Owner's Name b. Address c. Telephone Nos.	Nature of Work	Contractor's Role		a. Date Awarded b. Date Started c. Date of Completion	% of Accomplishment		Value of Outstanding Works
			Description	%		Planned	Actual	
Government								
Private								
Total Cost								

The bidder shall declare in this form all his on-going government and private contracts including contracts where the bidder (either as individual or as a joint venture) is a partner in a joint venture agreement other than his current joint venture where he is a partner. Non declaration will be a ground for disqualification of bid.

Note: This statement shall be supported with Contract and/or Notice of Award (to be presented by the winning bidder during Postqualification).

Submitted by : _____
(Printed Name & Signature)
Designation : _____
Date : _____

BID DOCUMENTS

**NAME OF PROJECT : STRENGTHENING AND RETROFITTING
OF AGUS 7 BRIDGES STRUCTURES**

**SECTION IX- CHECKLIST OF TECHNICAL &
FINANCIAL DOCUMENTS**

PR NO./REF. NO : MG-AT724-009/INFRA2024-AG7-012

Standard Form Number : NPCMGN5F-INF-02

The Statement of the Bidder's Single Largest Completed Contract (SLCC) similar to the contract to be bid

Business Name : _____
Business Address : _____

Name of Contract	Owner's Name a. Address b. Address c. Telephone Nos.	Nature of Work	Contractor's Role		Amount at Award a. Amount at Completion b. Duration	Date Awarded a. Contract Effectivity b. Date Completed
			Description	%		

Note: The bidder must state only one (1) Single Largest Completed Contract (SLCC) similar to the contract to be bid. Stating two (2) or more will disqualify his bid. This Statement shall be supported with:

1. Contract and Notice to Proceed
2. Certificate of Completion (for project completed within the year), or Owner's Certificate of Final Acceptance (for project completed after the lapse of one year) issued by the project owner other than the contractor, or a final rating of at least Satisfactory in the Contractor's Performance Evaluation System (CPES). In case of contracts in the private sector, an equivalent document (Ex. Official Receipt) shall be accepted.

Submitted by : _____
(Printed Name & Signature)

Designation : _____
Date : _____

BID DOCUMENTS

NAME OF PROJECT : STRENGTHENING AND RETROFITTING
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PR NO/REF. NO.. MG-AT724-009/INFRA2024-AG7-012

Standard Form No: NPCMGNSF-INFRA-03a

FORM OF BID SECURITY (SURETY BOND)

BOND NO.: _____ DATE BOND EXECUTED: _____

By this bond, We (Name of Bidder) (hereinafter called "the Principal") and (Name of Surety) of (Name of Country of Surety), authorized to transact business in the Philippines (hereinafter called "the Employer") as Obligee, in the sum of [amount in words & figures as prescribed in the bidding documents], callable on demand, for the payment of which sum, well and truly to be made, we, the said Principal and Surety bind ourselves, our successors and assigns, jointly and severally, firmly by these presents.

SEALED with our seals and dated this _____ day of _____ 20____

WHEREAS, the Principal has submitted a written Bid to the Employer dated the _____ day of _____ 20____, for the _____ (hereinafter called "the Bid").

NOW THEREFORE, the conditions of this obligation are:

- 1) If the Bidder withdraws his Bid during the period of bid validity specified in the Bidding Documents; or
- 2) If the Bidder does not accept the correction of arithmetical errors of his bid price in accordance with the Instructions to Bidder; or
- 3) If the Bidder, having determined as the LCB, fails or refuses to submit the required tax clearance, latest income and business tax returns and PhilGEPS registration certificate within the prescribed period; or
- 4) If the bidder having been notified of the acceptance of his bid and award of contract to him by the Entity during the period of bid validity:
 - a) Fails or refuses to execute the Contract; or
 - b) Fails or refuses to submit the required valid JVA, if applicable; or
 - c) Fails or refuses to furnish the Performance Security in accordance with the Instruction to Bidders;

Then this obligation shall remain in full force and effect, otherwise it shall be null and void.

PROVIDED HOWEVER, that the Surety shall not be:

- a) Liable for a grater sum than the specified penalty of this bond, nor
- b) Liable for a greater sum than the difference between the amount of the said Principal's Bid and the amount of the Bid that is accepted by the Employer.

