Government of the Republic of the Philippines

UNIVERSITY OF SOUTHEASTERN THE PHILIPPINES

Obrero Campus, Davao City

PHILIPPINE BIDDING DOCUMENTS

PROCUREMENT OF INFRASTRUCTURE PROJECT

For the

COMPLETION OF SCHOOL AND APPLIED ECONOMICS (SAec) BUILDING

Prebid Conference	**-**	**December 03, 2020 at 1:30 pm**
Submission of Bid	**-**	**December 16, 2020 at 2:00 pm**
Opening of Bid	**-**	**December 16, 2020 at 2:15 pm**

Sixth Edition
July 2020

Preface

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

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

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

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

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

a. All the documents listed in the Table of Contents are normally required for the procurement of Infrastructure Projects. However, they should be adapted as necessary to the circumstances of the particular Project.

b. Specific details, such as the "*name of the Procuring Entity*" and "*address for bid submission*," should be furnished in the Instructions to Bidders, Bid Data Sheet, and Special Conditions of Contract. The final documents should contain neither blank spaces nor options.

c. This Preface and the footnotes or notes in italics included in the Invitation to Bid, BDS, General Conditions of Contract, Special Conditions of Contract, Specifications, Drawings, and Bill of Quantities are not part of the text of the final document, although they contain instructions that the Procuring Entity should strictly follow.

d. The cover should be modified as required to identify the Bidding Documents as to the names of the Project, Contract, and Procuring Entity, in addition to date of issue.

e. Modifications for specific Procurement Project details should be provided in the Special Conditions of Contract as amendments to the Conditions of Contract. For easy completion, whenever reference has to be made to specific clauses in the Bid Data Sheet or Special

Conditions of Contract, these terms shall be printed in bold typeface on Sections I (Instructions to Bidders) and III (General Conditions of Contract), respectively.

f. For guidelines on the use of Bidding Forms and the procurement of Foreign-Assisted Projects, these will be covered by a separate issuance of the Government Procurement Policy Board.

TABLE OF CONTENTS

Glossary of Terms, Abbreviations, and Acronyms

ABC – Approved Budget for the Contract.

ARCC – Allowable Range of Contract Cost.

BAC – Bids and Awards Committee.

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

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

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

BIR – Bureau of Internal Revenue.

BSP – Bangko Sentral ng Pilipinas.

CDA – Cooperative Development Authority.

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

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

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

CPI – Consumer Price Index.

DOLE – Department of Labor and Employment.

DTI – Department of Trade and Industry.

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

GFI – Government Financial Institution.

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

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

GOP – Government of the Philippines.

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

LGUs – Local Government Units.

NFCC – Net Financial Contracting Capacity.

NGA – National Government Agency.

PCAB – Philippine Contractors Accreditation Board.

PhilGEPS - Philippine Government Electronic Procurement System.

Procurement Project – refers to a specific or identified procurement covering goods, infrastructure project or consulting services. A Procurement Project shall be described, detailed, and scheduled in the Project

Procurement Management Plan prepared by the agency which shall be consolidated in the procuring entity's Annual Procurement Plan. (GPPB Circular No. 06-2019 dated 17 July 2019)

PSA – Philippine Statistics Authority.

SEC – Securities and Exchange Commission.

SLCC – Single Largest Completed Contract.

UN – United Nations.

BIDDING DOCUMENTS

Section I. Invitation to Bid

Notes on the Invitation to Bid

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

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

The date of availability of the Bidding Documents, which shall be from the time the IB is first advertised/posted until the deadline for the submission and receipt of bids;

The place where the Bidding Documents may be acquired or the website where it may be downloaded;

The deadline for the submission and receipt of bids; and

Any important bid evaluation criteria.

The IB should be incorporated into the Bidding Documents. The information contained in

the IB must conform to the Bidding Documents and in particular to the relevant information in the Bid Data Sheet.

Republic of the Philippines
UNIVERSITY OF SOUTHEASTERN PHILIPPINES
Bids and Awards Committee
Obrero Campus, Davao City
Telephone No. (+63) (82) 227-8192 local 309
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INVITATION TO BID

1. The **University of Southeastern Philippines (USeP), Obrero Campus, Davao** City through **Fund 101** intends to apply the sum indicated below being the Approved Budget for the Contract (ABC) to payments under the contract as shown below. Bids received in excess of the ABC shall be automatically rejected at bid opening.

2. The University of Southeastern Philippines (USeP) now invites bids prospective bidders with at least a Size Range of Small B with License Category C & D and a valid PCAB License applicable to the contract. Bidders should have an experience of having completed a Single Largest Completed Contract (SLCC) that is similar to this Project, equivalent to at least fifty percent (50%) of the ABC adjusted, if necessary, by the Bidder to current prices using the Philippine Statistics Authority (PSA) consumer price index. However, 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 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.

Item	Description	Delivery	Approved Budget for the Contract (ABC)	Cost of Bid Documents
1	Completion of School and Applied Economics ITB No. 2020-12/Infra)	300 CD	PhP 28,985,507.25	PhP 25,000.00

Technical Specifications:

Item Nos	Unit	Item Description	Qty.	Total ABC

1	LOT	**COMPLETION OF SCHOOL OF APPLIED ECONOMICS**	1	**PhP 28,985,507.25**
		I. **GENERAL REQUIREMENTS**		
		1.1 **MOBILIZATION & DEMOBILIZATION**		
		1.2 **PROCESSING OF PERMITS**		
		II. **CONSTRUCTION SAFETY**		
		III. **SITE WORKS**		
		3.1 **SITE PREPARATION**		
		3.2 **SCAFFOLDING (rental) AND FORMWORKS**		
		3.3 **EXCAVATION**		
		IV. **CONCRETE & MASONRY WORKS**		
		4.1 **CONCRETING**		
		4.2 **REINFORCEMENT BARS**		
		4.3 **MASONRY**		
		V. **CARPENTRY WORKS**		
		5.1 **INTERIOR WALL PARTITIONS (DEAN'S OFFICE)**		
		VI. **FINISHING WORKS**		
		6.1 **PUMP ROOM PAINT FINISH**		
		6.2 **CONSUMABLES (Sand paper and etc.)**		
		VII. **WINDOWS**		
		VIII. **ROOFING AND STEEL WORKS**		
		8.1 **ROOF FRAMING STEEL WORKS**		
		8.2 **ROOFING AND BENDED SHEETS (Main Roof)**		
		8.3 **STEEL WORKS**		
		8.4 **CONSUMABLES (Sand Paper, Tyrolet steel cutter, accessories etc.)**		
		IX. **ELECTRICAL WORKS**		
		9.1 **ELECTRICAL FIXTURES**		
		9.2 **PANEL BOARDS & OVERCURRENT PROTECTIONS**		
		9.3 **PIPINGS AND WIRINGS SERVICE ENTRANCE**		
		X. **ELECTRONICS WORKS**		
		10.1. **DATA AND VOICE SYSTEM**		
		10.2 **FIRE ALARM SYSTEM**		
		10.3 **CCTV SYSTEM**		
		XI. **MECHANICAL WORKS**		
		11.1 **FIRE PROTECTION SYSTEM**		

		11.2	**VALVES, DEVICES AND ACCESSORIES**			
		11.3	**FIRE PROTECTION SYSTEM PUMP ROOM FACILITIES**			
		XII.	**PLUMBING WORKS**			
		12.1	**SANITARY (pipes & fittings S-1000)**			
		12.2	**WATERLINE (ppr pipes & fittings pn 20)**			
		12.3	**FIXTURES**			
		12.4	**STORM DRAIN**			
		12.5	**WATER TANKS**			
		12.6	**SEPTIC VAULTS**			
		XIII.	**THERMAL AND MOISTURE CONTROL**			
		13.1	WATERPROOFING			
Total ABC					**PhP 28,985,507.25**	

3. Bidding will be conducted through open competitive bidding procedures using a non-discretionary "pass/fail" criterion as specified in the 2016 Revised Implementing Rules and Regulations (IRR) of Republic Act (RA) 9184, otherwise known as the "Government Procurement Reform Act".

   Bidding is restricted to Filipino citizens/sole proprietorships, partnerships, or organizations with at least sixty percent (60%) interest or outstanding capital stock belonging to citizens of the Philippines, and to citizens or organizations of a country the laws or regulations of which grant similar rights or privileges to Filipino citizens, pursuant to RA 5183.

4. Interested bidders may obtain further information from USeP-BAC Secretariat and inspect the Bidding Documents at the address given below from 8:30 A.M. to 4:30 P.M. (Monday to Friday) except holidays.

5. A complete set of Bidding Documents may be acquired by interested Bidders on **24 November 2020 to 03 December 2020** from the address below and upon payment of the applicable fee for the Bidding Documents, pursuant to the latest Guidelines issued by the GPPB, in the amount stated in the table above for the package.

   It may also be downloaded free of charge from the website of the Philippine Government Electronic Procurement System (PhilGEPS) and the website of the Procuring Entity at **www.usep.edu.ph**, provided that Bidders shall pay the applicable fee for the Bidding Documents not later than the submission of their bids.

   Bidders shall pay the applicable fee for the Bidding Documents not later than the submission of their bids in any of the following payments options:

   - Over-the-counter payment at USeP-Cashier's Office, Obrero Campus, Davao City;
   - Over the-counter deposit at Development Bank of the Philippines (DBP) Account No.-0915-010315-030 CM Recto; or
   - Online fund transfer at Development Bank of the Philippines (DBP) Account No.-0915-010315-030 CM Recto Branch.

   Prior to payment, bidders are advised to coordinate first with the BAC Secretariat Head, Ms. Olivia D. Estremos, at (082) 227-8192 local 309 or through mobile phone at 09365127964 (Globe) for the issuance of the "Payment Order" and instructions.

6. The **USeP BAC** will hold a **Pre-Bid Conference on 03 December 2020 (1:30 P.M.)** at the **USeP-Hostel, Obrero Campus, Davao City,** which shall be open to prospective bidders but limited to one (1) physically present representative per bidder only. The Pre- bid Conference is likewise accessible online through the Google link: https://meet.google.com/jxf-xhpb-joe?authuser=0**.** Bids must be duly received by the BAC Secretariat at the address below on or before **16 December 2020 (2:15 P.M.).** All Bids must be accompanied by a bid security in any of the acceptable forms and in the amount stated in **ITB** Clause18.

   Bid opening shall be on **16 December 2020 (2:30 P.M.)** at the **USeP-Hostel, Obrero Campus, Davao City,** which shall be accessible online through the following link: https://meet.google.com/nsh-izzr-zyp?authuser=0**.** Bids will be opened in the presence of the bidders' representative who choose to attend at the address below. **Only one representative of the Bidder shall be allowed to physically attend in the opening of bids.** Late bids shall not be accepted.

   EMILIA P. PACOY
   Chairperson, Bids and Awards Committee-Infrastructure
   University of Southeastern Philippines
   Obrero Campus, Davao City

   Telephone No. (+63) (82) 227-8192 LOCAL 309,
   Website:http://www.usep.edu.ph
   E-mail Address: usepbacgoods@gmail.com

7. The **USeP** reserves the right to reject any and all bids, declare a failure of bidding, or not award the contract at any time prior to contract award in accordance with Section 41 of RA 9184 and its IRR, without thereby incurring any liability to the affected bidder or bidders.

8. For further information, interested bidders may inspect the Bidding Documents or inquire from the BAC Secretariat Head, Miss Olivia D. Estremos, at the address and contact numbers stated above from 8:30 AM – 4:30 PM, Monday to Friday.

Sgd.
EMILIA P. PACOY
Chairperson, Bids & Awards Committee (BAC)
Infrastructure

Section II. Instructions to Bidders

Notes on the Instructions to Bidders

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

9.

1. Scope of Bid

The Procuring Entity, **University of Southeastern Philippines**, **Obrero Campus, Davao City** invites Bids for the **Completion of School and Applied Economics (SAeC) Building**, with Project Identification Number **2020-12**.

[Note: The Project Identification Number is assigned by the Procuring Entity based on its own coding scheme and is not the same as the PhilGEPS reference number, which is generated after the posting of the bid opportunity on the PhilGEPS website.]

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

2. Funding Information

2.1. The GOP through the source of funding as indicated below for **2020** in the amount of **Php.28,985,507.25**

2.2. The source of funding is:

NGA, the National Expenditure Program.

3. Bidding Requirements

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

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

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

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

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

5. Eligible Bidders

Only Bids of Bidders found to be legally, technically, and financially capable will be evaluated.

The Bidder must have an experience of having completed a Single Largest Completed Contract (SLCC) that is similar to this Project, equivalent to at least fifty percent (50%) of the ABC adjusted, if necessary, by the Bidder to current prices using the PSA's CPI, except under conditions provided for in Section 23.4.2.4 of the 2016 revised IRR of RA No. 9184.

A contract is considered to be "similar" to the contract to be bid if it has the major categories of work

stated in the **BDS**.

For Foreign-funded Procurement, the Procuring Entity and the foreign government/foreign or international financing institution may agree on another track record requirement, as specified in the Bidding Document prepared for this purpose.

The Bidders shall comply with the eligibility criteria under Section 23.4.2 of the 2016 IRR of RA No. 9184.

6. Origin of Associated Goods

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

7. Subcontracts

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

The Procuring Entity has prescribed that:

Subcontracting is allowed but still the main contractor shall shoulder the overall responsibility. The portions of Project and the maximum percentage allowed to be subcontracted are indicated in the **BDS,** which shall not exceed fifty percent (50%) of the contracted Works.

7.1. The Bidder must submit together with its Bid the documentary requirements of the subcontractor(s) complying with the eligibility criterial stated in **ITB** Clause 5 in accordance with Section 23.4 of the 2016 revised IRR of RA No. 9184 pursuant to Section 23.1 thereof.

7.2. The Supplier may identify its subcontractor during the contract implementation stage. Subcontractors identified during the bidding may be changed during the implementation of this Contract. Subcontractors must submit the documentary requirements under Section 23.1 of the 2016 revised IRR of RA No. 9184 and comply with the eligibility criteria specified in **ITB** Clause 5 to the implementing or end-user unit.

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

8. Pre-Bid Conference

The Procuring Entity will hold a **Pre-Bid Conference** for this Project on the specified date and time and either at its physical address **03 December 2020 (1:30 P.M.)** at the **USeP-Hostel, Obrero Campus, Davao City,** which shall be open to prospective bidders but limited to one (1) physically present representative per bidder only. The Pre- bid Conference is likewise accessible online through the Google link: https://meet.google.com/jxf-xhpb-joe?authuser=0. and/or through videoconferencing/webcasting} as indicated in paragraph 6 of the **IB.**

9. Clarification and Amendment of Bidding Documents

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

10. Documents Comprising the Bid: Eligibility and Technical Components

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

10.2. If the eligibility requirements or statements, the bids, and all other documents for submission to the BAC are in foreign language other than English, it must be accompanied by a translation in English, which shall be authenticated by the appropriate Philippine foreign service establishment, post, or the equivalent office having jurisdiction over the foreign bidder's affairs in the Philippines. For Contracting Parties to the Apostille Convention, only the translated documents shall be authenticated through an apostille pursuant to GPPB Resolution No. 13-2019 dated 23 May 2019. The English translation shall govern, for purposes of interpretation of the bid.

10.3. A valid PCAB License is required, and in case of joint ventures, a valid special PCAB License, and registration for the type and cost of the contract for this Project. Any additional type of Contractor license or permit shall be indicated in the **BDS**.

10.4. A List of Contractor's key personnel (e.g., Project Manager, Project Engineers, Materials Engineers, and Foremen) assigned to the contract to be bid, with their complete qualification and experience data shall be provided. These key personnel must meet the required minimum years of experience set in the **BDS**.

10.5. A List of Contractor's major equipment units, which are owned, leased, and/or under purchase agreements, supported by proof of ownership, certification of availability of equipment from the equipment lessor/vendor for the duration of the project, as the case may be, must meet the minimum requirements for the contract set in the **BDS**.

11. Documents Comprising the Bid: Financial Component

11.1. The second bid envelope shall contain the financial documents for the Bid as specified in **Section IX. Checklist of Technical and Financial Documents**.

11.2. Any bid exceeding the ABC indicated in paragraph 1 of the **IB** shall not be accepted.

11.3. For Foreign-funded procurement, a ceiling may be applied to bid prices provided the conditions are met under Section 31.2 of the 2016 revised IRR of RA No. 9184.

12. Alternative Bids

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

13. Bid Prices

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

14. Bid and Payment Currencies

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

14.2. Payment of the contract price shall be made in Philippine Pesos.

15. Bid Security

15.1. The Bidder shall submit a Bid Securing Declaration or any form of Bid Security in the amount indicated in the **BDS**, which shall be not less than the percentage of the ABC in accordance with the schedule in the **BDS**.

15.2. The Bid and bid security shall be valid until **120 calendar days.** Any bid not accompanied by an acceptable bid security shall be rejected by the Procuring Entity as non-responsive.

16. Sealing and Marking of Bids

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

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

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

17. Deadline for Submission of Bids

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

18. Opening and Preliminary Examination of Bids

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

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

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

19. Detailed Evaluation and Comparison of Bids

19.1. The Procuring Entity's BAC shall immediately conduct a detailed evaluation of all Bids rated "*passed*" using non-discretionary pass/fail criteria. The BAC shall consider the conditions in the evaluation of Bids under Section 32.2 of 2016 revised IRR of RA No. 9184.

19.2. If the Project allows partial bids, all Bids and combinations of Bids as indicated in the **BDS** shall be received by the same deadline and opened and evaluated simultaneously so as to determine the Bid or combination of Bids offering the lowest calculated cost to the Procuring Entity. Bid Security as required by **ITB** Clause 16 shall be submitted for each contract (lot) separately.

19.3. In all cases, the NFCC computation pursuant to Section 23.4.2.6 of the 2016 revised IRR of RA No. 9184 must be sufficient for the total of the ABCs for all the lots participated in by the prospective Bidder.

20. Post Qualification

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

21. Signing of the Contract

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

Section III. Bid Data Sheet

Notes on the Bid Data Sheet (BDS)

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

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

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

a. Information that specifies and complements provisions of the ITB must be incorporated.

