



Republic of the Philippines  
**BULACAN STATE UNIVERSITY**  
City of Malolos, Bulacan

## INVITATION TO APPLY AND TO BID FOR THE Proposed Road Construction at the 25 Hectare BulSU Lot (Infra-2015-20)

The **BULACAN STATE UNIVERSITY (BulSU)**, through its **Bids and Awards Committee (BAC)**, invites suppliers/manufacturers/distributors/contractors to apply for eligibility and to bid for the hereunder project:

Name of Project : Proposed Road Construction at the 25 Hectare BulSU Lot  
Location : City of Malolos, Bulacan  
ABC : **Php 17,659,386.72**  
Completion Date : One Hundred Fifty (150) Calendar Days

The prospective bidder must have an experience of having completed at least one (1) contract that is similar to the contract to be bid, and whose value, adjusted to current prices using the NSO consumer price indices, must be at least fifty per cent (50%) of the ABC to be bid: Provided, however, That contractors under Small A and Small B Categories without similar experience on the contract to be bid may be allowed to bid if the cost of such contract is not more than fifty per cent (50%) of the Allowable Range of Contract Cost (ARCC) of their registration based on the guidelines as prescribed by the PCAB. The Eligibility Check/Screening as well as the Preliminary Examination of Bids shall use non-discretionary "pass/fail" criterion. Post-qualification of the lowest calculated bid shall be conducted.

All particulars relative to Eligibility Statement and Screening, Bid Security, Performance Security, Pre-Bidding Conference(s), Evaluation of Bids, Post-Qualification and Award of Contract shall be governed by the pertinent provisions of R.A. 9184 and its Implementing Rules and Regulations (IRR)

The schedule of activities is listed below:

Activities	Date/Time	Venue
1. Advertisement Period	<b>July 07, 2015</b>	PhilGEPS, BulSU Website and premises
2. Issuance of Bid Documents	<b>July 07, 2015</b>	Supply Office, CSSP Building, BulSU
3. Pre-bid Conference	<b>July 14, 2015 Tuesday, 9:00 am</b>	President's Boardroom, 2 <sup>nd</sup> Floor Flores Hall, BulSU
4. Deadline of Submission and Opening of Bids	<b>July 28, 2015 Tuesday, 10:00 am</b>	President's Boardroom, 2 <sup>nd</sup> Floor Flores Hall, BulSU

Bid Documents will be available only to prospective bidders upon payment of a non-refundable amount of **SEVENTEEN THOUSAND PESOS ONLY (P 17,000.00)** to the Bulacan State University Cashier, City of Malolos, Bulacan.

Submission of Letter of Intent (LOI) is per package and should bring the following: Original and photocopy of PCAB License and Certificate of Phil-GEPS Registration. Upon submission of Letter of Intent (LOI) and The Bulacan State University assumes no responsibility whatsoever to compensate or indemnify bidders for any expenses incurred in the preparation of the bid. Moreover, the Bulacan State University reserves the right to reject any or all bid proposal at any time prior to contract award, waive any formality in the bid requirements, declare the bidding a failure, or award the contract to the bidder whose offer is the most responsive, lowest calculated bid, and most advantageous to the government.

For further information, please refer to:  
*Bulacan State University-BAC Secretariat*  
*Guinhawa, City of Malolos, 3000 Bulacan*  
*Telefax. No. (044) 794-7755 ; (044)919-7800 to 99 loc 1053*  
*Email Address: bulsu\_bacsecretariat@ymail.com*

**DANILO S. HILARIO, Ed.D.**  
*BAC Chairman*



## **INVITATION TO BID FOR THE Proposed Road Construction at the 25 Hectare BulSU Lot (Infra-2015-20)**

The **BULACAN STATE UNIVERSITY (BulSU)**, through the **Use of Income** intends to apply the sum of **Seventeen Million Six Hundred Fifty Nine Thousand Three Hundred Eighty Six Pesos and 72/100 (Php. 17,659,386.72)** being the Approved Budget for the Contract (ABC) to payments under the contract for **Proposed Road Construction at the 25 Hectare BulSU Lot (Infra-2015-20)**. Bids received in excess of the ABC shall be automatically rejected at bid opening.

The **Bulacan State University** now invites bids for the **Proposed Road Construction at the 25 Hectare BulSU Lot (Infra-2015-20)**. Completion of the Works is required **One Hundred Fifty (150) calendar days upon receipt of Notice to Proceed**. The bidder must have an experience of having completed at least one (1) contract that is similar to the contract to be bid, and whose value, adjusted to current prices using the NSO consumer price indices, must be at least fifty per cent (50%) of the ABC to be bid: Provided, however, That contractors under Small A and Small B Categories without similar experience on the contract to be bid may be allowed to bid if the cost of such contract is not more than fifty per cent (50%) of the Allowable Range of Contract Cost (ARCC) of their registration based on the guidelines as prescribed by the PCAB. The description of an eligible bidder is contained in the Bidding Documents, particularly in Section II. Instructions to Bidders.

Bidding will be conducted through open competitive bidding procedures using non-discretionary pass/fail criterion as specified in the Implementing Rules and Regulations (IRR) of Republic Act 9184 (RA 9184), otherwise known as the "Government Procurement Reform Act".

Bidding is restricted to Filipino citizens/sole proprietorships, partnerships, or organizations with at least seventy five percent (75%) interest or outstanding capital stock belonging to citizens of the Philippines.

A complete set of Bidding Documents may be purchased by interested Bidders from the address below and upon payment of a non-refundable fee for the Bidding Documents in the amount of **Seventeen Thousand Pesos Only (Php. 17, 000.00)**.

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

The **Bulacan State University** will hold a **Pre-Bid Conference** on **July 14, 2015 (Tuesday), 9:00 a.m.** at the **President's Boardroom, 2<sup>nd</sup> Floor Flores Hall, Bulacan State University, Guinhawa, City of Malolos 3000 Bulacan**, which shall be open only to all interested parties who have purchased the Bidding Documents.

Bids must be delivered to the address below on or before **July 28, 2015 (Tuesday), 10:00 a.m. at the President's Boardroom, 2<sup>nd</sup> Floor Flores Hall, Bulacan State University**,

**Guinhawa, City of Malolos, 3000 Bulacan.** All bids must be accompanied by a bid security in any of the acceptable forms and in the amount stated in ITB Clause 18.

Bids will be opened in the presence of the bidders' representatives who choose to attend at the address below. Late bids shall not be accepted.

The **Bulacan State University** reserves the right to accept or reject any bid, to annul the bidding process, and to reject all bids at any time prior to contract award, without thereby incurring any liability to the affected bidder or bidders.

For further information, please refer to:

**CATHERINE B. PULUMBARIT**

*BAC Secretariat*

Bulacan State University

Guinhawa, City of Malolos, 3000 Bulacan

Tele fax no.: (044) 794-7755 / (044) 919-7800 loc 1053 or 1054

Email address: bulsu\_bacsecretariat@ymail.com

**DANILO S. HILARIO, Ed. D.**

*BAC Chairman*

## **A. General**

### **1. Scope of Bid**

1.1 The "BULACAN STATE UNIVERSITY" as defined in the **BDS**, invites bids for the construction of Works, as described in Section VI. Specifications. The name and identification number of the Contract is provided in the **BDS**.

1.2 The successful bidder will be expected to complete the Works by the intended completion date specified in SCC Clause 1.16.

### **2. Source of Funds**

The BULACAN STATE UNIVERSITY has a budget or has applied for or received funds from the Funding Source named in the **BDS**, and in the amount indicated in the **BDS**. It intends to apply part of the funds received for the Project, as defined in the **BDS**, to cover eligible payments under the Contract for the Works.

### **3. Corrupt, Fraudulent, Collusive, and Coercive Practices**

3.1. Unless otherwise specified in the BDS, the BULACAN STATE UNIVERSITY, as well as bidders and contractors, shall observe the highest standard of ethics during the procurement and execution of the contract. In pursuance of this policy, the Funding Source:

- (a) defines, for purposes of this provision, the terms set forth below as follows:
  - (i) **"corrupt practice"** means behavior on the part of officials in the public or private sectors by which they improperly and unlawfully enrich themselves, others, or induce others to do so, by misusing the position in which they are placed, and includes the offering, giving, receiving, or soliciting of anything of value to influence the action of any such official in the procurement process or in contract execution; entering, on behalf of the BULACAN STATE UNIVERSITY, into any contract or transaction manifestly and grossly disadvantageous to the same, whether or not the public officer profited or will profit thereby, and similar acts as provided in Republic Act 3019;
  - (ii) **"fraudulent practice"** means a misrepresentation of facts in order to influence a procurement process or the execution of a contract to the detriment of the BULACAN STATE UNIVERSITY, and includes collusive practices among Bidders (prior to or after Bid submission) designed to establish bid prices at artificial, non-competitive levels and to deprive the BULACAN STATE UNIVERSITY of the benefits of free and open competition;
  - (iii) **"collusive practice"** means a scheme or arrangement between two or more bidders, with or without the knowledge of the BULACAN STATE UNIVERSITY, designed to establish bid prices at artificial, non-competitive levels; and

- (iv) **“coercive practice”** means harming or threatening to harm, directly or indirectly, persons, or their property to influence their participation in a procurement process, or affect the execution of a contract;
  - (v) **“obstructive practice”** is
    - (aa) deliberately destroying, falsifying, altering or concealing of evidence material to an administrative proceedings or investigation or making false statements to investigators in order to materially impede an administrative proceedings or investigation of the BULACAN STATE UNIVERSITY or any foreign government/foreign or international financing institution into allegations of a corrupt, fraudulent, coercive or collusive practice; and/or threatening, harassing or intimidating any party to prevent it from disclosing its knowledge of matters relevant to the administrative proceedings or investigation or from pursuing such proceedings or investigation; or
    - (bb) acts intended to materially impede the exercise of the inspection and audit rights of the BULACAN STATE UNIVERSITY or any foreign government/foreign or international financing institution herein.
  - (b) will reject a proposal for award if it determines that the bidder recommended for award has engaged in corrupt or fraudulent practices in competing for the Contract; and
  - (c) will declare a firm ineligible, either indefinitely or for a stated period of time, to be awarded Contract funded by the Funding Source if it at any time determines that the firm has engaged in corrupt or fraudulent practices in competing or, or in executing, a Contract funded by the Funding Source.
- 3.2. Further, the BULACAN STATE UNIVERSITY will seek to impose the maximum civil, administrative, and/or criminal penalties available under the applicable laws on individuals and organizations deemed to be involved in any of the practices mentioned in **ITB** Clause 3.1(a).
- 3.3. Furthermore, the Funding Source and the BULACAN STATE UNIVERSITY reserve the right to inspect and audit records and accounts of a contractor in the bidding for and performance of a contract themselves or through independent auditors as reflected in the **GCC** Clause 34.

#### **4. Conflict of Interest**

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

interest in any of the circumstances set out in paragraphs (d) through (g) below:

- (a) A Bidder has controlling shareholders in common with another Bidder;
- (b) A Bidder receives or has received any direct or indirect subsidy from any other Bidder;
- (c) A Bidder has the same legal representative as that of another Bidder for purposes of this Bid;
- (d) A Bidder has a relationship, directly or through third parties, that puts them in a position to have access to information about or influence on the bid of another Bidder or influence the decisions of the BULACAN STATE UNIVERSITY regarding this bidding process. This will include a firm or an organization who lends, or temporarily seconds, its personnel to firms or organizations which are engaged in consulting services for the preparation related to procurement for or implementation of the project if the personnel would be involved in any capacity on the same project;
- (e) A Bidder submits more than one bid in this bidding process. However, this does not limit the participation of subcontractors in more than one bid;
- (f) A Bidder who participated as a consultant in the preparation of the design or technical specifications of the goods and related services that are the subject of the bid; or
- (g) A Bidder who lends, or temporary seconds, its personnel to firms or organizations which are engaged in consulting services for the preparation related to procurement for or implementation of the project, if the personnel would be involved in any capacity on the same project.

4.2. In accordance with Section 47 of the IRR of RA 9184, all Bidding Documents shall be accompanied by a sworn affidavit of the Bidder that it is not related to the Head of the BULACAN STATE UNIVERSITY, members of the Bids and Awards Committee (BAC), members of the Technical Working Group (TWG), members of the BAC Secretariat, the head of the Project Management Office (PMO) or the end-user unit, and the project consultants, by consanguinity or affinity up to the third civil degree. On the part of the bidder, this Clause shall apply to the following persons:

- (a) If the Bidder is an individual or a sole proprietorship, to the Bidder himself;
- (b) If the Bidder is a partnership, to all its officers and members;
- (c) If the Bidder is a corporation, to all its officers, directors, and controlling stockholders; and

- (d) If the Bidder is a joint venture (JV), the provisions of items (a), (b), or (c) of this Clause shall correspondingly apply to each of the members of the said JV, as may be appropriate.

Relationship of the nature described above or failure to comply with this Clause will result in the automatic disqualification of a Bidder.

## **5. Eligible Bidders**

- 5.1. Unless otherwise indicated in the BDS, the following persons shall be eligible to participate in this Bidding:
  - (a) Duly licensed Filipino citizens/sole proprietorships;
  - (b) Partnerships duly organized under the laws of the Philippines and of which at least seventy five percent (75%) of the interest belongs to citizens of the Philippines;
  - (c) Corporations duly organized under the laws of the Philippines, and of which at least seventy five percent (75%) of the outstanding capital stock belongs to citizens of the Philippines;
  - (d) Cooperatives duly organized under the laws of the Philippines, and of which at least seventy five percent (75%) of the interest belongs to citizens of the Philippines; and
  - (e) Persons/entities forming themselves into a JV, i.e., a group of two (2) or more persons/entities that intend to be jointly and severally responsible or liable for a particular contract: Provided, however, that, in accordance with Letter of Instructions No. 630, Filipino ownership or interest of the joint venture concerned shall be at least seventy five percent (75%): Provided, further, that joint ventures in which Filipino ownership or interest is less than seventy five percent (75%) may be eligible where the structures to be built require the application of techniques and/or technologies which are not adequately possessed by a person/entity meeting the seventy five percent (75%) Filipino ownership requirement: Provided, finally, that in the latter case, Filipino ownership or interest shall not be less than twenty five percent (25%). For this purpose Filipino ownership or interest shall be based on the contributions of each of the members of the joint venture as specified in their JVA.
- 5.2. The BULACAN STATE UNIVERSITY may also invite foreign bidders when provided for under any Treaty or International or Executive Agreement as specified in the **BDS**.
- 5.3. Government Corporate Entities may be eligible to participate only if they can establish that they (a) are legally and financially autonomous, (b) operate under commercial law, and (c) are not dependent agencies of the GOP or the BULACAN STATE UNIVERSITY.
- 5.4. (a) Unless otherwise provided in the **BDS**, the Bidder must have completed, within ten (10) years from the submission of bids, a single contract that is

similar to this Project, equivalent to at least fifty percent (50%) of the ABC adjusted to current prices using the National Statistics Office consumer price index.

(b) For Foreign-funded Procurement, the BULACAN STATE UNIVERSITY and the foreign government/foreign or international financing institution may agree on another track record requirement, as specified in the **BDS**.

For this purpose, contracts similar to the Project shall be those described in the **BDS**, and completed within the period stated in the Invitation to Bid and **ITB** Clause 12.1(a)(iii).

- 5.5. The Bidder must submit a computation of its Net Financial Contracting Capacity (NFCC) which must be at least equal to the ABC to be bid, calculated as follows:

NFCC = [(Current assets minus current liabilities) (K)] 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.

Where:

K = 10 for a contract duration of one year or less, 15 for a contract duration of more than one year up to two years, and 20 for a contract duration of more than two years.

The values of the bidder's current assets and current liabilities shall be based on the data submitted to the BIR, through its Electronic Filing and Payment System (EFPS).

## **6. Bidder's Responsibilities**

- 6.1. The Bidder or its duly authorized representative shall submit a sworn statement in the form prescribed in Section IX. Bidding Forms as required in **ITB** Clause 12.1(b)(iii).
- 6.2. The Bidder is responsible for the following:
- (a) Having taken steps to carefully examine all of the Bidding Documents;
  - (b) Having acknowledged all conditions, local or otherwise, affecting the implementation of the contract;
  - (c) Having made an estimate of the facilities available and needed for the contract to be bid, if any;
  - (d) Having complied with its responsibility to inquire or secure Supplemental/Bid Bulletin/s as provided under **ITB** Clause 10.3.
  - (e) Ensuring that it is not "blacklisted" or barred from bidding by the GOP or any of its agencies, offices, corporations, or LGUs, including foreign

government/foreign or international financing institution whose blacklisting rules have been recognized by the GPPB;

- (f) Ensuring that 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;
  - (g) Authorizing the Head of the BULACAN STATE UNIVERSITY or its duly authorized representative/s to verify all the documents submitted;
  - (h) Ensuring that the signatory is the duly authorized representative of the Bidder, and granted full power and authority to do, execute and perform any and all acts necessary and/or to represent the Bidder in the bidding, with the duly notarized Secretary's Certificate attesting to such fact, if the Bidder is a corporation, partnership, cooperative, or joint venture;
  - (i) Complying with the disclosure provision under Section 47 of the Act in relation to other provisions of Republic Act 3019; and
  - (j) Complying with existing labor laws and standards, if applicable. Failure to observe any of the above responsibilities shall be at the risk of the Bidder concerned.
- 6.3. The Bidder, by the act of submitting its bid, shall be deemed to have inspected the site, determined the general characteristics of the contract works and the conditions for this Project and examine all instructions, forms, terms, and project requirements in the Bidding Documents.
- 6.4. It shall be the sole responsibility of the prospective bidder to determine and to satisfy itself by such means as it considers necessary or desirable as to all matters pertaining to this Project, including: (a) the location and the nature of the contract, project, or 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.
- 6.5. The BULACAN STATE UNIVERSITY shall not assume any responsibility regarding erroneous interpretations or conclusions by the prospective or eligible bidder out of the data furnished by the BULACAN STATE UNIVERSITY.
- 6.6. Before submitting their bids, the Bidders are deemed to have become familiar with all existing laws, decrees, ordinances, acts and regulations of the Philippines which may affect the contract in any way.
- 6.7. The Bidder shall bear all costs associated with the preparation and submission of his bid, and the BULACAN STATE UNIVERSITY will in no case be responsible or liable for those costs, regardless of the conduct or outcome of the bidding process.

- 6.8. Bidders should note that the BULACAN STATE UNIVERSITY will only accept bids only from those that have paid the nonrefundable fee for the Bidding Documents at the office indicated in the Invitation to Bid.

## **7. Origin of GOODS and Services**

There is no restriction on the origin of Goods, or Contracting of Works or Services other than those prohibited by a decision of the United Nations Security Council taken under Chapter VII of the Charter of the United Nations.

## **8. Subcontracts**

- 8.1. Unless otherwise specified in the **BDS**, the Bidder may subcontract portions of the Works to an extent as may be approved by the BULACAN STATE UNIVERSITY and stated in the **BDS**. However, subcontracting of any portion shall not relieve the Bidder from any liability or obligation that may arise from the contract for this Project.
- 8.2. Subcontractors must submit the documentary requirements under **ITB** Clause 12 and comply with the eligibility criteria specified in the **BDS**. In the event that any subcontractor is found by the BULACAN STATE UNIVERSITY to be ineligible, the subcontracting of such portion of the Works shall be disallowed.
- 8.3. The Bidder may identify the subcontractor to whom a portion of the Works will be subcontracted at any stage of the bidding process or during contract implementation. If the Bidder opts to disclose the name of the subcontractor during bid submission, the Bidder shall include the required documents as part of the technical component of its bid.

## **B. Contents of Bidding Documents**

## **9. Pre-Bid Conference**

- 9.1. (a) If so specified in the **BDS**, a pre-bid conference shall be held at the venue and on the date indicated therein, to clarify and address the Bidders' questions on the technical and financial components of this Project.
- (b) *The pre-bid conference shall be held at least twelve (12) calendar days before the deadline for the submission of and receipt of bids. If the BULACAN STATE UNIVERSITY determines that, by reason of the method, nature, or complexity of the contract to be bid, or when international participation will be more advantageous to the GOP, a longer period for the preparation of bids is necessary, the pre-bid conference shall be held at least thirty (30) calendar days before the deadline for the submission and receipt of bids, as specified in the **BDS**.*
- 9.2. Bidders are encouraged to attend the pre-bid conference to ensure that they fully understand the BULACAN STATE UNIVERSITY's requirements. Non-attendance of the Bidder will in no way prejudice its bid; however, the Bidder is expected to know the changes and/or amendments to the Bidding Documents as recorded in the minutes of the pre-bid conference and the Supplemental/Bid Bulletin.

- 9.3. Any statement made at the pre-bid conference shall not modify the terms of the bidding documents unless such statement is specifically identified in writing as an amendment thereto and issued as a Supplemental/Bid Bulletin.

## **10. Clarification and Amendment of Bidding Documents**

- 10.1. Bidders who have purchased the Bidding Documents may request for clarification(s) on any part of the Bidding Documents or for an interpretation. Such a request must be in writing and submitted to the BULACAN STATE UNIVERSITY at the address indicated in the **BDS** at least ten (10) calendar days before the deadline set for the submission and receipt of Bids.
- 10.2. Supplemental/Bid Bulletins may be issued upon the BULACAN STATE UNIVERSITY's initiative for purposes of clarifying or modifying any provision of the Bidding Documents not later than seven (7) calendar days before the deadline for the submission and receipt of Bids. Any modification to the Bidding Documents shall be identified as an amendment.
- 10.3. Any Supplemental/Bid Bulletin issued by the BAC shall also be posted on the Philippine Government Electronic Procurement System (PhilGEPS) and the website of the BULACAN STATE UNIVERSITY concerned, if available. Unless, otherwise provided in the **BDS**, it shall be the responsibility of all Bidders who secure the Bidding Documents to inquire and secure Supplemental/Bid Bulletins that may be issued by the BAC. However, bidders who have submitted bids before the issuance of the Supplemental/Bid Bulletin must be informed and allowed to modify or withdraw their bids in accordance with **ITB** Clause 23.

### **C. Preparation of Bids**

## **11. Language of Bids**

The Bid, as well as all correspondence and documents relating to the Bid exchanged by the Bidder and the BULACAN STATE UNIVERSITY, shall be written in English. Supporting documents and printed literature furnished by the Bidder may be in another language provided they are accompanied by an accurate translation in English certified by the appropriate embassy or consulate in the Philippines, in which case the English translation shall govern, for purposes of interpretation of the Bid.

## **12. Documents Comprising the Bid: Eligibility and Technical Components**

- 12.1. Unless otherwise indicated in the **BDS**, the first envelope shall contain the following eligibility and technical documents:

### **(a) Eligibility Documents –**

#### **Class "A" Documents:**

- (i) Registration certificate from the Securities and Exchange Commission (SEC), Department of Trade and Industry (DTI) for sole proprietorship, or Cooperative Development Authority (CDA) for cooperatives, or any proof of such registration as stated in the **BDS**;

- (ii) Mayor's permit issued by the city or municipality where the principal place of business of the prospective bidder is located;
- (iii) The prospective bidder must have an experience of having completed at least one (1) contract that is similar to the contract to be bid, and whose value, adjusted to current prices using the NSO consumer price indices, must be at least fifty per cent (50%) of the ABC to be bid: *Provided, however,* That contractors under Small A and Small B Categories without similar experience on the contract to be bid may be allowed to bid if the cost of such contract is not more than fifty per cent (50%) of the Allowable Range of Contract Cost (ARCC) of their registration based on the guidelines as prescribed by the PCAB.

For Foreign-funded Procurement, the GOP and foreign government/ foreign or international financing institution may agree on another track record requirement.

Moreover, a contract shall be considered "similar" to the contract to be bid if it has the same major categories of work.

The statement shall include, for each contract, the following:

- (iii.1) name of the contract;
- (iii.2) date of the contract;
- (iii.3) contract duration;
- (iii.4) owner's name and address;
- (iii.5) nature of work;
- (iii.6) contractor's role (whether sole contractor, subcontractor, or partner in a JV) and percentage of participation;
- (iii.7) total contract value at award;
- (iii.8) date of completion or estimated completion time;
- (iii.9) total contract value at completion, if applicable;
- (iii.10) percentages of planned and actual accomplishments, if applicable;
- (iii.11) value of outstanding works, if applicable;
- (iii.12) the statement shall be supported by the notices of award and/or notices to proceed issued by the owners; and

(iii.13) the statement shall be supported by the Owner's Certificate of Final Acceptance; or the Constructors Performance Evaluation Summary (CPES) Final Rating and/or the Certificate of Completion, must be satisfactory.

- (iv) Unless otherwise provided in the **BDS**, valid Philippine Contractors Accreditation Board (PCAB) license and registration for the type and cost of the contract for this Project;
- (v) Audited financial statements, showing, among others, the prospective 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;
- (vi) NFCC computation in accordance with ITB Clause 5.5;
- (vii) Tax clearance per Executive Order 398, Series of 2005, as finally reviewed and approved by the BIR; and

**Class "B" Document:**

- (viii) If applicable, valid Joint Venture Agreement (JVA) or, in lieu thereof, 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 shall be included in the bid.

**(b) Technical Documents –**

- (i) Bid security in accordance with ITB Clause 18. If the Bidder opts to submit the bid security in the form of:
  - (i.1) Cash or cashier's/manager's check issued by a Universal or Commercial Bank.
  - (i.2) Bank draft/guarantee or irrevocable letter of credit issued by a Universal or Commercial Bank: Provided, however, that it shall be confirmed or authenticated by a Universal or Commercial Bank, if issued by a foreign bank.
  - (i.3) Surety bond callable upon demand issued by a surety or insurance company duly certified by the Insurance Commission as authorized to issue such security; and/or
  - (i.4) Any combination of items (i.1) to (i.3) above.
  - (i.5) Bid-Securing Declaration
- (ii) Project Requirements, which shall include the following:

- (ii.1) Organizational chart for the contract to be bid;
- (ii.2) List of contractor's personnel (viz, project Manager, Project Engineers, Materials Engineers, and Foremen), to be assigned to the contract to be bid, with their complete qualification and experience data; and
- (ii.3) List of contractor's equipment units, which are owned, leased, and/or under purchase agreements, supported by certification of availability of equipment from the equipment lessor/vendor for the duration of the project; and
- (iii) Sworn statement in accordance with Section 25.2(b) (iv) of the IRR of RA 9184 and using the form prescribed in Section IX. Bidding Forms.