BID DOCUMENTS

NAME OF PROJECT : STRENGTHENING AND RETROFITTING
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Standard Form No: NPCMGNSF-INFR-03a

Page 2 of 2

This Surety executing this instrument hereby agrees that its obligation shall be valid for 120 calendar days after the deadline for submission of Bids as such deadline is stated in the Instructions to Bidders or as it may be extended by the Employer, notice of which extension(s) to the Surety is hereby waived.

PRINCIPAL

SURETY

SIGNATURE(S)

SIGNATURE(S)

NAME(S) AND TITLE (S)

NAME(S)

SEAL

SEAL

BID DOCUMENTS

NAME OF PROJECT : STRENGTHENING AND RETROFITTING
OF AGUS 7 BRIDGES STRUCTURES

SECTION IX- CHECKLIST OF TECHNICAL &
FINANCIAL DOCUMENTS

PR NO./REF. NO : MG-AT724-009/INFRA2024-AG7-012

Standard Form No: NPCMGNSF-INFRA-03b

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

BID SECURING DECLARATION
Project Identification No.: *[Insert number]*

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

I/We, the undersigned, declare that:

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

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

*[Insert NAME OF BIDDER OR ITS AUTHORIZED
REPRESENTATIVE]*
[Insert signatory's legal capacity]
Affiant

[Jurat]

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

BID DOCUMENTS

NAME OF PROJECT STRENGTHENING AND RETROFITTING
OF AGUS 7 BRIDGES STRUCTURES

SECTION IX- CHECKLIST OF TECHNICAL &
FINANCIAL DOCUMENTS

PR NO./REF. NO. MG-AT724-009/INFRA2024-AG7-012

Standard Form No: NPCMGNSF-INFR-04

CONTRACTOR'S ORGANIZATIONAL CHART FOR THE CONTRACT

Submit Copy of the Organizational Chart that the Contractor intends to use to execute the Contract if awarded to him. Indicate in the chart the names of the Project Manager, Project Engineer, Foreman and other Key Engineering Personnel.

Attach the required Proposed Organizational Chart for the Contract as stated above

NOTES:

1. *This organization chart should represent the "Contractor's Organization" required for the Project, and not the organizational chart of the entire firm.*
2. *Each such nominated engineer/key personnel shall comply with and submit their complete qualification and experience data.*
3. *All these are required to be in the Technical Envelope of the Bidder.*

BID DOCUMENTS

NAME OF PROJECT : STRENGTHENING AND RETROFITTING
OF AGUS 7 BRIDGES STRUCTURES

SECTION IX- CHECKLIST OF TECHNICAL &
FINANCIAL DOCUMENTS

PR NO./REF. NO. MG-AT724-009/INFRA2024-AG7-012

BID DOCUMENTS

NAME OF PROJECT - STRENGTHENING AND RETROFITTING
OF AGUS 7 BRIDGES STRUCTURES

SECTION IX- CHECKLIST OF TECHNICAL &
FINANCIAL DOCUMENTS

PR NO./REF. NO MG-AT724-009/INFRA2024-AG7-012

LIST OF KEY PERSONNEL PROPOSED TO BE ASSIGNED TO THE CONTRACT
(Based on the Minimum Key Personnel Required in the Bidding Documents)

Business Name : _____
Business : _____

		DESIGNATION	
1. Name			
2. Address			
3. Date of Birth			
4. Employed Since			
5. Experience (No. of Years)			
6. Previous Employment			
7. Education			
8. PRC License No./COSW/Other professional certificate			

Required Attachments During Post Qualification:

1. Certificate of Employment and valid PRC license of the (professional) personnel
2. Certificate of Training with accreditation from DTCE of the Construction Safety and Health Officer
3. Copy of Diploma and/or Service Record/Certificate of Employment of previous and/or current employer of Foreman, Welder, Plumber or Electrician, whichever is applicable
4. TESDA Training Certificate (NC III) of Welder or Electrician, whichever is applicable

Submitted by: _____
(Printed name & Signature)

Designation: _____
Date: _____

One of the requirements from the bidder to be included in its Technical Envelope is a list of contractor's key personnel (based on the minimum key personnel required in the bidding documents) to be assigned to the contract to be bid, with their complete qualification and experience data (including the key personnel's signed written commitment to work for the project once awarded the contract).