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

Bid Data Sheet

ITB Clause	
5.2	For this purpose, contracts similar to the Project refer to contracts which have the same major categories of work, which shall be: **CONCRETE & MASONRY WORKS, CARPENTRY WORKS, FINISHING WORKS, PROVISION & INSTALLATION OF WINDOWS, STEEL WORKS, ELECTRICAL WORKS, ELECTRONICS WORKS, MECHANICAL WORKS, PLUMBING WORKS & THERMAL AND MOISTURE CONTROL.**
7.1	Some works can be subcontracted, such as mechanical works, electronic works, window glassworks, etc. but the maximum percentage allowed to be subcontracted shall not be more than 50%.
10.3	*PCAB license is required.*
10.4	The minimum work experience requirements for key personnel are the following: **Key Personnel** — **General Experience** — **Relevant Experience** **Resident Engineer** — Licensed Civil Engineer — 3 years **Construction Foreman** — Vertical construction — 5 years **Safety Officer** — Certification (OSH) — 1 year **Materials Engineer** — Certification (DPWH) — 3 years **Welders** — NC II — 2 years **Electrician** — NC II — 2 years **Plumber** — NC II — 2 years **Carpenter** — - — 1 year **Finishing Specialist** — - — 1 year
10.5	The minimum major equipment requirements are the following: **Equipment** — **Capacity** — **Number of Units** **Welding Machine** — Heavy duty — 1 **Acetylene Oxygen** — Heavy duty — 1 **Power Tools** — Heavy duty — 1 **Electric Drills** — Heavy duty — 1 **Paint Sprayer** — Heavy duty — 1 **Concrete Mixer** — Heavy duty — 1

	Concrete Pump	Heavy duty	1
	Dump Truck	Heavy duty	1
	Table Saw	Heavy duty	1
	Hydraulic Excavator	Heavy duty	1
	Water Pump	Heavy duty	1
12	No Value Engineering is required.		
15.1	The bid security shall be in the form of a Bid Securing Declaration or any of the following forms and amounts: 1. The amount of not less than **579,710.14** [2% of ABC], if bid security is in cash, cashier's/manager's check, bank draft/guarantee or irrevocable letter of credit; 2. The amount of not less than **1,449,275.36** [5% of ABC] if bid security is in Surety Bond.		
19.2	No partial bids are allowed.		
20	*Building Permit should secured at the start of the project.*		
21	Additional contract documents relevant to the Project: • **Duly Signed Availability of Equipment** • **Duly Signed Construction Schedule and S-Curve Chart/Pert-CPM** • **Duly signed Manpower Schedule** • **Duly Signed Construction Methods** • **Duly Signed Equipment Utilization Schedule** • **Duly Signed Construction Safety Certification** • **Duly Signed Certificate of Site Inspection from PDD representative** • **Duly Signed Certification of Compliance with Labor Laws**		

Section IV. General Conditions of Contract

Notes on the General Conditions of Contract

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

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

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

1. Scope of Contract

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

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

2. Sectional Completion of Works

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

3. Possession of Site

3.1. The Procuring Entity shall give possession of all or parts of the Site to the Contractor based on the schedule of delivery indicated in the SCC, which corresponds to the execution of the Works. If the Contractor suffers delay or incurs cost from failure on the part of the Procuring Entity to give possession in accordance with the terms of this clause, the Procuring Entity's Representative shall give the Contractor a Contract Time Extension and certify such sum as fair to cover the cost incurred, which sum shall be paid by Procuring Entity.

3.2. If possession of a portion is not given by the above date, the Procuring Entity will be deemed to have delayed the start of the relevant activities. The resulting adjustments in contract time to address such delay may be addressed through contract extension provided under Annex "E" of the 2016 revised IRR of RA No. 9184.

4. The Contractor's Obligations

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

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

5. Performance Security

5.1. Within ten (10) calendar days from receipt of the Notice of Award from the Procuring Entity but in no case later than the signing of the contract by both parties, the successful Bidder shall furnish the performance security in any of the forms prescribed in Section 39 of the 2016 revised IRR.

5.2. The Contractor, by entering into the Contract with the Procuring Entity, acknowledges the right of the Procuring Entity to institute action pursuant to RA No. 3688 against any subcontractor be they an individual, firm, partnership, corporation, or association supplying the Contractor with labor, materials and/or equipment for the performance of this Contract.

6. Site Investigation Reports

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

7. Warranty

7.1. In case the Contractor fails to undertake the repair works under Section 62.2.2 of the 2016 revised IRR, the Procuring Entity shall forfeit its performance security, subject its property(ies) to attachment or garnishment proceedings, and perpetually disqualify it from participating in any public bidding. All payables of the GOP in his favor shall be offset to recover the costs.

7.2. The warranty against Structural Defects/Failures, except that occasioned-on force majeure, shall cover the period from the date of issuance of the Certificate of Final Acceptance by the Procuring Entity. Specific duration of the warranty is found in the **SCC**.

8. Liability of the Contractor

Subject to additional provisions, if any, set forth in the **SCC**, the Contractor's liability under this Contract shall be as provided by the laws of the Republic of the Philippines.
If the Contractor is a joint venture, all partners to the joint venture shall be jointly and severally liable to the Procuring Entity.

9. Termination for Other Causes

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

10. Dayworks

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

11. Program of Work

11.1. The Contractor shall submit to the Procuring Entity's Representative for approval the said Program of Work showing the general methods, arrangements, order, and timing for all the activities in the Works. The submissions of the Program of Work are indicated in the **SCC.**

11.2. The Contractor shall submit to the Procuring Entity's Representative for approval an updated Program of Work at intervals no longer than the period stated in the **SCC.** If the Contractor does not submit an updated Program of Work within this period, the Procuring Entity's Representative may withhold the amount stated in the **SCC** from the next payment certificate and continue to withhold this amount until the next payment after the date on which the overdue Program of Work has been submitted.

12. Instructions, Inspections and Audits

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

13. Advance Payment

The Procuring Entity shall, upon a written request of the Contractor which shall be submitted as a Contract

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

14. Progress Payments

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

15. Operating and Maintenance Manuals

15.1. If required, the Contractor will provide "as built" Drawings and/or operating and maintenance manuals as specified in the **SCC.**

15.2. If the Contractor does not provide the Drawings and/or manuals by the dates stated above, or they do not receive the Procuring Entity's Representative's approval, the Procuring Entity's Representative may withhold the amount stated in the **SCC** from payments due to the Contractor.

Section V. Special Conditions of Contract

Notes on the Special Conditions of Contract

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

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

a. Information that complements provisions of the GCC must be incorporated.

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

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

Special Conditions of Contract

GCC Clause	
Error! Reference source not found.	Only one completion date for all sections of the project.
4	The site is already available and delivery of the possession of the site in full to the contractor can be done anytime.
6	The site investigation reports are: 1. **Certification of Site Inspection**
7.2	**Fifteen (15) years**
10	No dayworks are applicable to the contract.
11.1	The Contractor shall submit the Program of Work to the Procuring Entity's Representative within **fifteen (15) days** of delivery of the Notice of Award
11.2	The amount to be withheld for late submission of an updated Program of Work is [*insert amount*].
13	The amount of the advance payment is shall not exceed 15% of the total contract price and schedule of payment.
14	Materials and equipment delivered on the site but not completely put in place shall not be included for payment.
15.1	The date by which operating and maintenance manuals are required is upon final inspection. The date by which "as built" drawings are required is upon submission of final billing.
15.2	The final billing will not be processed for failing to produce "as built" drawings and/or operating and maintenance manuals.

Section VI. Specifications

Notes on Specifications

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

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

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

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

Sample Clause: Equivalency of Standards and Codes

Wherever reference is made in the Contract to specific standards and codes to be met by the goods and materials to be furnished, and work performed or tested, the provisions of the latest current edition or revision of the relevant standards and codes in effect shall apply, unless otherwise expressly stated in the Contract. Where such standards and codes are national, or relate to a particular country or region, other authoritative standards that ensure a substantially equal or higher quality than the standards and codes specified will be accepted subject to the Procuring Entity's Representative's prior review and written consent. Differences between the standards specified and the proposed alternative standards shall be fully described in writing by the Contractor and submitted to the Procuring Entity's Representative at least twenty-eight (28) days prior to the date when the Contractor desires the Procuring Entity's Representative's consent. In the event the Procuring Entity's Representative determines that such proposed deviations do not ensure substantially equal or higher quality, the Contractor shall comply with the standards specified in the documents.

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

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GENERAL CONDITIONS

SEC. 00000 <u>DEFINITIONS.</u>

a. The term "Owner" as used in these Specifications refers to the management of the **University of Southeastern Philippines.**

b. The term "Construction Architect/Engineer" shall mean the person executing the contract on behalf of the Owner for the construction of the project and said Construction Architect's/Engineer's duly authorized assistants or representatives.

c. The term "Contractor" means the entity that will provide all labor, materials, equipment, and who shall perform all the work necessary for the completion of the project in accordance with the plans and specifications.

d. The term "University Architect" refers to the designer and planner employed by the Owner.

e. The term "Completion of Contract" shall mean full performance by the Contractor of his obligations under the contract, and all amendments and revisions thereof except his obligation concerning (1) release of liens and certificate of Contractor, (2) other final documents. The term "completion" or "completion of the project shall mean the contract and all amendments and revisions thereof. The Certificate of Completion, signed by the Construction Architect/Engineer and approved in writing by the Owner shall be the sole and conclusive evidence as to the date completion.

f. The term "default" used herein shall include any such failure by the Contractor to make progress in the prosecution of work so as to endanger the completion of the project within the calendar days allotted.

g. Whenever in the specifications or upon the drawings the words "directed", "required", "ordered", "designated", "prescribed", or words of like import are used, it shall be understood that the direction, requirement, designation, or prescription of the Construction Architect/Engineer is intended. Similarly, the words "approved", "acceptable to", or "satisfactory to" refers to the Architect/Designer unless otherwise expressly stated.

h. Where "as shown", "as indicated", "as detailed", or words of similar import are used, it shall be understood that the reference is made to the drawings accompanying these specifications, unless stated otherwise. The word "provided" as used herein shall be understood to mean "provided complete in place," that is, furnished and installed.

SEC. 00001 <u>DIVISION OF THE SPECIFICATIONS.</u>

a. These specifications are divided, for convenience, into sections as set forth in the Table of Contents preceding these General Conditions. Any mention in these sections or indication on the drawings of articles,

materials, operations, or methods, requires that the Contractor shall furnish each time so mentioned or indicated, of the kind, type or design and quality specified or shown on the drawings.

b. Likewise, the Contractor shall furnish all labor, equipment, incidentals, and superintendence necessary to complete the work in accordance with the true meaning and intent of these specifications although such mention of articles, materials, operations, methods, quality, qualifications or condition is not expressed in complete sentences. Where devices, items, or parts thereof are referred to in the singular, it is intended that such reference shall apply to as many such devices, items or parts as are required to of other sections. The necessary information – items, accessories, anchors, connections, patterns, templates, etc. – shall be delivered when required in order to prevent any delay in the progress and completion of the work.

SEC. 00002 SPECIFICATIONS AND DRAWINGS.

a. **The Contractor shall keep in the work place a copy of the drawings and specifications** and shall at all times give the Construction Architect/Engineer access thereto. Anything mentioned in the specifications and not shown on the drawings, or shown on the drawings and not mentioned in the specifications, shall be of like effect as if shown or mentioned in both. In case of difference between drawings and specifications, the specifications shall govern. In case of discrepancy either in the figures, in the drawings, or specifications, the matter shall be promptly submitted to the University Architect who shall promptly make a determination in writing. Any adjustment by the Contractor without such a determination shall be at his risk and expense. The University Architect shall furnish from time to time such detailed drawings and other information, as he may consider necessary, unless otherwise provided.

b. **Omissions and mis-description**. Omissions from drawings or specifications or the mis-description of details of work which are manifestly necessary to carry out the intent of the drawings and specifications, or which are customarily performed, shall not relieve the Contractor from performing such omitted or mis-described details of work, but shall be performed as of fully and correctly set forth and described in the drawings and specifications.

c. **Deviations from the drawings and dimensions** therein given, whether or not error is believed to exist, shall be made only after written authority is obtained from the University Architect and/ or University Engineer.

SEC. 00003 PROGRESS SCHEDULE.

The work shall be executed with faithfulness and energy and in the order of precedence as directed by the Construction Architect/Engineer. The Contractor shall submit a progress schedule as follows:

a. The progress schedule shall be submitted within two weeks after the date of award of contract and shall be subject to the approval of and/or modification by the Construction Architect/Engineer.

b. The progress schedule shall be in Chart Form or Critical Path Method (CPM) and shall show the order in which the Contractor proposed to carry on the work, the dates on which he will start several salient features (including procurement of materials, plant and equipment), and the contemplated dates for completing the same.

SEC. 00004 PERMITS AND FEES.

Fees for testing of materials and specimens shall be paid for and obtained by the Contractor. The building permits shall

be obtained by the Contractor, but paid for by the Owner.

SEC. 00005 SUPERVISION AND INSPECTION.

The Contractor shall cause the construction work on the project to receive a constant supervision by a competent superintendent (hereinafter called Superintendent) who shall be present where construction is being carried on at all times during the working hours. The Contractor shall also employ, in connection with the construction of the project, capable, experienced, and reliable foremen and such skilled workmen as may be required for the various classes of work to be performed. Directions and instructions given to the Superintendent by the Owner shall be binding upon the Contractor.

a. The Owner reserves the right to require the removal from the project of any employee of the Contractor if in the judgment of the Owner such removal shall be necessary in order to protect the interest of the Owner. The Owner shall have the right to require the Contractor to increase the number of his employees and to increase or change the amount or kind of tools and equipment if at any time the progress of the work shall be unsatisfactory to the Owner. But the failure of the Owner to give such directions shall not relieve the Contractor of his obligations to complete the work within the time and in the manner specified**.**

b. The manner of performance of the work and all equipment used therein shall be subject to the inspection, tests, and approval of the Owner. The Contractor will provide all reasonable facilities necessary for such inspection and tests. The Contractor shall have an authorized agent to accompany the inspector when the final inspection is made and if requested by the Owner when any other inspection is made.

c. The Owner may recommend to the Contractor suspend the work wholly or in part, for such periods if he deemed it necessary due to unsuitable weather or such other condition which are considered unfavorable, for the satisfactory prosecution of the work. The Contractor shall not suspend work pursuant to this provision without written authority from the Owner to do so. The time of completion herein above set forth shall be increased by the number of days of any such suspension, except when suspension is due to the failure of the Contractor to comply with any of the provisions of this contract. In the event that work is suspended by the Contractor with the consent of the Owner, the Contractor, before resuming work shall give the Owner a written notice at least twenty-four (24) hours' notice thereof in writing.

SEC. 00006 DEFECTIVE WORKMANSHIP.

a. The acceptance of any workmanship by the Owner or the Construction Architect/Engineer shall not preclude the subsequent rejection thereof if such workmanship shall be found to be defective after installation. Such workmanship shall be remedied by and at the expense of the Contractor. The Contractor shall not be entitled to any payment hereunder so long as any defective workmanship, in respect to the project of which the Contractor shall have had notice, shall not have been remedied.

b. Should any workmanship be found not to have complied with the requirements within the one-year period after issuance of certificate of completion by the Owner or Construction Architect/Engineer, the Contractor shall remedy such defect within thirty days (30) upon written notification by the owner. In the event the Contractor fails to make such remedy, the Owner may execute the corrective measures but the Contractor shall pay the cost involved thereof.

SEC. 00007 QUALITY OF WORK AND MATERIAL.

All materials, parts and equipment furnished by the Contractor shall be new, high grade and free from defects and

imperfections. Both materials and workmanship shall be subject to the approval of the Construction Architect/Engineer and acceptable to the University Architect.

SEC. 00008 PROGRESS PHOTOGRAPHS.

a. The Contractor, shall at his expense, furnish to the Construction Architect/Engineer progress photographs that shall be taken monthly starting when the work begins and continuing so long as the work is in progress on the exterior or interior of the building, from station points designated by the Construction Architect/Engineer.

b. No partial payment shall be considered for approval without the above-mentioned prints.

SEC. 00009 ASSIGNMENT.

a. The Contractor shall not assign this contract in whole or in part nor shall he sublet any part of the work without prior written consent of the Owner. The Owner's consent to any subletting of work shall not be granted in any event until the Contractor has furnished the Owner with satisfactory evidence that the subcontractor is carrying ample insurance to the same extent and in the same manner as herein provided.

b. If the contract is assigned or any part thereof is sublet, the Contractor shall exonerate, indemnify and save harmless the Owner from against any and all losses or expenses caused thereby.

SEC. 00010 COMPLETION ON CONTRACTOR'S DEFAULT.

a. If default shall be committed by the Contractor or by a subcontractor in the performance of any of the terms of this contract, the Owner, without in any manner limiting its legal and equitable remedies in the circumstances, may serve upon the Contractor and the surety or sureties upon the Performance Bond or Bonds written notice requiring the Contractor to cause such default to be corrected forthwith.

b. Unless within twenty (20) days after the service of such notice upon the Contractor such defaults shall have been corrected or arrangements for the correction thereof satisfactory to the Owner shall be made by the Contractor or its sureties, the Owner may have such default corrected by contract or otherwise for the amount and at the expense of the Contractor, and the Contractor and its surety and sureties shall be liable to the Owner for any cost and expense in excess of the contract price occasioned thereby. In such event, the Owner may take possession of and utilize, in completing the construction of the project, any materials, tools, supplies, equipment, appliances, and plant belonging to the Contractor or any of its subcontractor, which may be situated at the site of the project. The Owner in such contingency may exercise any rights, claims, or demands which the Contractor may have against third person in connection with this contract and for such purpose the Contractor does hereby assign, transfer and set over unto the Owner all such rights, claims and demands.

SEC. 00011 PATENT INFRINGEMENT.

The Contractor shall save harmless indemnify the Owner from any and all claims, suits, and proceedings for the infringement of any patents covering any equipment used in the work.

SEC. 00012 COMPLIANCE WITH STATUTES AND REGULATIONS.

The Contractor will comply with all applicable statutes, ordinances, codes, laws, rules and regulations pertaining to the

work. The Contractor understands that the obligations of the parties hereunder are subject to the applicable regulations and orders of government agencies having jurisdiction in the premises.

SEC. 00013 PERSONAL AND PROPERTY DAMAGE.

Until the work is completed and accepted by the Owner, the Contractor shall assume all risks and bear all losses that may result from any cause to the work and to existing structures and equipment, and to other property located on the premises or adjacent thereto belonging to the Owner. He shall assume all damage or injury that may result to all such property and/or to persons where such damage or injury is caused in connection with his work or is due to his negligence or to his leaving open or unprotected portions of streets or other property.

SEC. 00014 SUPERVISION.

All work shall meet with the approval of the Construction Architect/ Engineers and shall be completed in conformity with the plans and specifications approved by and on file with the Owner, which plans and specifications will be made part of the contract to be entered into for the work referred to herein. The Contractor shall confer with the Construction Architect/Engineer before commencing any work under the contract. The Construction Architect/Engineer or his representative shall have access to the work at all times. The Contractor shall furnish all facilities for inspection at the construction site, and at shops or yards, and shall not cover up any work requiring inspection until the same has been approved by the University Architect/Engineer. If work should be covered up before being inspected, the Contractor will be required to remove such portions of the work as may be necessary to disclose the part in question.

SEC. 00015 IDENTIFICATION OF EMPLOYEES.

The Contractor shall be responsible for furnishing to each employee and for requiring each employee engaged in the work, to display such identification as maybe approved and directed by the Construction Architect/Engineer. All prescribed identification shall immediately be delivered to Construction Architect/Engineer for cancellation upon the release of any employee. When required by the Construction Architect/ Engineer, the Contractor shall obtain and submit fingerprints of all persons employed on the project.

SEC. 00016 SHOP DRAWINGS.