### **13. Documents Comprising the Bid: Financial Component**

- 13.1. Unless otherwise stated in the **BDS**, the financial component of the bid shall contain the following:
- (a) Financial Bid Form in accordance with the form prescribed in Section IX. Bidding Forms; and
  - (b) Any other document related to the financial component of the bid as stated in the **BDS**.
- 13.2. (a) Unless indicated in the **BDS**, all Bids that exceed the ABC shall not be accepted.
- (b) Unless otherwise indicated in the **BDS**, for foreign-funded procurement, a ceiling may be applied to bid prices provided the following conditions are met:
- (i) Bidding Documents are obtainable free of charge on a freely accessible website. If payment of Bidding Documents is required by the BULACAN STATE UNIVERSITY, payment could be made upon the submission of bids.
  - (ii) The BULACAN STATE UNIVERSITY has procedures in place to ensure that the ABC is based on recent estimates made by the engineer or the responsible unit of the procuring entity and that the estimates are based on adequate detailed engineering (in the case of works) and reflect the quality, supervision and risk and inflationary factors, as well as prevailing market prices, associated with the types of works or goods to be procured.
  - (iii) The BULACAN STATE UNIVERSITY has trained cost estimators on estimating prices and analyzing bid variances. In the case of infrastructure projects, the BULACAN STATE UNIVERSITY must also have trained quantity surveyors.

- (iv) The BULACAN STATE UNIVERSITY has established a system to monitor and report bid prices relative to ABC and engineer's/BULACAN STATE UNIVERSITY's estimate.
- (v) The BULACAN STATE UNIVERSITY has established a monitoring and evaluation system for contract implementation to provide a feedback on actual total costs of goods and works.

#### **14. Alternative Bids**

- 14.1. Alternative Bids shall be rejected. For this purpose, alternative bid is an offer made by a Bidder in addition or as a substitute to its original bid which may be included as part of its original bid or submitted separately therewith for purposes of bidding. A bid with options is considered an alternative bid regardless of whether said bid proposal is contained in a single envelope or submitted in two (2) or more separate bid envelopes.
- 14.2. 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.
- 14.3. Each Bidder shall submit only one Bid, either individually or as a partner in a JV. A Bidder who submits or participates in more than one bid (other than as a subcontractor if a subcontractor is permitted to participate in more than one bid) will cause all the proposals with the Bidder's participation to be disqualified. This shall be without prejudice to any applicable criminal, civil and administrative penalties that may be imposed upon the persons and entities concerned.

#### **15. Bid Prices**

- 15.1. The contract shall be for the whole Works, as described in **ITB** Clause 1.1, based on the priced Bill of Quantities submitted by the Bidder.
- 15.2. The Bidder shall fill in rates and prices for all items of the Works described in the Bill of Quantities. Bids not addressing or providing all of the required items in the Bidding Documents including, where applicable, bill of quantities, shall be considered non-responsive and, thus, automatically disqualified. In this regard, where a required item is provided, but no price is indicated, the same shall be considered as non-responsive, but specifying a "0" (zero) for the said item would mean that it is being offered for free to the Government.
- 15.3. All duties, taxes, and other levies payable by the Contractor under the Contract, or for any other cause, prior to the deadline for submission of bids, shall be included in the rates, prices, and total bid price submitted by the Bidder.
- 15.4. All bid prices for the given scope of work in the contract as awarded shall be considered as fixed prices, and therefore not subject to price escalation during contract implementation, except under extraordinary circumstances as specified in GCC Clause 48. Price escalation may be allowed in extraordinary circumstances as may be determined by the National Economic and Development Authority in accordance with the Civil Code of the Philippines,

and upon the recommendation of the BULACAN STATE UNIVERSITY. Furthermore, in cases where the cost of the awarded contract is affected by any applicable new laws, ordinances, regulations, or other acts of the GOP, promulgated after the date of bid opening, a contract price adjustment shall be made or appropriate relief shall be applied on a no loss-no gain basis.

**16. Bid Currencies**

- 16.1. All bid prices shall be quoted in Philippine Pesos unless otherwise provided in the **BDS**. However, for purposes of bid evaluation, bids denominated in foreign currencies shall be converted to Philippine currency based on the exchange rate prevailing on the day of the Bid opening.
- 16.2. If so allowed in accordance with **ITB** Clause 16.1, the BULACAN STATE UNIVERSITY for purposes of bid evaluation and comparing the bid prices will convert the amounts in various currencies in which the bid price is expressed to Philippine Pesos at the exchange rate as published in the BSP reference rate bulletin on the day of the bid opening.
- 16.3. Unless otherwise specified in the BDS, payment of the contract price shall be made in Philippine Pesos.

**17. Bid Validity**

- 17.1. Bids shall remain valid for the period specified in the **BDS** which shall not exceed one hundred twenty (120) calendar days from the date of the opening of bids.
- 17.2. In exceptional circumstances, prior to the expiration of the bid validity period, the BULACAN STATE UNIVERSITY may request Bidders to extend the period of validity of their bids. The request and the responses shall be made in writing. The bid security described in **ITB** Clause 0 should also be extended corresponding to the extension of the bid validity period at the least. A Bidder may refuse the request without forfeiting its bid security, but his bid shall no longer be considered for further evaluation and award. A Bidder granting the request shall not be required or permitted to modify its bid.

**18. Bid Security**

- 18.1. The bid security in the amount stated in the BDS shall be equal to the percentage of the ABC in accordance with the following schedule:

Form of Bid Security	Amount of Bid Security (Equal to Percentage of the ABC)
(a) Cash or cashier's/manager's check issued by a Universal or Commercial Bank.	Two percent (2%)

(b) Bank draft/guarantee or irrevocable letter of credit issued by a Universal or Commercial Bank: Provided, however, that it shall be confirmed or authenticated by a Universal or Commercial Bank, if issued by a foreign bank.	
(c) Surety bond callable upon demand issued by a surety or insurance company duly certified by the Insurance Commission as authorized to issue such security; and/or	Five percent (5%)
(d) Any combination of items (a) to (c) above.	Proportionate to share of form with respect to total amount of security
(e) Bid Securing Declaration	No percentage required

For biddings conducted by local government units, the procuring entity may also require bidders to submit bid securities in the form of cashier's/manager's check, bank draft/guarantee, or irrevocable letter of credit from other banks certified by the BSP as authorized to issue such financial statement.

- 18.2. The bid security should be valid for the period specified in the **BDS**. Any bid not accompanied by an acceptable bid security shall be rejected by the BULACAN STATE UNIVERSITY as non-responsive.
- 18.3. No bid securities shall be returned to bidders after the opening of bids and before contract signing, except to those that failed or declared as post-disqualified, upon submission of a written waiver of their right to file a motion for reconsideration and/or protest. Without prejudice on its forfeiture, Bid Securities shall be returned only after the bidder with the Lowest Calculated Responsive Bid has signed the contract and furnished the Performance Security, but in no case later than the expiration of the Bid Security validity period indicated in **ITB Clause 18.2**.
- 18.4. Upon signing and execution of the contract, pursuant to **ITB Clause 31**, and the posting of the performance security, pursuant to **ITB Clause 32**, the successful Bidder's Bid security will be discharged, but in no case later than the Bid security validity period as indicated in **ITB Clause 18.2**.
- 18.5. The bid security may be forfeited:
  - (a) if a Bidder:
    - (i) withdraws its bid during the period of bid validity specified in **ITB Clause 17**;
    - (ii) does not accept the correction of errors pursuant to **ITB Clause 27.3(b)**;

- (iii) fails to submit the requirements within the prescribed period, or a finding against their veracity, as stated in ITB Clause 28.2;
  - (iv) submission of eligibility requirements containing false information or falsified documents;
  - (v) submission of bids that contain false information or falsified documents, or the concealment of such information in the bids in order to influence the outcome of eligibility screening or any other stage of the public bidding;
  - (vi) allowing the use of one's name, or using the name of another for purposes of public bidding;
  - (vii) withdrawal of a bid, or refusal to accept an award, or enter into contract with the Government without justifiable cause, after the Bidder had been adjudged as having submitted the Lowest Calculated and Responsive Bid;
  - (viii) refusal or failure to post the required performance security within the prescribed time;
  - (ix) refusal to clarify or validate in writing its bid during post-qualification within a period of seven (7) calendar days from receipt of the request for clarification;
  - (x) any documented attempt by a bidder to unduly influence the outcome of the bidding in his favor;
  - (xi) failure of the potential joint venture partners to enter into the joint venture after the bid is declared successful; or
  - (xii) all other acts that tend to defeat the purpose of the competitive bidding, such as habitually withdrawing from bidding, submitting late Bids or patently insufficient bid, for at least three (3) times within a year, except for valid reasons.
- (b) if the successful Bidder:
- (i) fails to sign the contract in accordance with **ITB** Clause 31;
  - (ii) fails to furnish performance security in accordance with **ITB** Clause 32.

## **19. Format and Signing of Bids**

19.1 Bidders shall submit their bids through their duly authorized representative using the appropriate forms provided in Section IX. Bidding Forms on or before the deadline specified in the **ITB** Clause 21 in two (2) separate sealed bid envelopes, and which shall be submitted simultaneously. The first shall contain the technical component of the bid, including the eligibility requirements under **ITB** Clause 12.1 and the second shall contain the financial component of the bid.

- 19.2. Forms as mentioned in **ITB** Clause 19.1 must be completed without any alterations to their format, and no substitute form shall be accepted. All blank spaces shall be filled in with the information requested.
- 19.3. The Bidder shall prepare an original of the first and second envelopes as described in **ITB** Clauses 12 and 13. In addition, the Bidder shall submit copies of the first and second envelopes. In the event of any discrepancy between the original and the copies, the original shall prevail.
- 19.4. The bid, except for unamended printed literature, shall be signed, and each and every page thereof shall be initialed, by the duly authorized representative/s of the Bidder.
- 19.5. Any interlineations, erasures, or overwriting shall be valid only if they are signed or initialed by the duly authorized representative/s of the Bidder.

## **20. Sealing and Marking of Bids**

- 20.1. Bidders shall enclose their original eligibility and technical documents described in **ITB** Clause 12, in one sealed envelope marked "**ORIGINAL - TECHNICAL COMPONENT**", and the original of their financial component in another sealed envelope marked "**ORIGINAL - FINANCIAL COMPONENT**", sealing them all in an outer envelope marked "**ORIGINAL BID**".
- 20.2. Each copy of the first and second envelopes shall be similarly sealed duly marking the inner envelopes as "**COPY NO. \_\_\_\_ - TECHNICAL COMPONENT**" and "**COPY NO. \_\_\_\_ - FINANCIAL COMPONENT**" and the outer envelope as "**COPY NO. \_\_\_\_**", respectively. **These envelopes containing the original and the copies shall then be enclosed in one single envelope.**
- 20.3. The original and the number of copies of the Bid as indicated in the **BDS** shall be typed or written in indelible ink and shall be signed by the bidder or its duly authorized representative/s.
- 20.4. All envelopes shall:
  - (a) contain the name of the contract to be bid in capital letters;
  - (b) bear the name and address of the Bidder in capital letters;
  - (c) be addressed to the BULACAN STATE UNIVERSITY's BAC identified in **ITB** Clause 10.1;
  - (d) bear the specific identification of this bidding process indicated in the Invitation to Bid; and
  - (e) bear a warning "DO NOT OPEN BEFORE..." the date and time for the opening of bids, in accordance with **ITB** Clause 21.
- 20.5. If bids are not sealed and marked as required, the BULACAN STATE UNIVERSITY will assume no responsibility for the misplacement or premature opening of the bid.

## **D. Submission and Opening of Bids**

### **21. Deadline for Submission of Bids**

Bids must be received by the BULACAN STATE UNIVERSITY's BAC at the address and on or before the date and time indicated in the **BDS**.

### **22. Late Bids**

Any bid submitted after the deadline for submission and receipt of bids prescribed by the BULACAN STATE UNIVERSITY, pursuant to **ITB** Clause 21, shall be declared "Late" and shall not be accepted by the Procuring Entity.

### **23. Modification and Withdrawal of Bids**

23.1. The Bidder may modify its bid after it has been submitted; provided that the modification is received by the BULACAN STATE UNIVERSITY prior to the deadline prescribed for submission and receipt of bids. The Bidder shall not be allowed to retrieve its original bid, but shall be allowed to submit another bid equally sealed, properly identified, linked to its original bid marked as "TECHNICAL MODIFICATION" or "FINANCIAL MODIFICATION" and stamped "received" by the BAC. Bid modifications received after the applicable deadline shall not be considered and shall be returned to the Bidder unopened.

23.2. A Bidder may, through a letter of withdrawal, withdraw its bid after it has been submitted, for valid and justifiable reason; provided that the letter of withdrawal is received by the BULACAN STATE UNIVERSITY prior to the deadline prescribed for submission and receipt of bids.

23.3. Bids requested to be withdrawn in accordance with **ITB** Clause 23.1 shall be returned unopened to the Bidders. A Bidder may also express its intention not to participate in the bidding through a letter which should reach and be stamped by the BAC before the deadline for submission and receipt of bids. A Bidder that withdraws its bid shall not be permitted to submit another bid, directly or indirectly, for the same contract.

23.4. No bid may be modified after the deadline for submission of bids. No bid may be withdrawn in the interval between the deadline for submission of bids and the expiration of the period of bid validity specified by the Bidder on the Financial Bid Form. Withdrawal of a bid during this interval shall result in the forfeiture of the Bidder's bid security, pursuant to **ITB** Clause 18.5, and the imposition of administrative, civil, and criminal sanctions as prescribed by RA 9184 and its IRR.

### **24. Opening and Preliminary Examination of Bids**

24.1. The BAC shall open the first bid envelopes of Bidders in public as specified in the **BDS** to determine each Bidder's compliance with the documents prescribed in **ITB** Clause 12. For this purpose, the BAC shall check the submitted documents of each bidder against a checklist of required documents to ascertain if they are all present, using a non-discretionary "pass/fail" criterion. If a bidder submits the required document, it shall be rated "passed" for that particular requirement. In this regard, bids that fail to

include any requirement or are incomplete or patently insufficient shall be considered as “failed”. Otherwise, the BAC shall rate the said first bid envelope as “passed”.

- 24.2. Unless otherwise specified in the **BDS**, immediately after determining compliance with the requirements in the first envelope, the BAC shall forthwith open the second bid envelope of each remaining eligible bidder whose first bid envelope was rated “passed”. The second envelope of each complying bidder shall be opened within the same day. In case one or more of the requirements in the second envelope of a particular bid is missing, incomplete or patently insufficient, and/or if the submitted total bid price exceeds the ABC unless otherwise provided in **ITB** Clause 13.1(b), the BAC shall rate the bid concerned as “failed”. Only bids that are determined to contain all the bid requirements for both components shall be rated “passed” and shall immediately be considered for evaluation and comparison.
- 24.3. Letters of withdrawal shall be read out and recorded during bid opening, and the envelope containing the corresponding withdrawn bid shall be returned to the Bidder unopened. If the withdrawing Bidder’s representative is in attendance, the original bid and all copies thereof shall be returned to the representative during the bid opening. If the representative is not in attendance, the Bid shall be returned unopened by registered mail. The Bidder may withdraw its bid prior to the deadline for the submission and receipt of bids, provided that the corresponding letter of withdrawal contains a valid authorization requesting for such withdrawal, subject to appropriate administrative sanctions.
- 24.4. If a Bidder has previously secured a certification from the BULACAN STATE UNIVERSITY to the effect that it has previously submitted the above-enumerated Class “A” Documents, the said certification may be submitted in lieu of the requirements enumerated in **ITB** Clause 12.1(a), items (i) to (vi).
- 24.5. In the case of an eligible foreign Bidder as described in **ITB** Clause 5, the Class “A” Documents enumerated in **ITB** Clause 12.1(a) may be substituted with the appropriate equivalent documents, if any, issued by the country of the foreign Bidder concerned.
- 24.6. Each partner of a joint venture agreement shall likewise submit the documents required in **ITB** Clauses 12.1(a)(i) and 12.1(a)(ii). Submission of documents required under **ITB** Clauses 12.1(a)(iii) to 12.1(a)(vi) by any of the joint venture partners constitutes compliance.

## **E. Evaluation and Comparison of Bids**

### **25. Process to be Confidential**

- 25.1. Members of the BAC, including its staff and personnel, as well as its Secretariat and TWG, are prohibited from making or accepting any kind of communication with any bidder regarding the evaluation of their bids until the issuance of the Notice of Award, unless in the case of **ITB** Clause 26.
- 25.2. Any effort by a bidder to influence the BULACAN STATE UNIVERSITY in the BULACAN STATE UNIVERSITY’s decision in respect of Bid evaluation, Bid comparison or contract award will result in the rejection of the Bidder’s Bid.

## 26. Clarification of Bids

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

## 27. Detailed Evaluation and Comparison of Bids

27.1. The BULACAN STATE UNIVERSITY will undertake the detailed evaluation and comparison of Bids which have passed the opening and preliminary examination of Bids, pursuant to **ITB** Clause 24, in order to determine the Lowest Calculated Bid.

27.2. In evaluating the Bids to get the Lowest Calculated Bid, the BULACAN STATE UNIVERSITY shall undertake the following:

- (a) The detailed evaluation of the financial component of the bids, to establish the correct calculated prices of the bids; and
- (b) The ranking of the total bid prices as so calculated from the lowest to highest. The bid with the lowest price shall be identified as the Lowest Calculated Bid.

27.3. The BULACAN STATE UNIVERSITY's BAC shall immediately conduct a detailed evaluation of all bids rated "passed," using non-discretionary "pass/fail" criterion. The BAC shall consider the following in the evaluation of bids:

- (a) **Completeness of the bid.** Unless the ITB specifically allows partial bids, bids not addressing or providing all of the required items in the Schedule of Requirements including, where applicable, bill of quantities, shall be considered non-responsive and, thus, automatically disqualified. In this regard, where a required item is provided, but no price is indicated, the same shall be considered as non-responsive, but specifying a "0" (zero) for the said item would mean that it is being offered for free to the BULACAN STATE UNIVERSITY; and
- (b) **Arithmetical corrections.** Consider computational errors and omissions to enable proper comparison of all eligible bids. It may also consider bid modifications if expressly allowed in the **BDS**. Any adjustment shall be calculated in monetary terms to determine the calculated prices.

27.4. Based on the detailed evaluation of bids, those that comply with the above-mentioned requirements shall be ranked in the ascending order of their total calculated bid prices, as evaluated and corrected for computational errors, discounts and other modifications, to identify the Lowest Calculated Bid. Total calculated bid prices, as evaluated and corrected for computational errors, discounts and other modifications, which exceed the ABC shall not be considered, unless otherwise indicated in the **BDS**.

- 27.5. The BULACAN STATE UNIVERSITY's evaluation of bids shall only be based on the bid price quoted in the Financial Bid Form.
- 27.6. Bids shall be evaluated on an equal footing to ensure fair competition. For this purpose, all bidders shall be required to include in their bids the cost of all taxes, such as, but not limited to, value added tax (VAT), income tax, local taxes, and other fiscal levies and duties which shall be itemized in the bid form and reflected in the detailed estimates. Such bids, including said taxes, shall be the basis for bid evaluation and comparison.

## **28. Post-Qualification**

- 28.1. The BULACAN STATE UNIVERSITY shall determine to its satisfaction whether the Bidder that is evaluated as having submitted the Lowest Calculated Bid (LCB) complies with and is responsive to all the requirements and conditions specified in **ITB** Clauses 5, 12, and 13.

- 28.2. Within a non-extendible period of three (3) calendar days from receipt by the Bidder of the notice from the BAC that it submitted the LCB, the Bidder shall submit the following documentary requirements:

- (a) Latest income and business tax returns in the form specified in the **BDS**;
- (b) Certificate of PhilGEPS Registration; and
- (c) Other appropriate licenses and permits required by law and stated in the **BDS**.

Failure of the Bidder declared as LCB to duly submit the requirements under this Clause or a finding against the veracity of such shall be ground for forfeiture of the bid security and disqualification of the Bidder for award.

- 28.3. The determination shall be based upon an examination of the documentary evidence of the Bidder's qualifications submitted pursuant to **ITB** Clauses 12 and 13, as well as other information as the BULACAN STATE UNIVERSITY deems necessary and appropriate, using a non-discretionary "pass/fail" criterion.
- 28.4. If the BAC determines that the Bidder with the Lowest Calculated Bid passes all the criteria for post-qualification, it shall declare the said bid as the Lowest Calculated Responsive Bid, and recommend to the BULACAN STATE UNIVERSITY the award of contract to the said Bidder at its submitted price or its calculated bid price, whichever is lower, subject to **ITB** Clause 30.3.
- 28.5. A negative determination shall result in rejection of the Bidder's Bid, in which event the BULACAN STATE UNIVERSITY shall proceed to the next Lowest Calculated Bid to make a similar determination of that Bidder's capabilities to perform satisfactorily. If the second Bidder, however, fails the post qualification, the procedure for post qualification shall be repeated for the Bidder with the next Lowest Calculated Bid, and so on until the Lowest Calculated and Responsive Bid is determined for contract award.

- 28.6. Within a period not exceeding seven (7) calendar days from the date of receipt of the recommendation of the BAC, the Head of the BULACAN STATE UNIVERSITY shall approve or disapprove the said recommendation. In the case of government owned and government-owned and/or -controlled corporations (GOCCs) and government financial institutions (GFIs), the period provided herein shall be fifteen (15) calendar days.

## **29. Reservation Clause**

- 29.1. Notwithstanding the eligibility or post-qualification of a bidder, the BULACAN STATE UNIVERSITY concerned reserves the right to review its qualifications at any stage of the procurement process if it has reasonable grounds to believe that a misrepresentation has been made by the said bidder, or that there has been a change in the Bidder's capability to undertake the project from the time it submitted its eligibility requirements. Should such review uncover any misrepresentation made in the eligibility and bidding requirements, statements or documents, or any changes in the situation of the Bidder which will affect its capability to undertake the project so that it fails the preset eligibility or bid evaluation criteria, the BULACAN STATE UNIVERSITY shall consider the said Bidder as ineligible and shall disqualify it from submitting a bid or from obtaining an award or contract.
- 29.2. Based on the following grounds, the BULACAN STATE UNIVERSITY reserves the right to reject any and all Bids, declare a Failure of Bidding at any time prior to the contract award, or not to award the contract, without thereby incurring any liability, and make no assurance that a contract shall be entered into as a result of the bidding:
- (a) if there is *prima facie* evidence of collusion between appropriate public officers or employees of the BULACAN STATE UNIVERSITY, or between the BAC and any of the bidders, or if the collusion is between or among the bidders themselves, or between a bidder and a third party, including any act which restricts, suppresses or nullifies or tends to restrict, suppress or nullify competition;
  - (b) if the BULACAN STATE UNIVERSITY's BAC is found to have failed in following the prescribed bidding procedures; or
  - (c) for any justifiable and reasonable ground where the award of the contract will not redound to the benefit of the Government as follows:
    - (i) If the physical and economic conditions have significantly changed so as to render the project no longer economically, financially or technically feasible as determined by the head of the BULACAN STATE UNIVERSITY;
    - (ii) If the project is no longer necessary as determined by the head of the BULACAN STATE UNIVERSITY; and
    - (iii) If the source of funds for the project has been withheld or reduced through no fault of the BULACAN STATE UNIVERSITY.

29.3. In addition, the BULACAN STATE UNIVERSITY may likewise declare a failure of bidding when:

- (a) No bids are received;
- (b) All prospective bidders are declared ineligible;
- (c) All bids fail to comply with all the bid requirements or fail post-qualification; or
- (d) The bidder with the Lowest Calculated Responsive Bid refuses, without justifiable cause to accept the award of contract, and no award is made.

## **F. Award of Contract**

### **30. Contract Award**

30.1. Subject to **ITB** Clause 28, the BULACAN STATE UNIVERSITY shall award the contract to the Bidder who's Bid has been determined to be the Lowest Calculated and Responsive Bid (LCRB).

30.2. Prior to the expiration of the period of Bid validity, the BULACAN STATE UNIVERSITY shall notify the successful Bidder in writing that its Bid has been accepted, through a Notice of Award received personally or sent by registered mail or electronically, receipt of which must be confirmed in writing within two (2) days by the LCRB and submitted personally or sent by registered mail or electronically to the BULACAN STATE UNIVERSITY.

30.3. Notwithstanding the issuance of the Notice of Award, award of contract shall be subject to the following conditions:

- (a) Submission of the following documents within the prescribed period from receipt by the Bidder of the notice that it has the Lowest Calculated and Responsive Bid:
  - (i) Valid JVA, if applicable, within ten (10) calendar days;
  - (ii) Valid PCAB license and registration for the type and cost of the contract to be bid for foreign bidders, within thirty (30) calendar days, if allowed under a Treaty or International or Executive Agreement mentioned in **ITB** Clause 12.1(a)(iv);
- (b) Posting of the performance security in accordance with **ITB** Clause 32;
- (c) Signing of the contract as provided in **ITB** Clause 31; and
- (d) Approval by higher authority, if required.