Standard Form No: NPCMGNSF-INFR-06a

KEY PERSONNEL'S CERTIFICATE OF EMPLOYMENT (PROFESSIONAL PERSONNEL)

Issuance Date

THE VICE PRESIDENT National Power Corporation Mindanao Generation Maria Cristina, Iligan City

Dear Sir:

I am (Name of Nominee) a Licensed Engineer with Professional License No. issued on (date of issuance) at (place of issuance)

I hereby certify that (Name of Bidder) Has engaged my services as (Designation) for the (Name of Project), if awarded to it.

As (Designation), I supervised the following completed projects Similar to the contract under bidding:

Table with 4 columns: NAME OF PROJECT, OWNER, COST, DATE COMPLETED

At present, I am supervising the following projects:

Table with 4 columns: NAME OF PROJECT, OWNER, COST, DATE COMPLETED

In case of my separation for any reason whatsoever from the above-mentioned Contractor, I shall notify the National Power Corporation at least twenty one (21) days before the effective date of separation.

As (Designation), I know I will have to stay in the job site all the time to supervise and manage the Contract works to the best of my ability, and aware that I am authorized to handle only one (1) contract at a time.

One of the requirements from the bidder to be included in its Technical Envelope is a list of contractor's key personnel (viz, Project Manager, Project Engineer, Safety & Health Practitioner, Foremen, etc.), to be assigned to the contract to be bid, with

BID DOCUMENTS

NAME OF PROJECT : STRENGTHENING AND RETROFITTING
OF AGUS 7 BRIDGES STRUCTURES

SECTION IX- CHECKLIST OF TECHNICAL &
FINANCIAL DOCUMENTS

PR NO./REF. NO : MG-AT724-009/INFRA2024-AG7-012

their complete qualification and experience data (including the key personnel's signed written commitment to work for the project once awarded the contract)
Standard Form No: NPCMGNSF-INFR-06a
Page 2 of 2

I do not allow the use of my name for the purpose of enabling the above-mentioned Contractor to qualify for the Contract without any firm commitment on my part to assume the post of (Designation) therefore, If the contract is awarded to him since I understand that to do so will be a sufficient ground for my disqualification as (Designation) in any future National Power Corporation bidding or employment with any Contractor doing business with the National Power Corporation.

(Name and Signature)
AFFIANT

REPUBLIC OF THE PHILIPPINES)
City/Municipality of _____)S.S.

SUBSCRIBED AND SWORN TO before me this _____ day of _____ 20____,
affiant exhibiting to me his/her Community Tax Certificate No. _____ issued on
_____ at _____, Philippines.

Notary Public
Until 31 December
20____
PTR No. _____
Issued at: _____
Issued on: _____
TIN No. _____

Doc. No. _____
Page No. _____
Book No. _____
Series of _____

One of the requirements from the bidder to be included in its Technical Envelope is a list of contractor's key personnel (viz. Project Manager, Project Engineer, Safety & Health Practitioner, Foreman, etc.), to be assigned to the contract to be bid, with their complete qualification and experience data (including the key personnel's signed written commitment to work for the project once awarded the contract).

Standard Form No: NPCMGNSF-INFR-06b

**KEY PERSONNEL'S CERTIFICATE OF EMPLOYMENT
(CONSTRUCTION SAFETY AND HEALTH PRACTITIONER)**

Issuance Date

THE VICE PRESIDENT
National Power Corporation
Mindanao Generation
Maria Cristina, Iligan City

Dear Sir:

I am _____ (Name of Nominee) a Licensed _____ Engineer with
Professional License No. _____ Issued on _____ at _____
(date of issuance) (place
of issuance)

I hereby certify that _____ (Name of Bidder) Has engaged my services as
(Designation) for the _____ (Name of Project) , if awarded to it.

As _____ (Designation) , I supervised the following completed projects
Similar to the contract under bidding:

NAME OF PROJECT	OWNER	COST	DATE COMPLETED

At present, I am supervising the following projects:

NAME OF PROJECT	OWNER	COST	DATE COMPLETED

In case of my separation for any reason whatsoever from the above-mentioned Contractor, I shall notify the National Power Corporation at least twenty one (21) days before the effective date of separation.