Shop drawings shall be submitted with the same size as the contract drawings when practicable, but in no case, shall these exceed the dimensions of the contract drawings. Allow 38mm border at left hand edge of shop drawings for binding and uniform hanging in files at job site. The Contractor shall make preliminary check of all shop drawings for compliance with contract documents before submitting shop drawings to "Construction Architect/Engineer" and he shall stamp each print with statement of compliance with the requirement. The Contractor shall submit four (4) such checked prints to the "Construction Architect/Engineer" who will check it, retaining one print for his file and returning three (3) prints to the Contractor approved as noted, or disapproved. If shop drawings are disapproved, the Architect will return it to the Contractor for re-submission. The approval of the drawings by the "Construction Architect/Engineer" shall not be construed as a complete check but will indicate only that the general method of construction and detailing is satisfactory. Approval of such drawings will not relieve the Contractor of the responsibility for any error that may exist, as the Contractor shall be responsible for the dimension and design of adequate connections, details, and satisfactory construction of all work.

SEC. 00017 SAMPLES.

The Contractor shall submit to the Construction Architect/Engineer samples as required by the University Architect and these shall be properly identified with the Contractor's and manufacturer's name and catalog number, if applicable.

SEC. 00018 LIGHT, POWER AND WATER.

The Contractor shall furnish temporary water, light, and power, complete with connecting piping, wiring, lamps, meters, and similar equipment as required for the work. He shall install, maintain and remove his temporary lines upon completion of the work. All expenses in connection with temporary services and facilities shall be paid by the Contractor. Subsequent to the setting of the permanent meters, the Owner will be responsible for payment of water and electrical bill rendered for utility service through the respective permanent meters. The Contractor, however, shall pay all costs incurred in the setting of permanent meters.

SEC. 00019 TEMPORARY OFFICE.

The Contractor shall provide and maintain watertight office on the premises where directed for his own and subcontractor's use. This building shall be painted, provided with operating windows, doors with locks, tables, benches, racks for drawings, and adequate electric lighting.

a. The ceiling shall be 2.7m high. Floor and wall shall be plywood or equivalent.

b. The Contractor shall provide janitorial service for these offices for the duration of the job.

SEC. 00020 STORAGE SHEDS.

The Contractor shall provide and maintain on the premises where directed, watertight storage sheds for all materials which might be damaged by weather.

SEC. 00021 TEMPORARY TOILETS.

The Contractor shall install and maintain in a sanitary condition suitable toilets and urinals for use of workmen. These toilets shall be in a location approved by the University Architect/Engineer and connected to existing sewers, when feasible, or may be of the chemical type. There shall be a minimum of one (1) toilet for every thirty (30) employees or fraction part thereof, working at the job site.

SEC. 00022 LIGHTS, GUARDS, ETC.

The Contractor shall provide and maintain such lights, guard, temporary fences and warning signs as may be necessary for safety at all times from the execution of the contract until the final acceptance of the work.

SEC. 00023 REPAIRING INJURED WORK.

All portions of the work that may be broken or injured by accident or in the course of or on account of building operations, or by reason of any other cause whatsoever during the progress of the work, shall be carefully and neatly repaired or reconstructed and the whole left in first-class condition and turned over to the Owner ready for use.

SEC. 00024 CLEANING.

Upon completion of the work, all areas shall be cleaned of debris by the contractor. He shall remove remaining excess materials, waste, rubbish, debris, and his construction and installation equipment from the premises. Any dirt or stains shall be removed from the surfaces of the structure and equipment and fixtures.

SEC. 00025 REVISED DOCUMENTARY REQUIREMENTS FOR COMMON GOVERNMENT TRANSACTIONS ON INFRASTRUCTURE PROJECTS (COA. NO. 2012 – 001).

Letter request from contractors for advance/progress/final payment or for substitution in case of release of retention money shall be accompanied by the following documents:

a. Statement of Work Accomplished Progress Billing

b. Inspection Report by the Agency's Authorized Engineer

c. Results of Test Analysis, if applicable

d. Statement of Time Elapsed

e. Monthly Certificate of Payment

f. Contractor's Affidavit on payment of laborers and materials

g. Pictures, before, during and after construction of items of work especially the embedded items

h. Photocopy of vouchers of all previous payments

i. Certificate of completion

SEC. 00026 ADVANCE PAYMENT.

The procuring entity shall, upon a written request from the contractor, make an advance payment to the contractor in an amount not exceeding 15 percent of the total contract price to be made in lump-sum or, at the most, two installments according to a schedule specified in the Invitation to Bidders and other relevant Tender Documents. The advance payment shall be acceptance by the procuring entity 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 procuring entity (Annex E of the Revised IRR of RA No. 9184). Additional documentary Requirements include: a) Irrevocable Standby Letter of Credit/Security Bond/Bank Guarantee and b) such other documents peculiar to the contract and/or to the mode of procurement and considered necessary in the auditoria review and in the technical evaluation thereof

SEC. 00027 VARIATION ORDER/CHANGE ORDER/EXTRA WORK ORDER.

Variation Order/Extra Work Order may be issued 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 either due to change of plans, design or alignment to suit actual field conditions resulting in disparity between the pre-construction plans used for the purpose 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 additional Variation Order does not exceed 10 percent of the original contract price. The addition/deletion of works under Variation Orders should be within the general scope of the project as bid and awarded. Any cumulative positive Variation Order beyond 10 percent of the original contract price shall be subject of another contract to be bid out if the works are separable from the original contract (Annex E of the Revised IRR of RA

No. 9184) Additional documentary requirements, as enumerated under Annex B of COA Memorandum No. 2005-027 dated February 28, 2005 required to be submitted to the Office of the Auditor for the review/evaluation of the changes in the contract, include:

a. Copy of Approved Change Order (CO)/Extra Work Order (EWO)

b. Copy of the approved original plans indicating the affected portions) of the project and duly revised plans and specifications, if applicable, indicating the changes made which shall be color coded

c. Copy of the agency's report establishing the necessity/justification(s) for the need of such CO and/or EWO which shall include:

   c.1. The computation as to the quantities of the additional works involved per item indicating the specific stations where such works are needed;

   c.2. the date of inspection conducted and the results of inspection;

   c.3. a detailed estimate of the unit cost of such items of work for new unit costs including those expressed in volume/area/lump-sum/lot

   c.4. Copy of the approved/revised PERT/CPM Network Diagram which shall be color coded, reflecting the effect of additional/deductive time on the contract period and the corresponding detailed computations for the additional/deductive time for the subject Change Order/Extra Work Order

   c.5. Copy of the approved detailed breakdown of contract cost for the variation order

   c.6. Copy of the COA Technical Evaluation Report for the original contract

   c.7. If the Variation Order to be reviewed is not the 1st variation order, all of the above requirements for all previously approved variation orders, if not yet reviewed, otherwise, copy of the COA Technical Evaluation Report for the previously approved variation orders

   c.8. Additional performance security in the prescribed form and amount if variation order exceeds 10 percent of the original contract cost

   c.9. Such other documents peculiar to the contract and/or to the mode of procurement and considered necessary in the auditoria review and in the technical evaluation thereof

SEC. 00028 PROGRESS PAYMENT.

Once a month, the contractor may submit a statement of work accomplished (SWA) or progress billing and corresponding request for progress payment for work accomplished. The SWA should show the amounts which the contractor considers itself to be entitled to, up to the end of the month, to cover the cumulative value of the works executed to date based on the items in the Bill of Qualities and adjustments made for approved Variation Orders executed (Annex E of the Revised IRR of RA No. 9184).

SEC. 00029 FINAL PAYMENT.

a. Contractors shall be fully paid only upon completion and acceptance of the project by the agency.

b. Documentary requirements to be submitted are as follows:

b.1. As-Built plans

b.2. Warranty security

b.3. Clearance from the Provincial Treasurer that the corresponding sand and gravel fees have been paid [DPWH] Department Order (DO) No. 109 s. 1993 dated May 4, 1993 and DO No. 119 s. 1993 dated May II, 1993]

b.4. Copy of turn over documents/transfer of project and facilities such as motor vehicle, laptops, other equipment and furniture included in the contract to concerned government agency

SEC. 00030 RELEASE OF RETENTION MONEY.

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 guaranties or surety bonds callable on demand, of amounts equivalent to the retention money substituted for and acceptable to the Government, provided that the project is on schedule and is satisfactorily undertaken (Annex E of the Revised IRR of RA No. 9184. Additional documentary requirements include a) any security in the form of cash, bank guarantee, irrevocable standby letter of credit from a commercial bank, GSIS or surety bond callable on demand and b) Certification from the end-user that the project is completed and inspected

DIVISION 0: MISCELLANEOUS PROVISIONS

SEC. 00001 Warranty of Construction

a. For other warranties set out elsewhere in this contract, the Contractor warrants that the work performed under this contract conforms to the contract requirements and is free of any defect of equipment, material or design furnished, or workmanship performed by the Contractor or any of his subcontractors or suppliers at time. Such warranties shall continue for a period of one year from the date of final acceptance of the work, but with respect to any part of the work which the Owner takes possession of prior to final acceptance, such warranties shall continue for a period of one year from the date the Owner takes possession. Under this warranty, the Contractor shall remedy at his expense any such failure to conform or for any such defect. In addition, the Contractor shall remedy at his expense any damage to Owner-owned or controlled real or personal property when that damage is the result of the Contractor's failure to conform to contract requirements or for any such defect of equipment, material, workmanship, or design. The Contractor shall also restore any work damage in fulfilling the terms of this clause. The contractor's warranty with respect to work repaired or replaced hereunder will run for one year from the date of such repair or placement.

b. The Owner shall notify the Contractor in writing within a reasonable time after the discovery of any failure, defect, or damage.

c. Should the Contractor fail to remedy any failure, defect, or damage described in (a) above within reasonable time after receipt of notice thereof, the Owner shall have the right to replace, repair or otherwise remedy such failure, defect or damage at the Contractor's expense.

d. In addition to the other rights and remedies provided by this clause, all subcontractors' manufacturers', and suppliers' warranties expressed or implied, respecting any work and materials shall be enforced by the Contractor for the Owner. In such case, if the Contractor's warranty under (a) above has expired, any suit directed by the Owner to enforce a subcontractor, manufacturer, or a supplier warranty shall be at the expense of the Owner. The Contractor shall obtain any warranty that the subcontractor's manufacturers or suppliers would give in normal commercial practice.

e. Notwithstanding any other provision of this clause, unless such defects are caused by the negligence of the Contractor or his subcontractors or suppliers at any time, the Contractor shall not be liable for the repair of any defects of material or design furnished by the Owner, nor for the repair of any damage which results from any such defect in Owner-furnished material or design.

f. Defects in design or manufacture of equipment, specified by the Owner on a "brand name and model" basis, shall not be included in this warranty. The Contractor shall require any subcontractor, manufacturer, or supplier thereof to execute their warranties in writing directly to the Owner.

SEC. 00002 Project Sign

The Contractor shall provide a project sign fabricated to size and design as specified by the Owner. The sign shall be rigidly framed and erected at a location designated by the Construction Architect/Engineer. No separate payment will be made for the sign, and all cost in connection therewith shall be included in the contract price of the project. Upon completion of the work, the sign shall be removed and disposed by the Contractor.

SEC. 00003 Use of Owner Facilities by the Contractor

The Contractor will not be permitted to utilize any Owner's building or facility for his job-site office space or storage area for materials without prior written approval of the Construction Architect/Engineer.

SEC. 00004 Interference with Owner Operations

The Contractor shall establish work procedures and methods to avoid interference with existing operations within or adjacent to the construction area. Free passage into adjoining or adjacent buildings not in the contract will not be permitted, except as approved by the University Architect/Engineer. Procedures and methods shall also provide for safe conduct of work and protection of property, which is to remain undisturbed.

DIVISION 1: GENERAL REQUIREMENTS

SEC. 01000 Summary of Work

a. Project Description – **Completion of School of Applied Economics Building** shall include the following:

a.1. Concrete Works:

- Roof Deck Columns

- Roof Deck Beam
- Roof Deck Slab
- Stairs
- Catch Basin
- Pump Room

a.2. Masonry Works:

- Catch Basin
- Pump Room and Fire Tank

a.3. Carpentry Works (Interior Wall Partition at Dean's Office)

a.4. Painting Works for Pump Room

a.5. Supply and installation of Windows

a.6. Supply and installation of Roof Framing Steel Works, Roofing and Bended Sheets at main roof

a.7. Supply and installation of Roofing and Steel Works at Pump Room

a.8. Supply and installation for Waterproofing Works

a.9. Supply and installation for Waterline and Sanitary System

a.10. Supply and installation for Fire Protection System

a.11. Supply and installation for CCTV System

a.12. Supply and installation for Fire Alarm System

a.13. Supply and installation for Data and Cabling System

a.14. Supply and installation for Electrical works

b. Scope of Work

b.01. General Requirements

- Mobilization/Demobilization
  - Construction of temporary facilities (field office, bodega, cleaning and moving out including temporary connections for water & electrical).
- Temporary Facilities & Utilities
  - The contractor shall provide its own temporary office, water meter, watt meter, and etc. the whole duration of the contract.
- Debris and waste regulation
  - The contractor shall completely dispose of all debris and waste materials resulting from any demolition works. The site shall be free from any debris from any demolition throughout the remaining span of the project.
- Specification and Drawings
  - Omissions from drawings or specifications or the misdescription of details of works which are manifestly necessary to carry out the completion of the project, or which are customarily performed, shall not relieve the Contractor from performing such omitted or misdescribed details of work but shall hence be performed fully and correctly.
  - Quantities specified in the Bill of Quantities shall be for reference only. It shall be the responsibility of the contractor to check and verify the actual quantities needed for the completion of the project.

b.02. Construction Safety:

- Personal protective equipment (PPE), medical supplies, first aid kit, safety personnel, signage, barricades, fire extinguishers, safety personnel and other protective measures.

b.03. Site works

- Surface preparation, cleaning and application of epoxy for all old concrete surfaces & brushing and cleaning of all existing reinforcement bars.

b.04. Excavation

- For Septic Vaults
- For Fire Tank
- Backfill and Compaction

b.05. Reinforced concrete works

- Roof Deck Columns
  - Premix concrete w/ pumpcrete (3000psi)
  - Complete with reinforcements & connections
- Roof Deck Beam
  - Premix concrete w/ pumpcrete (3000psi)
  - Complete with reinforcements & connections
- Roof Deck Slab
  - Premix concrete w/ pumpcrete (3000psi)
  - Complete with reinforcements & connections
- Stairs
  - Premix concrete w/ pumpcrete (3000psi)
  - Complete with reinforcements & connections

b.06. Reinforced masonry works

- Catch Basin
  - 6" CHB
  - Portland cement
  - Washed sand
- Pump Room and Fire Tank
  - 100 mm thk CHB Wall with Smooth Plaster Finish
  - 10mm dia. DRB
  - 12mm dia. DRB
  - 16mm dia. DRB
  - #16 Tire wire
  - Portland Cement
  - Washed Gravel
  - Washed Sand

b.07. Finishing Works

- Painting for Pump Room (Concrete Surfaces)
  - Surface preparation
  - Concrete Skimcoat
  - Use primer and 2 coats of latex flat finished paint for topcoat.
- Painting for Pump Room (Metal Surfaces)
  - Surface preparation

- Metal primer paint
- Use 2 coats of quick dry enamel paint

b.08. Carpentry works

- Interior Wall Partitions for Dean's Office
  - Use 600mm x 600mm x 4.5mm fiber cement board supported with metal furring and spaced @ 600mm
  - Use 5/32 x 1/2 Blind Rivets and 4" Metal Studs

b.09. Fire protection (Ground Floor to Roof Deck)

- **Note**: Coring of floor slab for fire hydrant pipes shall be provided with sleeves of standard weight galvanized steel pipe. Provide chrome plated escutcheon plates large enough to cover the pipe sleeves.
- **Test and inspection**: The fire Protection Contractor shall conduct and bear the cost of all necessary tests of the fire protection work, furnishing all labor, power and equipment. All piping shall be tested with water and test witnessed by the construction Architect/Engineer.
- Fire alarm
- Floor control valve assembly
- Sprinkler
- Fire and jockey pump static diagram
  - Vertical Turbine Fire Pump

    250gpm at 150psi, 25HP Motor, 230V, 3 PH, 60Hz

    Rate Speed: 3500RPM
  - Vertical In-Line

    Multi-Stage Centrifugal Pump

    50gpm at 150psi, 5HP Motor, 230V, 3 PH, 60Hz

    Rated-Speed: 3500RPM
- Fire hose cabinet & Assemblies
- General supplies
- Complete with all accessories

b.010. Windows

- W1
  - 6mm thk Clear Glass Fixed and Awning Window With Aluminum Framing & complete accessories
- W2
  - 0.60m x 1.85m Awning Window With Aluminum Framing & complete accessories
- W3
  - 0.75m x 1.40m Awning Window With Aluminum Framing & complete accessories
- W4
  - 1.40m x 2.10m Awning Window With Aluminum Framing & complete accessories
- W5
  - Curtain Wall: Fixed and Awning Window With Aluminum Framing with complete accessories
- W6
  - Fixed Glass Window With Aluminum Framing & complete accessories
- W7
  - Counter Window: Fixed glass with speak-through in Aluminum Framing with complete accessories
- W8

- 1.40m x 1.40m Awning Window With Aluminum Framing & complete accessories
- W9
  - 0.75m x 0.70m Awning Window With Aluminum Framing & complete accessories

b.011. Roofing and Steel works

- **Note:** NC II welding and welding test is required
- Complete with welding rod, rivets, waste cotton, thinner, etc.
- Roof deck steel truss and details
- Steel works for pump room door, dead bolt, metal grills and posts, and fire tank
- Steel works for roof deck
- Roofing works for roof deck and pump room

b.012. Plumbing Works (Ground Floor to Roof Deck)

- Plumbing Fixtures
  - Water closet (flush valve type)
  - Concrete Lavatory counter w/ P-trap, fittings, & accessories
  - Urinal
  - Complete with accessories
- Plumbing layout
  - Sanitary line
  - Water line
  - Downspout
  - Complete fittings and accessories
- Tanks and Pumps
  - 2 sets of submersible pump 1.0 hp w/ acc.
  - 2 sets of pressure tank (diaphragm)1HP
  - 2 sets of water tank (3000 liters w/ Level - Censor switch & acce.)45gal. Pressurize tank with 1hp water pump
  - 2 sets of water tank (10,000 L w/ level censor switch & acce.) Pressure gauge
  - 2 sets of Booster Tank 1HP
  - 2 sets of septic vaults

b.013. Electrical works (Ground Floor to Roof Deck)

- Roof Deck floor plan
  - Electrical wires and cables
  - Lightings
  - Wiring devices: switches and outlet
  - Pipe, cable tray and cable duct
  - Pull box, junction box and utility box
  - Smoke detector & fire alarm system (complete with wirings, device and other accessories)
- Electrical Fixtures
  - Dual T5 Lamp w/ Reflective house
  - 12w Cool White Led Lights in recessed 6"x6" Circular Pinlight
  - Reflectorized Fluorescent Fixture (2X36W) T8-FL36W
  - Surface Type Down Light (28W)
  - Emergency Lightings (2X 6W-LED)
  - Convenience Outlet, Universal type wide series
  - Aircon Outlet (2gang-3pins) wide series
  - Switch (1 gang) wide series
  - Switch (2 gang) wide series