### 31. Signing of the Contract

- 31.1. At the same time as the BULACAN STATE UNIVERSITY notifies the successful Bidder that its Bid has been accepted, the BULACAN STATE UNIVERSITY shall send the Contract Form to the Bidder, which Contract has been provided in the Bidding Documents, incorporating therein all agreements between the parties.
- 31.2. Within ten (10) calendar days from receipt of the Notice of Award, the successful Bidder shall post the required performance security, sign and date the contract and return it to the BULACAN STATE UNIVERSITY.
- 31.3. The BULACAN STATE UNIVERSITY shall enter into contract with the successful Bidder within the same ten (10) calendar day period provided that all the documentary requirements are complied with.
- 31.4. The following documents shall form part of the contract:
- (a) Contract Agreement;
  - (b) Bidding Documents;
  - (c) Winning bidder's bid, including the Technical and Financial Proposals, and all other documents/statements submitted;
  - (d) Performance Security;
  - (e) Credit line in accordance with **ITB** Clause 5.5, if applicable;
  - (f) Notice of Award of Contract; and
  - (g) Other contract documents that may be required by existing laws and/or specified in the **BDS**.

### 32. Performance Security

- 32.1. To guarantee the faithful performance by the winning Bidder of its obligations under the contract, it shall post a performance security within a maximum period of ten (10) calendar days from the receipt of the Notice of Award from the BULACAN STATE UNIVERSITY and in no case later than the signing of the contract.
- 32.2. The procuring entity shall prescribe at least two (2) acceptable forms of performance security taken from two (2)m categories below that bidders may opt to use, denominated in Philippine Pesos and posted in favour of the Procuring Entity in an amount equal to the percentage of the total contract price as stated in the **BDS** in accordance with the following schedule:

Form of Performance Security	Amount of Performance Security (Equal to Percentage of the Total Contract Price)
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(a) Cash or cashier's/manager's check issued by a Universal or Commercial Bank.	Ten percent (10%)
(b) Bank draft/guarantee or irrevocable letter of credit issued by a Universal or Commercial Bank: Provided, however, that it shall be confirmed or authenticated by a Universal or Commercial Bank, if issued by a foreign bank.	
(c) Surety bond callable upon demand issued by a surety or insurance company duly certified by the Insurance Commission as authorized to issue such security; and/or	Thirty percent (30%)
(d) Any combination of the foregoing.	Proportionate to share of form with respect to total amount of security

32.3. Failure of the successful Bidder to comply with the above-mentioned requirement shall constitute sufficient ground for the annulment of the award and forfeiture of the bid security, in which event the BULACAN STATE UNIVERSITY shall initiate and complete the post qualification of the second Lowest Calculated Bid. The procedure shall be repeated until the Lowest Calculated and Responsive Bid is identified and selected for contract award. However if no Bidder passed post-qualification, the BAC shall declare the bidding a failure and conduct a re-bidding with re-advertisement.

### **33. Notice to Proceed**

33.1. Within three (3) calendar days from the date of approval of the Contract by the appropriate government approving authority, the BULACAN STATE UNIVERSITY shall issue its Notice to Proceed to the Bidder.

33.2. The contract effectivity date shall be provided in the Notice to Proceed by the BULACAN STATE UNIVERSITY, which date shall not be later than seven (7) calendar days from the issuance of the Notice to Proceed.

### **34. Protest Mechanism**

Decision of the procuring entity at any stage of the procurement process may be questioned in accordance with Section 55 of the revised Implementing Rules and Regulations of Republic Act 9184.

# Bid Data Sheet

ITB Clause	
1.1	<p>The <b>Procuring Entity</b> is <b>Bulacan State University (BulSU)</b>.</p> <p>The name of the Contract is <b>Proposed Road Construction at the 25 Hectare BulSU Lot</b></p> <p>The identification number of the Contract is <b>Infra-2015-20</b>.</p>
2	<p>The Funding Source is:</p> <p>The Government of the Philippines (GOP) through <b>Use of Income for the contract approved by the governing Boards in the amount of Seventeen Million Six Hundred Fifty Nine Thousand Three Hundred Eighty Six Pesos and 72/100 (Php. 17,659,386.72).</b></p> <p>The name of the Project is <b>Proposed Road Construction at the 25 Hectare BulSU Lot (Infra-2015-20).</b></p>
3.1	No further instructions.
5.1	No further instructions.
5.2	Bidding is restricted to eligible bidders as defined in ITB Clause 5.1.
5.4	<p>The prospective bidder must have an experience of having completed at least one (1) contract that is similar to the contract to be bid, and whose value, adjusted to current prices using the NSO consumer price indices, must be at least fifty per cent (50%) of the ABC to be bid: Provided, however, That contractors under Small A and Small B Categories without similar experience on the contract to be bid may be allowed to bid if the cost of such contract is not more than fifty per cent (50%) of the Allowable Range of Contract Cost (ARCC) of their registration based on the guidelines as prescribed by the PCAB.</p> <p><b>Similar project refers to Horizontal Infrastructure (Roads, Bridges, Retaining Walls and Dams) with corresponding supporting documents:</b></p> <p><b>(1) Programs of Works;</b></p> <p><b>(2) Notice of Award or Notice to Proceed or Contract issued by the owners.</b></p> <p><b>(3) Owner's Certificate of Final Acceptance; or the Constructors Performance Evaluation Summary (CPES) Final Rating or the Certificate of Completion, must be satisfactory.</b></p>
8.1	"Subcontracting is not allowed."
8.2	"Not applicable".
9.1	The BULACAN STATE UNIVERSITY will hold a <b>Pre-bid Conference</b> for this Project on <b>July 14, 2015, Tuesday 9:00 a.m.</b> at the <b>University President's Boardroom, 2<sup>nd</sup> Floor, Flores Hall, Bulacan State University, Guinhawa, City of Malolos, 3000 Bulacan</b>
10.1	The BULACAN STATE UNIVERSITY's address is: <b>Guinhawa, City of Malolos, 3000 Bulacan</b>

	<b>Catherine B. Pulumbarit</b> <i>BAC Secretariat</i> Telefax No. : (044) 794-7755 Website: <a href="http://www.bulsu.edu.ph">www.bulsu.edu.ph</a>
10.3	No further instructions.
12.1(a)(i)	Registration Certificate from the SEC, DTI or CDA. (Original copy of official receipt if pending issuance of certificate of registration.)
12.1(a)(ii)	Valid Mayor's permit issued by the city or municipality where the principal place of business of the prospective bidder is located.
12.1(a)(iii)	The statement of all ongoing government and private contracts including contracts awarded but not yet started. (Please see attached prescribed forms- Section IX of the bidding documents)  Note: 1. For the list of on-going it must be supported with the ff. a. Notice of Award or Notice to Proceed or Contract issued by the owners; and b. Certificate of Good Standing ( No slippage and delay)
12.1(a)(iv)	Valid Philippine Contractors Accreditation Board (PCAB) license (Medium A Category B, Road Works)
12.1(a)(vii)	Tax Clearance per Executive Order 398, Series of 2005, as finally reviewed and approved by the BIR
12.1(b)(ii.1)	Organizational chart for the contract to be bid;
12.1(b)(ii.2)	List of contractor's personnel:  <b>Registered Civil Engineer (Supervising Site Engineer to be present throughout the duration of the project) (with Valid PRC License) and other needed personnel to be assigned to the project with their complete qualifications and experiences data.</b>
12.1(b)(ii.3)	List of contractor's equipment units necessary for the project, which are owned, leased, and/or under purchase agreements, <b>supported by certification</b> of availability of equipment from the equipment lessor/vendor for the duration of the project.
12.1(b)(iv)	Additional documents to be included in the technical envelope <b>a. Construction Schedule and S-curve;</b> <b>b. Manpower Schedule;</b> <b>c. Detailed Construction Methods;</b> <b>d. PERT/CPM (network diagram);</b> <b>e. Equipment Utilization Schedule;</b> <b>f. Site Inspection Certificate issued by BulSU; and</b> <b>g. Contractor's Confirmation (Construction Specifications)</b>
13.1(b)	<ul style="list-style-type: none"> <li>- Duly signed Financial Bid Form.</li> <li>- Duly signed and priced Bill of Quantities</li> <li>- Duly signed and priced Detailed Estimates</li> <li>- Cash Flow by the Quarter and Payment Schedule</li> <li>- Detailed Unit Price Analysis</li> <li>- Back-up quantity computation sheet/tally sheet 9 as programmed</li> <li>- Soft copy in compact disc (CD) of the duly priced Bill of Quantities &amp; Detailed Estimates using Microsoft Excel</li> </ul>
13.1(b)	The ABC is <b>Seventeen Million Six Hundred Fifty Nine Thousand Three Hundred Eighty Six Pesos and 72/100 (Php. 17,659,386.72)</b> . Any bid with a financial component exceeding this amount shall not be accepted.

14.2	No further instructions.
15.4	No further instructions.
16.1	The bid prices shall be quoted in Philippine Pesos.
17.1	Bids will be valid until <b>one hundred twenty (120) calendar days after bid opening.</b>
18.1	<p>The bidder has the option to use any other form in accordance with the following amount:</p> <ol style="list-style-type: none"> <li>1. The amount of <b>P 353,187.73 [2% of ABC]</b>, if bid security is in cash, cashier's/manager's check, bank draft/guarantee or irrevocable letter of credit;</li> <li>2. The amount of <b>P 882,969.34 [5% of ABC]</b> if bid security is in Surety Bond; or</li> <li>3. Any combination of the foregoing proportionate to the share of form with respect to total amount of security.</li> <li>4. Bid-Securing Declaration</li> </ol>
18.2	The bid security shall be valid until <b>one hundred twenty (120) calendar days after bid opening.</b>
20.3	Each Bidder shall submit <b>one (1) original and two (2) certified photocopies of the original technical and the financial components duly signed and sealed.</b>
21	<p>The address for submission of bids is:</p> <p><b>BIDS AND AWARDS COMMITTEE</b>  <b>BULACAN STATE UNIVERSITY</b>  <b>Guinhawa, City of Malolos, 3000 Bulacan.</b></p> <p>The deadline for submission of bids is <b>on July 28, 2015 (Tuesday); 10:00 a.m.</b></p>
24.1	<p>The place of bid opening is:</p> <p><b>University President's Boardroom</b>  <b>2<sup>nd</sup> Floor, Flores Hall</b>  <b>Bulacan State University</b>  <b>Guinhawa, City of Malolos, 3000 Bulacan.</b></p> <p>The date and time of bid opening is <b>on July 28, 2015 (Tuesday); 10:00 a.m.</b></p>
24.2	No further instructions.
24.4	If the Bidder maintains a current and updated file of his Class "A" Documents, a Certificate of Registration and Membership issued by Phil-GEPS may be submitted in lieu of the said documents. The said Certificate shall be enclosed in the eligibility and technical documents.
27.3(b)	<b>BID MODIFICATION IS NOT ALLOWED.</b>
27.4	No further instructions.
28.2 (a)	<p><b>Bidders may submit manually filed tax returns or tax returns filed through the Electronic Filing and Payments System (EFPS).</b></p> <p><b>NOTE:</b> <i>The latest income and business tax returns are those within the last six months preceding the date of bid submission.</i></p>
28.2(c)	No further instructions.
31.4(g)	No further instructions.

32.2	<p>The <b>performance security</b> shall be in at least two (2) acceptable forms which can be taken from two (2) categories below, that bidders may opt to use, denominated in Philippine Pesos and posted in favor of the Bulacan State University:</p> <ol style="list-style-type: none"> <li>1. The amount of <b>[10% of Contract Price]</b>, if performance security is in cash, cashier's/manager's check, bank draft/guarantee or irrevocable letter of credit;</li> <li>2. The amount of <b>[30% of Contract Price]</b> if performance security is in Surety Bond; or</li> <li>3. Any combination of the foregoing proportionate to the share of form with respect to total amount of security.</li> </ol>
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## 1. Definition

For purposes of this Clause, boldface type is used to identify defined terms.

- 1.1. The **Arbiter** is the person appointed jointly by the BULACAN STATE UNIVERSITY and the Contractor to resolve disputes in the first instance, as provided for in **GCC** Clause 21.
- 1.2. **Bill of Quantities** refers to a list of the specific items of the Work and their corresponding unit prices, lump sums, and/or provisional sums.
- 1.3. The **Completion Date** is the date of completion of the Works as certified by the BULACAN STATE UNIVERSITY's Representative, in accordance with **GCC** Clause 49.
- 1.4. The **Contract** is the contract between the BULACAN STATE UNIVERSITY and the Contractor to execute, complete, and maintain the Works.
- 1.5. The **Contract Price** is the price stated in the Letter of Acceptance and thereafter to be paid by the BULACAN STATE UNIVERSITY to the Contractor for the execution of the Works in accordance with this Contract.
- 1.6. **Contract Time Extension** is the allowable period for the Contractor to complete the Works in addition to the original Completion Date stated in this Contract.
- 1.7. The **Contractor** is the juridical entity whose proposal has been accepted by the BULACAN STATE UNIVERSITY and to whom the Contract to execute the Work was awarded.
- 1.8. The **Contractor's Bid** is the signed offer or proposal submitted by the Contractor to the BULACAN STATE UNIVERSITY in response to the Bidding Documents.
- 1.9. **Days** are calendar days; months are calendar months.
- 1.10. **Dayworks** are varied work inputs subject to payment on a time basis for the Contractor's employees and Equipment, in addition to payments for associated Materials and Plant.
- 1.11. A **Defect** is any part of the Works not completed in accordance with the Contract.
- 1.12. The **Defects Liability Certificate** is the certificate issued by BULACAN STATE UNIVERSITY's Representative upon correction of defects by the Contractor.
- 1.13. The **Defects Liability Period** is the one year period between contract completion and final acceptance within which the Contractor assumes the responsibility to undertake the repair of any damage to the Works at his own expense.

- 1.14. **Drawings** are graphical presentations of the Works. They include all supplementary details, shop drawings, calculations, and other information provided or approved for the execution of this Contract.
- 1.15. **Equipment** refers to all facilities, supplies, appliances, materials or things required for the execution and completion of the Work provided by the Contractor and which shall not form or are not intended to form part of the Permanent Works.
- 1.16. The **Intended Completion Date** refers to the date specified in the **SCC** when the Contractor is expected to have completed the Works. The Intended Completion Date may be revised only by the BULACAN STATE UNIVERSITY's Representative by issuing an extension of time or an acceleration order.
- 1.17. **Materials** are all supplies, including consumables, used by the Contractor for incorporation in the Works.
- 1.18. The **Notice to Proceed** is a written notice issued by the BULACAN STATE UNIVERSITY or the BULACAN STATE UNIVERSITY's Representative to the Contractor requiring the latter to begin the commencement of the work not later than a specified or determinable date.
- 1.19. **Permanent Works** all permanent structures and all other project features and facilities required to be constructed and completed in accordance with this Contract which shall be delivered to the BULACAN STATE UNIVERSITY and which shall remain at the Site after the removal of all Temporary Works.
- 1.20. **Plant** refers to the machinery, apparatus, and the like intended to form an integral part of the Permanent Works.
- 1.21. The **Procuring Entity** is the party who employs the Contractor to carry out the Works stated in the **SCC**.
- 1.22. The **Procuring Entity's Representative** refers to the Head of the BULACAN STATE UNIVERSITY or his duly authorized representative, identified in the **SCC**, who shall be responsible for supervising the execution of the Works and administering this Contract.
- 1.23. The **Site** is the place provided by the BULACAN STATE UNIVERSITY where the Works shall be executed and any other place or places which may be designated in the **SCC**, or notified to the Contractor by the BULACAN STATE UNIVERSITY's Representative as forming part of the Site.
- 1.24. **Site Investigation Reports** are those that were included in the Bidding Documents and are factual and interpretative reports about the surface and subsurface conditions at the Site.
- 1.25. **Slippage** is a delay in work execution occurring when actual accomplishment falls below the target as measured by the difference between the scheduled and actual accomplishment of the Work by the Contractor as established from the work schedule. This is actually described as a percentage of the whole Works.

- 1.26. **Specifications** mean the description of Works to be done and the qualities of materials to be used, the equipment to be installed and the mode of construction.
- 1.27. The **Start Date**, as specified in the **SCC**, is the date when the Contractor is obliged to commence execution of the Works. It does not necessarily coincide with any of the Site Possession Dates.
- 1.28. A **Subcontractor** is any person or organization to whom a part of the Works has been subcontracted by the Contractor, as allowed by the BULACAN STATE UNIVERSITY, but not any assignee of such person.
- 1.29. **Temporary Works** are works designed, constructed, installed, and removed by the Contractor that are needed for construction or installation of the Permanent Works.
- 1.30. **Work(s)** refer to the Permanent Works and Temporary Works to be executed by the Contractor in accordance with this Contract, including (i) the furnishing of all labor, materials, equipment and others incidental, necessary or convenient to the complete execution of the Works; (ii) the passing of any tests before acceptance by the BULACAN STATE UNIVERSITY's Representative; (iii) and the carrying out of all duties and obligations of the Contractor imposed by this Contract as described in the **SCC**.

## **2. Interpretation**

- 2.1. In interpreting the Conditions of Contract, singular also means plural, male also means female or neuter, and the other way around. Headings have no significance. Words have their normal meaning under the language of this Contract unless specifically defined. The BULACAN STATE UNIVERSITY's Representative will provide instructions clarifying queries about the Conditions of Contract.
- 2.2. If sectional completion is specified in the **SCC**, references in the Conditions of Contract to the Works, the Completion Date, and the Intended Completion Date apply to any Section of the Works (other than references to the Completion Date and Intended Completion Date for the whole of the Works).

## **3. Governing Language and Law**

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

## **4. Communications**

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

## **5. Possession of Site**

- 5.1. On the date specified in the **SCC**, the BULACAN STATE UNIVERSITY shall grant the Contractor possession of so much of the Site as may be required to enable it to proceed with the execution of the Works. If the Contractor suffers delay or incurs cost from failure on the part of the BULACAN STATE UNIVERSITY to give possession in accordance with the terms of this clause, the BULACAN STATE UNIVERSITY'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 BULACAN STATE UNIVERSITY.
- 5.2. If possession of a portion is not given by the date stated in the **SCC** Clause 5.1, the BULACAN STATE UNIVERSITY will be deemed to have delayed the start of the relevant activities. The resulting adjustments in contract time to address such delay shall be in accordance with **GCC** Clause 47.
- 5.3. The Contractor shall bear all costs and charges for special or temporary right-of-way required by it in connection with access to the Site. The Contractor shall also provide at his own cost any additional facilities outside the Site required by it for purposes of the Works.
- 5.4. The Contractor shall allow the BULACAN STATE UNIVERSITY's Representative and any person authorized by the BULACAN STATE UNIVERSITY's Representative access to the Site and to any place where work in connection with this Contract is being carried out or is intended to be carried out.

## **6. The Contractor's Obligations**

- 6.1. The Contractor shall carry out the Works properly and in accordance with this Contract. The Contractor shall provide all supervision, labor, Materials, Plant and Contractor's Equipment, which may be required. All Materials and Plant on Site shall be deemed to be the property of the BULACAN STATE UNIVERSITY.
- 6.2. The Contractor shall commence execution of the Works on the Start Date and shall carry out the Works in accordance with the Program of Work submitted by the Contractor, as updated with the approval of the BULACAN STATE UNIVERSITY's Representative, and complete them by the Intended Completion Date.
- 6.3. The Contractor shall be responsible for the safety of all activities on the Site.
- 6.4. The Contractor shall carry out all instructions of the BULACAN STATE UNIVERSITY's Representative that comply with the applicable laws where the Site is located.
- 6.5. The Contractor shall employ the key personnel named in the Schedule of Key Personnel, as referred to in the **SCC**, to carry out the supervision of the

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

- 6.6. If the BULACAN STATE UNIVERSITY's Representative asks the Contractor to remove a member of the Contractor's staff or work force, for justifiable cause, the Contractor shall ensure that the person leaves the Site within seven (7) days and has no further connection with the Work in this Contract.
- 6.7. During Contract implementation, the Contractor and his subcontractors shall abide at all times by all labor laws, including child labor related enactments, and other relevant rules.
- 6.8. The Contractor shall submit to the BULACAN STATE UNIVERSITY for consent the name and particulars of the person authorized to receive instructions on behalf of the Contractor.
- 6.9. The Contractor shall cooperate and share the Site with other contractors, public authorities, utilities, and the BULACAN STATE UNIVERSITY between the dates given in the schedule of other contractors particularly when they shall require access to the Site. The Contractor shall also provide facilities and services for them during this period. The BULACAN STATE UNIVERSITY may modify the schedule of other contractors, and shall notify the Contractor of any such modification thereto.
- 6.10. Should anything of historical or other interest or of significant value be unexpectedly discovered on the Site, it shall be the property of the BULACAN STATE UNIVERSITY. The Contractor shall notify the BULACAN STATE UNIVERSITY's Representative of such discoveries and carry out the BULACAN STATE UNIVERSITY's Representative's instructions in dealing with them.

## **7. Performance Security**

- 7.1. Within ten (10) calendar days from receipt of the Notice of Award from the BULACAN STATE UNIVERSITY but in no case later than the signing of the contract by both parties, the Contractor shall furnish the performance security in any the forms prescribed in **ITB** Clause 32.2.
- 7.2. The performance security posted in favor of the BULACAN STATE UNIVERSITY shall be forfeited in the event it is established that the Contractor is in default in any of its obligations under the Contract.
- 7.3. The performance security shall remain valid until issuance by the BULACAN STATE UNIVERSITY of the Certificate of Final Acceptance.
- 7.4. The performance security may be released by the BULACAN STATE UNIVERSITY and returned to the Contractor after the issuance of the Certificate of Final Acceptance subject to the following conditions:
  - (a) There are no pending claims against the Contractor or the surety company filed by the BULACAN STATE UNIVERSITY;

- (b) The Contractor has no pending claims for labor and materials filed against it; and
  - (c) Other terms specified in the **SCC**.
- 7.5. The Contractor shall post an additional performance security following the amount and form specified in **ITB** Clause 32.2 to cover any cumulative increase of more than ten percent (10%) over the original value of the contract as a result of amendments to order or change orders, extra work orders and supplemental agreements, as the case may be. The Contractor shall cause the extension of the validity of the performance security to cover approved contract time extensions.
- 7.6. In case of a reduction in the contract value or for partially completed Works under the contract which are usable and accepted by the BULACAN STATE UNIVERSITY the use of which, in the judgment of the implementing agency or the BULACAN STATE UNIVERSITY, will not affect the structural integrity of the entire project, the Procuring Entity shall allow a proportional reduction in the original performance security, provided that any such reduction is more than ten percent (10%) and that the aggregate of such reductions is not more than fifty percent (50%) of the original performance security.
- 7.7. Unless otherwise indicated in the **SCC**, the Contractor, by entering into the Contract with the BULACAN STATE UNIVERSITY, acknowledges the right of the Procuring Entity to institute action pursuant to Act 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.

## **8. Subcontracting**

- 8.1. Unless otherwise indicated in the **SCC**, the Contractor cannot subcontract Works more than the percentage specified in **ITB** Clause 8.1.
- 8.2. Subcontracting of any portion of the Works does not relieve the Contractor of any liability or obligation under this Contract. The Contractor will be responsible for the acts, defaults, and negligence of any subcontractor, its agents, servants or workmen as fully as if these were the Contractor's own acts, defaults, or negligence, or those of its agents, servants or workmen.
- 8.3. Subcontractors disclosed and identified during the bidding may be changed during the implementation of this Contract, subject to compliance with the required qualifications and the approval of the Procuring Entity.

## **9. Liquidated Damages**

- 9.1. The Contractor shall pay liquidated damages to the BULACAN STATE UNIVERSITY for each day that the Completion Date is later than the Intended Completion Date. The applicable liquidated damages is at least one-tenth (1/10) of a percent of the cost of the unperformed portion for every day of delay. The total amount of liquidated damages shall not exceed ten percent (10%) of the amount of the contract. The BULACAN STATE UNIVERSITY may deduct liquidated damages from payments due to the Contractor. Payment of liquidated damages shall not affect the Contractor. Once the

cumulative amount of liquidated damages reaches ten percent (10%) of the amount of this Contract, the BULACAN STATE UNIVERSITY shall rescind this Contract, without prejudice to other courses of action and remedies open to it.

- 9.2. If the Intended Completion Date is extended after liquidated damages have been paid, the Engineer of the BULACAN STATE UNIVERSITY shall correct any overpayment of liquidated damages by the Contractor by adjusting the next payment certificate. The Contractor shall be paid interest on the overpayment, calculated from the date of payment to the date of repayment, at the rates specified in **GCC** Clause 40.3.

## **10. 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.

## **11. The Procuring Entity, Licenses and Permits**

The BULACAN STATE UNIVERSITY shall, if requested by the Contractor, assist him in applying for permits, licenses or approvals, which are required for the Works.

## **12. Contractor's Risk and Warranty Security**

- 12.1. The Contractor shall assume full responsibility for the Works from the time project construction commenced up to final acceptance by the BULACAN STATE UNIVERSITY and shall be held responsible for any damage or destruction of the Works except those occasioned by *force majeure*. The Contractor shall be fully responsible for the safety, protection, security, and convenience of his personnel, third parties, and the public at large, as well as the Works, Equipment, installation, and the like to be affected by his construction work.
- 12.2. The defects liability period for infrastructure projects shall be one year from contract completion up to final acceptance by the BULACAN STATE UNIVERSITY. During this period, the Contractor shall undertake the repair works, at his own expense, of any damage to the Works on account of the use of materials of inferior quality within ninety (90) days from the time the Head of the BULACAN STATE UNIVERSITY has issued an order to undertake repair. In case of failure or refusal to comply with this mandate, the BULACAN STATE UNIVERSITY shall undertake such repair works and shall be entitled to full reimbursement of expenses incurred therein upon demand.
- 12.3. Unless otherwise indicated in the **SCC**, in case the Contractor fails to comply with the preceding paragraph, the BULACAN STATE UNIVERSITY shall forfeit its performance security, subject its properties 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.
- 12.4. After final acceptance of the Works by the BULACAN STATE UNIVERSITY, the Contractor shall be held responsible for "Structural Defects", *i.e.*, major faults/flaws/deficiencies in one or more key structural elements of the project which may lead to structural failure of the completed elements or structure, or

“Structural Failures”, *i.e.*, where one or more key structural elements in an infrastructure facility fails or collapses, thereby rendering the facility or part thereof incapable of withstanding the design loads, and/or endangering the safety of the users or the general public:

- (a) Contractor – Where Structural Defects/Failures arise due to faults attributable to improper construction, use of inferior quality/substandard materials, and any violation of the contract plans and specifications, the contractor shall be held liable;
- (b) Consultants – Where Structural Defects/Failures arise due to faulty and/or inadequate design and specifications as well as construction supervision, then the consultant who prepared the design or undertook construction supervision for the project shall be held liable;
- (c) BULACAN STATE UNIVERSITY’s Representatives/Project Manager/Construction Managers and Supervisors – The project owner’s representative(s), project manager, construction manager, and supervisor(s) shall be held liable in cases where the Structural Defects/Failures are due to his/their willful intervention in altering the designs and other specifications; negligence or omission in not approving or acting on proposed changes to noted defects or deficiencies in the design and/or specifications; and the use of substandard construction materials in the project;
- (d) Third Parties - Third Parties shall be held liable in cases where Structural Defects/Failures are caused by work undertaken by them such as leaking pipes, diggings or excavations, underground cables and electrical wires, underground tunnel, mining shaft and the like, in which case the applicable warranty to such structure should be levied to third parties for their construction or restoration works.
- (e) Users - In cases where Structural Defects/Failures are due to abuse/misuse by the end user of the constructed facility and/or non-compliance by a user with the technical design limits and/or intended purpose of the same, then the user concerned shall be held liable.