As Safety and Health Practitioner, I know I will have to stay in the job site all the time and aware that I am authorized to handle only one (1) contract at a time.

One of the requirements from the bidder to be included in its Technical Envelope is a list of contractor's key personnel (viz Project Manager, Project Engineer, Safety & Health Practitioner, Foreman, etc.), to be assigned to the contract to be bid, with their complete qualification and experience data (including the key personnel's signed written commitment to work for the project once awarded the contract).

BID DOCUMENTS

NAME OF PROJECT : STRENGTHENING AND RETROFITTING
OF AGUS 7 BRIDGES STRUCTURES

SECTION IX- CHECKLIST OF TECHNICAL &
FINANCIAL DOCUMENTS

PR NO./REF. NO : MG-AT724-009/INFRA2024-AG7-012

Standard Form No: NPCMGNSF-INFR-06b
Page 2 of 2

I do not allow the use of my name for the purpose of enabling the above-mentioned Contractor to qualify for the Contract without any firm commitment on my part to assume the post of Safety and Health Practitioner, if the contract is awarded to him since I understand that to do so will be a sufficient ground for my disqualification as Safety and Health Practitioner in any future National Power Corporation bidding or employment with any Contractor doing business with the National Power Corporation.

(Name and Signature)
AFFIANT

BID DOCUMENTS

NAME OF PROJECT : STRENGTHENING AND RETROFITTING
OF AGUS 7 BRIDGES STRUCTURES

SECTION IX- CHECKLIST OF TECHNICAL &
FINANCIAL DOCUMENTS

PR NO./REF. NO. MG-AT724-009/INFRA2024-AG7-012

REPUBLIC OF THE PHILIPPINES)
City/Municipality of _____)S.S.

SUBSCRIBED AND SWORN TO before me this _____, day of ____ 20 __,
affiant exhibiting to me his/her Community Tax Certificate No. _____ issued on
_____ at _____, Philippines.

Notary Public
Until 31 December 20 _____
PTR No. _____
Issued at: _____
Issued on: _____
TIN No. _____

Doc. No. _____
Page No. _____
Book No. _____
Series of _____

One of the requirements from the bidder to be included in its Technical Envelope is a list of contractor's key personnel (viz. Project Manager, Project Engineer, Safety & Health Practitioner, Foremen, etc.), to be assigned to the contract to be bid, with their complete qualification and experience data (including the key personnel's signed written commitment to work for the project once awarded the contract).

Standard Form No: NPCMGNSF-INFR-07

KEY PERSONNEL (FORMAT OF BIO-DATA)

Give the detailed information of the following personnel who are scheduled to be assigned as full-time staff for the project. Fill up a form for each person.

- 1. Name
2. Date of Birth
3. Nationality
4. Education and Degrees
5. Specialty
6. Registration
7. Length of Service with the Firm
8. Years of Experience

9. If item 7 is less than the required number of years stated in BDS Section III- ITB Clause 10.4, give name and length of service with previous employers to satisfy the required number of years of experience within the last ten (10) years (attached additional sheet/s), if necessary:

Table with 2 columns: Name and Address of Employer, Length of Service. Includes sub-columns for Year(s) from and to.

10. Experience: This should cover the past ten (10) years of experience. (Attached as many pages as necessary to show involvement of personnel in projects using the format below).

One of the requirements from the bidder to be included in its Technical Envelope is a list of contractor's key personnel (viz. Project Manager, Project Engineer, Safety & Health Practitioner, Foremen, etc.), to be assigned to the contract to be bid, with their complete qualification and experience data (including the key personnel's signed written commitment to work for the project once awarded the contract).