- Switch (3 gang) wide series
- Panel Board and Overcurrent Protections
  - 4 LPB(X) Panelboard Centermain-Bolt On, 12Branches (Main: 1pc-60AT/100AF,2P, 240V-MCCB Type, Branches: 12pcs X20AT/60AF, 2P,10kAIC)
  - LPB5- Panelboard Centermain- Bolt On, 6Branches (Main: 1set -40AT/100AF,2P, 10kA-MCCB, Branches: 6pcs x 20AT/60AT, 2P, 10kAIC-MCB)
  - PPB(X)- Panelboard Centermain-Bolt On, 8Branches (Main: 1set -40AT/100AF,2P, 10kA-MCCB Type, Branches: 6pcs- 20AT/60AF,2P,MCB)
  - APB(X)- Aircon Panelboard Centermain-Bolt On, 12Branches (Main: 1set -125AT/225AF,2P, 16kA-MCCB Type, Branches: 12pcs- 30AT/60AF,2P,MCB)
  - DP - Distribution Panel (Main: 200AT/225AF, 3P; Branches: 1- 60/100AF;1-40AT/100AF & 1-125At/225AF)
  - PMPB- Plumbing Motors Panelboard (Main: 1-40AT/100AF,3P, 4- 20AT/100AF,2P)
  - Main Distribution Panel (Main: 1- 800AT/800AF, 3P, MCCB TPYE, Branches: 4-200AT/225AF, 3-100AT/100AT & 1- 60AT/100AF)
  - MAIN Circuit Breaker (MCB) (1-800AT/800AF,3P-MCCB type)

b.014. Electronic Works

- Data and Voice System Roughing-ins (Ground Floor to Roof Deck)
  - Conventional Fire Alarm Control Panel, 8-Zone
  - Conventional Smoke Detectors
  - Conventional Manual Pull Switch (Resettable Type)
  - Sounder with Strobe Light
- CCTV System Roughing-ins (Ground Floor to Roof Deck)
  - 3MP Fixed Lens IR Mini Bullet IP Camera
  - Embedded 32Channel 4SATA 1eSATA 1.5U NVR
  - 21" LCD Monitor
  - 24 ports 10/100Mbps POE Switch, Managed
  - 4TB Hard Drive

b.015. Waterproofing

- Septic Vaults
- Fire Tank
- Third Floor and Roof Deck Restrooms
- Water Tank Area at Roof Deck
- Dressing Room at Roof Deck

DIVISION 2: SITE WORKS

SEC. 02000 <u>General Requirements.</u>

a. **Scope of Works** - The work covered by this section of the Specifications consists of, surface preparation, ceiling preparation, provision of formworks & scaffolding, re-orientation of existing sprinkler system, and site preparation.

b. Salvage and Demolition

b.1. The procedures proposed for the accomplishment of salvage and demolition or removal work shall be submitted for approval. The procedures shall provide for a safe conduct of the work, careful removal and disposition of materials specified to be salvaged, protection of property which is to

remain undisturbed, coordination with other work in progress, and timely disconnection of utility services.

b.2. Utilities shall be disconnected at the points directed. Where such disconnection will interrupt the utility services to an area not included in the contract, arrangements for such interruption shall be made with the Construction Architect/Engineer at least 24 hours in advance of the interruption.

b.3. The amount of dust resulting from the salvage and removal operations shall be controlled to prevent the spread of dust to occupy portions of the building and to avoid creation of a nuisance in the surrounding area.

b.4. The use of burning at the project site for the disposal of refuse and debris will not be permitted.

b.5. Items designated to be salvaged or saved shall be carefully removed, cleaned of all dust, dirt, and foreign matter, and shall be properly stored by the contractor.

b.6. After removal of items to be salvaged as directed, all existing structures shall be demolished or removed. The amount of dust resulting from the demolition and removal operations shall be controlled to prevent the spread of dust to occupy portions of the building and to avoid creation of a nuisance in the surrounding area.

b.7. The contractor shall designate an area for the storage of salvaged items. It is the responsibility of the contractor to keep the salvaged items free from damage; the contractor will be held liable for any damage of the salvaged items throughout the length of the project and shall replace the item accordingly. All these items shall be delivered to the Owner's storage.

b.8. Materials not indicated or specified to be salvaged shall be disposed by the Contractor outside the limits of the Owner's property at the Contractor's responsibility.

c. Stake and Batter Boards

c.1. Basic batter boards and basic reference marks as directed by the Construction Architect/ Engineer shall be erected by the Contractor at such places where they will not be disturbed during construction.

c.2. The CONTRACTOR shall construct two (2) permanent bench marks or previously known elevations near or within the site of construction for the purpose of determining any settlement that may occur during the program of construction.

c.3. Monthly or when required, elevation readings shall be taken at least at ten (10) points in the buildings as directed by the Construction Architect/ Engineer. A permanent record of all the readings shall be kept in construction site and when required a report shall be submitted to the Construction Architect/Engineer.

d. Soil Treatment

d.1. Pesticide for subterranean termite control, shall be delivered to the project site in original transport/ service containers bearing original labels or reasonable facsimiles thereof.

d.2. Pesticides shall be registered with the Environmental Protection Agency (EPA), or with EPA approval for use as specified herein. The pesticides shall be water-based emulsions.

d.3. The Contractor shall be licensed in the category required for performance of this contract. All pesticide applications shall be made by a certified applicator.

d.4. Formulation, treatment, storage and disposal of pesticides shall be in accordance with label directions. Water for formulating shall be drawn only from a site designated by the Construction Architect/Engineer, and the filling hose shall be fitted with a backflow preventer meeting local plumbing codes/standards. The filling operation shall be under the direct and continuous observation of a Contractor's representative to prevent overflow.

d.5. At the time of soil treatment application, the soil shall be preferably in a friable condition with low moisture content to allow uniform distribution of the treatment solution throughout the soil. Do not apply pesticides during or immediately following heavy rains, or when conditions will cause runoff and create an environmental hazard. Cover treated area with waterproof sheeting if concrete is not poured on the same day on the soil treatment. Take precautions to prevent disturbance of the pesticide barrier. Before the placement of structural components, over treated area with waterproof sheeting if concrete is not poured on the same day as the soil treatment. Apply pesticide prior to placement of the vapor barrier or waterproof membrane.

d.6. For slab on grade, establish a horizontal pesticide barrier over floor area tended to be covered. Apply treatment solution with a low-pressure coarse spray at the rate of 41 liter per 3 sq. m. of earth fill. Apply at the rate of 6 liter per 3 sq. m. if the fill is washed gravel or other coarse material. Establish a vertical pesticide barrier under slab in critical areas such as inside of foundation, walls, and both sides of interior walls, around plumbing and utility conduits. Apply treatment by rodd or rodding and trenching the fill at the rate of 16 liters per linear 30cm, and 30 cm deep. Made pesticide band at least 150mm wide with the pesticide evenly distributed throughout.

d.7. For foundation walls, establish vertical pesticide barriers along the outside of foundation walls. Apply termite treatment solution with pressure coarse spray to voids within foundation walls at the rate of 8 liters per 10 linear 30 cm of water. When the foundation walls consist of more than one row of masonry units with voids, treat each row of masonry units with voids at the rate of 8 liters per 10 liner 30 cm. Treat outer foundation wall after grading has been completed. Apply treatment solution to fill along the outside perimeter of foundation walls, and similar locations by trenching or rodding and trenching at the rate of 16 liter per linear cm of wall per each 30cm depth down to the top of the footing; for example, a footing 90 cm depth would require 48 liters of solution per 10 linear 30 cm. Make band of treated fill at least 150mm width with solution evenly distributed from grade level to the footing.

d.8. The Contractor shall warrant for 5 years the building treated, guaranteed retreatment of any subsequent subterranean termite infestation. Any structural damage due to subterranean termite infestation shall be repaired at no additional cost to the Owner. The warranty shall be covered by an insurance policy issued by a bonafide insurance company. The form of insurance coverage will be subject to the approval of the Construction Architect/Engineer and/or Owner.

e. Excavation

e.1. The Contractor shall perform excavation of every type of material encountered within the limits of the project to the lines, grades, and elevations indicated and as specified herein. Grading shall be in conformity with the typical sections shown and shall be finished within a tolerance of ¼ of 30cm of the grades indicated. Satisfactorily excavated materials shall be transported to and placed in fill areas within work limits. Unsatisfactory materials encountered below the established sub-grade shown under building or paved areas shall be excavated 300mm or 31cm below grade and replaced with satisfactory material as directed. In the event that it is required to remove unsatisfactory material to a greater depth than specified, an adjustment in the contract price will be made in accordance with the contract. Surplus satisfactory excavated material not required for fill or embankment shall be disposed of in designated wastes or spoil areas. Excavation and filling shall be performed in a manner and sequence that will provide proper drainage at all times.

e.2. The Contractor shall make all necessary excavations for foundations to grades indicated on drawings including all other excavations for drainage system, sewer, and water service systems, etc., required and necessary for the proper prosecution of the work. Incidental excavation to level the bottom of footing, compacting and tamping same are included in the building contract.

e.3. Where excavation for footings will rest on fill excavation shall be carried deeper until the desired stratum is reached for safe bearing capacity of soil.

e.4. Excavations carried to a greater depth or size indicated or required through error be corrected by filling such additional depth with size class "D" concrete at the contractor's expense.

e.5. Whenever water is encountered in the excavation process, it shall be removed by means of pails or by pumping. Care must be taken that the surrounding particles of soil adjacent to other structures are not disturbed or removed, but if not feasible, shoring must then be utilized.

f. Sub-Grade Preparation

f.1. Construction Sub-grade shall be shaped to line, grade, and cross-section, and compacted as specified. This operation shall include plowing, disking and any moistening or aerating required obtaining proper compact of soft or otherwise unsatisfactorily excavated material or other approved material as directed in writing. Low areas resulting from removal of unsatisfactory material or excavation of rock shall be brought up to required grade with satisfactory materials. Entire sub-grade shaped as specified. Elevation of finish sub-grade shall conform to elevations shown.

f.2. During construction, any excavation shall be kept shaped and drained. Ditches and drains shall be maintained in such a manner as to drain effectively at all times. Storage or stockpiling of materials on the sub-grade will not be permitted. Graded areas shall be protected against action of the elements prior to acceptance of the work. Settlement or washing that may have occurred shall be repaired and grades shall be re-established to the required elevations and slopes immediately prior to installation of paving.

g. Filling, Backfilling & Grading

g.1. Fill and backfill materials shall be free from roots, wood scraps, vegetable matter and refuse.

g.2. Backfill shall be thoroughly wetted and compacted by tamping and rolling. The top two (2) gravel layers, and other proved materials thoroughly compacted by wetting and tamping.

g.3. Compact fill and backfill through the full depth of each layer (300mm/layer) to not less than 90% to maximum density except that under ramps, pavement, building slabs, and footings compact to not less than 95%. Control soil moisture during compaction between 80% to 100% through aeration or sprinkling.

g.4. All soil moisture readings in this area so indicated shall be performed by the contractor. Bring fill to finished grades indicated and grade to drain water any from structures. Arrange existing grades which are to remain and which are disturbed by the Contractor's operations to provide surfaces suitable for the proper use of moving machines.

g.5. Maintain tolerances in final unpaved areas to within 0.10 ft. above or below the grades, elevations, slopes and section shown. Accomplish grading so as to readily drain into the drainage facilities and/or adjacent natural drainage areas without the formation of pockets in which water will stand.

h. Disposal of Excess Excavated Material

h.1. Dispose any excess materials resulting from the excavation and operations not required or unsuitable for fill or backfill under this or other related sections of the specifications by hauling and spreading

in nearby areas, spoil areas designated by the Construction Architect/Engineer except such materials classes as rubbish and debris which shall be disposed of in dumps and burning areas.

h.2. Grade excavated materials should be deposited in the soil to a reasonably uniform surface.

DIVISION 3: CONCRETE

SEC. 03000 General Requirements

a. General

Construction notes and typical details apply to all drawings unless other otherwise shown or noted. Modify typical details as directed to meet special conditions.

Shop drawings with erection and placing diagrams of all structural steel miscellaneous iron, pre—cast concrete etc. shall be submitted for the Construction Architect/Engineer's approval before fabrication.

Contractor shall verify all dimensions before all work is to begin, check with mechanical & electrical drawings for conduits, pipe sleeves, etc. that are to be embedded in concrete.

It shall be the contractor's responsibility to design and provide adequate shoring and bracings of the structure for all loads that maybe imposed during construction in accordance to ACI 347 "guide to formwork for concrete".

b. Scope of Work

Furnish materials, labor, equipment, and other facilities and perform all work necessary to complete all concrete work shown on the drawings and specified herein in accordance with the ACI Building Code 318-63.

c. Storage of Materials

c.1. Cement and aggregates shall be stored in such a manner as to prevent deterioration or intrusion by foreign matter.

c.2. Deteriorated or damaged materials shall not be used for concrete

c.3. Steel shall be stored under cover or otherwise prevented from rusting

c.4. Store cement in a dry, weather-tight, properly ventilated structure of adequate provision for preventing or absorption of mixture.

d. Proportions and Consistency of Concrete

d.1. Proportions shall be such as to produce a concrete mixture which will work readily into corners and angles of the forms and around reinforcement. With the method of placing employed on the work, but without permitting the materials to segregate or excess free water to be collected on the surface. The combined aggregates shall be such composition of sizes that when separated on the No. U.S. Standard Sieve, the weight passing the sieve (fine aggregate) shall not less than thirty percent (30%) of the total nor greater than fifty percent (50%) of the total, except that these proportions do not necessarily apply to light-weight aggregates.

d.2. Concrete materials shall be measured preferably by weight such that the proportions can be accurately controlled and easily checked at any time during work.

d.3. Measurement of materials for ready-mixed concrete shall conform to Standard Specifications for Ready Mixed Concrete, ASTM Designation C-94 where applicable.

d.4. Water content shall in no case exceed six (6) U.S. gallons per bag of cement for all portions in the structure. Slumps shall be within the following limits,

Portions of Structure	Slump (inches)
Columns and end supported beams, girders, and slabs	3 - 6
Foundations elements, bedded slabs, and cantilevered beams and slabs	2 - 3

SEC. 03100 <u>Concrete Formwork, Embedded Pipes, and Construction Joints</u>

a. Design of Formworks

a.1. Includes all labor, materials, equipment, plant, tools, and other facilities necessary to complete all framework whether cast-in-place or pre-cast concrete.

a.2. Materials shall be plywood, metal, phenolic, plaster of Paris, plastic materials, or other suitable materials. In no case shall the forms for beams and slabs be less than ½" thick plywood for exposed concrete, ¾" T & G for covered concrete. Plastering in general shall not be allowed so that care shall be exercised in the choice of surface of forms and fittings that will be in contact with concrete. Forms for surfaces requiring special finishes shall be plywood or hard-pressed boards not less than 12mm thick. Surfaces of steel forms shall be free from irregularities, dents, and sags.

a.3. Forms shall result in a final structure that conforms to shapes, lines, and dimensions of the members as required by the design drawings and specifications.

a.4. Forms shall be substantial and sufficiently tight to prevent leakage of mortar.

a.5. Forms shall be properly braced or tied together to maintain position and shape.

a.6. Forms and their supports shall be designed so as not to damage previously placed structure.

a.7. Design of formwork shall include consideration of the following factors.

a.7.1. Rate and method of placing concrete.
a.7.2. Construction loads, including vertical, horizontal, and impact loads
a.7.3. Special form requirements for construction of shells, folded plates, domes, architectural concrete, or similar types of elements.

b. Removal of forms and shores.

b.1. No construction loads shall be supported on, nor any shoring removed from, any part of the structure under construction except when that portion of the structure in combination with remaining forming and shoring system has sufficient strength to support safely its weight and loads placed thereon

b.2. Sufficient strength may be demonstrated by field-cured test cylinders and by a structural analysis considering proposed loads in relation to field-cured cylinder strengths and strength of the forming and

shoring system. Such analysis and strength test data shall be furnished by the contractor to the Owner when so required.

b.3. No construction loads exceeding the combination of superimposed dead load plus specified live load shall be supported on any unshored portion of the structure under construction, unless analysis indicates adequate strength to support such additional loads.

b.4. Forms shall be removed in such manner as not to impair safety and serviceability of the structure. All concrete to be exposed by form removal shall have sufficient strength not to be damaged thereby. Forms shall not be removed without approval of the Construction Architect/Engineer.

c. Conduits and pipes embedded in concrete.

c.1. Conduits, pipes and sleeves of any material not harmful to concrete and within limitations of Section 6.3 may be embedded in concrete with approval of the Construction Architect/Engineer, provided they are not considered to replace structurally the displaced concrete.

c.2. Conduits and pipes of aluminum shall not be embedded in structural concrete unless effectively coated or covered to prevent aluminum-concrete reaction or electrolytic action between aluminum and steel.

c.3. Conduits, pipes and sleeved passing through a slab, wall, or beam shall not impair significantly the strength of the construction.

c.4. Conduits and pipes, with their fittings, embedded within a column shall not displace more than 4 percent of the area of cross section on which strength is calculated or which is required for fire protection.

c.5. Except when plans for conduits and pipes are approved by the Structural Engineer, conduits and pipes embedded within a slab, wall, or beam (other than those merely passing through) shall satisfy the following:

c.5.1. They shall not be larger in outside dimension than 1/3 the overall thickness of slab, wall, or beam in which they are embedded.
c.5.2. They shall not be spaced closer than 3 diameters or widths on center.
c.5.3. They shall not impair significantly the strength of the construction.

c.6. Conduits, pipes, and sleeves may be considered as replacing structurally in compression the displaced concrete provided:

c.6.1. They are not exposed to rusting or other deterioration.
c.6.2. They are of uncoated or galvanized iron or steel not thinner than standard Schedule 40 steel pipe, and
c.6.3. They have a nominal inside diameter not over 2 in. and are spaced not less than 3 diameters on centers.

c.7. In addition to other requirements of Section 6.3, pipes that will contain liquid, gas, or vapor may be embedded in structural concrete under the following conditions:

c.7.1. Pipes and fittings shall be designed to resist effects of the material, pressure, and temperature to which they will be subjected.
c.7.2. Temperature of liquid, gas, or vapor shall not exceed 150°F
c.7.3. Maximum pressure to which any piping or fittings shall be subjected shall not exceed 200 psi above atmospheric pressure
c.7.4. All piping and fittings except as provided in (e) shall be tested as a unit for leaks before concrete placement. Testing pressure above atmospheric pressure shall be 50 percent in excess of pressure to which piping and fittings may be subjected, but minimum testing pressure shall not be less than 150

psi above atmospheric pressure. Pressure test shall be held for 4 hr. with no drop in pressure except that which may be caused by air temperature.

c.7.5. Drain pipes and other piping designed for pressures of not more than 1 psi above atmospheric pressure need not be tested as required in (d).

c.7.6. Pipes carrying liquid, gas, or vapor that is explosive or injurious to health shall again be tested as specified in (d) after concrete has hardened.

c.7.7. No liquid, gas, or vapor, except water not exceeding 90° F nor 50 psi pressure, shall be placed in the pipes until the concrete has attained its designed strength.

c.7.8. In solid slabs the piping, unless it is for radiant heating or snow melting, shall be placed between top and bottom reinforcement.

c.7.9. Concrete cover for pipes and fittings shall not be less than 1 ½ in. for concrete not earth or weather nor ¾ in. for concrete not exposed to weather or in contact with ground

c.7.10. Reinforcement with an area not less than 0.002 times the area of concrete section shall be provided normal to the piping.

c.7.11. Piping and fittings shall be assembled by welding, brazing, or solder-sweating, or other equally satisfactory method. Screw connections shall not be permitted. Piping shall be so fabricated and installed that cutting, bending, or displacement of reinforcement from its proper location will not be required.

d. Construction Joints.

d.1. Where a construction joint is to be made, the surface of concrete shall be thoroughly cleaned and all laitance and standing water removed.

d.2. Vertical construction joints shall be thoroughly wetted and coated with neat cement grout immediately before new concrete placement.

d.3. Construction joints not indicated on the design drawings shall be so made and located as not to impair significantly the strength of the structure

d.4. Construction joints in floors shall be located near the middle of spans of slabs, beams or girders, unless a beam intersects a girder at the middle location, in which case joints in the girders shall be offset a distance equal to twice the width of the beam. Provision shall be made for transfer of shear and other forces through construction joints

d.5. Beams, girders, or slabs supported by columns or walls shall not be cast or erected until concrete in the vertical support members is no longer plastic.

d.6. Beams, girders, column capitals, and haunches shall be considered as part of a slab system and shall be placed monolithically therewith.

e. Coating.

e.1. Before placing the concrete, contact surfaces of forms shall be coated with non-staining mineral oil or suitable non-staining form coating compound, or shall be given two coats of nitrocellulose lacquer, except as specified otherwise.