12.5. The warranty against Structural Defects/Failures, except those occasioned on force majeure, shall cover the period specified in the **SCC** reckoned from the date of issuance of the Certificate of Final Acceptance by the BULACAN STATE UNIVERSITY.

12.6. The Contractor shall be required to put up a warranty security in the form of cash, bank guarantee, letter of credit, GSIS or surety bond callable on demand, in accordance with the following schedule:

Form of Warranty	Minimum Amount in Percentage (%) of Total Contract Price
(a) Cash or letter of credit issued by Universal or Commercial bank: provided, however, that the letter of credit shall be confirmed or authenticated by a Universal or Commercial bank, if issued by a foreign bank	Five Percent (5%)

(b) Bank guarantee confirmed by Universal or Commercial bank: provided, however, that the letter of credit shall be confirmed or authenticated by a Universal or Commercial bank, if issued by a foreign bank	Ten Percent (10%)
(c) Surety bond callable upon demand issued by GSIS or any surety or insurance company duly certified by the Insurance Commission	Thirty Percent (30%)

12.7. The warranty security shall be stated in Philippine Pesos and shall remain effective for one year from the date of issuance of the Certificate of Final Acceptance by the BULACAN STATE UNIVERSITY, and returned only after the lapse of said one year period.

12.8. In case of structural defects/failure occurring during the applicable warranty period provided in **GCC** Clause 12.5, the BULACAN STATE UNIVERSITY shall undertake the necessary restoration or reconstruction works and shall be entitled to full reimbursement by the parties found to be liable for expenses incurred therein upon demand, without prejudice to the filing of appropriate administrative, civil, and/or criminal charges against the responsible persons as well as the forfeiture of the warranty security posted in favor of the BULACAN STATE UNIVERSITY.

### 13. 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.

### 14. Procuring Entity's Risk

14.1. From the Start Date until the Certificate of Final Acceptance has been issued, the following are risks of the BULACAN STATE UNIVERSITY:

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

### 15. Insurance

- 15.1. The Contractor shall, under his name and at his own expense, obtain and maintain, for the duration of this Contract, the following insurance coverage:
- (a) Contractor's All Risk Insurance;
  - (b) Transportation to the project Site of Equipment, Machinery, and Supplies owned by the Contractor;
  - (c) Personal injury or death of Contractor's employees; and
  - (d) Comprehensive insurance for third party liability to Contractor's direct or indirect act or omission causing damage to third persons.
- 15.2. The Contractor shall provide evidence to the BULACAN STATE UNIVERSITY's Representative that the insurances required under this Contract have been effected and shall, within a reasonable time, provide copies of the insurance policies to the BULACAN STATE UNIVERSITY's Representative. Such evidence and such policies shall be provided to the BULACAN STATE UNIVERSITY's through the BULACAN STATE UNIVERSITY's Representative.
- 15.3. The Contractor shall notify the insurers of changes in the nature, extent, or program for the execution of the Works and ensure the adequacy of the insurances at all times in accordance with the terms of this Contract and shall produce to the BULACAN STATE UNIVERSITY's Representative the insurance policies in force including the receipts for payment of the current premiums.
- The above insurance policies shall be obtained from any reputable insurance company approved by the BULACAN STATE UNIVERSITY's Representative.
- 15.4. If the Contractor fails to obtain and keep in force the insurances referred to herein or any other insurance which he may be required to obtain under the terms of this Contract, the BULACAN STATE UNIVERSITY may obtain and keep in force any such insurances and pay such premiums as may be necessary for the purpose. From time to time, the BULACAN STATE UNIVERSITY may deduct the amount it shall pay for said premiums including twenty five percent (25%) therein from any monies due, or which may become due, to the Contractor, without prejudice to the BULACAN STATE UNIVERSITY exercising its right to impose other sanctions against the Contractor pursuant to the provisions of this Contract.
- 15.5. In the event the Contractor fails to observe the above safeguards, the BULACAN STATE UNIVERSITY may, at the Contractor's expense, take whatever measure is deemed necessary for its protection and that of the Contractor's personnel and third parties, and/or order the interruption of dangerous Works. In addition, the Procuring Entity may refuse to make the payments under **GCC** Clause 40 until the Contractor complies with this Clause.
- 15.6. The Contractor shall immediately replace the insurance policy obtained as required in this Contract, without need of the BULACAN STATE UNIVERSITY's demand, with a new policy issued by a new insurance

company acceptable to the BULACAN STATE UNIVERSITY for any of the following grounds:

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

#### **16. Termination for Default of Contractor**

- 16.1. The BULACAN STATE UNIVERSITY shall terminate this Contract for default when any of the following conditions attend its implementation:
- 16.2. Due to the Contractor's fault and while the project is on-going, it has incurred negative slippage of fifteen percent (15%) or more in accordance with Presidential Decree 1870, regardless of whether or not previous warnings and notices have been issued for the Contractor to improve his performance;
- 16.3. Due to its own fault and after this Contract time has expired, the Contractor incurs delay in the completion of the Work after this Contract has expired; or
- 16.4. The Contractor:
  - (a) abandons the contract Works, refuses or fails to comply with a valid instruction of the Procuring Entity or fails to proceed expeditiously and without delay despite a written notice by the BULACAN STATE UNIVERSITY;
  - (b) does not actually have on the project Site the minimum essential equipment listed on the Bid necessary to prosecute the Works in accordance with the approved Program of Work and equipment deployment schedule as required for the project;
  - (c) does not execute the Works in accordance with this Contract or persistently or flagrantly neglects to carry out its obligations under this Contract;
  - (d) neglects or refuses to remove materials or to perform a new Work that has been rejected as defective or unsuitable; or
  - (e) sub-lets any part of this Contract without approval by the BULACAN STATE UNIVERSITY.

- 16.5. All materials on the Site, Plant, Equipment, and Works shall be deemed to be the property of the BULACAN STATE UNIVERSITY if this Contract is rescinded because of the Contractor's default.

**17. Termination for Default of Procuring Entity**

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

- (a) Failure of the BULACAN STATE UNIVERSITY to deliver, within a reasonable time, supplies, materials, right-of-way, or other items it is obligated to furnish under the terms of this Contract; or
- (b) The prosecution of the Work is disrupted by the adverse peace and order situation, as certified by the Armed Forces of the Philippines Provincial Commander and approved by the Secretary of National Defense.

**18. Termination for Other Causes**

- 18.1. The BULACAN STATE UNIVERSITY may terminate this Contract, in whole or in part, at any time for its convenience. The Head of the BULACAN STATE UNIVERSITY may terminate this Contract for the convenience of the BULACAN STATE UNIVERSITY if he has determined the existence of conditions that make Project Implementation economically, financially or technically impractical and/or unnecessary, such as, but not limited to, fortuitous event(s) or changes in law and National Government policies.
- 18.2. The BULACAN STATE UNIVERSITY or the Contractor may terminate this Contract if the other party causes a fundamental breach of this Contract.
- 18.3. Fundamental breaches of Contract shall include, but shall not be limited to, the following:
- (a) The Contractor stops work for twenty eight (28) days when no stoppage of work is shown on the current Program of Work and the stoppage has not been authorized by the BULACAN STATE UNIVERSITY's Representative;
  - (b) The BULACAN STATE UNIVERSITY's Representative instructs the Contractor to delay the progress of the Works, and the instruction is not withdrawn within twenty eight (28) days;
  - (c) The BULACAN STATE UNIVERSITY shall terminate this Contract if the Contractor is declared bankrupt or insolvent as determined with finality by a court of competent jurisdiction. In this event, termination will be without compensation to the Contractor, provided that such termination will not prejudice or affect any right of action or remedy which has accrued or will accrue thereafter to the BULACAN STATE UNIVERSITY and/or the Contractor. In the case of the Contractor's insolvency, any Contractor's Equipment which the BULACAN STATE UNIVERSITY instructs in the notice is to be used until the completion of the Works;

- (d) A payment certified by the BULACAN STATE UNIVERSITY's Representative is not paid by the BULACAN STATE UNIVERSITY to the Contractor within eighty four (84) days from the date of the BULACAN STATE UNIVERSITY's Representative's certificate;
- (e) The BULACAN STATE UNIVERSITY's Representative gives Notice that failure to correct a particular Defect is a fundamental breach of Contract and the Contractor fails to correct it within a reasonable period of time determined by the BULACAN STATE UNIVERSITY's Representative;
- (f) The Contractor does not maintain a Security, which is required;
- (g) The Contractor has delayed the completion of the Works by the number of days for which the maximum amount of liquidated damages can be paid, as defined in the **GCC** Clause 9; and
- (h) In case it is determined prima facie by the BULACAN STATE UNIVERSITY 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, the following:
  - (i) corrupt, fraudulent, collusive, coercive, and obstructive practices as defined in **ITB** Clause 3.1(a), unless otherwise specified in the SCC;
  - (ii) drawing up or using forged documents;
  - (iii) using adulterated materials, means or methods, or engaging in production contrary to rules of science or the trade; and
  - (iv) any other act analogous to the foregoing.

18.4. The Funding Source or the BULACAN STATE UNIVERSITY, as appropriate, will seek to impose the maximum civil, administrative and/or criminal penalties available under the applicable law on individuals and organizations deemed to be involved with corrupt, fraudulent, or coercive practices.

18.5. When persons from either party to this Contract gives notice of a fundamental breach to the BULACAN STATE UNIVERSITY's Representative in order to terminate the existing contract for a cause other than those listed under **GCC** Clause 18.3, the BULACAN STATE UNIVERSITY's Representative shall decide whether the breach is fundamental or not.

18.6. If this Contract is terminated, the Contractor shall stop work immediately, make the Site safe and secure, and leave the Site as soon as reasonably possible.

## **19. Procedures for Termination of Contracts**

19.1. The following provisions shall govern the procedures for the termination of this Contract:

- (a) Upon receipt of a written report of acts or causes which may constitute ground(s) for termination as aforementioned, or upon its own initiative, the BULACAN STATE UNIVERSITY shall, within a period of seven (7) calendar days, verify the existence of such ground(s) and cause the execution of a Verified Report, with all relevant evidence attached;
- (b) Upon recommendation by the BULACAN STATE UNIVERSITY, the Head of the BULACAN STATE UNIVERSITY shall terminate this Contract only by a written notice to the Contractor conveying the termination of this Contract. The notice shall state:
  - (i) that this Contract is being terminated for any of the ground(s) afore-mentioned, and a statement of the acts that constitute the ground(s) constituting the same;
  - (ii) the extent of termination, whether in whole or in part;
  - (iii) an instruction to the Contractor to show cause as to why this Contract should not be terminated; and
  - (iv) special instructions of the BULACAN STATE UNIVERSITY, if any.

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

- (c) Within a period of seven (7) calendar days from receipt of the Notice of Termination, the Contractor shall submit to the Head of the BULACAN STATE UNIVERSITY a verified position paper stating why the contract should not be terminated. If the Contractor fails to show cause after the lapse of the seven (7) day period, either by inaction or by default, the Head of the BULACAN STATE UNIVERSITY shall issue an order terminating the contract;
- (d) The BULACAN STATE UNIVERSITY may, at any time before receipt of the Bidder's verified position paper described in item (c) above withdraw the Notice to Terminate if it is determined that certain items or works subject of the notice had been completed, delivered, or performed before the Contractor's receipt of the notice;
- (e) Within a non-extendible period of ten (10) calendar days from receipt of the verified position paper, the Head of the BULACAN STATE UNIVERSITY shall decide whether or not to terminate this Contract. It shall serve a written notice to the Contractor of its decision and, unless otherwise provided in the said notice, this Contract is deemed terminated from receipt of the Contractor of the notice of decision. The termination shall only be based on the ground(s) stated in the Notice to Terminate; and
- (f) The Head of the BULACAN STATE UNIVERSITY may create a Contract Termination Review Committee (CTRC) to assist him in the discharge of this function. All decisions recommended by the CTRC shall be subject to the approval of the Head of the BULACAN STATE UNIVERSITY.

- 19.2. Pursuant to Section 69(f) of RA 9184 and without prejudice to the imposition of additional administrative sanctions as the internal rules of the agency may provide and/or further criminal prosecution as provided by applicable laws, the BULACAN STATE UNIVERSITY shall impose on contractors after the termination of the contract the penalty of suspension for one (1) year for the first offense, suspension for two (2) years for the second offense from participating in the public bidding process, for violations committed during the contract implementation stage, which include but not limited to the following:
- (a) Failure of the contractor, due solely to his fault or negligence, to mobilize and start work or performance within the specified period in the Notice to Proceed ("NTP");
  - (b) Failure by the contractor to fully and faithfully comply with its contractual obligations without valid cause, or failure by the contractor to comply with any written lawful instruction of the procuring entity or its representative(s) pursuant to the implementation of the contract. For the procurement of infrastructure projects or consultancy contracts, lawful instructions include but are not limited to the following:
    - (i) Employment of competent technical personnel, competent engineers and/or work supervisors;
    - (ii) Provision of warning signs and barricades in accordance with approved plans and specifications and contract provisions;
    - (iii) Stockpiling in proper places of all materials and removal from the project site of waste and excess materials, including broken pavement and excavated debris in accordance with approved plans and specifications and contract provisions;
    - (iv) Deployment of committed equipment, facilities, support staff and manpower; and
    - (v) Renewal of the effectivity dates of the performance security after its expiration during the course of contract implementation.
  - (c) Assignment and subcontracting of the contract or any part thereof or substitution of key personnel named in the proposal without prior written approval by the BULACAN STATE UNIVERSITY.
  - (d) Poor performance by the contractor or unsatisfactory quality and/or progress of work arising from his fault or negligence as reflected in the Constructor's Performance Evaluation System ("CPES") rating sheet. In the absence of the CPES rating sheet, the existing performance monitoring system of the procuring entity shall be applied. Any of the following acts by the Contractor shall be construed as poor performance:
    - (i) Negative slippage of 15% and above within the critical path of the project due entirely to the fault or negligence of the contractor; and

- (ii) Quality of materials and workmanship not complying with the approved specifications arising from the contractor's fault or negligence.
- (e) Willful or deliberate abandonment or non-performance of the project or contract by the contractor resulting to substantial breach thereof without lawful and/or just cause.

In addition to the penalty of suspension, the performance security posted by the contractor shall also be forfeited.

## **20. Force Majeure, Release from Performance**

- 20.1. For purposes of this Contract the terms "*force majeure*" and "fortuitous event" may be used interchangeably. In this regard, a fortuitous event or *force majeure* shall be interpreted to mean an event which the Contractor could not have foreseen, or which though foreseen, was inevitable. It shall not include ordinary unfavorable weather conditions; and any other cause the effects of which could have been avoided with the exercise of reasonable diligence by the Contractor.
- 20.2. If this Contract is discontinued by an outbreak of war or by any other event entirely outside the control of either the BULACAN STATE UNIVERSITY or the Contractor, the BULACAN STATE UNIVERSITY's Representative shall certify that this Contract has been discontinued. The Contractor shall make the Site safe and stop work as quickly as possible after receiving this certificate and shall be paid for all works carried out before receiving it and for any Work carried out afterwards to which a commitment was made.
- 20.3. If the event continues for a period of eighty four (84) days, either party may then give notice of termination, which shall take effect twenty eight (28) days after the giving of the notice.
- 20.4. After termination, the Contractor shall be entitled to payment of the unpaid balance of the value of the Works executed and of the materials and Plant reasonably delivered to the Site, adjusted by the following:
  - (a) any sum to which the Contractor is entitled under **GCC** Clause 28;
  - (b) the cost of his suspension and demobilization;
  - (c) any sum to which the BULACAN STATE UNIVERSITY is entitled.
- 20.5. The net balance due shall be paid or repaid within a reasonable time period from the time of the notice of termination.

## **21. Resolution of Disputes**

- 21.1. If any dispute or difference of any kind whatsoever shall arise between the parties in connection with the implementation of the contract covered by the Act and this IRR, the parties shall make every effort to resolve amicably such dispute or difference by mutual consultation.

- 21.2. If the Contractor believes that a decision taken by the BULACAN STATE UNIVERSITY's Representative was either outside the authority given to the BULACAN STATE UNIVERSITY's Representative by this Contract or that the decision was wrongly taken, the decision shall be referred to the Arbiter indicated in the **SCC** within fourteen (14) days of the notification of the BULACAN STATE UNIVERSITY's Representative's decision.
- 21.3. Any and all disputes arising from the implementation of this Contract covered by the R.A. 9184 and its IRR shall be submitted to arbitration in the Philippines according to the provisions of Republic Act No. 876, otherwise known as the "Arbitration Law" and Republic Act 9285, otherwise known as the "Alternative Dispute Resolution Act of 2004": *Provided, however*, That, disputes that are within the competence of the Construction Industry Arbitration Commission to resolve shall be referred thereto. The process of arbitration shall be incorporated as a provision in this Contract that will be executed pursuant to the provisions of the Act and its IRR: *Provided, further*, That, by mutual agreement, the parties may agree in writing to resort to other alternative modes of dispute resolution.

## **22. Suspension of Loan, Credit, Grant, or Appropriation**

In the event that the Funding Source suspends the Loan, Credit, Grant, or Appropriation to the BULACAN STATE UNIVERSITY, from which part of the payments to the Contractor are being made:

- (a) The BULACAN STATE UNIVERSITY is obligated to notify the Contractor of such suspension within seven (7) days of having received the suspension notice.
- (b) If the Contractor has not received sums due it for work already done within forty five (45) days from the time the Contractor's claim for payment has been certified by the BULACAN STATE UNIVERSITY's Representative, the Contractor may immediately issue a suspension of work notice in accordance with **GCC** Clause 45.2.

## **23. Procuring Entity's Representative's Decisions**

- 23.1. Except where otherwise specifically stated, the BULACAN STATE UNIVERSITY's Representative will decide contractual matters between the BULACAN STATE UNIVERSITY and the Contractor in the role representing the BULACAN STATE UNIVERSITY.
- 23.2. The BULACAN STATE UNIVERSITY's Representative may delegate any of his duties and responsibilities to other people, except to the Arbiter, after notifying the Contractor, and may cancel any delegation after notifying the Contractor.

## **24. Approval of Drawings and Temporary Works by the Procuring Entity's Representative**

- 24.1. All Drawings prepared by the Contractor for the execution of the Temporary Works, are subject to prior approval by the BULACAN STATE UNIVERSITY's Representative before its use.

- 24.2. The Contractor shall be responsible for design of Temporary Works.
- 24.3. The BULACAN STATE UNIVERSITY's Representative's approval shall not alter the Contractor's responsibility for design of the Temporary Works.
- 24.4. The Contractor shall obtain approval of third parties to the design of the Temporary Works, when required by the BULACAN STATE UNIVERSITY.

**25. Acceleration and Delays Ordered by the Procuring Entity's Representative**

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

**26. Extension of the Intended Completion Date**

- 26.1. The BULACAN STATE UNIVERSITY's Representative shall extend the Intended Completion Date if a Variation is issued which makes it impossible for the Intended Completion Date to be achieved by the Contractor without taking steps to accelerate the remaining work, which would cause the Contractor to incur additional costs. No payment shall be made for any event which may warrant the extension of the Intended Completion Date.
- 26.2. The BULACAN STATE UNIVERSITY's Representative shall decide whether and by how much to extend the Intended Completion Date within twenty one (21) days of the Contractor asking the BULACAN STATE UNIVERSITY's Representative for a decision thereto after fully submitting all supporting information. If the Contractor has failed to give early warning of a delay or has failed to cooperate in dealing with a delay, the delay by this failure shall not be considered in assessing the new Intended Completion Date.

**27. Right to Vary**

- 27.1. The BULACAN STATE UNIVERSITY's Representative with the prior approval of the BULACAN STATE UNIVERSITY may instruct Variations, up to a maximum cumulative amount of ten percent (10%) of the original contract cost.
- 27.2. Variations shall be valued as follows:
  - (a) At a lump sum price agreed between the parties;
  - (b) where appropriate, at rates in this Contract;
  - (c) in the absence of appropriate rates, the rates in this Contract shall be used as the basis for valuation; or failing which

- (d) at appropriate new rates, equal to or lower than current industry rates and to be agreed upon by both parties and approved by the Head of the BULACAN STATE UNIVERSITY.

## **28. Contractor's Right to Claim**

If the Contractor incurs cost as a result of any of the events under **GCC** Clause 13, the Contractor shall be entitled to the amount of such cost. If as a result of any of the said events, it is necessary to change the Works, this shall be dealt with as a Variation.

## **29. Dayworks**

- 29.1. Subject to **GCC** Clause 43 on Variation Order, and if applicable as indicated in the **SCC**, the Dayworks rates in the Contractor's Bid shall be used for small additional amounts of work only when the BULACAN STATE UNIVERSITY's Representative has given written instructions in advance for additional work to be paid for in that way.
- 29.2. All work to be paid for as Dayworks shall be recorded by the Contractor on forms approved by the BULACAN STATE UNIVERSITY's Representative. Each completed form shall be verified and signed by the BULACAN STATE UNIVERSITY's Representative within two days of the work being done.
- 29.3. The Contractor shall be paid for Dayworks subject to obtaining signed Dayworks forms.

## **30. Early Warning**

- 30.1. The Contractor shall warn the BULACAN STATE UNIVERSITY's Representative at the earliest opportunity of specific likely future events or circumstances that may adversely affect the quality of the work, increase the Contract Price, or delay the execution of the Works. The BULACAN STATE UNIVERSITY's Representative may require the Contractor to provide an estimate of the expected effect of the future event or circumstance on the Contract Price and Completion Date. The estimate shall be provided by the Contractor as soon as reasonably possible.
- 30.2. The Contractor shall cooperate with the BULACAN STATE UNIVERSITY's Representative in making and considering proposals for how the effect of such an event or circumstance can be avoided or reduced by anyone involved in the work and in carrying out any resulting instruction of the BULACAN STATE UNIVERSITY's Representative.

## **31. Program of Work**

- 31.1. Within the time stated in the **SCC**, the Contractor shall submit to the BULACAN STATE UNIVERSITY's Representative for approval a Program of Work showing the general methods, arrangements, order, and timing for all the activities in the Works.
- 31.2. An update of the Program of Work shall show the actual progress achieved on each activity and the effect of the progress achieved on the

timing of the remaining work, including any changes to the sequence of the activities.

- 31.3. The Contractor shall submit to the BULACAN STATE UNIVERSITY'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 BULACAN STATE UNIVERSITY'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.
- 31.4. The BULACAN STATE UNIVERSITY's Representative's approval of the Program of Work shall not alter the Contractor's obligations. The Contractor may revise the Program of Work and submit it to the BULACAN STATE UNIVERSITY's Representative again at any time. A revised Program of Work shall show the effect of any approved Variations.
- 31.5. When the Program of Work is updated, the Contractor shall provide the BULACAN STATE UNIVERSITY's Representative with an updated cash flow forecast. The cash flow forecast shall include different currencies, as defined in the Contract, converted as necessary using the Contract exchange rates.
- 31.6. All Variations shall be included in updated Program of Work produced by the Contractor.

## **32. Management Conferences**

- 32.1. Either the BULACAN STATE UNIVERSITY's Representative or the Contractor may require the other to attend a Management Conference. The Management Conference shall review the plans for remaining work and deal with matters raised in accordance with the early warning procedure.
- 32.2. The BULACAN STATE UNIVERSITY's Representative shall record the business of Management Conferences and provide copies of the record to those attending the Conference and to the BULACAN STATE UNIVERSITY. The responsibility of the parties for actions to be taken shall be decided by the BULACAN STATE UNIVERSITY's Representative either at the Management Conference or after the Management Conference and stated in writing to all who attended the Conference.

## **33. Bill of Quantities**

- 33.1. The Bill of Quantities shall contain items of work for the construction, installation, testing, and commissioning of work to be done by the Contractor.
- 33.2. The Bill of Quantities is used to calculate the Contract Price. The Contractor is paid for the quantity of the work done at the rate in the Bill of Quantities for each item.
- 33.3. If the final quantity of any work done differs from the quantity in the Bill of Quantities for the particular item and is not more than twenty five percent (25%) of the original quantity, provided the aggregate changes for all items do not exceed ten percent (10%) of the Contract price, the BULACAN STATE

UNIVERSITY's Representative shall make the necessary adjustments to allow for the changes subject to applicable laws, rules, and regulations.

- 33.4. If requested by the BULACAN STATE UNIVERSITY's Representative, the Contractor shall provide the BULACAN STATE UNIVERSITY's Representative with a detailed cost breakdown of any rate in the Bill of Quantities.