SECTION IX- CHECKLIST OF TECHNICAL &
FINANCIAL DOCUMENTS

PR NO./REF. NO : MG-AT724-009/INFRA2024-AG7-012

Standard Form No: NPCMGNSF-INFR-07
Page 2 of 2

- 1. Name : _____
- 2. Name and Address of Owner : _____
- 3. Name and Address of the Owner's Engineer (Consultant) : _____
- 4. Indicate the Features of Project (particulars of the project components and any other particular interest connected with the project) : _____
- 5. Contract Amount Expressed in Philippine Currency : _____
- 6. Position : _____
- 7. Structures for which the employee was responsible : _____
- 8. Assignment Period : from _____ (months) _____ (years)
to _____ (months) _____ (years)

Name and Signature of
Employee

It is hereby certified that the above personnel can be assigned to this project, if the contract is awarded to our company.

(Place and Date)

(The Authorized Representative)

One of the requirements from the bidder to be included in its Technical Envelope is a list of contractor's key personnel (viz. Project Manager, Project Engineer, Safety & Health Practitioner, Foremen, etc.), to be assigned to the contract to be bid, with their complete qualification and experience data (including the key personnel's signed written commitment to work for the project once awarded the contract).

BID DOCUMENTS

NAME OF PROJECT : STRENGTHENING AND RETROFITTING
OF AGUS 7 BRIDGES STRUCTURES

PR NO./REF. NO. : MG-ATT24-009/INFRA2024-AG7-012

SECTION IX- CHECKLIST OF TECHNICAL &
FINANCIAL DOCUMENTS

Standard Form Number : NPCMGNSE-INFN - 08

LIST OF EQUIPMENT, OWNED OR LEASED AND/OR UNDER PURCHASE AGREEMENTS
(Based on the Minimum Equipment Required in the Bidding Documents)

Business Name : _____
Business : _____

Description	Model/Year	Capacity/ Performance / Size	Plate No.	Motor No. / Body No.	Location	Condition	Proof of Ownership / Lessor or Vendor
A. Owned							
i.							
ii.							
iii.							
iv.							
B. Leased							
i.							
ii.							
iii.							
iv.							
C. Under Purchased Agreements							
i.							
ii.							
iii.							
iv.							

Submitted by: _____ (Printed name & Signature)
Designation: _____
Date: _____

One of the requirements from the bidder to be included in its Technical Envelope in the list of its equipment units pledged for the contract to be bid, based on minimum equipment required in the bidding docs, which are owned (supported by proof/s of ownership), leased, and/or under purchase agreements (with corresponding engine numbers, chassis numbers and/or serial numbers), supported by certification of availability of equipment from the equipment lessor/vendor for the duration of the project.

Standard Form No: NPCMGNSF-INFR-09a

Omnibus Sworn Statement (Revised)
(SOLE PROPRIETORSHIP)

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

AFFIDAVIT

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

1. I am the sole proprietor or authorized representative of [Name of Bidder] with office address at [address of Bidder];
2. As the owner and sole proprietor, or authorized representative of [Name of Bidder], I have full power and authority to do, execute and perform any and all acts necessary to participate, submit the bid, and to sign and execute the ensuing contract for [Name of the Project] of the National Power Corporation-Mindanao Generation, as shown in the attached duly notarized Special Power of Attorney;
3. [Name of Bidder] is not "blacklisted" or barred from bidding by the Government of the Philippines or any of its agencies, offices, corporations, or Local Government Units, foreign government/foreign or international financing institution whose blacklisting rules have been recognized by the Government Procurement Policy Board, by itself or by relation, membership, association, affiliation, or controlling interest with another blacklisted person or entity as defined and provided for in the Uniform Guidelines on Blacklisting;
4. Each of the documents submitted in satisfaction of the bidding requirements is an authentic copy of the original, complete, and all statements and information provided therein are true and correct;
5. [Name of Bidder] is authorizing the Head of the Procuring Entity or its duly authorized representative(s) to verify all the documents submitted;
6. The owner or sole proprietor is not related to the Head of the Procuring Entity, members of the Bids and Awards Committee (BAC), the Technical Working Group, and the BAC Secretariat, the head of the Project Management Office or the end-user unit, and the project consultants by consanguinity or affinity up to the third civil degree;
7. [Name of Bidder] complies with existing labor laws and standards; and
8. [Name of Bidder] is aware of and has undertaken the responsibilities as a Bidder in compliance with the Philippine Bidding Documents, which includes:
 - a. Carefully examining all of the Bidding Documents;
 - b. Acknowledging all conditions, local or otherwise, affecting the implementation of the Contract;