SEC. 03200 <u>Concrete Reinforcement</u>

a. All materials and workmanship shall conform to the latest b latest ACI Building Code 318.
b. 2. All concrete shall develop a min. Compressive strength at the end of twenty eight (28) days w/ corresponding maximum size aggregate & slumps as follows.

c. All reinforcing bars shall conform to Astm specs grade 33 (227 Mpa) for 12ø & smaller bars and grade 60 (414 Mpa) for 16ø to 25ø bars.

d. In general the latest edition of aci-315, manual of standard practice detailing reinforced concrete structures shall be adhered to unless otherwise shown or noted.

e. Maintain minimum concrete cover for reinforcing steel as follows.

Suspended slabs	----------	3/4 in. (19 mm)
Slab on grade	----------	1 1/2 in. (38 mm)
Walls above grade	----------	1 in. (25 mm)
Beam stirrups & column ties	----------	1 1/2 in. (38 mm)
Where concrete is exposed to earth but poured against forms	----------	2 in. (50 mm)
Where concrete is deposited directly against earth	----------	3 in. (75 mm)

f. Splices shall be securely wired together & shall lap or extend in accordance w/ table 1 (table of lap splice & anchorage length) unless otherwise shown on drawings, splices shall be staggered whenever possible.

Location	28 days strength	Max. Size aggregate	Max. Slump
Foundation	3000 psi (20.7 mpa)	3/4 in. (19 mm)	4 in. (100 mm)
Columns	3000 psi (20.7 mpa)	3/4 in. (19 mm)	4 in. (100 mm)
Suspended beams & slabs	3000 psi (20.7 mpa)	3/4 in. (19 mm)	4 in. (100 mm)
Slab on grade	3000 psi (20.7 mpa)	3/4 in. (19 mm)	4 in. (100 mm)
All others	3000 psi (20.7 mpa)	3/4 in. (19 mm)	4 in. (100 mm)

g. All anchor bolts, dowels, and other inserts, shall be properly positioned & secured in place prior to placing of concrete.

h. Contractor shall note and provide all miscellaneous curbs, sills, stools, equipment's and mechanical bases that are required by the architectural, electrical, and mechanical drawings.

i. All concrete shall be kept moist for a minimum of seven consecutive days immediately after pouring by the use of wet burlap fog spraying, curing compounds or other approved methods.

j. Stripping of forms and shores:

Foundation	----------	24 hrs.
Suspended slab except when Additional loads are imposed	----------	8 days
Walls	----------	18 hrs.
Beams	----------	14 days

k. Development length (Ld) of reinforcing steel bars shall be as follows:

Size of bars (mm)	Development length (mm)
10	375

12	440
16	590
20	730
25	920
28	1030
32	1170

If the depth of concrete cast in one lift beneath the bars exceeds 300 mm, increase the above lengths by 1.40.

SEC. 03300 Concrete Accessories

a. Cement - Portland cement shall conform to the requirement of the standard Specifications and test for the Portland Cement ASM C-150 and the DTI Bureau of Product Standards PNS07-83.

b. Fine Aggregates - shall be coarse sand, crushed stone quarry screening or other inert materials with similar characteristics or a combination thereof having clean, hard, strong, sound, durable, uncoated grains free from injurious amount of dust, lumps, soft or flaky particles, shale, organic matter, loan or deleterious substances, and shall not contain more than three (3) percent of materials passing the No. 200 sieve by washing or one percent of clay lumps or one percent of shale (PNS18-84).

c. Coarse Aggregates

c.1. Shall be crushed rock/gravel with a uniform and stable moisture content; hard, tough, durable, uncoated particles, generally rounded or cubical and reasonably free from thin, flat, elongated particles, free from foreign materials and dust by adequate processing. The approval of all materials taken from the deposits, and the Contractor shall be held responsible for the specified quality of all such materials used in the work.

c.2. Maximum size aggregate shall not be larger than $^1/_5$ of the narrowest dimension between sides of the forms nor larger than ¾ of the minimum clear spacing between reinforcing bars, and in no case greater than 2" in diameter (PNS18-84).

d. Water - shall be clean and free from injurious amount of oils, acids, alkalis, organic materials or other delirious substances detrimental to concrete.

SEC. 03400 Cast-in-place Concrete

a. Ready-mixed Concrete

a.1. Ready-mixed concrete shall conform to ASTM C94 modified herein. Ready-mixed concrete is defined in this specification as concrete produced regularly by a commercial establishment and delivered to the purchaser in the plastic state.

a.2. Subject to the approval of the Construction Architect/Engineer, ready-mixed concrete to be used shall conform to the following: (a) the plant has sufficient capacity and transportation equipment to deliver the concrete at the rate desired, and (b) the plant meets the requirements specified herein before the equipment, measurement of materials, and mixing, except as modified herein. The cement, aggregates, water and admixtures shall conform to all applicable requirements of this specification. Ready-mixed concrete not specified otherwise shall be mixed and delivered by means of (a) truck mixing, (b) central plant mixing, and (c) combination central plant and truck mixing.

a.3. Use Pre-mix concrete with pumpcrete (3,000 psi).

b. Concrete Mixing Methods

b.1. Truck mixing - Concrete shall be mixed and delivered in a truck mixer. Mixers shall be charged with a ribbon-fed mixture of aggregates and cement, or in the absence of facilities for ribbon feeding, the aggregates shall be charged before the cement. When mixing has begun during or immediately after charging, a portion of the mixing water not in excess of that required producing the minimum acceptable slump shall be added ahead of or with the other ingredients. Total mixing shall not be less than 50 nor more than 100 revolutions of the drum at the manufacturer's rated mixing speed after all ingredients including water are in the drum, except as follows: after 30 to 75 revolutions of the drum the slump shall be tested and additional water shall be added if necessary to produce the required slump. If additional water is necessary, mixing shall be continued for at least 20 revolutions of the drum after the water is added. Mixing speed shall not be less than ___ rpm for revolving drum mixers, and not less than 4 rpm nor more than 16 rpm for open-top mixers. Any turning of the drum during transportation shall be at the speed designated by the manufacturer of the equipment, agitating speed. Each batch of concrete delivered at the job site shall be accompanied by a time slip issued at the batching plant, bearing the time of departure therefrom and the signature of the inspector. Discharge of concrete from the drum shall be completed within 1 hour or before the drum completes 250 revolutions after the introduction of water to the cement and aggregates.

b.2. Central plant mixing – Concrete shall be mixed completely in a stationary mixer at a plant and transported to the site of the work in a truck agitator or a truck mixer operating at a speed of rotation designated by the manufacturer as agitating speed. Mixing shall begin within 30 minutes after cement has been added to aggregates. When authorized in writing by the Construction Architect/Engineer, non-agitation equipment approved by him may be used for transporting concrete. The time lapse between the introduction of the mixing water to the cement and aggregates and the placing of concrete in final position in the forms shall not exceed: (a) for agitating equipment – 60 minutes, air temperature less than 26 degrees Celsius and 45minutes, air temperature equal or greater than 29 degrees Celsius, (b) for non-agitating equipment – 30 minutes.

b.3. Combination central plant and truck mixing – Concrete shall be partially mixed in a central plant mixer and the mixing completed in a truck mixer. The mixing time in a central plant mixer shall be the minimum required inter-mingling the ingredients and shall not exceed 30 seconds. The mixing shall be completed in a truck mixer as specified herein before under truck mixing.

c. Placing of Concrete

c.1. No concrete shall be placed after there is evidence of initial set. All concrete placing equipment and methods shall be subject to the approval of the Construction Architect/Engineer. Concrete placement will not be permitted when weather conditions prevent proper placement and consolidation.

c.2. Before placing concrete on porous sub-grades, they shall be dampened as directed by the Construction Architect/Engineer. Forms shall be clean and free from dirt, construction debris and water.

c.3. Concrete shall be deposited in horizontal layers approximately 31 to 51 cm. deep in a manner to preclude the formation of cold joints between successive layers.

c.4. The method of depositing concrete shall be such as to avoid displacing the reinforcement and segregating the aggregate. Concrete shall be worked about the reinforcement and embedded fixtures and avoid overworking which may result in segregation.

c.5. On the bottom of slabs, the girders where the congestion of steel near the forms makes placing difficult, a layer of mortar equal to the approved slump shall be deposited to cover the surface to a depth of approximately 25 mm before placing the concrete.

c.6. Water which accumulates on the surface of the concrete during placing shall be removed by absorption with porous materials in a manner that prevents removal of concrete.

c.7. Placing of concrete with a free drop or a fall of more than five feet (5' - 0") is not allowed.

c.8. No placing of concrete will be allowed without vibrators. Segregation due to over vibration shall be avoided.

c.9. If possible, concreting shall be done continuous until section is complete. When stoppage of concreting operations occur, construction joints shall be placed either horizontally or vertically as indicated, approved by the Construction Architect/Engineer and provided with shear keys to dowels to develop bond. Construction joints shall be as per plan or shall be approved or as directed by the Construction Architect/Engineer.

SEC. 03500 Concrete Curing

a. Keep concrete continuously wet or moist for at least one (1) week after placing. Floors and vertical surface may be sprayed with an approved retarder. Curing shall begin as soon as concrete has attained initial set.

b. Curing additives may be used. A minimum of 48 hours continuous moist curing after placing of concrete shall be done after subsequent additional curing can be dispensed with.

c. When 7-day compression test cylinders, with representative of parts of a structure already placed, indicate that the 28-day strengths may be less than 90% of the design strengths, those parts of the structure shall be given, as directed by the Project Engineer.

d. Curing shall be as follows: 10 days – pavement not under cover; 7 days – all concrete not specified otherwise.

SEC. 03600 Concrete Sampling

a. The strengths specified and the design mix shall be verified during the progress of the work at intervals by testing standard cylinders of samples taken at the job site.

b. Three test cylinders shall be taken for each 60 cubic meter or fraction thereof of each class of concrete placed, but at least 3 test cylinders shall be taken each day for each class of concrete placed that day, or as directly by the Construction Architect/Engineer.

c. Not more than 3 cylinders shall be taken from any one batch. The making and curing of test specimen shall be in accordance with ASTM C31.

d. The Contractor shall furnish the necessary labor, materials, and facilities for taking samples, handling, storing the cylinders at the site of the work, and shipping the cylinders for testing to the authorized and designated testing laboratory at his expense.

SEC. 03700 Compressive Testing

a. Testing of specimens for compressive strength shall be in accordance with ASTM C39. Test will be made on the 14^{th}, 21^{st} and 28^{th} day from time of molding.

b. When a satisfactory result in the 14-day strength has been established, the 14-day test result may be used as an indicator of the 21- and 28-day strength.

c. Each test shall be the average of the strengths of the three test specimens of a set except that if one specimen in a set of three shows evidence of improper sampling, molding, handling or curing, the remaining two specimens shall be considered the test result.

SEC. 03800 Test Failure

a. If test results of any concrete to be used in the project show that the concrete strength is below the specified limits and does not meet other requirements of this specification, the Contractor shall make all necessary adjustments, as directed by the Construction Architect/Engineer at the Contractor's expense.

b. Concrete, which at the end of 28 days, does not meet the specified strength shall be removed or otherwise corrected, at the Contractor's expense, with corrective methods subject to the approval of the Construction Architect/Engineer.

DIVISION 4: MASONRY

SEC. 04000 General Requirements

a. Scope of Work

a.1. The work shall include all masonry work, cement work, and all other works required to provide complete masonry and cement work.

a.2. All materials shall be delivered in original cartons, boxes or containers with labels intact and seals unbroken. Trademark is required on materials not delivered in containers and/or cartons and/or boxes.

a.3. All materials shall be stored properly to preserve its quality and strength.

SEC. 04100 Mortar

a. Materials

a.1. ***Sand*** - shall comply with ASTM C-33, be coarse and crushed stone quarry screening or other inert materials with similar characteristics or a combination thereof having clean, hard, strong, sound, durable, uncoated grains free from injurious amount of dust, lumps, soft or flaky particles, shale, alkali, organic matter, loam or deleterious substances, and shall not contain more than three percent of material, passing the No. 200 sieve by washing not more than one percent (1%) of either clay or silt by volume.

a.2. ***Cement*** - Portland Cement shall conform to the Standard Specifications for Portland Cement (ASM Designation 3150, latest revision) for type Portland Cement and shall be constant and of the same brand and source throughout the project.

a.3. ***Water*** - shall be clean and free from injurious amount of soils, acids, alkali, organic materials or other deleterious substances detrimental to concrete.

b. Mixes

b.1. ***Cement Mortar***

1: 2 mixture - 1 part Portland cement, 2 parts Sand
1: 3 mixture - 1 part Portland cement, 3 parts Sand

b.2. ***Water*** - depending upon the strength or plasticity required.

c. Installation or Execution

c.1. Measure materials with approved containers to ensure specified proportion.

c.2. Use mortar while in plastic state.

SEC. 04200 Unit Masonry

a. Handling and Storage

a.1. Handle to prevent chipping breakage
a.2. Protect storage piles from heavy traffic
a.3. Storage piles should not rest on soil.

b. Materials

b.1. Concrete Hollow Block - 15 cm. x 20 cm. x 40 cm. minimum compressive strength:

Loading bearing : 850 psi
Non - loading bearing : 350 psi

b.2. Concrete Hollow Blocks - 10 cm. x 20 cm. x 40 for all interior walls and passage.
b.3. Mortar - 1 : 3 mixture
b.4. Ties - G.I. Wire, gauge No. 16
b.5. Reinforcing bars - See structural drawings.

c. Installation / Erection

c.1. Lay all units plumb, true to line, level, and accurately spaced.
c.2. Set in place all anchors, wall plugs, and accessories to masonry as erection progresses.
c.3. Bed solidly each course on Portland cement mortar.
c.4. Wedge tight with mortar and reinforce properly to do well all units terminating against beams, columns, slabs
c.5. Provide R.C. columns and stiffener band beams as indicated in the plans.
c.6. Set back all unfinished work for joining with new work.
c.7. Remove all loose mortar and thoroughly wet exposed joints not less than one hour before laying new work.