#### **34. Instructions, Inspections and Audits**

- 34.1. The BULACAN STATE UNIVERSITY's personnel shall at all reasonable times during construction of the Work be entitled to examine, inspect, measure and test the materials and workmanship, and to check the progress of the construction.
- 34.2. If the BULACAN STATE UNIVERSITY's Representative instructs the Contractor to carry out a test not specified in the Specification to check whether any work has a defect and the test shows that it does, the Contractor shall pay for the test and any samples. If there is no defect, the test shall be a Compensation Event.
- 34.3. The Contractor shall permit the Funding Source named in the **SCC** to inspect the Contractor's accounts and records relating to the performance of the Contractor and to have them audited by auditors appointed by the Funding Source, if so required by the Funding Source.

#### **35. Identifying Defects**

The Procuring Entity's Representative shall check the Contractor's work and notify the Contractor of any defects that are found. Such checking shall not affect the Contractor's responsibilities. The Procuring Entity's Representative may instruct the Contractor to search uncover defects and test any work that the Procuring Entity's Representative considers below standards and defective.

#### **36. Cost of Repairs**

Loss or damage to the Works or Materials to be incorporated in the Works between the Start Date and the end of the Defects Liability Periods shall be remedied by the Contractor at the Contractor's cost if the loss or damage arises from the Contractor's acts or omissions.

#### **37. Correction of Defects**

- 37.1. The BULACAN STATE UNIVERSITY's Representative shall give notice to the Contractor of any defects before the end of the Defects Liability Period, which is One (1) year from project completion up to final acceptance by the BULACAN STATE UNIVERSITY's.
- 37.2. Every time notice of a defect is given, the Contractor shall correct the notified defect within the length of time specified in the BULACAN STATE UNIVERSITY's Representative's notice.
- 37.3. The Contractor shall correct the defects which he notices himself before the end of the Defects Liability Period.

- 37.4. The BULACAN STATE UNIVERSITY shall certify that all defects have been corrected. If the BULACAN STATE UNIVERSITY considers that correction of a defect is not essential, he can request the Contractor to submit a quotation for the corresponding reduction in the Contract Price. If the BULACAN STATE UNIVERSITY accepts the quotation, the corresponding change in the SCC is a Variation.

**38. Uncorrected Defects**

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

**39. Advance Payment**

- 39.1. The BULACAN STATE UNIVERSITY 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**.
- 39.2. The advance payment shall be made only upon the submission to and acceptance by the BULACAN STATE UNIVERSITY of an irrevocable standby letter of credit of equivalent value from a commercial bank, a bank guarantee or a surety bond callable upon demand, issued by a surety or insurance company duly licensed by the Insurance Commission and confirmed by the BULACAN STATE UNIVERSITY.
- 39.3. The advance payment shall be repaid by the Contractor by an amount equal to the percentage of the total contract price used for the advance payment.
- 39.4. The contractor may reduce his standby letter of credit or guarantee instrument by the amounts refunded by the Monthly Certificates in the advance payment.
- 39.5. The BULACAN STATE UNIVERSITY will provide an Advance Payment on the Contract Price as stipulated in the Conditions of Contract, subject to the maximum amount stated in **SCC** Clause 39.1.

**40. Progress Payments**

- 40.1. The Contractor may submit a request for payment for Work accomplished. Such request for payment shall be verified and certified by the BULACAN STATE UNIVERSITY'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.

- 40.2. The BULACAN STATE UNIVERSITY shall deduct the following from the certified gross amounts to be paid to the contractor as progress payment:
- (a) Cumulative value of the work previously certified and paid for.
  - (b) Portion of the advance payment to be recouped for the month.
  - (c) Retention money in accordance with the condition of contract.
  - (d) Amount to cover third party liabilities.
  - (e) Amount to cover uncorrected discovered defects in the works.
- 40.3. Payments shall be adjusted by deducting therefrom the amounts for advance payments and retention. The BULACAN STATE UNIVERSITY shall pay the Contractor the amounts certified by the BULACAN STATE UNIVERSITY's Representative within twenty eight (28) days from the date each certificate was issued. No payment of interest for delayed payments and adjustments shall be made by the BULACAN STATE UNIVERSITY.
- 40.4. The first progress payment may be paid by the BULACAN STATE UNIVERSITY to the Contractor provided that at least twenty percent (20%) of the work has been accomplished as certified by the BULACAN STATE UNIVERSITY's Representative.
- 40.5. Items of the Works for which a price of "0" (zero) has been entered will not be paid for by the BULACAN STATE UNIVERSITY and shall be deemed covered by other rates and prices in the Contract.

#### **41. Payment Certificates**

- 41.1. The Contractor shall submit to the BULACAN STATE UNIVERSITY's Representative monthly statements of the estimated value of the work executed less the cumulative amount certified previously.
- 41.2. The BULACAN STATE UNIVERSITY's Representative shall check the Contractor's monthly statement and certify the amount to be paid to the Contractor.
- 41.3. The value of Work executed shall:
- (a) be determined by the BULACAN STATE UNIVERSITY's Representative;
  - (b) comprise the value of the quantities of the items in the Bill of Quantities completed; and
  - (c) include the valuations of approved variations.
- 41.4. The BULACAN STATE UNIVERSITY's Representative may exclude any item certified in a previous certificate or reduce the proportion of any item previously certified in any certificate in the light of later information.

#### **42. Retention**

- 42.1. The BULACAN STATE UNIVERSITY shall retain from each payment due to the Contractor an amount equal to a percentage thereof using the rate as specified in **ITB** Sub-Clause 42.2.
- 42.2. Progress payments are subject to retention of ten percent (10%), referred to as the “retention money.” Such retention shall be based on the total amount due to the Contractor prior to any deduction and shall be retained from every progress payment until fifty percent (50%) of the value of Works, as determined by the BULACAN STATE UNIVERSITY, are completed. If, after fifty percent (50%) completion, the Work is satisfactorily done and on schedule, no additional retention shall be made; otherwise, the ten percent (10%) retention shall again be imposed using the rate specified therefor.
- 42.3. The total “retention money” shall be due for release upon final acceptance of the Works. The Contractor may, however, request the substitution of the retention money for each progress billing with irrevocable standby letters of credit from a commercial bank, bank guarantees or surety bonds callable on demand, of amounts equivalent to the retention money substituted for and acceptable to the BULACAN STATE UNIVERSITY, provided that the project is on schedule and is satisfactorily undertaken. Otherwise, the ten (10%) percent retention shall be made. Said irrevocable standby letters of credit, bank guarantees and/or surety bonds, to be posted in favor of the Government shall be valid for a duration to be determined by the concerned implementing office/agency or BULACAN STATE UNIVERSITY and will answer for the purpose for which the ten (10%) percent retention is intended, *i.e.*, to cover uncorrected discovered defects and third party liabilities.
- 42.4. On completion of the whole Works, the Contractor may substitute retention money with an “on demand” Bank guarantee in a form acceptable to the BULACAN STATE UNIVERSITY.

#### **43. Variation Orders**

- 43.1. Variation Orders may be issued by the BULACAN STATE UNIVERSITY to cover any increase/decrease in quantities, including the introduction of new work items that are not included in the original contract or reclassification of work items that are either due to change of plans, design or alignment to suit actual field conditions resulting in disparity between the preconstruction plans used for purposes of bidding and the “as staked plans” or construction drawings prepared after a joint survey by the Contractor and the BULACAN STATE UNIVERSITY after award of the contract, provided that the cumulative amount of the Variation Order does not exceed ten percent (10%) of the original project cost. The addition/deletion of Works should be within the general scope of the project as bid and awarded. The scope of works shall not be reduced so as to accommodate a positive Variation Order. A Variation Order may either be in the form of a Change Order or Extra Work Order.
- 43.2. A Change Order may be issued by the BULACAN STATE UNIVERSITY to cover any increase/decrease in quantities of original Work items in the contract.
- 43.3. An Extra Work Order may be issued by the BULACAN STATE UNIVERSITY to cover the introduction of new work necessary for the completion, improvement or protection of the project which were not included as items of

Work in the original contract, such as, where there are subsurface or latent physical conditions at the site differing materially from those indicated in the contract, or where there are duly unknown physical conditions at the site of an unusual nature differing materially from those ordinarily encountered and generally recognized as inherent in the Work or character provided for in the contract.

- 43.4. Any cumulative Variation Order beyond ten percent (10%) shall be subject of another contract to be bid out if the works are separable from the original contract. In exceptional cases where it is urgently necessary to complete the original scope of work, the Head of the BULACAN STATE UNIVERSITY may authorize a positive Variation Order go beyond ten percent (10%) but not more than twenty percent (20%) of the original contract price, subject to the guidelines to be determined by the GPPB: *Provided, however,* That appropriate sanctions shall be imposed on the designer, consultant or official responsible for the original detailed engineering design which failed to consider the Variation Order beyond ten percent (10%).
- 43.5. In claiming for any Variation Order, the Contractor shall, within seven (7) calendar days after such work has been commenced or after the circumstances leading to such condition(s) leading to the extra cost, and within twenty-eight (28) calendar days deliver a written communication giving full and detailed particulars of any extra cost in order that it may be investigated at that time. Failure to provide either of such notices in the time stipulated shall constitute a waiver by the contractor for any claim. The preparation and submission of Variation Orders are as follows:
- (a) If the BULACAN STATE UNIVERSITY's representative/Project Engineer believes that a Change Order or Extra Work Order should be issued, he shall prepare the proposed Order accompanied with the notices submitted by the Contractor, the plans therefore, his computations as to the quantities of the additional works involved per item indicating the specific stations where such works are needed, the date of his inspections and investigations thereon, and the log book thereof, and a detailed estimate of the unit cost of such items of work, together with his justifications for the need of such Change Order or Extra Work Order, and shall submit the same to the Head of the BULACAN STATE UNIVERSITY for approval.
  - (b) The Head of the BULACAN STATE UNIVERSITY or his duly authorized representative, upon receipt of the proposed Change Order or Extra Work Order shall immediately instruct the technical staff of the BULACAN STATE UNIVERSITY's to conduct an on-the-spot investigation to verify the need for the Work to be prosecuted. A report of such verification shall be submitted directly to the Head of the BULACAN STATE UNIVERSITY or his duly authorized representative.
  - (c) The, Head of the BULACAN STATE UNIVERSITY or his duly authorized representative, after being satisfied that such Change Order or Extra Work Order is justified and necessary, shall review the estimated quantities and prices and forward the proposal with the supporting documentation to the Head of BULACAN STATE UNIVERSITY for consideration.

- (d) If, after review of the plans, quantities and estimated unit cost of the items of work involved, the proper office of the BULACAN STATE UNIVERSITY empowered to review and evaluate Change Orders or Extra Work Orders recommends approval thereof, Head of the BULACAN STATE UNIVERSITY or his duly authorized representative, believing the Change Order or Extra Work Order to be in order, shall approve the same.
- (e) The timeframe for the processing of Variation Orders from the preparation up to the approval by the Head of the BULACAN STATE UNIVERSITY concerned shall not exceed thirty (30) calendar days.

#### **44. Contract Completion**

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

#### **45. Suspension of Work**

- 45.1. The BULACAN STATE UNIVERSITY shall have the authority to suspend the work wholly or partly by written order for such period as may be deemed necessary, due to *force majeure* or any fortuitous events or for failure on the part of the Contractor to correct bad conditions which are unsafe for workers or for the general public, to carry out valid orders given by the BULACAN STATE UNIVERSITY or to perform any provisions of the contract, or due to adjustment of plans to suit field conditions as found necessary during construction. The Contractor shall immediately comply with such order to suspend the work wholly or partly.
- 45.2. The Contractor or its duly authorized representative shall have the right to suspend work operation on any or all projects/activities along the critical path of activities after fifteen (15) calendar days from date of receipt of written notice from the Contractor to the district engineer/regional director/consultant or equivalent official, as the case may be, due to the following:
  - (a) There exist right-of-way problems which prohibit the Contractor from performing work in accordance with the approved construction schedule.
  - (b) Requisite construction plans which must be owner-furnished are not issued to the contractor precluding any work called for by such plans.
  - (c) Peace and order conditions make it extremely dangerous, if not possible, to work. However, this condition must be certified in writing by the Philippine National Police (PNP) station which has responsibility over the affected area and confirmed by the Department of Interior and Local Government (DILG) Regional Director.

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

#### **46. Payment on Termination**

- 46.1. If the Contract is terminated because of a fundamental breach of Contract by the Contractor, the BULACAN STATE UNIVERSITY's Representative shall issue a certificate for the value of the work done and Materials ordered less advance payments received up to the date of the issue of the certificate and less the percentage to apply to the value of the work not completed, as indicated in the SCC. Additional Liquidated Damages shall not apply. If the total amount due to the BULACAN STATE UNIVERSITY exceeds any payment due to the Contractor, the difference shall be a debt payable to the BULACAN STATE UNIVERSITY.
- 46.2. If the Contract is terminated for the BULACAN STATE UNIVERSITY's convenience or because of a fundamental breach of Contract by the BULACAN STATE UNIVERSITY, the BULACAN STATE UNIVERSITY's Representative shall issue a certificate for the value of the work done, Materials ordered, the reasonable cost of removal of Equipment, repatriation of the Contractor's personnel employed solely on the Works, and the Contractor's costs of protecting and securing the Works, and less advance payments received up to the date of the certificate.
- 46.3. The net balance due shall be paid or repaid within twenty eight (28) days from the notice of termination.
- 46.4. If the Contractor has terminated the Contract under **GCC** Clauses 17 or 18, the BULACAN STATE UNIVERSITY shall promptly return the Performance Security to the Contractor.

#### **47. Extension of Contract Time**

- 47.1. Should the amount of additional work of any kind or other special circumstances of any kind whatsoever occur such as to fairly entitle the contractor to an extension of contract time, the BULACAN STATE UNIVERSITY shall determine the amount of such extension; provided that the BULACAN STATE UNIVERSITY is not bound to take into account any claim for an extension of time unless the Contractor has, prior to the expiration of the contract time and within thirty (30) calendar days after such work has been commenced or after the circumstances leading to such claim have

arisen, delivered to the BULACAN STATE UNIVERSITY notices in order that it could have investigated them at that time. Failure to provide such notice shall constitute a waiver by the Contractor of any claim. Upon receipt of full and detailed particulars, the BULACAN STATE UNIVERSITY shall examine the facts and extent of the delay and shall extend the contract time completing the contract work when, in the BULACAN STATE UNIVERSITY's opinion, the findings of facts justify an extension.

- 47.2. No extension of contract time shall be granted the Contractor due to (a) ordinary unfavorable weather conditions and (b) inexcusable failure or negligence of Contractor to provide the required equipment, supplies or materials.
- 47.3. Extension of contract time may be granted only when the affected activities fall within the critical path of the PERT/CPM network.
- 47.4. No extension of contract time shall be granted when the reason given to support the request for extension was already considered in the determination of the original contract time during the conduct of detailed engineering and in the preparation of the contract documents as agreed upon by the parties before contract perfection.
- 47.5. Extension of contract time shall be granted for rainy/unworkable days considered unfavorable for the prosecution of the works at the site, based on the actual conditions obtained at the site, in excess of the number of rainy/unworkable days pre-determined by the BULACAN STATE UNIVERSITY in relation to the original contract time during the conduct of detailed engineering and in the preparation of the contract documents as agreed upon by the parties before contract perfection, and/or for equivalent period of delay due to major calamities such as exceptionally destructive typhoons, floods and earthquakes, and epidemics, and for causes such as non-delivery on time of materials, working drawings, or written information to be furnished by the BULACAN STATE UNIVERSITY, non-acquisition of permit to enter private properties within the right-of-way resulting in complete paralyzation of construction activities, and other meritorious causes as determined by the BULACAN STATE UNIVERSITY's Representative and approved by the Head of the BULACAN STATE UNIVERSITY. Shortage of construction materials, general labor strikes, and peace and order problems that disrupt construction operations through no fault of the Contractor may be considered as additional grounds for extension of contract time provided they are publicly felt and certified by appropriate government agencies such as DTI, DOLE, DILG, and DND, among others. The written consent of bondsmen must be attached to any request of the Contractor for extension of contract time and submitted to the BULACAN STATE UNIVERSITY for consideration and the validity of the Performance Security shall be correspondingly extended.

#### **48. Price Adjustment**

Except for extraordinary circumstances as determined by NEDA and approved by the GPPB, no price adjustment shall be allowed. Nevertheless, in cases where the cost of the awarded contract is affected by any applicable new laws, ordinances, regulations, or other acts of the GOP, promulgated after the date of bid opening, a

contract price adjustment shall be made or appropriate relief shall be applied on a no loss-no gain basis.

**49. Completion**

The Contractor shall request the BULACAN STATE UNIVERSITY's Representative to issue a certificate of Completion of the Works, and the BULACAN STATE UNIVERSITY's Representative will do so upon deciding that the work is completed.

**50. Taking Over**

The BULACAN STATE UNIVERSITY shall take over the Site and the Works within seven (7) days from the date the BULACAN STATE UNIVERSITY's Representative issues a certificate of Completion.

**51. Operating and Maintenance Manuals**

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

51.2. If the Contractor does not supply the Drawings and/or manuals by the dates stated in the **SCC**, or they do not receive the BULACAN STATE UNIVERSITY's Representative's approval, the BULACAN STATE UNIVERSITY's Representative shall withhold the amount stated in the **SCC** from payments due to the Contractor.

## Special Conditions of Contract

GCC Clause	
1.16	The <b>Intended Completion Date</b> is <i>One Hundred Fifty (150) calendar days</i> .
1.21	The <b>Procuring Entity</b> is <b>BULACAN STATE UNIVERSITY</b> .
1.22	The <b>BULACAN STATE UNIVERSITY's Representative</b> is <b>DR. MARIANO C. DE JESUS, University President</b> .
1.23	The <b>Site</b> is located <i>at the Bulacan State University-Main Campus, City of Malolos, Bulacan</i> .
1.27	The <b>Start Date</b> is <i>Within ten (10) calendar days from receipt of Notice to Proceed (NTP)</i> .
1.30	The <b>Works</b> consist of Preparing the Site, Concrete and Masonry Works, Metal Works, Cleaning of Debris and Salvage Materials within the Construction Site during and after the construction period.
5.1	The BULACAN STATE UNIVERSITY shall give possession of all parts of the Site to the Contractor <b>from receipt of Notice to Proceed</b> .
6.3	<b>a. Construction safety and health program for this project.</b> <b>b. Contractor's All Risk Insurance Policy</b> <b>c. Approved Quality Control Program</b>
6.5	The Contractor shall employ the following <b>Key Personnel</b> :  <i>[List key personnel by name and designation]</i>  <i>Registered Civil Engineer (Supervising Site Engineer to be present throughout the duration of the project) (with Valid PRC License)</i>
7.4(c)	No further instructions.
7.7	No further instructions.
8.1	No further instructions.
10	<b>Site Inspection Certificate.</b>
12.3	No further instructions.
12.5	No further instructions.
13	<i>If the Contractor is a joint venture, "All partners to the joint venture shall be jointly and severally liable to the BULACAN STATE UNIVERSITY."</i>
18.3(h)(i)	No further instructions.
21.2	No further instructions.
29.1	No further instructions.

31.1	The Contractor shall submit the Program of Work to the BULACAN STATE UNIVERSITY's Representative within <b><u>ten (10) calendar days</u></b> of delivery of the Letter of Acceptance.
31.3	No further instructions.
34.3	The Funding Source is Corporate Budget (Income).
39.1	The amount of the <b><u>advance payment is not more than 15% of the Contract Price.</u></b>
40.1	Materials and equipment delivered on the site and completely put in place shall be included for payment.
51.1	The date by which surveyed location plan is required <b><u>within ten (10) calendar days after project completion.</u></b>
51.2	The amount to be withheld for failing to produce "as built" drawings and/or operating and maintenance manuals by the date required is <b><u>ten percent (10%) of the contract price.</u></b>

# CONSTRUCTION SPECIFICATIONS

PROJECT TITLE	CONSTRUCTION OF ROADS (1 & 3) – 25 HECTARES
LOCATION	Bulacan State University – Main Campus
OWNER	Bulacan State University

Prepared by:

**MA. VICTORIA V. UMALI**  
Civil Engineer, PMO

Submitted by:

**ARCH. MA. SATURNINA C. PARUNGAO**  
Director, PMO

Approved by:

**DR. MARIANO C. DE JESUS**  
BulSU – PRESIDENT

Conforme:

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CONTRACTOR

## **DIVISION 1.0 GENERAL CONDITIONS**

### **PART 1.0 GENERAL**

**1.1 SCOPE OF WORK:** The work covered under this Contract is for the Construction of Roads (1 to 3) - 25 Hectares at Bulacan State University – Main Campus. It consists of the furnishing all materials, labor, equipment, transportation, incidentals, facilities, and superintendence necessary to complete the project in accordance with true intent of the Specifications and Contract Drawings.

**1.2 PLANS AND SPECIFICATIONS:** The Contractor shall be responsible for carefully examining, comparing and verifying the data furnished by the Plans and Specifications. In case of obscurity or discrepancy in the Plans and Specifications, the Contractor shall submit the matter to the Project Management Office of the Bulacan State University for the proper explanation or necessary correction, before any adjustment shall be made. Any adjustment by the Contractor without such determination shall be at his risk and expense.

Omitted or wrongly described details of work, which are manifestly necessary to carry out the true intent of the drawings and specifications, shall be performed as if fully and correctly set forth and described in the drawings and specifications.

The Owner may, from time to time, make changes in the specifications and construction drawings. However, if the cost to the Contractor shall be materially increased by such change, the Owner shall pay the Contractor for the reasonable cost in accordance with the changes.

**1.3 LAWS TO BE OBSERVED:** The contractor shall comply with National Building Code of the Philippines, National Structural Code of the Philippines, Fire Code of the Philippines, Plumbing Code of the Philippines as well as Local Rules and Regulations of the City of Malolos, Bulacan. This includes safety practices especially during construction process. The Contractor or those engaged thereon shall obtain all necessary licenses and permits and pay all taxes or fees, which may due to the local and/or National Government in connection with the prosecution of the work. He shall also be responsible for all damages to persons or property that may occur.

**1.4 SIGNBOARDS.** The Contractor shall provide signboards with complete details of the project. Sizes are subject for the approval from PMO.

### **PART 2.0 MATERIALS**

**2.1 MATERIALS:** Unless otherwise specified, all materials shall be new and free from defects and imperfections. The quality of materials shall be of the best grade of their respective kinds for the purpose. The work shall be performed

in the best and most acceptable manner in strict accordance with the requirements of the Plans and Specifications. Preference will be given to articles or materials that are locally manufactured, conditions of quality and price being equal.

- 2.2      **SAMPLES AND INFORMATION ON MATERIALS:** When required by the Specifications, or when called for by the ENGINEER, the Contractor shall furnish, for approval, full information and satisfactory evidence as to the kind and quality of materials or articles he will incorporate in the work. The Contractor shall furnish, for ENGINEER's and Owner's approval, all samples when so directed. The work shall be in accordance with approved samples. Materials and articles installed or used without such approval shall be at the risk of subsequent rejection.

Any failure on the part of the Contractor to conform or use materials that are not specified herein shall be under subsequent rejection. Any alteration or revision of material usage without approval from the ENGINEER shall make the Contractor responsible and liable in terms of guarantee, workmanship and defects.

### **PART 3.0      WORKMANSHIP**

- 3.1      **WORKMANSHIP:** Workmanship shall be in accordance with the best standard practices and all operations required under any and all parts of the Specifications shall be undertaken in a neat, workmanlike manner. Only skilled personnel with sufficient experience in similar operations shall be allowed to undertake the same.

Any alteration or revision on the execution of Drawings without approval from the ENGINEER shall be under subsequent rejection and shall make the Contractor responsible and liable for any workmanship and execution defects.

Defective workmanship shall be remedied by the Contractor, at his expense. He shall not be entitled to any payment hereunder until defective workmanship has been remedied.

- 3.2      **TEMPORARY FACILITIES:** The Contractor shall provide temporary facilities with water and light. The Contractor shall furnish all temporary lights and power and shall pay all expenses in connection therewith. Furthermore, the Contractor shall provide and pay for all water expenses for structure purposes that are required by all trades. He shall remove all connections and appliances connected there with prior to the completion of the Contract and leave the premises perfectly clean.

Provision of Staff/Bunk House and Storage facilities of Contractor must be approved by the BULSU Management.

- 3.3 PROTECTION OF WORK AND OWNER'S PROPERTY: The Contractor shall put up safety measures and continuously maintain adequate protection of all his work from damage and shall protect the Owners property, as well as all materials furnished and delivered to him by the Owner. He shall make good any such damage, injury or loss, except such as may be caused by agents or employees of the Owner, or due to causes considered as an Act of God.

#### **PART 4.0 SUPERVISION AND INSPECTION**

- 4.1 AUTHORIZED REPRESENTATIVE: Whenever the Contractor is not at the site, orders maybe given by the Owner to his authorized representative and shall be accepted and complied to by the superintendent or foreman of the Contractor.
- 4.2 INSPECTION OF WORK: The ENGINEER or Owner shall, at all times, have access to the work whenever it is in preparation or progress and the Contractor shall provide facilities for such access for inspection. The manner of work and all materials and equipment used therein shall be subject to inspection, tests, and approval of the Owner.
- 4.3 CONSTANT SUPERVISION: The Contractor shall ensure that the project will have constant supervision by a competent superintendent, who shall be present where construction is being carried on at all times during the working hours. Existing condition of the work site shall be documented and photos shall be taken before commence of the work to ensure such status, any damages on the areas due to on-going work shall be refurbished at the Contractor's expense.
- 4.4 DISPUTES: The ENGINEER shall, within a reasonable time, make decision on all claims of the Owner or Contractor and on all matters relating to the execution and progress of the work or the interpretation of the Contract Documents.
- Except as otherwise specifically provided in this Contract, all disputes concerning questions of fact arising under this contract shall be decided by the ENGINEER, whose decisions shall be final and conclusive upon the parties as to questions of fact.
- 4.5 AS BUILT PLANS: Three sets of "As-Built Plans" of the project concerned duly signed and sealed by the ENGINEER-in-charge of construction should be submitted as a requirement for the final acceptance of the work. It should be properly drawn indicating all the specifications, layouts, tables and necessary data. An initial layout should be submitted on A3 paper for checking and approval of PMO. Final "As-Built plans", both soft and hard copies, three sets on A3 paper and a CD copy, respectively.
- 4.6 CLEAN UP: The Contractor, prior to the turn over of the work to the Owner, shall remove any excess materials, waste, debris, rubbish, and all

construction and installation equipment and tools from the premises before the final acceptance of the work.