Standard Form No: NPCMGNSF-INFR-09a

Page 2 of 2

- c. Making an estimate of the facilities available and needed for the contract to be bid, if any; and
 - d. Inquiring or securing Supplemental/Bid Bulletin(s) issued for the *[Name of the Project]*.
9. *[Name of Bidder]* did not give or pay directly or indirectly, any commission, amount, fee, or any form of consideration, pecuniary or otherwise, to any person or official, personnel or representative of the government in relation to any procurement project or activity.
10. In case advance payment was made or given, failure to perform or deliver any of the obligations and undertakings in the contract shall be sufficient grounds to constitute criminal liability for Swindling (Estafa) or the commission of fraud with unfaithfulness or abuse of confidence through misappropriating or converting any payment received by a person or entity under an obligation involving the duty to deliver certain goods or services, to the prejudice of the public and the government of the Philippines pursuant to Article 315 of Act No. 3815 s. 1930, as amended, or the Revised Penal Code.

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

[Insert NAME OF BIDDER OR ITS AUTHORIZED REPRESENTATIVE]
[Insert signatory's legal capacity]
Affiant

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

Standard Form No: NPCMGNSF-INFRA-09b

Omnibus Sworn Statement (Revised)
PARTNERSHIP/COOP/CORP/JOINT VENTURE

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

AFFIDAVIT

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

1. I am the duly authorized and designated representative of [Name of Bidder] with office address at [address of Bidder];
2. I am granted full power and authority to do, execute and perform any and all acts necessary to participate, submit the bid, and to sign and execute the ensuing contract for [Name of the Project] of the National Power Corporation-Mindanao Generation, as shown in the attached [state title of attached document showing proof of authorization (e.g., duly notarized Secretary's Certificate, Board/Partnership Resolution, or Special Power of Attorney, whichever is applicable)];
3. [Name of Bidder] is not "blacklisted" or barred from bidding by the Government of the Philippines or any of its agencies, offices, corporations, or Local Government Units, foreign government/foreign or international financing institution whose blacklisting rules have been recognized by the Government Procurement Policy Board, by itself or by relation, membership, association, affiliation, or controlling interest with another blacklisted person or entity as defined and provided for in the Uniform Guidelines on Blacklisting;
4. Each of the documents submitted in satisfaction of the bidding requirements is an authentic copy of the original, complete, and all statements and information provided therein are true and correct;
5. [Name of Bidder] is authorizing the Head of the Procuring Entity or its duly authorized representative(s) to verify all the documents submitted;
6. *[If a partnership or cooperative:]* None of the officers and members of [Name of Bidder] is related to the Head of the Procuring Entity, members of the Bids and Awards Committee (BAC), the Technical Working Group, and the BAC Secretariat, the head of the Project Management Office or the end-user unit, and the project consultants by consanguinity or affinity up to the third civil degree;

[If a corporation or joint venture:] None of the officers, directors, and controlling stockholders of [Name of Bidder] is related to the Head of the Procuring Entity, members of the Bids and Awards Committee (BAC), the Technical Working Group, and the BAC

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

Standard Form No: NPCMGNSF-INFRA-09b

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

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

[Insert NAME OF BIDDER OR ITS AUTHORIZED REPRESENTATIVE]

[Insert signatory's legal capacity]
Affiant

[Jurat]

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

Standard Form No: NPCMGNSF-INFR-10

NET FINANCIAL CONTRACTING CAPACITY (NFCC)

A. Summary of the Bidder's/Contractor's assets and liabilities on the basis of the income tax return and audited financial statement for the immediately preceding calendar year are:

	Year 20
1. Total Assets	
2. Current Assets	
3. Total Liabilities	
4. Current Liabilities	
5. Net Worth (1-3)	
6. Net Working Capital (2-4)	

B. The Net Financial Contracting Capacity (NFCC) based on the above data is computed as follows:

NFCC = [(Current assets minus current liabilities) x 15] minus the value of all outstanding or uncompleted portions of the projects under ongoing contracts, including awarded contracts yet to be started coinciding with the contract for this Project.

NFCC – P _____

Herewith attached is certified true copy of the audited financial statement, stamped "RECEIVED" by the BIR or BIR authorized collecting agent for the immediately preceding calendar year.