DIVISION 5: METALS

SEC. 05000 <u>Miscellaneous Metals</u>

a. General

a.1. ***Scope of Works*** - The work consists of furnishing of all labor, tools, equipment, appliances and materials and performance of all operations relative to the fabrication, delivery to site, erection and painting of miscellaneous metal work including stair railings, corridor railings, PWD ramp grab bars, toilet grab bars and exterior metal louvers to be installed at rear elevation of the 5-storey information technology (I.T. Building).

a.2. ***Design Conditions*** - Connections for which details are not indicated shall be designed in accordance with the American institute of Steel Construction "manual of Steel Construction" and shall be welded or bolted, except as specified otherwise. Welding shall be done in a manner that will prevent permanent buckling and all welds exposed in the finished work shall be ground smooth. Steel and iron shall be standard well-finished structural shapes, plates, or bar steels or bar irons. All finished and/or machined faces shall be true to line and level. Materials, and parts necessary to complete each item, through such work is not shown or specified shall be included, such as miscellaneous bolts and anchor supports, braces, and connection etc.

a.2.1. Shop drawings as well as erection drawing shall be submitted by the Contractor for approval by the Owner or Construction Architect/Engineer before any fabrication is made.

a.2.2. Shop drawings, giving complete information necessary for the fabrication of the component parts of the structures, including the location, type and size of all rivets, bolts and welds, shall clearly distinguish between shop and field rivets, bolts and welds.

a.2.3. Shop drawings shall be made in conformity with the best modern practice and with due regard to speed and economy in fabrication and erection.

b. Products

b.1. All structural steel shapes and plates shall conform to ASTM A-36 steel and shall have a minimum thickness of 3/16" (4.762 mm).

b.2. Light-gauge Cold-formed structural steel shall conform to pertinent specifications of the American Iron and Steel Institute (AISI).

b.3. Welding electrodes shall conform to AWS A.S.I. or A 5.5 E70 xx electrodes. Manufacturer's certification shall conform conformity to this specification.

b.4. Bolts and nuts for main members shall be high strength bolts conforming to ASTM A 325. Bolts shall mark an identification that it is such a kind of bolt. For secondary members ASTM A 307 bolts may be used. Care shall be taken so that, different types of bolts do not get interchanged. All bolts shall be provided with plain washers.

b.5. Anchor bolts shall conform to ASTM A307 and applicable portions of A36.

b.6. Shop coat of paint shall be red lead primer unless the Owner or Construction Architect/Engineer approves of a substitute.

c. Execution

c.1. Fabrication - Field fabrication shall be kept to a minimum and shop fabrication shall be employed to the greatest extent possible with members shop fabricated as long as practicable with a minimum requirement for field connection. Welding, shearing, gas cutting, chipping and all other works involved in the fabrication of structural steel shall be done with accuracy and of the highest quality of workmanship, within the allowable tolerance prescribed in the AISC Specifications.

c.2. Welding

c.2.1. The technique, appearance and quality of welds and the method of correcting defective work shall conform with the American Building Society Code for the Arc Welding in Building Construction. Welding in shop and filed shall be done only be certified operators to perform the work required as in the approved drawings. Surfaces to be welded shall be free from the loose side, rust, grease, paint and other materials.

c.2.2. Temporary weld and assembly attachments shall be kept to a minimum. All temporary attachments that are welded shall be removed by a flame torch above the parent metal surface and ground to smooth surface by power grinding.

c.2.3. If, for any reason, the Owner or Construction Architect/Engineer believes that a defect exists in any weld, it shall be the Contractor's responsibility to repair questioned weld to the satisfaction of the Owner or Construction Architect/Engineer.

c.2.4. Note shall be made on the plans and on the shop drawings of those important joints or groups of joints in which it is especially important that the welding sequence and technique of welding be carefully controlled to minimize welding under restraint and to avoid undue distortion. Weld length called on the plans and on the shop drawings shall be the net effective lengths.

c.3. Connections and Holes

c.3.1. Connections shall be as shown in the drawings and shall develop the full capacity of the members.

c.3.2. Surfaces or joints prepared for welded or high strength bolted connections shall comply with the cleanliness requirements of all joint surfaces and contact surfaces within friction type's joints as specified in section 3, "Bolted Parts of the AISC Specifications."

c.3.3. Holes shall be punched or drilled at right angles to the surface of the metals and shall be enlarged by burning. Holes shall be clean-out without rugged edges. Outside burst resulting from drilling or reaming operations shall be removed with a tool which reaches a 1/16" (1.588 mm) level around the bolt holes.

c.4. Quality Control Procedures

Quality Control Procedures shall be practiced by the Fabricator to assure high quality in the work. In addition to the Fabricator's quality control procedures, materials and workmanship shall be subject to inspection by qualified Inspectors representing the Owner or Construction Architect/Engineer. Fabricator shall cooperate harmoniously with the inspector to avoid interruption in the work, when correction will be needed.

c.5. Rejections

Rejections - Materials or workmanship not in reasonable conformance with the provisions of these specifications shall be rejected at any time during the progress of the work. The fabricator shall receive copies of all reports made by the inspector authorized by the Owner or Construction Architect/Engineer.

c.6. Erection

c.6.1. The steel structures shall be erected plumb and true to line and grade. Bracings and supports shall be introduced whenever necessary to take care of all the loads to which the structure may be subjected. Such bracings shall be left in place as long as may be required for safety.

c.6.2. Base plates and bearing plates shall be supported on steel wedges or shims until the supported members shall have been lined and plumb, following which the entire bearing area shall be grouted solid with non-shrink cement grout. Grouting mortar shall be of the commercial type approved by the Owner or Construction Architect/Engineer and method of use shall be recommended by manufacturer.

c.7. Marking

Shop fabricated members shall be marked prior to delivery to facilitate the erection of the members. Markings shall be listed and given description and copies of which shall be furnished to the field, the Owner and the Construction Architect/Engineer. Markings shall be neatly painted on the members with a distinctive color of enamel paint.

c.8. Shop Painting

Steel works to be encased in concrete shall not be painted. All other steel works shall be given one coat of shop paint of red lead primer, applied thoroughly and evenly to dry surfaces, which have been cleaned, by brush, spray roller coating, flow coating or dipping at the selection of the Fabricator. Steel work prior to painting and after inspection and approval shall be cleaned of loose mill scale, loose rust, weld slag or flux deposit, dirt and other foreign materials. Oil and grease shall be removed by solvent. Parts of the steelworks which shall be fielded welded or connected shall not be painted.

All steelworks specified to have no shop paint shall likewise be thoroughly cleaned.

c.9. Field Painting

Field Painting - All steelworks after complete erection, shall be field painted with the type and color specified in the section of the painting of this specification. Painting shall not be done on any steel surface that is thoroughly clean and dry.

SEC. 05100 <u>Structural Steel Works</u>

a. Scope - This section includes structural steel work, complete.

b. General - Connections for which details are not indicated shall be designed in accordance with the "American Institute of Steel Construction Manual of Steel Construction", and shall be welded or bolted.

c. Requirements

c.1. Handling, shipping and storing steel work – all materials shall be handled, shipped and stored in a manner that will prevent distortion or other damage. Materials shall be stored in a clean location and keep properly drained. All damaged materials shall be replaced or repaired by and at the expense of the Contractor.

c.2. Structural carbon steel for bolted or welded work shall conform to ASTM A36.

c.3. Structural tubing for bolted or welded work, shall conform to ATSM A500 or A501.

c.4. Common bolts and nuts shall conform to the requirements for regular hexagon bolts and nuts of ANSI 818.2.1 and 818.2.2. Materials shall conform to ASTM 307.

c.5. Washers – Circular washers shall be flat and smooth and shall conform to requirements for Type A washers in ANSI B 27.2. Beveled washers shall conform to American Standard Beams and channel shall be square or rectangular, tapered in thickness, and shall be smoothed. Washer for use with high strength bolts shall be hardened.

c.6. Welding electrodes and rods.

c.7. Submerged arc welding – Bare electrodes and flux for submerged arc welding shall conform to the requirements of AWS D1.0, and the following grades:

Steel	Grade
A36	SAW-1 or SAW-2

d. Fabrication

d.1. General – Except as modified herein, fabrication shall be in accordance with the applicable specifications and standards of the American Institute of Steel Construction. Workmanship shall be equal to standard commercial practice in modern structural shops. Portions of the work exposed to view shall be finished neatly. Structural materials, wither plain or fabricated, shall be stored above the ground on platforms, skits, or other supports. Materials shall be kept from dirt, grease, and other foreign matter, and shall be protected as far as practicable from corrosion. All materials shall be cleaned and straight. If straightening or flattening is necessary, it shall be done by a process and in a manner that will not damage the material. Shearing, flame-cutting, chipping shall be done carefully and accurately. The radii of a re-entrant gas-cut fillet shall not be less that 25 mm and as large as practicable. The top and bottom surfaces of base plates, cap plates of columns and sole plates shall be planed, or the plates shall be hot straightened and parts of members in contact with them shall be faces.

d.2. Bolted construction – Holes for bolted construction shall be 1.59 mm larger than the nominal diameter of the bolt. Holes shall be clean cut without torn or ragged edges. Outsides burrs resulting from reaming or drilling shall be removed. For punched holes the diameter of the die shall not exceed the diameter of the punch by more than 1.59 mm. the dies for sub-punched holes shall be at least 1.59mm smaller that the nominal diameter of the bolt. If any hole must be enlarged to admit the bolts, they shall be reamed. Reamed holes shall be cylindrical and perpendicular to the member. Where practicable, reamers shall be directed by mechanical means. After assembly of the member and before reaming, holes punched full size and holes sub-punched shall admit a cylindrical pin 3 mm less in diameter than the nominal size of the holes perpendicular to the face of the member without drifting in not less than 85 percent of the holes in any contiguous group, after reaming or drilling, shall show no offset greater than 79 mm between adjacent thickness of metal. Bolts' holes shall be at right angle to the member. The slope of bolted parts in contact with the bolt head shall not exceed 1:20 with respect to a plane normal to the bolt axis. Where the surface of a bolted path has slope of more than 1:20, beveled washer shall be used to compensate for the lack of parallelism.

d.3. Structures subject to static loading – Holes for bolts shall be drilled or sub-punched and reamed, except that where the thickness of the material is not greater than the nominal diameter of the bolt plus 3 mm, the holes may be punched full size.

d.4. Common bolts – bolts transmitting shear shall be threaded to such a length that not more than one thread would be a within the grip of the metal. The bolts shall be of such length that they will extend entirely through the nuts with the beveled end outside the nut. Bolt heads and nuts shall be drawn tight against the work with a suitable wrench not less than 38 cm long. Bolt heads shall be tapped with a hammer while the nut is being tightened.

d.5. Shop painting – All structural steel work, except zinc-coated surfaces and steelwork to be embedded in concrete or mortar, shall be shop painted. Surfaces to be welded shall not be coated within 75 mm of the weld, prior to welding. Surfaces shall be thoroughly dry and clean when the paint is applied. No painting shall be done in wet weather except under cover; the temperature shall be above 7 degrees C. but not over 32 degrees C. Paint shall be applied thoroughly. Surfaces that will be concealed or inaccessible after assembly shall be painted prior assembly.

e. Cleaning – Except as modified herein, surfaces shall be cleaned to bare metal by a suitable blasting process. Surfaces that may be damaged by blasting shall be cleaned to bare metal by powered wire brushing or other mechanical means. Surface that will be enclosed from the weather and subject to

exposure no more corrosive than an indoor atmosphere controlled for human comfort, may be cleaned by wire brushing or other manual or mechanical means of removal of loose mill scale, rust, dirt, or other deleterious substances. Cleaned surfaces which become contaminated with rust, dirt, oil, grease or other contaminants shall be washed with solvent until thoroughly clean. Steel to be embedded in concrete shall be free from dirt and grease. Bearing surfaces, including contact surfaces within friction-type joints, shall not be painted nor galvanized but shall be coated with rust preventive coating, applied in the shop. The coating shall be removed just prior to field erection using a remover approved by the rust preventive manufacturer. The surfaces, when assembled, shall be free from rust, grease, dirt, and other foreign matter.

f. Pre-treatment – except as modified herein, immediately after cleaning, surfaces shall be coated with a coat of pre-treatment coating applied to a dry film thickness of 0.30 to 0.50 mil or be given a crystalline phosphate base coating except that the phosphate base coating shall be applied only to blast-cleaned bare metal surfaces.

g. Priming – treated surfaces shall be primed as soon as practicable after the pre-treatment coating has dried. Except as modified herein, the primer shall be two coats of epoxy type or as specified in Section: Filed Painting applied to a minimum dry film thickness of 3 mils. Surfaces that will be concealed after construction and will require no over-painting may be primed. Damage to promised surfaces shall be repaired with primer.

h. Match Marking – Members and component part of structure shall be assembled and match marked prior to erection to ensure accurate assembly and adjustment of position on final erection. Painted assembly markings shall be removed from any surface o be welded or riveted. Scratch or notch marks shall be located in a manner that will not affect the strength of the member or cause concentrations of stress.

i. Erection

i.1. General – except as modified herein, erection shall be in accordance with the applicable specifications and standard of the AISC "Manual of Steel Construction". Erecting equipment shall be suitable for the work and shall be in first class condition. Where parts cannot be assembled or fitted properly because of errors ion fabrication or of deformation due to handling or transportation, such condition shall be reported immediately to the Construction Architect/Engineer and his approval of the method correction obtained. The correction shall be made in his presence. Bent or damaged parts shall be rejected. Steelwork shall be drained properly. Pockets in structures exposed to the weather shall be filled with waterproof material. Safety belts and lines shall be used by workers on high structures, unless safe working platforms or safety nets are provided.

j. Assembly – the frame of steel structures shall be carried up true as shown and all match markings be followed. Temporary bracing shall be used wherever necessary to support all loads to which the structure may be subjected, including equipment and operation thereof and piles of materials. Such bracing shall be left in a place as long as may be required for safety. The various members forming parts of a completed frame after being assembled shall be aligned and adjusted accurately before being fastened. Fastening of splices of compression members shall be done after the abutting surfaces have been brought completely into contact. No riveting, welding or bolting, shall be done until much of the structures shall be stiffened and has been aligned properly. Bearing surfaces and surfaces which will be in permanent contact shall be cleaned before the members are assembled. As erection progresses, the work shall be bolted or welded sufficiently to take care of all the dead load, wind, and erection stresses. Spliced will be permitted only where indicated. Erection bolts used in welded construction may be tightened securely and left in place; in removed, the holes be filled with plug welds.

k. Field Bolting shall be in accordance with the requirements specified for shop fabrication. Unfair holes shall be corrected by reaming.

l. Field Welding shall be specified for shop fabrication of welded construction. Any shop paint on surfaces adjacent to joints to be field-welded shall be wire-brushed to reduce the paint film to a minimum.

m. Field Painting – all exposed surfaces of steelwork shall be shop-painted, surfaces where the shop coat of paint has been damaged shall be retouched using the same system as the original shop painting. Surfaces which will be in contact after erection, except when in contact with bolted or welded connections, and shall be given one finish coat before erection. The cleaning, pre-treatment and priming of welds and the areas adjacent thereto shall be done promptly after the acceptance of the weld and shall be as specified under the shop painting.

n. Inspection

n.1. General – Contactor's inspection shall be made promptly to permit immediate correction of defects. The inspector shall stamp each piece which is accepted, with the mark assigned to him. The Contractor shall be fully responsible for the accuracy and character of the work in all details. Errors or faults which are discovered after delivery or during erection shall be corrected by the Contractor in accordance with the requirements of the contract and without increase in the contract price. He shall provide competent supervision and visual inspection of all fabrication through shop inspectors whose primary duty is inspection.

o. Shop Drawings – submit shop drawing of the required steel framing assemblies for roofing structures and other applications for approval prior to procurement.

DIVISION 6: THERMAL AND MOISTURE CONTROL

SEC. 06000 Long Span Pre-Painted Roofing

a. **Scope** - The work includes long span pre painted roofing, complete.

b. **General** - The work includes furnishing all materials and performing all operations to provide roofing and miscellaneous sheet, metal items as required providing a watertight installation. Surfaces to which roofing is to be applied shall be thoroughly clean and dry and free from any defect that might affect the application. Specific installation details shall be in accordance with recognized sheet- metal installation practice.

c. Materials

c.1. Roofing system shall be gauge 24 pre-painted long span, galvanized prior to painting of silicone modified polyester or approved equivalent, configuration as shown; roof accessories as per manufacturer's detail, and connection on trusses and purlins shall be as per details and structural design. Materials shall be of approved products, with pre-insulation system or any equivalent approved by the Owner.

c.2. Ridge rolls and flashings shall be flat sheets, gauge 24, same as the roofing.

c.3. Install 10mm thick foamed polyethylene insulation sheet with double aluminum coating.

c.4. Install 4.5mm Polycarbonate solid type roofing sheet complete with flashing, connector and other accessories.

d. Fasteners

d.1. All fasteners shall be of the underneath type. Straps shall be pre-formed of galvanized steel not lighter than gauge 24.

d.2. Solder shall be of composition Sn 50.

d.3. Soldering flux shall be of resin type, unless otherwise specified.

e. **Installation** - Except as specified herein, all materials shall be installed in accordance with the manufacturers' printed erection instructions. Care shall be exercised in storing, handling, and installing to prevent any damage to roofing and siding sheets. The sheets shall be of the long-span type with no end lapping. Size of fasteners used in erection shall be as recommended by the manufacturer. All metal shavings shall be swept from roofs on completion of the work.

e.1. Joint sealing material shall be provided to seal all joints in and around sealing strips or ridges, eaves, valleys and bolt holes before inserting fasteners for all flashings and elsewhere as necessary to provide watertight construction

e.2. Fastenings. All end laps in roofing shall be not less than 31cm. All roofing sheets shall be fastened to framing members with the fasteners specified herein.

e.3. Sheet metal flashing shall be secured to roofing with cadmium-plated or zinc-coated sheet metal screws in accordance with the manufacturer's recommendation.

e.4. Sheet metal works like flashing, eaves roll, and ridge roll shall be provided as shown and where necessary to make the work watertight. Flashing shall not be bent at sharp angles but shall be worked too as large a radius as possible. Allowance shall be made for expansion and contraction of all sheet metal.

f. **Performance of Roofing** - Roofing and all sheet metal works shall be completely weather tight, free of abrasions, loose fasteners, and deformations.

g. **Prior to procurement and delivery, brochures or catalogs of the product** to be used shall be submitted for approval by the University Engineer/Architect.

SEC. 06100 <u>Cementitious Waterproofing</u>

a. Scope - This section includes cementitious waterproofing system, complete.

b. General - The cementitious waterproofing coating shall be a complete system of compatible materials to create a seamless waterproof application.

c. Product Delivery, Storage and Handling

c.1. Delivery. Materials shall be delivered in original sealed containers, clearly marked with brand name and type of materials.

c.2. Storage. Materials shall be stored in 29 degrees Celsius with normal handling to prevent damage to container. Do not store for long periods in direct sunlight.

d. Cementitious Coating - It shall be a mixture of high early strength Portland cement with fine silica sand and water- white elastomeric chemicals for polymerization – to provide a cementitious water barrier for concrete. Application of cementitious coatings shall be 90mils thick.

e. Surface Preparation - All surfaces on which coating is to be applied shall be steel trowelled finish, dry, clean, smooth, free from oil or grease and from projections that might puncture the coatings. Floor surfaces shall be

kept dry prior to and during installation. Final cleaning method, if necessary, shall be treating the concrete surfaces with 10% to 15% solution of muriatic acid to remove laitance and impurities. After acid has stopped foaming or boiling, immediately rinse thoroughly with water. Keep the surfaces dry prior to and during the installation. Concrete surfaces and all surfaces that slope to drain shall be checked and approved before installation of any coating is started. All defects or inaccuracies in the surfaces shall be corrected in satisfactory manner to eliminate poor drainage, hollows and low spots.

f. Inspection - Verify that the concrete work done under other sections meets the following requirements:

f.1. Concrete surfaces are free of ridges or sharp projections.

f.2. Concrete must be cured for a minimum of 14 days.

f.3. Concrete shall be finished by a power or hand steel trowel followed by soft hair to obtain light texture or "light sidewalk" finish.

g. Application

g.1. Method of application shall be as per manufacturer's specifications to attain the thickness specified.

g.2. At all integral flashing, apply 120mil thick of cementitious coating to the surface to be flashed extending 150mm unto the floor slab and up to the vertical wall.

g.3. Concrete shall be finished by a power or hand steel trowel followed by soft hair to obtain light texture or "light sidewalk" finish.

g.4. Apply cementitious coating primer as first coat at 15 square meters per 4 liter container.

g.5. Apply two coats of cementitious top coating approximately 45 mils thick per coat after other coat has completely dried. Total thickness of membrane waterproofing shall be approximately 90mils. Others shall do mortar setting bed for tile works to cover the membrane waterproofing.

g.6. Material application shall be made by trowel, brush or squeegee.

h. The waterproofing system shall be guaranteed for a minimum of five years against leakage, supported with a certificate of maintenance guaranty.

i. Flood Testing

i.1. Waterproofed areas shall be given 24-hour flood test upon completion of the waterproofing. Allow system to cure 48 hours prior to flood test, or until dry enough to support foot traffic and test.

i.2. Plug drains and places barrier to contain the water.

i.3. Repair any leaks that may occur.

i.4. All debris resulting form completion of work shall be removed from the project.

j. Performance of Waterproofing - Waterproofing works shall be done in a skillful manner, completely watertight, and free from loose applications. The Contractor shall submit a guarantee certificate against water leaks for a period of Five (5) years.

Shop Drawings - Prior to procurement and delivery, the Contractor shall submit brochure and sample of

cementitious waterproofing materials to be used for approval.