## **DIVISION 2.0 EARTHWORK**

### **ITEM 100 – CLEARING AND GRUBBING**

#### **100.1 Description**

This item shall consist of clearing, grubbing, removing and disposing all vegetation and debris as designated in the Contract, except those objects that are designated to remain in place or are to be removed in consonance with other provisions of this Specification. The work shall also include the preservation from injury or defacement of all objects designated to remain.

#### **100.2 Construction Requirements**

##### **100.2.1 General**

The Engineer will establish the limits of work and designate all trees, shrubs, plants and other things to remain. The Contractor shall preserve all objects designated to remain. Paint required for cut or scarred surface of trees or shrubs selected for retention shall be an approved asphaltum base paint prepared especially for tree surgery.

Clearing shall extend one (1) meter beyond the toe of the fill slopes or beyond rounding of cut slopes as the case maybe for the entire length of the project unless otherwise shown on the plans or as directed by the Engineer and provided it is within the right of way limits of the project, with the exception of trees under the jurisdiction of the Forest Management Bureau (FMB).

##### **100.2.2 Clearing and Grubbing**

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

- (1) Removal of undisturbed stumps and roots and nonperishable solid objects with a minimum depth of one (1) meter below subgrade or slope of embankment will not be required.
- (2) In areas outside of the grading limits of cut and embankment areas, stumps and nonperishable solid objects shall be cut off not more than 150 mm (6 inches) above the ground line or low water level.
- (3) Grubbing of pits, channel changes and ditches will be required only to the depth necessitated by the proposed excavation within such areas.

Materials and debris which cannot be burned and perishable materials may be disposed off by methods and at locations approved by the Engineer, on or off the project. If disposal is by burying, the debris shall be placed in layers with the material so disturbed to avoid nesting. Each layer shall be covered or mixed with earth material by the land-fill method to fill all voids. The top layer of material buried shall be covered with at least 300 mm (12 inches) of earth or other approved material and shall be graded, shaped and compacted to present a pleasing appearance. If the disposal location is off the project, the

Contractor shall make all necessary arrangements with property owners in writing for obtaining suitable disposal locations which are outside the limits of view from the project. The cost involved shall be included in the unit bid price. A copy of such agreement shall be furnished to the Engineer. The disposal areas shall be seeded, fertilized and mulched at the Contractor's expense.

## **ITEM 101 – REMOVAL OF STRUCTURES AND OBSTRUCTIONS**

### **101.1 Description**

This Item shall consist of the removal wholly or in part, and satisfactory disposal of all buildings, fences, structures, old pavements, abandoned pipe lines, and any other obstructions which are not designated or permitted to remain, except for the obstructions to be removed and disposed off under other items in the Contract. It shall also include the salvaging of designated materials and backfilling the resulting trenches, holes, and pits.

### **101.2 Construction Requirements**

#### **101.2.1 General**

The Contractor shall perform the work described above, within and adjacent to the roadway, on Government land or easement, as shown on the Plans or as directed by the Engineer. All designated salvable material shall be removed, without unnecessary damage, in sections or pieces which may be readily transported, and shall be stored by the Contractor at specified places on the project or as otherwise shown in the Special Provisions. Perishable material shall be handled as designated in subsection. Nonperishable material may be disposed off outside the limits of view from the project with written permission of the property owner on whose property the material is placed. Copies of all agreements with property owners are to be furnished to the Engineer. Basements or cavities left by the structure removal shall be filled with acceptable material to the level of the surrounding ground and, if within the prism of construction, shall be compacted to the required density.

#### **101.2.2 Removal of Culverts, and other Drainage Structures**

All existing culverts and other drainage structures in use by traffic shall not be removed until satisfactory arrangements have been made to accommodate traffic. The removal of existing culverts within embankment areas will be required only as necessary for the installation of new structures. Abandoned culverts shall be broken down, crushed and sealed or plugged. All retrieved culvert for future use as determined by the Engineer shall be carefully removed and all precautions shall be employed to avoid breakage or structural damage to any of its part. All sections of structures removed which are not designated for stockpiling or re-laying shall become the property of the Government and be removed from the project or disposed off in a manner approved by the Engineer.

Unless otherwise directed, the substructures of existing structures shall be removed down to the natural stream bottom and those parts outside of the stream shall be removed down to at least 300 mm (12 inches) below natural ground surface. Where

such portions of existing structures lie wholly or in part within the limits for a new structure, they shall be removed as necessary to accommodate the construction of the proposed structure.

Structures designated to become the property of the Contractor shall be removed from the right-of-way.

### **101.2.3 Removal of Pipes Other than Pipe Culverts**

Unless otherwise provided, all pipes shall be carefully removed and every precaution taken to avoid breakage or damaged. Pipes to be relaid shall be removed and stored when necessary so that there will be no loss of damage before re-laying. The Contractor shall replace sections lost from storage or damage by negligence, at his own expense.

## **ITEM 102 – EXCAVATION**

### **102.1 Description**

This Item shall consist of roadway and drainage and borrow excavation and the disposal of material in accordance with this Specification and in conformity with the lines, grades and dimensions shown on the Plans or established by the Engineer.

#### **102.1.1 Roadway Excavation**

Roadway excavation will include excavation and grading for roadways, parking areas, intersections, approaches, slope rounding, benching, waterways and ditches; removal of unsuitable material from the roadbed and beneath embankment areas; and excavating selected material found in the roadway as ordered by the Engineer for specific use in the improvement. Roadway excavation will be classified as “unclassified excavation”, “rock excavation”, “common excavation”, or “muck excavation” as indicated in the Bill of Quantities and hereinafter described.

- (1) **Unclassified Excavation.** Unclassified excavation shall consist of the excavation and disposal of all materials regardless of its nature, not classified and included in the Bill of Quantities under other pay items.
- (2) **Rock Excavation.** Rock excavation shall consist of igneous, sedimentary and metamorphic rock which cannot be excavated without blasting or the use of rippers, and all boulders or other detached stones each having a volume of 1 cubic meter or more as determined by physical measurements or visually by the Engineer.
- (3) **Common Excavation.** Common excavations shall consist of all excavation not included in the Bill of Quantities under “rock excavation” or other pay items.

#### **102.1.2 Borrow Excavation**

Borrow excavation shall consist of the excavation and utilization of approved material required for the construction of embankments or for other portions of the work, and shall be obtained from approved sources.

The material shall meet the quality requirements determined by the Engineer unless otherwise provided in the Contract.

## **102.2 Construction Requirements**

### **102.2.1 General**

When there is evidence of discrepancies on the actual elevations and that shown on the Plans, a pre-construction survey referred to the datum plane used in the approved Plan shall be undertaken by the Contractor under the control of the Engineer to serve as basis for the computation of the actual volume of the excavated materials.

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. Prior to excavation, all necessary clearing and grubbing in that area shall have been performed in accordance with Item 100, Clearing and Grubbing.

### **102.2.3 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 material, including rock and boulders that cannot be used in embankments shall be disposed off as directed.

Material encountered in the excavation and determined by the Engineer as suitable for topping, road finishing, slope protection, or other purposes shall be conserved and utilized as directed by the Engineer.

Borrow material shall not be placed until after the readily accessible roadway excavation has been placed in the fill, unless otherwise permitted or directed by the Engineer. If the Contractor places more borrow than is required and thereby causes a waste of excavation, the amount of such waste will be deducted from the borrow volume.

#### **102.2.4 Removal of Unsuitable Material**

Where the Plans show the top portion of the roadbed to be selected topping, all unsuitable materials shall be excavated to the depth necessary for replacement of the selected topping to the required compacted thickness.

Where excavation to the finished graded section results in a subgrade or slopes of unsuitable soil, the Engineer may require the Contractor to remove the unsuitable material and backfill to the finished graded section with approved material. The Contractor shall conduct his operations in such a way that the Engineer can take the necessary cross-sectional measurements before the backfill is placed.

The excavation of muck shall be handled in a manner that will not permit the entrapment of muck within the backfill. The material used for backfilling up to the ground line or water level, whichever is higher, shall be rock or other suitable granular material selected from the roadway excavation, if available. If not available, suitable material shall be obtained from other approved sources. Unsuitable material removed shall be disposed off in designated areas shown on the Plans or approved by the Engineer.

### **ITEM 104 – EMBANKMENT**

#### **104.1 Description**

This Item shall consist of the construction of embankment in accordance with this Specification and in conformity with the lines, grades and dimensions shown on the Plans or established by the Engineer.

#### **104.2 Material Requirements**

Embankments shall be constructed of suitable materials, in consonance with the following definitions:

1. Suitable Material – Material which is acceptable in accordance with the Contract and which can be compacted in the manner specified in this Item. It can be common material or rock.
2. Unsuitable Material – Material other than suitable materials such as:
  - (a) Materials containing detrimental quantities of organic materials, such as grass, roots and sewerage.
  - (b) Organic soils such as peat and muck.
  - (c) Soils with liquid limit exceeding 80 and/or plasticity index exceeding 55.
  - (d) Soils with a natural water content exceeding 100%.
  - (e) Soils with very low natural density, 800 kg/m<sup>3</sup> or lower.
  - (f) Soils that cannot be properly compacted as determined by the Engineer.

### **104.3 Construction Requirements**

#### **104.3.1 General**

Prior to construction of embankment, all necessary clearing and grubbing in that area shall have been performed in conformity with Clearing and Grubbing.

Embankment construction shall consist of constructing roadway embankments, including preparation of the areas upon which they are to be placed; the construction of dikes within or adjacent to the roadway; the placing and compacting of approved material within roadway areas where unsuitable material has been removed; and the placing and compacting of embankment material in holes, pits, and other depressions within the roadway area.

Embankments and backfills shall contain no muck, peat, sod, roots or other deleterious matter. Rocks, broken concrete or other solid, bulky materials shall not be placed in embankment areas where piling is to be placed or driven.

Where shown on the Plans or directed by the Engineer, the surface of the existing ground shall be compacted to a depth of 150 mm (6 inches) and to the specified requirements of this Item.

Where provided on the Plans and Bill of Quantities the top portions of the roadbed in both cuts and embankments, as indicated, shall consist of selected borrow for topping from excavations.

#### **104.3.2 Compaction**

##### **Trials**

Before commencing the formation of embankments, the Contractor shall submit in writing to the Engineer for approval his proposals for the compaction of each type of fill material to be used in the works. The proposals shall include the relationship between the types of compaction equipment, and the number of passes required and the method of adjusting moisture content. The Contractor shall carry out full scale compaction trials on areas not less than 10 m wide and 50 m long as required by the Engineer and using his proposed procedures or such amendments thereto as may be found necessary to satisfy the Engineer that all the specified requirements regarding compaction can be consistently achieved. Compaction trials with the main types of fill material to be used in the works shall be completed before work with the corresponding materials will be allowed to commence.

Throughout the periods when compaction of earthwork is in progress, the Contractor shall adhere to the compaction procedures found from compaction trials for each type of material being compacted, each type of compaction equipment employed and each degree of compaction specified.

##### **Earth**

The Contractor shall compact the material placed in all embankment layers and the material scarified to the designated depth below subgrade in cut sections, until a uniform density of not less than 95 mass percent of the maximum dry density determined by AASHTO T 99 Method C, is attained, at a moisture content determined by Engineer to be

suitable for such density. Acceptance of compaction may be based on adherence to an approved roller pattern developed as set forth in Item 106, Compaction Equipment and Density Control Strips.

The Engineer shall during progress of the Work, make density tests of compacted material in accordance with AASHTO T 191, T 205, or other approved field density tests, including the use of properly calibrated nuclear testing devices. A correction for coarse particles may be made in accordance with AASHTO T 224. If, by such tests, the Engineer determines that the specified density and moisture conditions have not been attained, the Contractor shall perform additional work as may be necessary to attain the specified conditions.

At least one group of three in-situ density tests shall be carried out for each 500 m of each layer of compacted fill.

#### **104.3.4 Protection of Roadbed During Construction**

During the construction of the roadway, the roadbed shall be maintained in such condition that it will be well drained at all times. Side ditches or gutters emptying from cuts to embankments or otherwise shall be so constructed as to avoid damage to embankments by erosion.

#### **104.3.5 Finishing Roadbed and Slopes**

After the roadbed has been substantially completed, the full width shall be conditioned by removing any soft or other unstable material that will not compact properly or serve the intended purpose. The resulting areas and all other low sections, holes or depressions shall be brought to grade with suitable selected material. Scarifying, blading, dragging, rolling, or other methods of work shall be performed or used as necessary to provide a thoroughly compacted roadbed shaped to the grades and cross-sections shown on the Plans or as staked by the Engineer.

All earth slopes shall be left with roughened surfaces but shall be reasonably uniform, without any noticeable break, and in reasonably close conformity with the Plans or other surfaces indicated on the Plans or as staked by the Engineer, with no variations therefrom readily discernible as viewed from the road.

### **Item 105 – SUBGRADE PREPARATION**

#### **105.1 Description**

This Item shall consist of the preparation of the subgrade for the support of overlying structural layers. It shall extend to full width of the roadway. Unless authorized by the Engineer, subgrade preparation shall not be done unless the Contractor is able to start immediately the construction of the pavement structure.

#### **105.2 Material Requirements**

Unless otherwise stated in the Contract and except when the subgrade is in rock cut, all materials below subgrade level to a depth 150 mm or to such greater depth as may be specified shall meet the requirements, Selected Borrow for Topping.

### **105.3 Construction Requirements**

#### **105.3.1 Prior Works**

Prior to commencing preparation of the subgrade, all culverts, cross drains, ducts and the like (including their fully compacted backfill), ditches, drains and drainage outlets shall be completed. Any work on the preparation of the subgrade shall not be started unless prior work herein described shall have been approved by the Engineer.

#### **105.3.2 Subgrade in Common Excavation**

Unless otherwise specified, all materials below subgrade level in earth cuts to a depth 150 mm or other depth shown on the Plans or as directed by the Engineer shall be excavated. The material, if suitable, shall be set aside for future use or, if unsuitable, shall be disposed off in accordance with the requirements .

Where material has been removed from below subgrade level, the resulting surface shall be compacted to a depth of 150 mm and in accordance with the requirements.

All materials immediately below subgrade level in earth cuts to a depth of 150 mm, or to such greater depth as may be specified, shall be compacted in accordance with the requirements.

#### **105.3.3 Subgrade on Embankment**

After the embankment has been completed, the full width shall be conditioned by removing any soft or other unstable material that will not compacted properly. The resulting areas and all other low sections, holes, or depressions shall be brought to grade with suitable material. The entire roadbed shall be shaped and compacted to the requirements of Subsections 104.3.3. Scarifying, blading, dragging, rolling, or other methods of work shall be performed or used as necessary to provide a thoroughly compacted roadbed shaped to the cross-sections shown on the Plans.

#### **105.3.4 Protection of Completed Work**

The Contractor shall be required to protect and maintain at his own expense the entire work within the limits of his Contract in good condition satisfactory to the Engineer from the time he first started work until all work shall have been completed. Maintenance shall include repairing and recompacting ruts, ridges, soft spots and deteriorated sections of the subgrade caused by the traffic of the Contractor's vehicle/equipment or that of the public.

### **ITEM 106 – SUBBASE AND BASE**

#### **ITEM 1 – AGGREGATE SUBBASE COURSE**

##### **1.1 Description**

This item 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.

##### **1.2 Material Requirements**

Aggregate for subbase shall consist of hard, durable particles or fragments of crushed stone, 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.

The subbase material shall conform to Table 1.1, Grading Requirements

**Table 1.1 – 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

### **1.3 Construction Requirements**

#### **1.3.1 Preparation of Existing Surface**

The existing surface shall be graded and finished as provided under Item 105, Subgrade Preparation, before placing the subbase material.

#### **1.3.2 Placing**

The aggregate subbase material shall be placed at a uniform mixture on a prepared subgrade in a 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 is placed.

The placing of material shall begin at the point designated by the Engineer. Placing shall be from vehicles especially equipped to distribute the material in a continuous uniform layer or windrow. The layer or windrow shall be of such size that when spread and compacted the finished layer be in reasonably close conformity to the nominal thickness shown on the Plans. When hauling is done over previously placed material, hauling equipment shall be dispersed uniformly over the entire surface of the previously constructed layer, to minimize rutting or uneven compaction.

#### **1.3.3 Spreading and Compacting**

When uniformly mixed, the mixture shall be spread to the plan thickness, for compaction. Where the required thickness is 150 mm or less, the material may be spread and compacted in one layer. Where the required thickness is more than 150 mm, the aggregate subbase shall be spread and compacted in two or more layers of approximately equal thickness, and the maximum compacted thickness of any layer shall not exceed 150 mm. All subsequent layers shall be spread and compacted in a similar manner.

The moisture content of subbase material shall, if necessary, be adjusted prior to compaction by watering with approved sprinklers mounted on trucks or by drying out, as required in order to obtain the required compaction.

Immediately following final spreading and smoothing, each layer shall be compacted to the full width by means of approved compaction equipment. Rolling shall progress gradually from the sides to the center, parallel to the centerline of the road and shall continue until the whole surface has been rolled. Any irregularities or depressions that develop shall be corrected by loosening the material at these places and adding or removing material until surface is smooth and uniform. Along curbs, headers, and walls, and at all places not accessible to the roller, the subbase material shall be compacted thoroughly with approved tampers or compactors.

If the layer of subbase material, or part thereof, does not conform to the required finish, the Contractor shall, at his own expense, make the necessary corrections.

Compaction of each layer shall continue until a field density of at least 100 percent of the maximum dry density determined in accordance with AASHTO T 180, Method D has been achieved. In-place density determination shall be made in accordance with AASHTO T 191.

## **ITEM 2 – AGGREGATE BASE COURSE**

### **2.1 Description**

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

### **2.2 Material Requirements**

Aggregate for base course shall consist of hard, durable particles or fragments of crushed stone, 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 base.

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 base course material shall conform to Table 2.1, whichever is called for in the Bill of Quantities.

**Table 2.1 – Grading Requirements**

Sieve Designation		Mass Percent Passing	
Standard, mm	Alternate US Standard	Grading A	Grading B

50	2"	100	
37.5	1-1/2"	-	100
25.0	1"	60 – 85	-
19.0	3/4"	-	60 – 85
12.5	1/2"	35 – 65	-
4.75	No. 4	20 – 50	30 – 55
0.425	No. 40	5 – 20	8 – 25
0.075	No. 200	0 – 12	2 – 14

## **2.3 Construction Requirements**

### **2.3.1 Preparation of Existing Surface**

The existing surface shall be graded and finished as provided under Item 105, Subgrade Preparation, before placing the base material.

### **2.3.2 Placing**

It shall be in accordance with all the requirements of Subsection 200.3.2, Placing.

### **2.3.3 Spreading and Compacting**

It shall be in accordance with all the requirements of Subsection 200.3.3, Spreading and Compacting.

## **ITEM 3 – AGGREGATE STOCKPILE**

### **3.1 Description**

This Item shall consist of furnishing and placing aggregate in stockpiles at locations shown on the Plans or as directed and approved by the Engineer.

### **3.2 Material Requirements**

The aggregate shall conform to all requirements of the specified Item No. of the Specifications.

It shall be tested for acceptance at the source.

### **3.3 Construction Requirements**

The stockpile area, as staked by the Engineer, shall be graded, shaped and compacted to a uniform cross-section that will drain satisfactorily. The entire area shall be compacted with a minimum of three completed passes of the approved equipment.

The stockpiling and handling of aggregates shall be in accordance with clauses 65 and 66, Part H Control of Materials of the latest DPWH Standard Specifications, Volume I, Requirements and Conditions of Contract.

## **ITEM 4 – PORTLAND CEMENT CONCRETE PAVEMENT**

## **4.1 Description**

This Item shall consist of pavement of Portland Cement Concrete, with or without reinforcement, constructed on the prepared base in accordance with this Specification and in conformity with lines, grades, thickness and typical cross- section shown on the Plans.

## **4.2 Material Requirements**

### **4.2.1 Portland Cement**

It shall conform to the applicable requirements of Item 700, Hydraulic Cement. Only Type I Portland Cement shall be used unless otherwise provided for in the Special Provisions. Different brands or the same brands from different mills shall not be mixed nor shall they be used alternately unless the mix is approved by the Engineer. However, the use of Portland Pozzolan Cement Type IP meeting the requirements of AASHTO M 240/ASTM C 695, Specifications for Blended Hydraulic Cement shall be allowed, provided that trial mixes shall be done and that the mixes meet the concrete strength requirements, the AASHTO/ASTM provisions pertinent to the use of Portland Pozzolan Type IP shall be adopted.

Cement which for any reason, has become partially set or which contains lumps of caked cement will be rejected. Cement salvaged from discarded or used bags shall not be used.

Samples of Cement shall be obtained in accordance with AASHTO T 127. **4.2.2 Fine**

### **Aggregate**

It shall consist of natural sand, stone screenings or other inert materials with similar characteristics, or combinations thereof, having hard, strong and durable particles. Fine aggregate from different sources of supply shall not be mixed or stored in the same pile nor used alternately in the same class of concrete without the approval of the Engineer.

It shall not contain more than three (3) mass percent of material passing the 0.075 mm (No. 200 sieve) by washing nor more than one (1) mass percent each of clay lumps or shale. The use of beach sand will not be allowed without the approval of the Engineer.

If the fine aggregate is subjected to five (5) cycles of the sodium sulfate soundness test, the weighted loss shall not exceed 10 mass percent.

The fine aggregate shall be free from injurious amounts of organic impurities. If subjected to the colorimetric test for organic impurities and a color darker than the standard is produced, it shall be rejected. However, when tested for the effect of organic impurities of strength of mortar by AASHTO T 71, the fine aggregate may be used if the relative strength at 7 and 28 days is not less than 95 mass percent.

The fine aggregate shall be well-graded from coarse to fine and shall conform to Table 1.

**Table 1 – Grading Requirements for Fine Aggregate**

Sieve Designation	Mass Percent Passing
9.5 mm (3/8 in)	100
4.75 mm (No. 4)	95 – 100
2.36 mm (No. 8)	-
1.18 mm (No. 16)	45 – 80
0.600 mm (No. 30)	-
0.300 mm (No. 50)	5 – 30
0.150 mm (No. 100)	0 – 10

#### 4.2.3 Coarse Aggregate

It shall consist of crushed stone, gravel, blast furnace slag, or other approved inert materials of similar characteristics, or combinations thereof, having hard, strong, durable pieces and free from any adherent coatings.

It shall contain not more than one (1) mass percent of material passing the 0.075 mm (No. 200) sieve, not more than 0.25 mass percent of clay lumps, nor more than 3.5 mass percent of soft fragments.

If the coarse aggregate is subjected to five (5) cycles of the sodium sulfate soundness test, the weighted loss shall not exceed 12 mass percent.

It shall have a mass percent of wear not exceeding 40 when tested by AASHTO T 96. If the slag is used, its density shall not be less than 1120 kg/m<sup>3</sup> (70 lb./cu. ft.). The gradation of the coarse aggregate shall conform to Table 2.

Only one grading specification shall be used from any one source.

**Table 2 – Grading Requirement for Coarse Aggregate**

Sieve Designation		Mass Percent Passing		
Standard Mm	Alternate U. S. Standard	Grading A	Grading B	Grading C
75.00	3 in.	100	-	-
63.00	2-1/2 in.	90-100	100	100
50.00	2 in.	-	90-100	95-100
37.5	1-1/2 in.	25-60	35-70	-
25.0	1 in.	-	0-15	35-70
19.0	3/4 in.	0-10	-	-
12.5	1/2 in.	0-5	0-5	10-30
4.75	No. 4	-	-	0-5

#### 4.2.4 Water

Water used in mixing, curing or other designated application shall be reasonably clean and free of oil, salt, acid, alkali, grass or other substances injurious to the finished product. Water will be tested in accordance with and shall meet the requirements of Item 714, Water. Water which is drinkable may be used without test. Where the source of water is shallow, the intake shall be so enclosed as to exclude silt, mud, grass or other foreign materials.

#### **4.2.5 Reinforcing Steel**

It shall conform to the requirements of Item 404, Reinforcing Steel. Dowels and tie bars shall conform to the requirements of AASHTO M 31 or M 42, except that rail steel shall not be used for tie bars that are to be bent and restraightened during construction. Tie bars shall be deformed bars. Dowels shall be plain round bars. Before delivery to the site of work, one-half of the length of each dowel shall be painted with one coat of approved lead or tar paint.

The sleeves for dowel bars shall be metal of approved design to cover 50 mm ( 2 inches), plus or minus 5 mm (1/4 inch) 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. Sleeves shall be of such design that they do not collapse during construction.

#### **4.2.6 Joint Fillers**

Poured joint fillers shall be mixed asphalt and mineral or rubber filler conforming to the applicable requirements of Item 705, Joint Materials.

Preformed joint filler shall conform to the applicable requirements of Item 705. It shall be punched to admit the dowels where called for in the Plans. The filler for each joint shall be furnished in a single piece for the full depth and width required for the joint.

#### **4.2.7 Admixtures**

Air-entraining admixture shall conform to the requirements of AASHTO M 154.

Chemical admixtures, if specified or permitted, shall conform to the requirements of AASHTO M 194.

Fly Ash, if specified or permitted as a mineral admixture and as 20% partial replacement of Portland Cement in concrete mix shall conform to the requirements of ASTM C 618.