Submitted by:

Name of Bidder/Contractor

Signature of Authorized Representative

Date: _____

Standard Form No: NPCMGNSF-INFR-11

JOINT VENTURE AGREEMENT

KNOW ALL MEN BY THESE PRESENTS:

That this **JOINT VENTURE AGREEMENT** is entered in to by and between: _____, of legal age, (civil status), authorized representative of _____ and a resident of _____.

- and -

_____ of legal age, (civil status), authorized representative of _____ and a resident of _____.

That both parties agree to join together their capital, manpower, equipment, and other resources and efforts to enable the Joint Venture to participate in the Bidding and Undertaking of the hereunder stated Contract of the National Power Corporation.

NAME OF FIRM

CAPITAL CONTRIBUTION

That the capital contribution of each member firm:

NAME OF FIRM

CAPITAL CONTRIBUTION

1
2

DWD
RHP

That both parties agree to be jointly and severally liable for their participation in the Bidding and Undertaking of the said contract.

That both parties agree that _____ and/or _____ shall be the Official Representative/s of the Joint Venture, and are granted full power and authority to do, execute and perform any and all acts necessary and/or to represent the Joint Venture in the Bidding and Undertaking of the said contract, as fully and effectively and the Joint Venture may do and if personally present with full power of substitution and revocation.

That this Joint Venture Agreement shall remain in effect only for the above stated Contract until terminated by both parties.

Name & Signature of Authorized Representative

Name & Signature of Authorized Representative

Official Designation

Official Designation

Name of Firm

Name of Firm

Witnesses

If the bidder is a joint venture, one of the requirements is the submission of a valid joint venture agreement.

Standard Form No: NPCMGNSF-INFR-11

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ACKNOWLEDGEMENT

BEFORE ME, a Notary Public for and in _____, Philippines, this _____ day of _____, 20____, personally appeared _____, authorized representative, of _____ with Community Tax Certificate No. _____, issued at _____, on _____, AND _____ authorized representative, of _____ with Community Tax Certificate No. _____, issued at _____, on _____ known to me to be the same person who executed the foregoing instrument consisting of two (2) pages, including the page whereon the acknowledgements are written, all pages signed by both parties and their instrumental witnesses and they acknowledged before me that the same are their free and voluntary acts and deeds and that of the Corporations they represents.

WITNESS MY HAND AND NOTARIAL SEAL, at the place and on the date first above written.

Notary Public
Until 31 December 20 _____
PTR No. _____
Issued at: _____
Issued on: _____
TIN No. _____

Doc. No. _____
Page No. _____
Book No. _____
Series of _____

If the bidder is a joint venture, one of the requirements is the submission of a valid joint venture agreement

Standard Form No: NPCMGNSF-INFR-12

Bid Form for the Procurement of Infrastructure Projects**BID FORM**

Date : _____

Project Identification No. : _____

To: *The Vice President*
National Power Corporation
Mindanao Generation
Maria Cristina, Iligan City

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

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

¹ currently based on GPPB Resolution No. 09-2020

US, until a formal Contract is prepared and executed; and
Standard Form No: NPCMGNSF-INFR-12

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

Name: _____

Legal Capacity: _____

Signature: _____

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

Date: _____

Standard Form No: NPCMGNSF-INFR-14

**SUMMARY SHEETS OF MATERIALS PRICES, LABOR RATES AND
EQUIPMENT RENTAL RATES**

Name of Bidder: _____

I. Unit Prices of Materials

Materials Description	Unit	Unit Price
-----------------------	------	------------

II. Manpower Hourly Rates

Designation	Rate/Hr.
-------------	----------

III. Equipment Hourly Rental Rates

Equipment Description	Rental Rate/Hr.
-----------------------	-----------------

Name, Signature of Authorized

Designation

Performance Securing Declaration (Revised)

[if used as an alternative performance security but it is not required to be submitted with the Bid, as it shall be submitted within ten (10) days after receiving the Notice of Award]

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

PERFORMANCE SECURING DECLARATION

Invitation to Bid: [Insert Reference Number indicated in the Bidding Documents]
To: [Insert name and address of the Procuring Entity]