DIVISION 7: FINISHES

SEC. 07000 Plastering

a. General Requirements

All masonry unit work not specifically specified with a finish, exposed to view shall be cement-plastered. Plastering work shall be coordinated properly with the work of other trades. The work of other trades shall be protected properly from damages during plastering operations. Floors and finished work shall be properly protected with a covering of polyethylene sheets or heavy kraft waterproof paper, with lapped and sealed joints. Scaffolding shall be amply strong, well braced, tied securely and inspected regularly. Overloading of scaffolding will not be permitted/

b. Materials

b.1. Portland cement shall conform to PNS 07-1992, type 1.

b.2. Sand shall be clean natural sand or manufactured sand passing a 3mm screen and retained in a No. 100 mesh sieve.

b.3. Water for mixing shall be potable.

b.4. Lime shall be hydrated lime with the requirement that the free (unhydrated) calcium oxide (CaO) and magnesium oxide (MgO) in the hydrated product shall not exceed 8 percent by weight calculated on the "as received" basis.

c. Mixing of Plaster

Except where hand mixing of small patches is approved, mechanical mixers of an approved type shall be used for mixing of plaster. Materials shall be accurately measured in a device that will maintain the specified proportions within a plus or minus tolerance not in excess of 5 percent by volume. Caked or lumped materials shall not be used. Mechanical mixers, mixing boxes, and tools shall be cleaned after mixing each batch and kept freely of plaster from previous mixes. Plaster shall be thoroughly mixed with the proper amount of water, until uniform in color and consistency. Re-tempering will not be permitted, and all plaster that has begun to stiffen shall be discarded.

d. Proportioning of Plaster

Portland cement plaster shall be a two-coat application. Each coat shall be proportioned as follows: one part Portland cement, three parts sand and 1/5 part lime putty.

e. Application of Plaster

e.1. Workmanship

Based coats shall be applied with sufficient pressure and the plaster shall be sufficiently plastic to provide good bond on masonry or concrete base. Plaster work shall be finished level, plumb, square, and true, within a tolerance of 3 mm in 3 m, without eaves, cracks, blisters, pits, grazing discoloration, projections, or other imperfections. Plasterwork shall have no visible junction marks where one day's work adjoins another. Finished work shall be covered and protected in an approved manner to prevent damage.

e.2. Portland Cement Plaster

Shall be applied in two coats double up method on masonry or concrete to a thickness of not less than 12mm. Based coats shall be applied with sufficient pressure and excessive evaporation during hot or drying weather conditions. Care shall be taken to prevent staining the finished plaster.

e.3. Patching and Pointing

Upon completion of the building and when directed, all loose, cracked, damaged or defective plastering shall be cut out and re-patched in a satisfactory and approved manner. All point-patching of plastered surfaces and plaster work abutting or adjoining any other finish work, shall be done in a neat and workmanlike manner. Plaster droppings or splattering shall be removed from all surfaces. Exposed plastered surfaces shall be left in a clean unblemished condition ready to received paint or other finish. Protective covering shall be removed from floors, other surfaces and all rubbish and debris shall be removed from the building.

e.4. Sample requirement

Prior to application of plasterwork, the Contractor shall apply a one-small-wall sample of plastering of the expected completed work on a designed area at the job site for workmanship approval by the architect.

SEC. 07100 <u>Painting Work</u>

a. General Requirements

Surfaces to be painted shall be thoroughly cleaned. Interior areas shall be broom-cleaned and dust-free before during the application of any painting materials. Paint colors not specified shall be as approved by the University Architect. Paint finishes not specified shall be flat, semi-gloss, or gloss as directed. Damaged painting shall be retouched before the succeeding coat is applied. Finish surfaces shall be smooth, even, and free from defects. The number of paint coats specified shall be in addition to the shop priming coats.

b. **Delivery and Storage** - Paints and paint materials shall be delivered in sealed containers that plainly show the brand name of the manufacturer. Storage of paints and paint materials and the mixing of paints shall be restricted to the location directed.

c. Materials

c.1. Materials for Surface Preparation
c.2. Elastomeric paint
c.3. Acrylic latex paint
c.4. Quick Dry enamel paint
c.5. Epoxy primer
c.6. Latex flat primer paint

d. **Preparation Surfaces** – All dirt, rust, scale, splinters, loose particles, disintegrated paint, grease, oil and other deleterious substances shall be removed from all surfaces that are to be painted.

d.1. Concrete and plaster shall be repaired before painting. Dirt, fungus, grease and oil shall be removed prior to application of paint.
d.2. Puttying of concrete and plaster surfaces shall be done after the priming coat has been applied and has dried properly. Sandpapering will be required prior to second coat of paint to provide an even and smooth surface. Prior to top coating of paints, prepared surfaces shall be as approved.

d.3. Metal surfaces to be painted shall be given one coat of pre-treatment coating immediately after being cleaned. This includes zinc-coated surfaces and unprimed steel and iron surfaces. Primer paint shall be applied over the pre-treatment coating when practicable after the coating has dried.

e. Workmanship

e.1. Shall be first class in every respect. The work shall be conducted as to avoid damage to other surfaces. Any damage thereto shall be made good by the Contractor at his expense.

e.2. Sufficient time shall be allowed between coats to ensure thorough drying. Each coat shall be in proper condition before the next coat is applied. Sanding and dusting as required, shall be performed to produce finishes, which are free from visible defects when viewed from a distance of 1.50 m.

e.3. Finish coat shall be smooth and free from runs, sags, or other defects. Each coat of paint shall be of sufficient thickness to cover completely the previous coat or surface.

f. **Submittal requirements** – The contractor shall submit for approval brochures or catalogs for the paint system to be used on the different surfaces to be applied. A one square meter sample of finished surfaces for each kind of paint application shall be provided on a designated area at the job site for color and workmanship approval for the expected painting works

DIVISION 8: WINDOWS

SEC. 08000 <u>Windows</u>

a. Scope - This section includes aluminum windows & frames, complete.

b. Storage and protection - Materials shall be stored out of contact with the ground and shall be arranged to avoid bending, warping or otherwise damaging the fabricated windows.

c. Materials

c.1. Windows shall be casement and awning type, and color and configuration shall be as shown or as approved by the owner.

c.2. Aluminum sliding windows shall be horizontal type; frames shall be standard sizes or as indicated, with gray powdered coated finish. Glass shall be tempered, 6mm thick, gray tinted, as approved.

c.3. Locking of windows shall be multiple point, lockable and unlockable, with lever type handle.

d. Installation Requirements - Windows shall be installed without forcing or distortions so that sills and heads are level and jambs are plumb. Window frames shall be securely anchored into the supporting construction. Joints between aluminum windows and aluminum members, including mullions, shall be set in mastic and weather-stripping of the type recommended by the window manufacturer and as approved, to provide completely watertight joints. After installation and glazing, each window shall be checked for proper operation and adjusted as necessary to provide an even sash edge contact of operating sash. Aluminum surfaces shall be cleaned and any staining or discoloring of the finish shall be restored or the unit replaced.

e. Shop Drawings - Prior to fabrication and delivery, shop drawings, catalog cuts, and sample of cut profiles shall be submitted for approval.

DIVISION 9: SPECIALITIES

SEC. 09000 Toilet and Bath Accessories

a. General Requirements – Accessories are as shown on the drawings and as specified herein. The Contractor shall furnish and install all toilet accessories as listed or indicated on the drawings.

b. Product delivery, storage and handling – Delivery of materials shall be so scheduled as to allow for immediate installation. Products shall be protected and kept under cover both during transit and at the jobsite. Handle products carefully to prevent damage.

c. Materials

c.1. Manufactured materials shall be delivered in the manufacturer's original unbroken packages or containers that are labeled plainly with the manufacturer's name and brand. Materials shall be stored in any weathertight enclosures, and shall be handled in a manner that will prevent damage.

c.2. Models shall be as specified herein and shall be provided with color as indicated in the drawings or as approved. Contractor shall furnish and install all indicated toilet and bath accessories including all required fittings.

d. Installations –

d.1. Toilet and bath accessories shall be installed on locations as shown. Surfaces of fastening devices exposed after installation shall have the same finish as the attached accessory. Exposed screw head shall be oval. Installed heights shall be as shown on the drawings. Upon completion of the installation, accessories shall be protected with strippable plastics or by other approved means until the installation is accepted. The manufacturer's accessory mounting details shall be coordinated with other trades as their work progresses.

d.2. Submittal requirements – Brochures and technical publications relative to the product specified shall be submitted for approval.

DIVISION 10: MECHANICAL WORK

SEC. 10000 Plumbing Specifications

a. General

a.1. Supplementary Documents - Contract Conditions and Division 1 Requirements apply to work specified in this section.

a.2. Scope - Provide necessary labor, materials, equipment, accessories, transportation, and services required for the complete installation of Plumbing Systems in the building as shown in the drawings, and specified herein. For convenience, drawings showing primarily Plumbing Works have been labelled with "P".

a.3. Codes

a.3.1. All Plumbing Works included herein shall be executed according to the provisions of the National Plumbing Code, the National Building Code and the Rules and Regulations of Davao City.

a.3.2. All Works & Installations shall be done or laid under close supervision of a duly License Master Plumber.

a.4. Coordination

a.4.1. Coordinate the drawing with other related drawings and specifications. The engineer shall be notified immediately of any discrepancy found. All pipes shall be installed as indicated on plans. Any relocations required for proper execution of other trade shall be with prior approval of the Construction Architect/Engineer.

a.4.2. Proposed Sanitary Utilities shall conform to the actual location, depth and invert elevation of all existing pipes and structures as verified by the contractor. Coordinate the drawing with other related drawings and specifications. The engineer shall be notified immediately of any discrepancy found. All pipes shall be installed as indicated on plans. Any relocation required for proper execution of other trade shall be with prior approval of the Construction Architect/Engineer.

a.4.3. All slopes for horizontal drainage shall maintain 2% unless otherwise specified. Size of water supply pipes to fixtures shall be in accordance with the manufacturer's instructions.

a.4.4. The contractor shall verify all existing utilities at site. Coordinate the works with the sewer line effluent disposal point and water line service connection point.

a.4.5. All pipe sizes are in millimeters and dimensions are in meters unless otherwise specified.

a.4.6. All pipe sizes indicated on plans are nominal sizes (inside diameter).

b. Materials

b.1. Water Distribution System

b.1.1. Cold Water Lines

All water risers and main distribution lines shall be Galvanized Steel or Iron (G.I.) pipe, schedule 40 standard, conforming to ASTM A-53, with class 300 fittings, flanged connections for 65mmø and larger sizes for all joints connection. For 50mmø and below, shall be schedule 40 standard, conforming to ASTM A-120-69, with class 250 fittings, screwed/threaded for all joints connection as approved by the University Architect/Engineer.

All roughing-in of toilet and lateral water distribution lines shall be high PPRC (Polypropylene Random Copolymer) Class PN-20 Polypropylene pipe materials. Fitting will be Fusion Weld Type, as approved by the University Architect/Engineer.

When buried underground, tapping water lines from water main to building toilet/or supply line shall be Galvanized Iron (G.I.) pipes, schedule 40, standard conforming to ASTM A-120-69, as approved by the University Architect/Engineer..

b.2. Water Meter shall be approved by the University Architect/Engineer or to be provided by the DCWD.

b.3. Waste, Sewer and Vent System.

b.3.1. Sewer and Kitchen Waste Lines

All lateral and branch sewer lines shall be Polyvinyl Chloride Pipes (PVC) series 1000 as approved by the Construction Architect/Engineer.

All soil stack and main collector lines – shall be Polyvinyl Chloride pipes (PVC) series 1000, as approved by the Construction Architect/Engineer.

b.3.2. . Vent Lines

All stacks and branch vent lines shall be Polyvinyl Chloride pipes (PVC) Series 1000 by "Atlanta", "Emerald", "Neltex" & "Crown" brand or approved equivalent.

b.3.3. AHU/ACU/FCU Waste Lines

All stacks and branch vent lines shall be Polyvinyl Chloride pipes (PVC) Series 1000, as approved by the Construction Architect/Engineer. All exposed FCU/AHU drain lines shall be provided with ½" thick close cell Elastomeric Thermal Insulation, as approved by the Construction Architect/Engineer.

b.4. Storm Drainage System

b.4.1. Drainage Lines and Downspouts

All lateral and branch sewer lines shall be Polyvinyl Chloride Pipes (PVC) series 1000, as approved by the Construction Architect/Engineer.

All downspouts and main collector lines – shall be Polyvinyl Chloride pipes (PVC) series 1000, as approved by the Construction Architect/Engineer.

Outside building – shall be Reinforced Concrete Drain Pipe (RCDP), tongue and groove, mortar joints reinforced for 300mmø and larger manufactured locally.

b.4.2. Parking Waste Lines

All lateral and branch sewer lines shall be Polyvinyl Chloride Pipes (PVC) series 1000, as approved by the Construction Architect/Engineer.

All parking waste lines and main collector lines – shall be Polyvinyl Chloride pipes (PVC) series 1000, as approved by the Construction Architect/Engineer.

b.4.3. Floor Drains and Floor Cleanout.

Shall be black steel / or cast iron for all housing and body and shall be brass coated finish for all drains strainer and stainless steel for all toilet drains strainers, as approved by the Construction Architect/Engineer.

b.5. Gate and Check Valves

b.5.1. Gate Valve

50mmø and larger shall be rising stem outside screw and yoke (OS & Y), flanged connection and shall be iron body with bronze trim, minimum of 150 psi working pressure. For 40mmø and smaller sizes, shall be rising stem / or non-rising stem inside screw female threaded and shall be bronze finished minimum of 125 psi working pressure, as approved by the Construction Architect/Engineer.

b.5.2. Check Valve for Booster Pump

50mmø and larger shall be iron body lift type check valve has a center guided, spring loaded valve disc with resilient seal bronze or stainless steel removable valve seat with bronze trim, flanged connection, minimum of 150 psi working pressure. 40mmø and smaller, same except female threaded connection, as approved by the Construction Architect/Engineer.

b.5.3. Check Valve for Transfer Pump

Shall be cast iron body ASTM A 126 Class B, non-slam type with opening and closing speed controls, stainless steel main valve trim and actuator, as approved by the Construction Architect/Engineer.

b.5.4. Float Valve

Shall be hydraulically operated, diaphragm actuated valve with pilot control and float mechanism mounted on the cover of the main valve. The float positions, the pilot control to close the valves when floats contacts the upper stop and open the valve when the float contacts the lower stop, as approved by the Construction Architect/Engineer.

b.5.5. Pressure Reducing/Sustaining Valve

Shall be single seated hydraulically operated pilot controlled, diaphragm type globe valve. The control system shall consist of a reducing control sensitive to diaphragm pressure changes sustaining control that is sensed to the main valve inlet, as approved by the Construction Architect/Engineer.

b.5.6. Combination Surge Anticipating/Pressure Relief Control Valve

Shall be hydraulically operated with pilots that will cause the main valve to open on a low pressure wave or a high pressure wave. The main valve shall be hydraulically operated, pilot-controlled, diaphragm type, globe or angle valve, as approved by the Construction Architect/Engineer. The valve location at transfer pump discharge riser.

b.5.7. Angle Valve Strainer

Strainer pattern shall be "Y" or angle strainer body and cover shall be cast iron, nuts & bolts shall be galvanized steel. Basket and basket latch shall be stainless steel, body and plug O-ring, as approved by the Construction Architect/Engineer.

b.5.8. Check Valves for Water Heater

For Water heater and other check valves requirements (except for pumps) shall be bronze finished minimum of 125 psi working pressure, as approved by the Construction Architect/Engineer.

c. Cold Water Lines Hydrostatic and Leakage Testing

c.1. The Contractor shall provide all necessary equipment such as pumps, gauges and water measuring tanks and shall perform all work required for pipe pressure and leakage test. Hydrostatic and leakage tests shall be made between valves and/or connections for each section tested using the procedure outline in ANSI/AWWA-C600.

c.2. The allowable leakage rate for pressure tests are included in the specific system standard specifications. The testing procedure shall include the continued application of the specified

pressure of 70 psi steady for 24 hours to the test system by way of a pump taking supply from a container suitable for measuring water loss. The amount of loss shall be determined by measuring the volume displaced from said container. Any exposed pipe, fittings, valves, hydrants, and joints shall be examined during the test. Any damaged or defective pipe fittings, valves, or hydrants that are discovered following the pressure test shall be repaired or replaced with sound material, and all tests shall be repeated.

c.3. The pressure shall not vary by more than +5 psi from the required pressure for the duration of the test. If at any point during the test the pressure loss exceeds 5 psi, the test is considered failed. Should the test fail, necessary repairs shall be accomplished by the Contractor and the test repeated until within the established limits.

d. Cold Water Lines Disinfection of Pipelines

d.1. Disinfection of mains shall comply with AWWA C651. Each unit of completed supply line and distribution system shall be thoroughly flushed and then disinfected with chlorine with a maximum residual of 100-300 PPM.

d.2. The Contractor shall install sampling taps required to take all necessary water samples of points designated in the Construction Drawings by the Construction Architect/Engineer or his representatives.

d.3. The Contractor shall make all arrangements with a certified testing laboratory to take all water samples required for bacteriological tests and shall maintain continuous running bacteriological sample taps. Water mains being tested must remain under line pressure, and have continuous running sample taps until release of system into service as directed by the Construction Architect/Engineer or his representatives.

d.4. AWWA Standard C651-92 requires that after final flushing, two consecutive sets of bacteriological samples be collected from the new main. At least one set of samples shall be collected from every 300 meters of the new main, plus one set from the end of the line and at least one set from each branch. The bacteriological test required is for the presence of coliform organisms in accordance with Standard Methods for the Examination of Water and Wastewater. Bacteriological testing of new mains is required to confirm the effectiveness of the disinfection procedure. Public water supply systems may require bacteriological testing of mains in their Standard Specifications for Water Main Installations. Unless the provisions of AWWA Standard C651-92 are incorporated by reference in the specifications, specifications for bacteriological testing Disinfection works shall be done by a qualified and accredited by DCWD Disinfection group.

e. Gravity Sewer Leak Testing

e.1. All completed piping shall be tested as specified herein by low-pressure air test, exfiltration, or infiltration test after backfilling to test for leaks. The maximum leakage allowance for all sanitary sewers shall be 80 gallons per inch diameter per km of pipe per 24 hours. If the level of the current prevailing groundwater is two feet (2') or more above the top of the sewer pipe, an infiltration test will be required. At the request of the Construction Architect/Engineer, a low-pressure air test or exfiltration test will be performed instead of or in addition to an infiltration test if the ground water level is uncertain. Labor, equipment and supplies required for all tests shall be furnished by the Contractor. The Contractor shall flush and clean the sewer line to the satisfaction of the Owner prior to testing. The Construction Architect/Engineer shall witness and approve all leakage tests. In the event that the Contractor performs any test without witness by the Construction

Architect/Engineer, the Contractor will be required to test the section again at no cost to the Owner. The Contractor and Construction Architect Engineer shall sign all test reports. Note that only four sections (approximately 1,200 - 1,600 feet) of sewer will be permitted to remain untested at any time.

e.2. Exfiltration Test:

The inlet ends of the upstream and downstream pipe shall be sealed with watertight plugs or bulkheads, and the sewer along with the upstream inlet shall be filled with water until the elevation of the water in the upstream inlet is: 1) two feet (2') higher extended vertical pipe at the top of the sewer pipe, including all service laterals, at the highest point of the section being tested, or 2) two feet (2') above the level of the current prevailing water, the test level shall be clearly marked in the upstream extended pipe. The entire length of section to be tested shall be filled and maintained full of water for a period of at least 24 hours prior to the start of the test. If the water level in the upper manhole drops during this 24 hour period, the level shall be raised to the test level mark prior to start of the test. Exfiltration will be determined by measuring the amount of water required to maintain the marked water level for a period of 1 hour from the start of the test. The allowable leakage of leak should be at least zero or there is no drop of water in the marking at the upstream extended pipe.