Admixture should be added only to the concrete mix to produce some desired modifications to the properties of concrete where necessary, but not as partial replacement of cement.

#### **4.2.8 Curing Materials**

Curing materials shall conform to the following requirements as specified;

- a) Burlap cloth - AASHTO M 182
- b) Liquid membrane forming compounds - AASHTO M 148

c) Sheeting (film) materials - AASHTO M 171  
Cotton mats and water-proof paper can be used.

#### **4.2.9 Calcium Chloride/Calcium Nitrate**

It shall conform to AASHTO M 144, if specified or permitted by the Engineer, as accelerator.

#### **4.2.10 Storage of Cement and Aggregate**

All cement shall be stored, immediately upon delivery at the Site, in weatherproof building which will protect the cement from dampness. The floor shall be raised from the ground. The buildings shall be placed in locations approved by the Engineer. Provisions for storage shall be ample, and the shipments of cement as received shall be separately stored in such a manner as to allow the earliest deliveries to be used first and to provide easy access for identification and inspection of each shipment.

Storage buildings shall have capacity for storage of a sufficient quantity of cement to allow sampling at least twelve (12) days before the cement is to be used. Bulk cement, if used, shall be transferred to elevated air tight and weatherproof bins. Stored cement shall meet the test requirements at any time after storage when retest is ordered by the Engineer. At the time of use, all cement shall be free-flowing and free of lumps.

The handling and storing of concrete aggregates shall be such as to prevent segregation or the inclusion of foreign materials. The Engineer may require that aggregates be stored on separate platforms at satisfactory locations.

In order to secure greater uniformity of concrete mix, the Engineer may require that the coarse aggregate be separated into two or more sizes. Different sizes of aggregate shall be stored in separate bins or in separate stockpiles sufficiently removed from each other to prevent the material at the edges of the piles from becoming intermixed.

#### **4.2.11 Proportioning, Consistency and Strength of Concrete**

The Contractor shall prepare the design mix based on the absolute volume method as outlined in the American Concrete Institute (ACI) Standard 211.1, "Recommended Practice for Selecting Proportions for Normal and Heavyweight Concrete".

It is the intent of this Specification to require at least 364 kg of cement per cubic meter of concrete to meet the minimum strength requirements. The Engineer shall determine from laboratory tests of the materials to be used, the cement content and the proportions of aggregate and water that will produce workable concrete having a slump of between 40 and 75 mm (1-1/2 and 3 inches) if not vibrated or between 10 and 40 mm (1/2 and 1-1/2 inches) if vibrated, and a flexural strength of not less than 3.8 MPa (550 psi) when tested by the third-point method or 4.5 MPa (650 psi) when tested by the mid-point method at fourteen (14) days in accordance with AASHTO T97 and T177, respectively; or a

compressive strength of 24.1 MPa (3500 psi) for cores taken at fourteen (14) days and tested in accordance with AASHTO T24.

Slump shall be determined using AASHTO T 119.

The designer shall consider the use of lean concrete (econocrete) mixtures using local materials or specifically modified conventional concrete mixes in base course and in the lower course composite, monolithic concrete pavements using a minimum of 75 mm (3 inches) of conventional concrete as the surface course.

The mix design shall be submitted to the Engineer for approval and shall be accompanied with certified test data from an approved laboratory demonstrating the adequacy of the mix design. A change in the source of materials during the progress of work may necessitate a new design mix.

### **4.3 Construction Requirements**

#### **4.3.1 Quality Control of Concrete**

##### **1. General**

The Contractor shall be responsible for the quality control of all materials during the handling, blending, and mixing and placement operations.

##### **2. Quality Control Plan**

The Contractor shall furnish the Engineer a Quality Control Plan detailing his production control procedures and the type and frequency of sampling and testing to insure that the concrete produces complies with the Specifications. The Engineer shall be provided free access to recent plant production records, and if requested, informational copies of mix design, materials certifications and sampling and testing reports.

##### **3. Qualification of Workmen**

Experienced and qualified personnel shall perform all batching or mixing operation for the concrete mix, and shall be present at the plant and job site to control the concrete productions whenever the plant is in operation. They shall be identified and duties defined as follows:

- a. Concrete Batcher. The person performing the batching or mixing operation shall be capable of accurately conducting aggregate surface moisture determination and establishing correct scale weights for concrete materials. He shall be capable of assuring that the proportioned batch weights of materials are in accordance with the mix design.
- b. Concrete Technician. The person responsible for concrete production control and sampling and testing for quality control shall be proficient in concrete technology and shall have a sound knowledge of the Specifications as they relate to concrete production. He shall be capable of conducting tests on concrete and concrete materials in accordance with these Specifications. He shall be capable of adjusting

concrete mix designs for improving workability and Specification compliance and preparing trial mix designs. He shall be qualified to act as the concrete batcher in the batcher's absence.

#### 4. Quality Control Testing

The Contractor shall perform all sampling, testing and inspection necessary to assure quality control of the component materials and the concrete.

The Contractor shall be responsible for determining the gradation of fine and coarse aggregates and for testing the concrete mixture for slump, air content, water-cement ratio and temperature. He shall conduct his operations so as to produce a mix conforming to the approved mix design.

#### 5. Documentation

The Contractor shall maintain adequate records of all inspections and tests. The records shall indicate the nature and number of observations made, the number and type of deficiencies found, the quantities approved and rejected, and nature of any corrective action taken.

The Engineer may take independent assurance samples at random location for acceptance purposes as he deems necessary.

### 4.3.2 Equipment

Equipment and tools necessary for handling materials and performing all parts of the work shall be approved by the Engineer as to design, capacity and mechanical condition. The equipment shall be at the jobsite sufficiently ahead of the start of construction operations to be examined thoroughly and approved.

#### 1. Batching Plant and Equipment

- a. General. The batching shall include bins, weighing hoppers, and scales for the fine aggregate and for each size of coarse aggregate. If cement is used in bulk, a bin, a hopper, and separate scale for cement shall be included. The weighing hopper shall be properly sealed and vented to preclude dusting operation. The batch plant shall be equipped with a suitable non-resettable batch counter which will correctly indicate the number of batches proportioned.
- b. Bins and Hoppers. Bins with adequate separate compartments for fine aggregate and for each size of coarse aggregate shall be provided in the batching plant.
- c. Scales. Scales for weighing aggregates and cement shall be of either the beam type or the springless-dial type. They shall be accurate within one-half percent (0.5%) throughout the range of use. Poises shall be designed to be locked in any position and to prevent unauthorized change.

Scales shall be inspected and sealed as often as the Engineer may deem necessary to assure their continued accuracy.

- d. Automatic Weighing Devices. Unless otherwise allowed on the Contract, batching plants shall be equipped with automatic weighing devices of an approved type to proportion aggregates and bulk cement.

## 2. Mixers

- a. General. Concrete may be mixed at the Site of construction or at a central plant, or wholly or in part in truck mixers. Each mixer shall have a manufacturer's plate attached in a prominent place showing the capacity of the drum in terms of volume of mixed concrete and the speed of rotation of the mixing drum or blades.
- b. Mixers at Site of Construction. Mixing shall be done in an approved mixer capable of combining the aggregates, cement and water into a thoroughly mixed and uniform mass within the specified mixing period and discharging and distributing the mixture without segregation on the prepared grade. The mixer shall be equipped with an approved timing device which will automatically lock the discharge lever when the drum has been charged and released it at the end of the mixing period. In case of failure of the timing device, the mixer may be used for the balance of the day while it is being repaired, provided that each batch is mixed 90 seconds. The mixer shall be equipped with a suitable nonresettable batch counter which shall correctly indicate the number of the batches mixed.
- c. Truck Mixer and Truck Agitators. Truck mixers used for mixing and hauling concrete, and truck agitators used for hauling central-mixed concrete, shall conform to the requirements of AASHTO M 157.
- d. Non-Agitator Truck. Bodies of non-agitating hauling equipment for concrete shall be smooth, mortar-tight metal containers and shall be capable of discharging the concrete at a satisfactory controlled rate without segregation.

## 3 Paving and Finishing Equipment

The concrete shall be placed with an approved paver designed to spread, consolidate, screed and float finish the freshly placed concrete in one complete pass of the machine in such a manner that a minimum of hand finishing will be necessary to provide a dense and homogeneous pavement in conformance with the Plans and Specifications.

The finishing machine shall be equipped with at least two (2) oscillating type transverse screed.

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

#### 4. Concrete Saw

The Contractor shall provide sawing equipment in adequate number of units and power to complete the sawing with a water- cooled diamond edge saw blade or an abrasive wheel to the required dimensions and at the required rate. He shall provide at least one (1) stand-by saw in good working condition and with an ample supply of saw blades.

#### 5. Forms

Forms shall be of steel, of an approved section, and of depth equal to the thickness of the pavement at the edge. The base of the forms shall be of sufficient width to provide necessary stability in all directions. The flange braces must extend outward on the base to not less than  $\frac{2}{3}$  the height of the form.

All forms shall be rigidly supported on bed of thoroughly compacted material during the entire operation of placing and finishing the concrete. Forms shall be provided with adequate devices for secure setting so that when in place, they will withstand, without visible spring or settlement, the impact and vibration of the consolidation and finishing or paving equipment.

##### **4.3.3 Preparation of Grade**

After the subgrade of base has been placed and compacted to the required density, the areas which will support the paving machine and the grade on which the pavement is to be constructed shall be trimmed to the proper elevation by means of a properly designed machine extending the prepared work areas compacted at least 60 cm beyond each edge of the proposed concrete pavement. If loss of density results from the trimming operations, it shall be restored by additional compaction before concrete is placed. If any traffic is allowed to use the prepared subgrade or base, the surface shall be checked and corrected immediately ahead of the placing concrete.

The subgrade or base shall be uniformly moist when the concrete is placed.

##### **4.3.4 Setting Forms**

###### 1. Base Support

The foundation under the forms shall be hard and true to grade so that the form when set will be firmly in contact for its whole length and at the specified grade. (Any roadbed, which at the form line is found below established grade, shall be filled with approved granular materials to grade in lifts of three (3) cm or less, and thoroughly rerolled or tamped.) Imperfections or variations above grade shall be corrected by tamping or by cutting as necessary.

###### 2. Form Setting

Forms shall be set sufficiently in advance of the point where concrete is being placed. After the forms have been set to correct grade, the grade shall

be thoroughly tamped, mechanically or by hand, at both the inside and outside edges of the base of the forms. The forms shall not deviate from true line by more than one (1) cm at any point.

### 3. Grade and Alignment

The alignment and grade elevations of the forms shall be checked and corrections made by the Contractor immediately before placing the concrete. Testing as to crown and elevation, prior to placing of concrete can be made by means of holding an approved template in a vertical position and moved backward and forward on the forms.

When any form has been disturbed or any grade has become unstable, the form shall be reset and rechecked.

#### **4.3.5 Conditioning of Subgrade or Base Course**

When side forms have been securely set to grade, the subgrade or base course shall be brought to proper cross-section. High areas shall be trimmed to proper elevation. Low areas shall be filled and compacted to a condition similar to that of surrounding grade. The finished grade shall be maintained in a smooth and compacted condition until the pavement is placed.

Unless waterproof subgrade or base course cover material is specified, the subgrade or base course shall be uniformly moist when the concrete is placed. If it subsequently becomes too dry, the subgrade or base course shall be sprinkled, but the method of sprinkling shall not be such as to form mud or pools of water.

#### **4.3.6 Handling, Measuring and Batching Materials**

The batch plant site, layout, equipment and provisions for transporting material shall be such as to assure a continuous supply of material to the work.

Stockpiles shall be built up in layers of not more than one (1) meter in thickness. Each layer shall be completely in place before beginning the next which shall not be allowed to "cone" down over the next lower layer. Aggregates from different sources and of different grading shall not be stockpiled together.

All washed aggregates and aggregates produced or handled by hydraulic methods, shall be stockpiled or binned for draining at least twelve (12) hours before being batched.

When mixing is done at the side of the work aggregates shall be transported from the batching plant to the mixer in batch boxes, vehicle bodies, or other containers of adequate capacity and construction to properly carry the volume required. Partitions separating batches shall be adequate and effective to prevent spilling from one compartment to another while in transit or being dumped. When bulk cement is used, the Contractor shall use a suitable method of handling the cement from weighing hopper to transporting container or into the batch itself for transportation to the mixer, with chute, boot or other approved device, to prevent loss of cement, and to provide positive assurance of the actual presence in each batch of the entire cement content specified.

Bulk cement shall be transported to the mixer in tight compartments carrying the full amount of cement required for the batch. However, if allowed in the Special Provisions, it may be transported between the fine and coarse aggregate. When cement is placed in contact with the aggregates, batches may be rejected unless mixed within 1-1/2 hours of such contact. Cement in original shipping packages may be transported on top of the aggregates, each batch containing the number of sacks required by the job mix.

The mixer shall be charged without loss of cement. Batching shall be so conducted as to result in the weight to each material required within a tolerance of one (1) percent for the cement and two (2) percent for aggregates.

Water may be measured either by volume or by weight. The accuracy of measuring the water shall be within a range of error of not over than one (1) percent. Unless the water is to be weighed, the water-measuring equipment shall include an auxiliary tank from which the measuring tank shall be equipped with an outside tap and valve to provide checking the setting, unless other means are provided for readily and accurately determining the amount of water in the tank. The volume of the auxiliary tank shall be at least equal to that of the measuring tank.

#### **4.3.7 Mixing Concrete**

The concrete may be mixed at the site of the work in a central-mix plant, or in truck mixers. The mixer shall be of an approved type and capacity. Mixing time will be measured from the time all materials, except water, are in the drum. Ready-mixed concrete shall be mixed and delivered in accordance with requirements of AASHTO M 157, except that the minimum required revolutions at the mixing speed for transit-mixed concrete may be reduced to not less than that recommended by the mixer manufacturer. The number of revolutions recommended by the mixer manufacturer shall be indicated on the manufacturer's serial plate attached to the mixer. The Contractor shall furnish test data acceptable to the Engineer verifying that the make and model of the mixer will produce uniform concrete conforming to the provision of AASHTO M 157 at the reduced number of revolutions shown on the serial plate.

When mixed at the site or in a central mixing plant, the mixing time shall not be less than fifty (50) seconds nor more than ninety (90) seconds, unless mixer performance tests prove adequate mixing of the concrete is a shorter time period.

Four (4) seconds shall be added to the specified mixing time if timing starts at the instant the skip reaches its maximum raised positions. Mixing time ends when the discharge chute opens. Transfer time in multiple drum mixers is included in mixing time. The contents of an individual mixer drum shall be removed before a succeeding batch is emptied therein.

The mixer shall be operated at the drum speed as shown on the manufacturer's name plate attached on the mixer. Any concrete mixed less than the specified time shall be discarded and disposed off by the Contractor at his expense. The volume of concrete mixed per batch shall not exceed the mixer's nominal capacity in cubic metre, as shown on the manufacturer's standard rating plate on the mixer, except that an

overload up to ten (10) percent above the mixer's nominal capacity may be permitted provided concrete test data for strength, segregation, and uniform consistency are satisfactory, and provided no spillage of concrete takes place.

The batches shall be so charged into the drum that a portion of the mixing water shall be entered in advance of the cement and aggregates. The flow of water shall be uniform and all water shall be in the drum by the end of the first fifteen (15) seconds of the mixing period. The throat of the drum shall be kept free of such accumulations as may restrict the free flow of materials into the drum.

Mixed concrete from the central mixing plant shall be transported in truck mixers, truck agitators or non-agitating truck specified in Subsection 12.3.2, Equipment. The time elapsed from the time water is added to the mix until the concrete is deposited in place at the Site shall not exceed forty five (45) minutes when the concrete is hauled in non-agitating trucks, nor ninety (90) minutes when hauled in truck mixers or truck agitators, except that in hot weather or under other conditions contributing to quick hardening of the concrete, the maximum allowable time may be reduced by the Engineer.

In exceptional cases and when volumetric measurements are authorized for small project requiring less than 75 cu.m. of concrete per day of pouring, the weight proportions shall be converted to equivalent volumetric proportions. In such cases, suitable allowance shall be made for variations in the moisture condition of the aggregates, including the bulking effect in the fine aggregate. Batching and mixing shall be in accordance with ASTM C 685, Section 6 through 9.

Concrete mixing by chute is allowed provided that a weighing scales for determining the batch weight will be used.

Retempering concrete by adding water or by other means shall not be permitted, except that when concrete is delivered in truck mixers, additional water may be added to the batch materials and additional mixing performed to increase the slump to meet the specified requirements, if permitted by the Engineer, provided all these operations are performed within forty-five (45) minutes after the initial mixing operation and the water-cement ratio is not exceeded. Concrete that is not within the specified slump limits at the time of placement shall not be used. Admixtures for increasing the workability or for accelerating the setting of the concrete will be permitted only when specifically approved by the Engineer.

#### **4.3.8 Limitation of Mixing**

No concrete shall be mixed, placed or finished when natural light is insufficient, unless an adequate and approved artificial lighting system is operated.

During hot weather, the Engineer shall require that steps be taken to prevent the temperature of mixed concrete from exceeding a maximum temperature of 90 °F ( 32°C)

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

In order that the concrete may be properly protected against the effects of rain before the concrete is sufficiently hardened, the Contractor will be required to have available at all times materials for the protection of the edges and surface of the unhardened concrete.

#### **4.3.9 Placing Concrete**

Concrete shall be deposited in such a manner to require minimal rehandling. Unless truck mixers or non-agitating hauling equipment are equipped with means to discharge concrete without segregation of the materials, the concrete shall be unloaded into an approved spreading device and mechanically spread on the grade in such a manner as to prevent segregation. Placing shall be continuous between transverse joints without the use of intermediate bulkheads. Necessary hand spreading shall be done with shovels, not rakes. Workmen shall not be allowed to walk in the freshly mixed concrete with boots or shoes coated with earth or foreign substances.

When concrete is to be placed adjoining a previously constructed lane and mechanical equipment will be operated upon the existing lane, that previously constructed lane shall have attained the strength for fourteen (14) day concrete. If only finishing equipment is carried on the existing lane, paving in adjoining lanes may be permitted after three (3) days.

Concrete shall be thoroughly consolidated against and along the faces of all forms and along the full length and on both sides of all joint assemblies, by means of vibrators inserted in the concrete. Vibrators shall not be permitted to come in contact with a joint assembly, the grade, or a side form. In no case shall the vibrator be operated longer than fifteen (15) seconds in any one location.

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

Should any concrete material fall on or be worked into the surface of a complete slab, it shall be removed immediately.

#### **4.3.10 Test Specimens**

As work progresses, at least one (1) set consisting of three (3) concrete beam test specimens, 150 mm x 150 mm x 525 mm or 900 mm shall be taken from each 330 m<sup>2</sup> of pavement, 230 mm depth, or fraction thereof placed each day. Test specimens shall be made under the supervision of the Engineer, and the Contractor shall provide all concrete and other facilities necessary in making the test specimens and shall protect them from damage by construction operations. Cylinder samples shall not be used as substitute for determining the adequacy of the strength of concrete.

The beams shall be made, cured, and tested in accordance with AASHTO T 23 and T 97.

#### **4.3.11 Strike-off of Concrete and Placement of Reinforcement**

Following the placing of the concrete, it shall be struck off to conform to the cross-section shown on the Plans and to an elevation such that when the concrete is properly consolidated and finished, the surface of the pavement will be at the elevation shown on the Plans. When reinforced concrete pavement is placed in two (2) layers, the bottom layer shall be struck off and consolidated to such length and depth that the sheet of fabric or bar mat may be laid full length on the concrete in its final position without further manipulation. The reinforcement shall then be placed directly upon the concrete, after which the top layer of the concrete shall be placed, struck off and screeded. Any portion of the bottom layer of concrete which has been placed more than 30 minutes without being covered with the top layer shall be removed and replaced with freshly mixed concrete at the Contractor's expense. When reinforced concrete is placed in one layer, the reinforcement may be firmly positioned in advance of concrete placement or it may be placed at the depth shown on the Plans in plastic concrete, after spreading by mechanical or vibratory means.

Reinforcing steel shall be free from dirt, oil, paint, grease, mill scale and loose or thick rust which could impair bond of the steel with the concrete.

#### **4.3.12 Joints**

Joints shall be constructed of the type and dimensions, and at the locations required by the Plans or Special Provisions. All joints shall be protected from the intrusion of injurious foreign material until sealed.

##### **1. Longitudinal Joint**

Deformed steel tie bars of specified length, size, spacing and materials shall be placed perpendicular to the longitudinal joints, they shall be placed by approved mechanical equipment or rigidly secured by chair or other approved supports to prevent displacement. Tie bars shall not be painted or coated with asphalt or other materials or enclosed in tubes or sleeves. When shown on the Plans and when adjacent lanes of pavement are constructed separately, steel side forms shall be used which will form a keyway along the construction joint. Tie bars, except those made of rail steel, may be bent at right angles against the form of the first lane constructed and straightened into final position before the concrete of the adjacent lane is placed, or in lieu of bent tie bars, approved two-piece connectors may be used.

Longitudinal formed joints shall consist of a groove or cleft, extending downward from and normal to, the surface of the pavement. These joints shall be effected or formed by an approved mechanically or manually operated device to the dimensions and line indicated on the Plans and while the concrete is in a plastic state. The groove or cleft shall be filled with either a premolded strip or poured material as required.

The longitudinal joints shall be continuous, there shall be no gaps in either transverse or longitudinal joints at the intersection of the joints.

Longitudinal sawed joints shall be cut by means of approved concrete saws to the depth, width and line shown on the Plans. Suitable guide lines or devices shall be used to assure cutting the longitudinal joint on the true

line. The longitudinal joint shall be sawed before the end of the curing period or shortly thereafter and before any equipment or vehicles are allowed on the pavement. The sawed area shall be thoroughly cleaned and, if required, the joint shall immediately be filled with sealer.

Longitudinal pavement insert type joints shall be formed by placing a continuous strip of plastic materials which will not react adversely with the chemical constituent of the concrete.

## 2. Transverse Expansion Joint

The expansion joint filler shall be continuous from form to form, shaped to subgrade and to the keyway along the form. Preformed joint filler shall be furnished in lengths equal to the pavement width or equal to the width of one lane. Damaged or repaired joint filler shall not be used.

The expansion joint filler shall be held in a vertical position. An approved installing bar, or other device, shall be used if required to secure preformed expansion joint filler at the proper grade and alignment during placing and finishing of the concrete. Finished joint shall not deviate more than 6 mm from a straight line. If joint fillers are assembled in sections, there shall be no offsets between adjacent units. No plugs of concrete shall be permitted anywhere within the expansion space.

## 3. Transverse Contraction Joint/Weakened Joint

When shown on the Plans, it shall consist of planes of weakness created by forming or cutting grooves in the surface of the pavement and shall include load transfer assemblies. The depth of the weakened plane joint should at all times not be less than 50 mm, while the width should not be more than 6 mm.

- a. Transverse Strip Contraction Joint. It shall be formed by installing a parting strip to be left in place as shown on the Plans.
- b. Formed Groove. It shall be made by depressing an approved tool or device into the plastic concrete. The tool or device shall remain in place at least until the concrete has attained its initial set and shall then be removed without disturbing the adjacent concrete, unless the device is designed to remain in the joint.
- c. Sawed Contraction Joint. It shall be created by sawing grooves in the surface of the pavement of the width not more than 6 mm, depth should at all times not be less than 50 mm, and at the spacing and lines shown on the Plans, with an approved concrete saw. After each joint is sawed, it shall be thoroughly cleaned including the adjacent concrete surface.

Sawing of the joint shall commence as soon as the concrete has hardened sufficiently to permit sawing without excessive ravelling, usually 4 to 24 hours. All joints shall be sawed before uncontrolled shrinkage cracking takes place. If necessary, the sawing operations shall be carried on during the day or night, regardless of weather conditions. The sawing of any joint shall be omitted if crack occurs at or near the joint location prior to the time of sawing.

Sawing shall be discounted when a crack develops ahead of the saw. In general, all joints should be sawed in sequence. If extreme condition exist which make it impractical to prevent erratic cracking by early sawing, the contraction joint groove shall be formed prior to initial set of concrete as provided above.

#### **4.3.13 Final Strike-off (Consolidation and Finishing)**

##### **1. Sequence**

The sequence of operations shall be the strike-off and consolidation, floating and removal of laitance, straight-edging and final surface finish. Work bridges or other devices necessary to provide access to the pavement surface for the purpose of finishing straight-edging, and make corrections as hereinafter specified, shall be provided by the Contractor.

In general, the addition of water to the surface of the concrete to assist in finishing operations will not be permitted. If the application of water to the surface is permitted, it shall be applied as fog spray by means of an approved spray equipment.

##### **2. Finishing Joints**

The concrete adjacent to joints shall be compacted or firmly placed without voids or segregation against the joint material assembly, also under and around all load transfer devices, joint assembly units, and other features designed to extend into the pavement. Concrete adjacent to joints shall be mechanically vibrated as required in Subsection 12.3.9, Placing Concrete.

After the concrete has been placed and vibrated adjacent to the joints as required in Subsection 12.3.9, the finishing machine shall be brought forward, operating in a manner to avoid damage or misalignment of joints. If uninterrupted operation of the finishing machine, to over and beyond the joints causes segregation of concrete, damage to, or misalignment of the joints, the finishing machine shall be stopped when the front screed is approximately 20 cm (8 inches) from the joint. Segregated concrete shall be removed from in front of and off the joint. The front screed shall be lifted and set directly on top of the joint and the forward motion of the finishing machine resumed. When the second screed is close enough to permit the excess mortar in front of it to flow over the joint, it shall be lifted and carried over the joint. Thereafter, the finishing machine may be run over the joint without lifting the screeds, provided there is no segregated concrete immediately between the joint and the screed or on top of the joint.