I/We, the undersigned, declare that:

1. I/We understand that, according to your conditions, to guarantee the faithful performance by the supplier/distributor/manufacturer/contractor/consultant of its obligations under the Contract, I/we shall submit a Performance Securing Declaration within a maximum period of ten (10) calendar days from the receipt of the Notice of Award prior to the signing of the Contract.
2. I/We accept that: I/we will be automatically disqualified from bidding for any procurement contract with any procuring entity for a period of one (1) year for the first offense, or two (2) years for the second offense, upon receipt of your Blacklisting Order if I/We have violated my/our obligations under the Contract;
3. I/We understand that this Performance Securing Declaration shall cease to be valid upon:
 - a. issuance by the Procuring Entity of the Certificate of Final Acceptance, subject to the following conditions:
 - i. Procuring Entity has no claims filed against the contract awardee;
 - ii. It has no claims for labor and materials filed against the contractor; and
 - iii. Other terms of the contract; or
 - b. replacement by the winning bidder of the submitted PSD with a performance security in any of the prescribed forms under Section 39.2 of the 2016 revised IRR of RA No. 9184 as required by the end-user.

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

*[Insert NAME OF BIDDER OR ITS
AUTHORIZED REPRESENTATIVE]
[Insert signatory's legal capacity]
Affiant*

[Jurat]

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

Contract Agreement Form for the Procurement of Infrastructure Projects (Revised)

[not required to be submitted with the Bid, but it shall be submitted within ten (10) days after receiving the Notice of Award]

CONTRACT AGREEMENT

THIS AGREEMENT, made this *[insert date]* day of *[insert month]*, *[insert year]* between *[name and address of PROCURING ENTITY]* (hereinafter called the "Entity") and *[name and address of Contractor]* (hereinafter called the "Contractor").

WHEREAS, the Entity is desirous that the Contractor execute *[name and identification number of contract]* (hereinafter called "the Works") and the Entity has accepted the Bid for *[contract price in words and figures in specified currency]* by the Contractor for the execution and completion of such Works and the remedying of any defects therein.

NOW THIS AGREEMENT WITNESSETH AS FOLLOWS:

1. In this Agreement, words and expressions shall have the same meanings as are respectively assigned to them in the Conditions of Contract hereinafter referred to.
2. The following documents as required by the 2016 revised Implementing Rules and Regulations of Republic Act No. 9184 shall be deemed to form and be read and construed as part of this Agreement, *viz.*:
 - a. Philippine Bidding Documents (PBDs);
 - i. Drawings/Plans;
 - ii. Specifications;
 - iii. Bill of Quantities;
 - iv. General and Special Conditions of Contract;
 - v. Supplemental or Bid Bulletins, if any;
 - b. Winning bidder's bid, including the Eligibility requirements, Technical and Financial Proposals, and all other documents or statements submitted;

Bid form, including all the documents/statements contained in the Bidder's bidding envelopes, as annexes, and all other documents submitted (e.g., Bidder's response to request for clarifications on the bid), including corrections to the bid, if any, resulting from the Procuring Entity's bid evaluation;
 - c. Performance Security;
 - d. Notice of Award of Contract and the Bidder's conforme thereto; and
 - e. Other contract documents that may be required by existing laws and/or the Procuring Entity concerned in the PBDs. **Winning bidder agrees that additional contract documents or information prescribed by the GPPB that are subsequently required for submission after the contract**

execution, such as the Notice to Proceed, Variation Orders, and Warranty Security, shall likewise form part of the Contract.

- 3. In consideration for the sum of *[total contract price in words and figures]* or such other sums as may be ascertained, *[Named of the bidder]* agrees to *[state the object of the contract]* in accordance with his/her/its Bid.
- 4. The *[Name of the procuring entity]* agrees to pay the above-mentioned sum in accordance with the terms of the Bidding.

IN WITNESS whereof the parties thereto have caused this Agreement to be executed the day and year first before written.

[Insert Name and Signature]

[Insert Name and Signature]

[Insert Signatory's Legal Capacity]

[Insert Signatory's Legal Capacity]

for:

for:

[Insert Procuring Entity]

[Insert Name of Supplier]

Acknowledgment

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