##### **3 Machine Finishing**

- a. **Non-vibratory Method.** The concrete shall be distributed or spread as soon as placed. As soon as the concrete has been placed, it shall be struck off and screeded by an approved finishing machine. The machine shall go over each area of pavement as many times and at such intervals as necessary to give the proper compaction and leave a surface of uniform texture. Excessive operation over a given area shall be avoided. The tops of the forms shall be kept clean by an effective device attached to the machine and the travel of the machine on the forms shall be maintained true without wobbling or other variation tending to affect the precision finish. During the first pass of the finishing machine, a uniform ridge of concrete shall be maintained ahead of the front screed in its entire length.
- b. **Vibratory Method.** When vibration is specified, vibrators for full width vibration of concrete paving slabs, shall meet the requirements in Subsection 12.3.2,

Equipment. If uniform and satisfactory density of the concrete is not obtained by the vibratory method at joints, along forms, at structures, and throughout the pavement, the Contractor will be required to furnish equipment and method which will produce pavement conforming to the Specifications. All provisions in item (a) above not in conflict with the provisions for the vibratory method shall govern.

#### 4. Hand Finishing

Hand finishing methods may only be used under the following conditions:

- a. In the event of breakdown of the mechanical equipment, hand methods may be used to finish the concrete already deposited on the grade.
- b. In narrow widths or areas of irregular dimensions where operations of the mechanical equipment is impractical, hand methods may be used.

Concrete, as soon as placed, shall be struck off and screeded. An approved portable screed shall be used. A second screed shall be provided for striking off the bottom layer of concrete if reinforcement is used.

The screed for the surface shall be at least 60 cm (2 feet) longer than the maximum width of the slab to be struck off. It shall be of approved design, sufficiently rigid to retain its shape, and constructed either of metal or other suitable material shod with metal.

Consolidation shall be attained by the use of suitable vibrator or other approved equipment.

In operation, the screed shall be moved forward on the forms with a combined longitudinal and transverse shearing motion, moving always in the direction in which the work is progressing and so manipulated that neither end is raised from the side forms during the striking off process. If necessary, this shall be repeated until the surface is of uniform texture, true to grade and cross-section, and free from porous areas.

#### 6. Straight-edge Testing and Surface Correction

After the floating has been completed and the excess water removed, but while the concrete is still plastic, the surface of the concrete shall be tested for trueness with a 300 cm long straight-edge. For this purpose, the Contractor shall furnish and use an accurate 300-cm straight-edge swung from handles 100 cm (3 feet) longer than one-half the width of the slab. The straight-edge shall be held in contact with the surface in successive positions parallel to the road center line and the whole area gone over from one side of the slab to the other as necessary. Advances along the road shall be in successive stages of not more than one-half the length of the straightedge. Any depressions found shall be immediately filled with freshly mixed concrete, struck off, consolidated and refinished. High areas shall be cut down and refinished. Special attention shall be given to assure that the surface across joints meets the requirements for smoothness. Straight-edge testing and surface corrections shall continue until the entire surface is found to be free from observable departures from the straight-edge and the slab conforms to the required grade and cross-section.

#### 7. Final Finish

If the surface texture is broom finished, it shall applied when the water sheen has practically disappeared. The broom shall be drawn from the center to the edge of the pavement with adjacent strokes slightly overlapping. The brooming operation should be so executed that the corrugations produced in the surface shall be uniform in appearance and not more than 1.5 mm in depth. Brooming shall be completed before the concrete is in such condition that the surface will be unduly roughened by the operation. The surface thus finished shall be free from rough and porous areas, irregularities, and depressions resulting from improper handling of the broom. Brooms shall be of the quality size and construction and be operated so as to produce a surface finish meeting the approval of the Engineer. Subject to satisfactory results being obtained and approval of the Engineer, the Contractor will be permitted to substitute mechanical brooming in lieu of the manual brooming herein described.

If the surface texture is belt finished, when straight-edging is complete and water sheen has practically disappeared and just before the concrete becomes non-plastic, the surface shall be belted with 2- ply canvass belt not less than 20 cm wide and at least 100 cm longer than the pavement width. Hand belts shall have suitable handles to permit controlled, uniform manipulation. The belt shall be operated with short strokes transverse to the center line and with a rapid advances parallel to the center line.

If the surface texture is drag finished, a drag shall be used which consists of a seamless strip of damp burlap or cotton fabric, which shall produce a uniform of gritty texture after dragging it longitudinally along the full width of pavement. For pavement 5 m or more in width, the drag shall be mounted on a bridge which travels on the forms. The dimensions of the drag shall be such that a strip of burlap or fabric at least 100 cm wide is in contact with the full width of pavement surface while the drag is used. The drag shall consist of not less than 2 layers of burlap with the bottom layer approximately 15 cm wider than the layer. The drag shall be maintained in such condition that the resultant surface is of uniform appearance and reasonably free from grooves over 1.5 mm in depth. Drag shall be maintained clean and free from encrusted mortar. Drags that cannot be cleaned shall be discarded and new drags be substituted.

Regardless of the method used for final finish, the hardened surface of pavement shall have a coefficient of friction of 0.25 or more. Completed pavement that is found to have a coefficient of friction less than 0.25 shall be grounded or scored by the Contractor at his expense to provide the required coefficient of friction.

#### 8. Edging at Forms and Joints

After the final finish, but before the concrete has taken its initial set, the edges of the pavement along each side of each slab, and on each side of transverse expansion joints, formed joints, transverse construction joints, and emergency construction joints, shall be worked with an approved tool and rounded to the radius required by the Plans. A well – defined and continuous radius shall be produced and a smooth, dense mortar finish obtained. The surface of the slab shall not be unduly disturbed by tilting the tool during the use.

At all joints, any tool marks appearing on the slab adjacent to the joints shall be eliminated by brooming the surface. In doing this, the rounding of the corner of the slab shall not be disturbed. All concrete on top of the joint filler shall be completely removed.

All joints shall be tested with a straight-edge before the concrete has set and correction made if one edge of the joint is higher than the other.

#### **4.3.14 Surface Test**

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

Any area or section so removed shall be not less than 1.5 m in length and not less than the full width of the lane involved. When it is necessary to remove and replace a section of pavement, any remaining portion of the slab adjacent to the joints that is less than 1.5 m in length, shall also be removed and replaced.

#### **4.3.15 Curing**

Immediately after the finishing operations have been completed and the concrete has sufficiently set, the entire surface of the newly placed concrete shall be cured in accordance with either one of the methods described herein. Failure to provide sufficient cover material of whatever kind the Contractor may elect to use, or the lack of water to adequately take care of both curing and other requirements, shall be a cause for immediate suspension of concreting operations. The concrete shall not be left exposed for more than 1/2 hour between stages of curing or during the curing period.

#### **4.3.16 Removal of Forms**

After forms for concrete shall remain in place undisturbed for not less than twenty four (24) hours after concrete pouring. In the removal of forms, crowbars should be used in pulling out nails and pins. Care should be taken so as not to break the edges of the pavement. In case portions of the concrete are spalled, they shall be immediately repaired with fresh mortar mixed in the proportion of one part of Portland Cement and two parts fine aggregates. Major honeycomb areas will be considered as defective work and shall be removed and replaced at the expense of the Contractor. Any area or section so removed shall not be less than the distance between weakened plane joint nor less than the full width of the lane involved.

#### **4.3.17 Sealing Joints**

Joints shall be sealed with asphalt sealant soon after completion of the curing period and before the pavement is opened to traffic, including the Contractor's equipment. Just prior to sealing, each joint shall be thoroughly cleaned of all foreign materials including membrane curing compound and the joint faces shall be clean and surface dry when the seal is applied.

The sealing material shall be applied to each joint opening to conform to the details shown on the Plans or as directed by the Engineer. Material for seal applied hot shall be

stirred during heating so that localized overheating does not occur. The pouring shall be done in such a manner that the material will not be spilled on the exposed surfaces of the concrete. The use of sand or similar material as a cover for the seal will not be permitted.

Preformed elastomeric gaskets for sealing joints shall be of the cross- sectional dimensions shown on the Plans. Seals shall be installed by suitable tools, without elongation and secured in place with an approved lubricant adhesive which shall cover both sides of the concrete joints. The seals shall be installed in a compressive condition and shall at time of placement be below the level of the pavement surface by approximately 6 mm.

The seals shall be in one piece for the full width of each transverse joint.

#### **4.3.18 Protection of Pavement**

The Contractor shall protect the pavement and its appurtenances against both public traffic and traffic caused by his own employees and agents. This shall include watchmen to direct traffic and the erection of and maintenance of warning signs, lights, pavement bridges or cross-overs, etc. The Plans or Special Provisions will indicate the location and type of device or facility required to protect the work and provide adequately for traffic.

All boreholes after thickness and/or strength determinations of newly constructed asphalt and concrete pavements shall be immediately filled / restored with the prescribed concrete/asphalt mix after completion of the drilling works.

Any damage to the pavement, occurring prior to final acceptance, shall be repaired or the pavement be replaced.

#### **4.3.19 Acceptance of Concrete**

The strength level of the concrete will be considered satisfactory if the averages of all sets of three (3) consecutive strength test results equal or exceed the specified strength,  $f_c'$  and no individual strength test result is deficient by more than 15% of the specified strength,  $f_c'$ .

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 failed test results is acceptable in place. At least three (3) representative cores shall be taken from each member or area of concrete in place that is considered deficient. The location of cores shall be determined by the Engineer so that there will be at least impairment of strength of the structure. The obtaining and testing of drilled cores shall be in accordance with AASHTO T 24.

Concrete in the area represented by the cores will be considered adequate if the average strength of the cores is equal to at least 85% of, and if no single core is less than 75% of, the specified strength,  $f_c'$ .

If the strength of control specimens does not meet the requirements of this Subsection, and it is not feasible or not advisable to obtain cores from the structure due to structural

considerations, payment of the concrete will be made at an adjusted price due to strength deficiency of concrete specimens as specified hereunder:

Deficiency in Strength of Concrete Specimens, Percent (%)	Percent (%) of Contract Price Allowed
Less than 5	100
5 to less than 10	80
10 to less than 15	70
15 to less than 20	60
20 to less than 25	50
25 or more	0

#### 4.3.20 Opening to Traffic

The Engineer will decide when the pavement may be opened to traffic. The road will not be opened to traffic until test specimens molded and cured in accordance with AASHTO T 23 have attained the minimum strength requirements in Subsection 12.2.11. If such tests are not conducted prior to the specified age the pavement shall not be operated to traffic until 14 days after the concrete was placed. Before opening to traffic, the pavement shall be cleaned and joint sealing completed.

- END -

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Conforme:

**CONTRACTOR**

*drawing*



Republic of the Philippines  
**BULACAN STATE UNIVERSITY**  
**Project Management Office**  
 City of Malolos, Bulacan



### **DETAILED ESTIMATE**

Project: **CONSTRUCTION OF ROADS (1 & 3) - 25 HECTARES BuISU MAIN CAMPUS**  
 Bulacan State University - MAIN  
 Owner: **CAMPUS**  
 Location: **Malolos City, Bulacan**

ITEM NO.		QTY	UNIT	UNIT PRICE	TOTAL PRICE
I.	<b>GENERAL REQUIREMENTS</b>				
1.0	Mobilization / Demobilization		lot		
2.0	Health & Safety Requirements		lot		
3.0	Board-up / Barricade		lot		
4.0	Road Survey / Layout		lot		
5.0	Temporary Facilities		lot		
6.0	Daily Clean-Up		lot		
II.	<b>ROADWAYS</b>				
A.	<b>ROAD LOT 1: L =74.00 L.M, W = 13.0M, D= 12" (300mm thk.)</b>				
1.0	Site Clearing (including stripping of 150mm thk top soil)		sm		
2.0	Earthfilling Materials (approx. 2.81m depth)		cm		

3.0	Backfill and Compaction		cm		
4.0	Subgrade Preparation		sm		
5.0	100mm thk. Sub-Basecourse Materials		cm		
6.0	100mm thk. Basecourse Materials		cm		
7.0	300mm thk. PCCP (3000psi @ 14 Days)		cm		
8.0	16mmØ Reinforcing Bars		kgs		
9.0	Concrete Island (Planting Strip excluding plants)		l.m		
10.0	Construction Joint		lot		
11.0	Formworks		lot		
<b>B.</b>	<b>ROAD LOT 3: L = 95 L.M, W = 8.0M, D= 12" (300mm thk.)</b>				
1.0	Site Clearing (including stripping of 150mm thk top soil)		sm		
2.0	Earthfilling Materials (approx. 2.81m depth)		cm		
3.0	Backfill and Compaction		cm		
4.0	Subgrade Preparation		sm		
5.0	100mm thk. Sub-Basecourse Materials		cm		
6.0	100mm thk. Basecourse Materials		cm		
7.0	300mm thk. PCCP (3000psi @ 14 Days)		cm		
8.0	16mmØ Reinforcing Bars		kgs		
9.0	Construction Joint		lot		
10.0	Formworks		lot		
	<b>TOTAL MATERIAL COST</b>				
	<b>LABOR COST</b>				

	ADDITIONAL LABOR AND EQUIPMENT COST				
1.0	Mobilization / Demobilization		lot		
2.0	Health & Safety Requirements		lot		
3.0	Board-up / Barricade		lot		
4.0	Road Survey / Layout		lot		
5.0	Temporary Facilities		lot		
6.0	Daily Clean-Up		lot		
7.0	Site Clearing		sm		
8.0	Backfill and Compaction		cm		
9.0	Subgrade Preparation		sm		
	<b>TOTAL ADDITIONAL LABOR AND EQUIPMENT COST</b>				
	<b>DIRECT COST</b>				
	<b>INDIRECT COST (17%)</b>				
	<b>TOTAL COST (DIRECT + INDIRECT)</b>				
	VAT (12%)				
	<b>TOTAL PROJECT COST</b>				

## Bid Form

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Date: \_\_\_\_\_

IAEB<sup>1</sup> N<sup>o</sup>: \_\_\_\_\_

To: **BULACAN STATE UNIVERSITY**

**Address: Guinhawa, City of Malolos, 3000 Bulacan**

We, the undersigned, declare that:

(a) We have examined and have no reservation to the Bidding Documents, including Addenda, for the Contract ***Proposed Road Construction at the 25 Hectare BSU Lot (Infra-2015-20)***;

(b) We offer to execute the Works for this Contract in accordance with the Bid and Bid Data Sheet, General and Special Conditions of Contract accompanying this Bid;

The total price of our Bid, excluding any discounts offered in item (d) below is: [insert information];

The discounts offered and the methodology for their application are: [insert information];

(c) Our Bid shall be valid for a period of [insert number] days from the date fixed for the Bid submission deadline in accordance with the Bidding Documents, and it shall remain binding upon us and may be accepted at any time before the expiration of that period;

(d) 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;

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<sup>1</sup> If ADB, JICA and WB funded projects, use IFB.

- (e) Our firm, including any subcontractors or suppliers for any part of the Contract, have nationalities from the following eligible countries: *[insert information]*;
- (f) 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;
- (g) Our firm, its affiliates or subsidiaries, including any subcontractors or suppliers for any part of the Contract, has not been declared ineligible by the Funding Source;
- (h) We understand that this Bid, together with your written acceptance thereof included in your notification of award, shall constitute a binding contract between us, until a formal Contract is prepared and executed; and
- (i) We understand that you are not bound to accept the Lowest Evaluated Bid or any other Bid that you may receive.

Name: \_\_\_\_\_

In the capacity of: \_\_\_\_\_

Signed: \_\_\_\_\_

Duly authorized to sign the Bid for and on behalf of: \_\_\_\_\_

Date: \_\_\_\_\_

## Form of Contract Agreement

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Know All Men by These Present:

This CONTRACT made and executed this \_\_\_\_ day of \_\_\_\_\_ 2015, by and between:

**BULACAN STATE UNIVERSITY**, a state educational institution duly organized and existing under and by virtue of the laws of the Philippines, with principal office and postal address at **Guinhawa, City of Malolos, 3000 Bulacan of the Philippines** represented by its President **MARIANO C. DE JESUS, Ed.D.** (hereinafter called "the UNIVERSITY")

and -

[Name of Contractor], duly organized and existing under the laws of the Philippines, with postal address at [Address of Contractor] represented herein by its Owner & General Manager [Name of the Owner] and by virtue of the powers conferred upon him, hereinafter referred to as the CONTRACTOR.

WHEREAS, the **UNIVERSITY** is desirous that the Contractor execute [Project Title] (hereinafter called "the Works") and the **UNIVERSITY** has accepted the Bid for [Amount of the Contract] hereinafter called ("the Contract Price") by the Contractor for the execution and completion of such Works and the remedying of any defects therein;

WHEREAS, as a measure of guarantee for the faithful performance of and compliance with his obligations under this contract, the **CONTRACTOR** posted performance security in the form of Surety Bond amounting to [Performance Security] which is thirty percent (30%) of the contract price as specified in the Bidding Documents.

### **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 the Contract referred to.
2. Republic Act no. 9184 and its Implementing Rules and Regulations, as amended, as well as the applicable Government Procurement Policy Board Resolutions shall apply to this Contract.
3. **SCOPE OF WORK**
  - 3.1 CONTRACTOR agrees to render the Services enumerated and described in the Construction Specifications and in accordance with the general terms and conditions and made an integral part hereof.
  - 3.2 Plans/Drawings as approved by the UNIVERSITY necessary in the execution of work mutually agreed upon by the UNIVERSITY and CONTRACTOR.
  - 3.3 The CONTRACTOR shall undertake the construction and completion of the PROJECT in full compliance with Contract Documents.

#### **4. WARRANTY**

Section 62 (b) of R.A. 9184: The CONTRACTOR shall assume full responsibility for the contract work from the time project construction commenced up to a reasonable period as defined in the IRR taking into consideration the scale and coverage of the project from its final acceptance by the government and shall be held responsible for any damage or construction of works except those occasioned by force majeure.

The CONTRACTOR shall be fully responsible for the safety, protection, security, and convenience of his personnel, third parties, and the public at large, as well as the works, equipment, installation and the like to be affected by his construction work and shall be required to put up a warranty security in the form of cash, bank guarantee, letter of credit, Government Service Insurance System bond, or callable surety bond. The CONTRACTOR shall undertake the repair works, at his own expense, of any defect or damage to the infrastructure projects on account of the use of materials of inferior quality within ninety (90) days from the time the Head of the Procuring Entity has issued an order to undertake repair. In case of failure or refusal to comply with this mandate, the government shall undertake such repair works and shall be entitled to full reimbursement of expenses incurred therein upon demand.

#### **5. WORK CHANGES**

Variation Orders may be issued by the UNIVERSITY to cover any increase/decrease in quantities, including the introduction of new work items that are not included in the original contract or reclassification of work items that are either due to change of plans, design or alignment to suit actual field conditions resulting in disparity between the preconstruction plans used for purposes of bidding and the "as staked plans" or construction drawings prepared after a joint survey by the CONTRACTOR and the Government after award of the contract, provided that the cumulative amount of the positive or additive Variation Order does not exceed ten percent (10%) of the original contract price.

In claiming for any Variation Order, the CONTRACTOR shall, within seven (7) calendar days after such work has been commenced pursuant to Section 3.2 of the Revised IRR Annex "E" of R.A. 9184; or, within twenty eight (28) calendar days after the circumstances or reasons justifying a claim for extra cost shall have occurred, deliver a notice giving full and detailed particulars of any extra cost in order that it may be investigated at that time.

#### **6. COMPLETION OF WORK**

The CONTRACTOR binds itself to complete the undertaking herein contracted within One Hundred Fifty (150) calendar days commencing on the day the undertaking started, which should not be later than ten (10) calendar days from receipt of the Notice to Proceed;

The CONTRACTOR shall pay the UNIVERSITY for liquidated damages (LD), and not by way of penalty, an amount equal to one-tenth (1/10) of one percent (1%) of the cost of the unperformed portion of the works for every day of delay. The UNIVERSITY shall deduct the liquidated damages from payments or any money due or which may due the CONTRACTOR under this Contract and/or

collect such liquidated damages from the retention money or other securities posted by the CONTRACTOR whichever is convenient to the UNIVERSITY. Once the cumulative amount of liquidated damages reaches ten percent (10%) of the amount of this contract, the UNIVERSITY shall rescind this contract, without prejudice to other courses of action and remedies open to the UNIVERSITY.

## **7. PENAL CLAUSE**

In addition to the Performance Security posted by the winning bidder to guarantee the faithful performance of its obligations under the contract in accordance with the Bidding Documents, the CONTRACTOR shall pay a penalty of 0.5% of the contract price for each day of delay of the project and 1<sup>%</sup> of the same for every breach.

## **8. PROJECT COST AND TERMS OF PAYMENT**

In consideration of the Contract Price mentioned herein to be paid by the UNIVERSITY to the CONTRACTOR, the CONTRACTOR hereby covenants, with the UNIVERSITY, to execute and complete such works and to remedy defect therein in conformity in all respect with the provisions of the Contract;

The Contract Price shall be paid to the CONTRACTOR through the Government disbursement procedure subject to the payment, retention money, and warranty provisions in the General Conditions of Contract, the Special Conditions of Contract, and the IRR of R.A. 9184;

## **9. The following Contract Documents are incorporated hereto and made integral part of this Agreement:**

9.1 The said Bid which is the Form of Bid Accomplished and submitted by the Contractor, including:

- a. Bid Security
- b. Bid Prices in the Bill of Quantities
- c. Detailed Estimates
- d. Valid Philippine Contractor's Accreditation Board (PCAB) License and Registration for the type and cost of the contract for this Project
- e. Organizational Chart
- f. List of Contractor's Personnel
- g. List of Contractor's Equipment
- h. Construction Schedule and S-Curve
- i. Construction Safety and Health Program for this Project
- j. Manpower Schedule
- k. Construction Methods
- l. PERT/CPM
- m. Site Inspection Certificate
- n. Omnibus Sworn Statement

9.2 Invitation to Apply for Eligibility and to Bid;

- 9.3 Bid Data Sheet;
- 9.4 General and Special Conditions of the Contract;
- 9.5 Supplemental Bid Bulletin
- 9.6 Eligibility requirements, documents and/or statements;
- 9.7 Performance Security and Warranty;
- 9.8 Approved Resolution to Award;
- 9.9 Notice of Award of Contract and winning bidder's "Conforme" thereto; and
- 9.10 Other contract documents that may be required by the existing laws and/or the Entity.

#### **10. RESOLUTION OF CONFLICTS**

10.1 In the event of any conflict arising from the [PROJECT TITLE] between the UNIVERSITY and the CONTRACTOR, the parties shall endeavor to settle their conflicts amicably, failing which, the same shall be submitted to arbitration or to the jurisdiction of the courts of Malolos City, to the exclusion of all others.

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

#### **SIGNED, SEALED, AND DELIVERED BY:**

**BULACAN STATE UNIVERSITY**

***[NAME OF THE CONTRACTOR]***

\_\_\_\_\_  
**MARIANO C. DE JESUS, Ed.D.**

*President*

\_\_\_\_\_  
*Owner & General Manager*

#### **SIGNED IN THE PRESENCE OF:**

\_\_\_\_\_  
**DANILO S. HILARIO, Ed.D.**

*VP-PRE*

\_\_\_\_\_  
*Contractor's Witness*

#### **Funds Available:**

**FELICITAS G. MIRABUENOS**

*Accountant IV, BuISU Accounting Office*

## ACKNOWLEDGMENT

REPUBLIC OF THE PHILIPPINES

\_\_\_\_\_ )S.S.

\_\_\_\_\_ )

BEFORE ME, a Notary Public for and in the Province/City of \_\_\_\_\_ this \_\_\_\_\_, 2015, personally came and appeared:

Name	Gov't issued identification	Issued At/Date
DR. MARIANO C. DE JESUS	XX55460101 (Passport)	DFA Manila/Feb. 17, 2010- Feb. 16, 2015

Known to me and known to be the same persons who executed the foregoing instrument and acknowledged to me that same is the free and voluntary act and deed of the entities which they respectively represent.

The foregoing instrument is an AGREEMENT consisting of four (4) pages (exclusive of attachments), including this page on which this acknowledgment is written and signed by the parties hereto and their instrument witnesses on the left hand margin of each and every page hereof.

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

Doc. No. \_\_\_\_\_

Page No. \_\_\_\_\_

Book No. \_\_\_\_\_  
Series of 2015

## Omnibus Sworn Statement

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

### AFFIDAVIT

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

1. **Select one, delete the other:**

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

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

2. **Select one, delete the other:**

*If a sole proprietorship:* As the owner and sole proprietor of *[Name of Bidder]*, I have full power and authority to do, execute and perform any and all acts necessary to represent it in the bidding for *[Name of the Project]* of the *[Name of the Procuring Entity]*;

*If a partnership, corporation, cooperative, or joint venture:* I am granted full power and authority to do, execute and perform any and all acts necessary and/or to represent the *[Name of Bidder]* in the bidding as shown in the attached *[state title of attached document showing proof of authorization (e.g., duly notarized Secretary's Certificate issued by the corporation or the members of the joint venture)]*;

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;

4. Each of the documents submitted in satisfaction of the bidding requirements is an authentic copy of the original, complete, and all statements and information provided therein are true and correct;

5. *[Name of Bidder]* is authorizing the Head of the Procuring Entity or its duly authorized representative(s) to verify all the documents submitted;

6. **Select one, delete the rest:**

*If a sole proprietorship:* I am not related to the Head of the Procuring Entity, members of the Bids and Awards Committee (BAC), the Technical Working Group, and the

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

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

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

7. *[Name of Bidder]* complies with existing labor laws and standards; and
8. *[Name of Bidder]* is aware of and has undertaken the following responsibilities as a Bidder:
  - a) Carefully examine all of the Bidding Documents;
  - b) Acknowledge all conditions, local or otherwise, affecting the implementation of the Contract;
  - c) Made an estimate of the facilities available and needed for the contract to be bid, if any; and
  - d) Inquire or secure Supplemental/Bid Bulletin(s) issued for the *[Name of the Project]*.
9. *[Name of Bidder]* did not give or pay directly, 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.

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

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Bidder's Representative/Authorized Signatory

*[JURAT]*

\* This form will not apply for WB funded projects.