SEC. 10100 Sprinkler System

a. Scope of works

This section includes the piping and accessories for wet-pipe automatic sprinkler system for the fourth to fifth floors. The work includes the reorientation and replacement of the existing sprinkler heads in ground to third floors, and addition of nipple if necessary, of piping on ceiling.

b. General Requirements

The work includes furnishing and installing all sprinkler piping, valves, pipe fittings and flanges, alarm valve and appurtenances, fire department connection, water flow switches, fire hose cabinets, and miscellaneous devices as shown and specified. All permits and fees, government or private shall be borne by the Contractor.

The work shall be done by a qualified and licensed firm which has completed a sprinkler installation approved by the Philippines Fire Protection Association (PFPA). All Works & Installations shall be done or laid under close supervision of a duly Licensed Mechanical Engineer.

Design coverage and spacing of sprinkler head shall not exceed the requirements of NFPA Standard number 13 for ordinary hazard occupancy.

Standard pipe and fittings will be utilized throughout and restriction orifices will not be permitted.

Discharge density design shall be based on hydraulic computations utilizing the method outlines in NFPA Standard number 13 and shall to the following requirements.

Density of discharge from sprinkler heads shall be uniform within a 10% variation and provided 0.378 liter per minute per 0.30 m square with a total demand of 1,398 liters per minute and a residual pressure of 0.86

MPa or 125 psi at the base of the sprinkler riser.

c. Materials and equipment

All devices and equipment shall be of make and type listed by the "Underwriter's Laboratory Inc.," or approved by the "Factory Mutual Laboratories." Materials shall be of approved standard quality and the entire installation shall be accomplished in a thorough and professional manner. All work and materials shall conform to current requirements of the NFPA as published in their 13 as possible. The provisions of this standard, unless otherwise specified shall be followed in total, whether the stipulations listed therein are directed or recommended. The riser assemblies and trimming shall be installed approximately at the locations indicated. Approved devices shall be installed for the automatic transmission of water flow alarms connected to the fire alarm system and shall be such that the flow of water equal to or greater than that from a single sprinkler head will cause the transmission of a fire alarm and the sounding of an audible local alarm signal. Each wet pipe riser assembly and its appurtenance shall be so arranged and equipped in an approved manner that the transmission of accidental water-flow alarms will be positively prevented. The system shall be so designed and installed that no part thereof will interfere with doors, windows, heating, and plumbing. Electrical equipment and sprinkler heads shall not be located closer than 31 cm. from lighting fixtures or other obstructions. The Contractor shall obtain coordination among the trades to avoid any interference with potential effectiveness of the automatic sprinkler system.

c.1. Pendent type sprinkler head – shall be of ordinary degree rating except where excessive temperatures are anticipated. Corrosion-resistance sprinkler heads shall be installed where they are exposed to weather, moisture or corrosive vapors. Heads installed where they might receive mechanical injury shall be installed as shown in NFPA standard number 13.

d. Recessed ceiling sprinkler assembly – shall be used in occupancies with suspended ceiling. The assembly shall consist of a fusible solder type 13mm pendent sprinkler and a recessed sprinkler plate.

e. Installation – the installation of the wet-pipe type automatic sprinkler system shall conform to the requirements of NFPA standard number 13 unless specified otherwise. Cutting structural member for passage of pipes for pipe-hanger fastening will not be permitted.

f. Tests – upon completion of the installation, the system shall be hydrostatically tested and flushed as specified in NFPA standard number 13, in the presence of the Owner or his authorized representative.

g. Cleaning - after installation has passed satisfactory hydrostatic test, all iron and steel parts shall be thoroughly cleaned.

h. Submittal requirements – Before fabrication and installation, the Contractor shall submit, for approval, shop drawings as may be required.

i. Pipes and fittings

Pipes above ground and within the building shall be black iron pipes, standard weight, schedule 40, screw-jointed conforming to PNS 26 1992. Flange fittings where required shall be steel, 0.69 MPa working pressure. Screw-jointed fittings shall be malleable iron, wrought iron or steel 0.69 MPa working pressure.

j. Valves

Gate valves not buried shall be "O," "S," and "Y" type, iron body with brass trim and shall be designed for 0.86 MPa water working pressure. Screwed and gate valves shall be bronze. Check valves shall be type having iron body, brass seat and disc, clear-way swinging, with drip connections designed for 0.86 MPa water working pressure. Screwed-end angle, check and globe valves, shall be bronze.

k. Flexible connections

Flexible connections of an approved design shall be placed below each riser valve assembly. Additional flexible connections shall be provided in conformity with NFPA standard number 13 for installation in areas subject to earthquakes.

l. Pressure gauges

Pressure gauges shall be dial type and shall conform to best commercial standard.

m. Fire department pump connections

Fire department pump connections shall be provided in accordance with NFPA standard number 13. Hose couplings shall be equipped with plugs or standard caps.

n. Pipe supports

Metal supports, sway braces, hangers, clamps, etc. and other accessories shall be of an approved pattern and placed to conform to the requirements of NFPA standard no. 13.

o. Valve sign

A properly lettered approved metal sign conforming to NFPA standard number 13 shall be attached to each control valve.

p. Drains

All main drains shall be piped to discharge at safe points outside the building.

q. Sleeves

Steel pipe sleeves shall be provided for all pipes passing through masonry walls, floors and ceiling, and shall conform to NFPA standard number 13. Sleeves shall extend completely through construction and, in the case of floors, extend to 100 mm above the floor.

r. Water flow detectors

Vane-type water-flow detectors shall be installed on the sprinkler system piping as designated for mounting on either vertical or horizontal piping, but shall not be mounted within 31 mm of any fitting that changes the direction of water flow. It shall have sensitivity setting to signal any flow of water that equals or exceeds the discharge from one sprinkler head. Detector switch mechanisms shall incorporate an instantly recycling pneumatic retard element with an adjustable range from 0 to 70 seconds. Switches shall have a minimum rated capacity of 14 amp, 220 volt AC, and shall be actuated by a polyethylene vane extending into the waterway of the piping. Detectors shall be of weatherproof dut-tight construction and shall provide a 12 mm conduit entrance

and shall be finished in red baked enamel. Vane-type water flow detectors shall be listed and approved by the "Underwriters' Laboratories" and "Factory Manual."

s. Inspector's test valves

Inspector's test valves shall be installed and supplied from the most remote of each system in relation to the riser assembly, and shall discharge outside of the building. Test valves shall be conveniently accessible within 2.1 m from the floor. An approved automatic air release vent shall be required at the highest point of the sprinkler system piping.

t. Controller

The automatic electric motor controller shall conform to the requirements of NPFA 20 and be specifically UL/FM approved for fire pump service. It shall be arranged to start the fire pump motor on a drop in the system pressure, and shall be supplied with a circuit breaker interrupting of not less than 30 amps at 230 volts. It shall be of the reduced voltage primary resistor type.

u. Jockey pump and controller

The jockey pump shall be capable of delivering 113 liters per minute at a total net head of 0.86 mpa. The pump shall be close coupled to open drip-proof motor. A relief valve shall be provided to prevent excess discharge pressures. The pump shall operate automatically by utilizing a controller capable of automatically starting and stopping the pump through the use of a pressure switch. The controller shall contain an across the line starter with a fusible disconnect switch, adjustable type pressure switch, and a "hand-off" automatic selector switch and start push-button cover. The motor and controller shall be suitable for operation on 3 phase, 60 cycle, and 220-volt power.

v. Instructional manuals

One instructional manual containing instructions for the specific make and model of the alarm valve and fire pump furnished shall be provided.

w. Fire Alarm Bell and Smoke Detector.

Fire alarm bell and smoke detector shall be of approved quality.

x. Installations

The installation of the wet-pipe type automatic sprinkler system shall conform to the requirements of NFPA standard 13 unless specified otherwise. Cutting structural member for passage of pipes for pipe-hanger fastenings will not be permitted.

SEC. 10200 <u>Fire Protection System</u>

a. Scope of Work

This section includes wet stand pipe fire protection system, complete.

b. General Requirements

b.1. The contractor shall arrange for, obtain and bear the cost of necessary permits, bonds and fees for the wet standpipe.

b.2. Furnish and install water supply piping from cross main or riser.

b.3. Chipping and plastering works necessary for the area covered in the installation of the fire protection systems.

b.4. Do the testing of all piping works and necessary cleaning of the fire protection work.

b.5. Periodically remove from the jobsite all rubbish and debris resulting from the fire protection work.

c. Site conditions

The contractor shall be deemed to visit the site and acquaint himself with the existing site conditions, means of access and take into account any feature that may affect his tender. No claim for his neglect to do so or out of any misunderstanding on his part in these conditions shall be entertained. The contractor shall be responsible for the proper coordination with other trade contractors.

d. Standards, codes and regulations

The applicable current standards for the fire protection systems shall be the National Fire Protection Association (NFPA). NFPA -14, 20, Philippine Fire Code – PD 1185, and all other applicable local codes and ordinances.

e. Approval of shop drawings

The architect's approval of shop drawings, catalog cuts, and others, shall not relieve the contractor of the responsibility for any error or omissions which may exist in the items submitted nor shall it relieve him from the responsibility for deviations from the contract drawings and specifications. The stamped approval of the shop drawings, catalog cuts, and others, shall be construed only that the general design and method of construction are satisfactory.

f. Conduct of work

The contractor shall employ on the job at all times a competent superintendent, who shall be responsible for the progress and execution of the work. Workmanship shall be of high quality, conforming to standard practice as stipulated by NFPA, ASTM and ASA recommendations by skilled workers during regular working hours.

g. Selection of materials and equipment

All materials and equipment furnished under this section shall be new and in accordance with the Philippine National Standards or approved by Underwriter's Laboratories, Inc. (UL), Factory Mutual (FM), and American Water Works Association (AWWA) where applicable.

h. Proposal submission

The proposal submitted shall include all materials and equipment specified or shown on the drawings.

i. Standpipe system

Pipes shall be standard weight, heavy gauge, schedule 40, conforming to ASTM 53 or PNS 26 1992, screwed-jointed with malleable iron fittings. The interior surfaces of all piping and equipment shall be clean and free of dirt, loose scale, rust, and other foreign material before installation.

j. Pipe installation

Pipe ends shall be reamed to remove all burrs, and pipe sections shall be cleaned inside to all chips and foreign materials prior to making up joints. Approved joint compound shall be applied to the threads of the pipe and not in the fitting when making up joints. Pipe shall not extend into the waterway of the fitting.

k. Sleeves

Pipes passing through the building walls and floors above grade shall be provided with sleeves of standard weight galvanized steel pipe. The annular spaces between pipe and sleeves shall be packed tight with link seal hydrostatic pipe wall sleeve. Provide chrome plated escutcheon plates large enough to cover the pipe sleeves. Sleeves shall be sized as follows.

25 mm pipe	-	50 mm ID sleeve
32 mm pipe	-	50 mm ID sleeve
38 mm pipe	-	62 mm ID sleeve
50 mm pipe	-	75 mm ID sleeve
62 mm pipe	-	100 mm ID sleeve
75 mm pipe	-	125 mm ID sleeve
100 mm pipe	-	150 mm ID sleeve
150 mm pipe	-	200 mm ID sleeve

l. Pipe supports

All piping shall be of approved quality, capable of supporting load, sizing, and spacing. Installation shall be in accordance with National Fire Protection Association Standard No. 14 "Standpipe Systems" as shown on drawings or specified herein

m. Restrictions

No cutting, drilling, welding or burning of any structural steel member shall be allowed. Power driven studs and welding studs shall not be allowed.

n. Bolts and threaded rods

All bolts and threaded rods shall be used with double nut and washer wherever a single unsecured nut could work loose and allow either threaded rod or supported piping to drop.

o. Tests and inspection

The fire protection contractor shall conduct and bear the costs of all necessary tests of the fire protection

work, furnishing all labor, power and equipment. All piping shall be tested with water and test witnessed by the Construction Architect/Engineer. The fire protection piping shall be tested under a hydrostatic pressure of not less than 90 k lbs. for duration of not less than two (2) hours.

DIVISION 11: ELECTRICAL WORKS

SEC. 11000 Notes & Specifications

a. All electrical installation works herein shall be done in accordance with these plans and specifications, the applicable provisions of the latest edition of the Philippine electrical code, the rules and regulations of the local enforcing authority.

b. The electric service voltage shall be three phase, 3-wire + ground, 230 volts, 60 hertz.

c. The electrical wiring installation shall be done in polyvinyl chloride conduits. Flexible conduits shall be used where required. Minimum size for all conduits shall be 15mm dia., electrical trade size. Metal conduits and all PVC pipe requirements shall be as approved by the Construction Architect/Engineer

d. All wires shall be copper and thermoplastic insulated type "THHN" or "THW" unless otherwise indicated. The minimum size for power and lighting shall be 5.5mm and shall be color coded as follows:

d.1. Line 1 – red
d.2. Line 2 – yellow
d.3. Line 3 – blue
d.4. Ground – green

e. The contractor shall verify and orient the actual location of service entrance for connection to the power supply.

f. All pipe sleeves shall be provided with proper support or anchorage necessary for permanent connection with concrete walling or beam.

g. All service entrance equipment, switches, panelboards and all non-current carrying metal parts shall be properly grounded in accordance with the latest edition of the Philippine electrical code.

h. All pipes and fittings on exposed work shall be supported and secured by means of c-channels and clamps.

i. All conduit bends shall be field made using hydraulic benders. Minimum bending radius shall be in accordance with the code.

j. Any discrepancy in location and ratings of equipment and apparatus shall be verified with the owner or any of his representative and changes shall be made accordingly.

k. All materials to be used and the equipment to be installed shall be brand new and must be of the approved type for the particular location and purpose intended.

l. All fluorescent lamp fixtures shall have electronic ballast and lamps shall be warm white throughout unless otherwise specified by the architect.

m. The mounting heights of wiring devices shall be as follows:
m.1. Light switches - 1400mm above floor finish
m.2. Convenience outlets - 300mm above floor finish or as required

m.3. Panel boards and cabinets - 1500mm above floor finish at center or as required

n. For each spare branch circuit in panel board, provide one 20mmø empty conduit terminated to 100mm octagonal box above ceiling.

o. There shall be adequate and effective equipment grounding. Ground resistance should be no more than 5 ohms. If ground resistance exceeds 5 ohms, additional ground rods shall be provided.

p. Upon completion of electrical construction work, the following test shall be performed by the contractor inclusive of the installation to be reported in details and in forms approved by the owner's representative:
   - p.1. Insulation resistance test
   - p.2. Ground resistance test
   - p.3. Operational test
   - p.4. Phase balancing test
   - p.5. System test

q. All electrical installations shall be done under the direct supervision of a duly licensed Professional Electrical Engineer.

SEC. 11100 <u>Fire Detection and Alarm System</u>

a. **General requirements** - The fire detection and alarm system may comprise of main fire alarm control panels, optical smoke/heat sensors, heat sensors, and optical smoke/heat sensor with integral sounder units, manual call points, electronic sounders, repeat panels, and interface units, each with its own short circuit built-in isolators. All loop cabling and any other components and accessories deemed necessary for a safe, reliable and satisfactory system will conform to the relevant and applicable requirements of Republic Act No. 9514, or the Fire Code of the Philippines and its Implementing Rules and Regulations, and existing ordinances in Davao city.

b. **Scope** - The work includes complete roughing- in installations for fire detection and alarm system, except installation of wires, cables, and devices.

c. **Materials** - Pipes and fittings shall be made of Electrical Metallic Tubing (EMT) or Polyvinyl Chloride (PVC) material of various sizes, as specified in the plans. Hanger, brackets and other accessories shall be securely installed.

d. **Embedded** conduits run shall be PVC. Exposed conduit runs shall be IMC.

e. Independent 230V power supply for FACP.

Prepared by:

Ar. Ericson P. Europa
Director, PDD

Section VII. Drawings

[Insert here a list of Drawings. The actual Drawings, including site plans, should be attached to this section, or annexed in a separate folder.]

(In Separate Volume)

Section VIII. Bill of Quantities
(In Separate Volume)

Notes on the Bill of Quantities

Objectives

The objectives of the Bill of Quantities are:

a. to provide sufficient information on the quantities of Works to be performed to enable Bids to be prepared efficiently and accurately; and

b. when a Contract has been entered into, to provide a priced Bill of Quantities for use in the periodic valuation of Works executed.

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

Daywork Schedule

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

a. A list of the various classes of labor, materials, and Constructional Plant for which basic daywork rates or prices are to be inserted by the Bidder, together with a statement of the conditions under which the Contractor will be paid for work executed on a daywork basis.

b. Nominal quantities for each item of Daywork, to be priced by each Bidder at Daywork rates as Bid. The rate to be entered by the Bidder against each basic Daywork item should include the Contractor's profit, overheads, supervision, and other charges.

Provisional Sums

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

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

Signature Box

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

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

Section IX. Checklist of Technical and Financial Documents

Notes on the Checklist of Technical and Financial Documents

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

a. GPPB Resolution No. 09-2020 on the efficient procurement measures during a State of Calamity or other similar issuances that shall allow the use of alternate documents in lieu of the mandated requirements; or

b. any subsequent GPPB issuances adjusting the documentary requirements after the effectivity of the adoption of the PBDs.

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

Checklist of Technical and Financial Documents

I. TECHNICAL COMPONENT ENVELOPE

Class "A" Documents

Legal Documents

☐ (a) Valid PhilGEPS Registration Certificate (Platinum Membership) (all pages);
or

☐ (b) Registration certificate from Securities and Exchange Commission (SEC), Department of Trade and Industry (DTI) for sole proprietorship, or Cooperative Development Authority (CDA) for cooperatives or its equivalent document;
and

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

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

Technical Documents

☐ (f) Statement of the prospective bidder of all its ongoing government and private contracts, including contracts awarded but not yet started, if any, whether similar or not similar in nature and complexity to the contract to be bid; **and**

☐ (g) Statement of the bidder's Single Largest Completed Contract (SLCC) similar to the contract to be bid, except under conditions provided under the rules; **and**

☐ (h) Philippine Contractors Accreditation Board (PCAB) License;
or
Special PCAB License in case of Joint Ventures;
and registration for the type and cost of the contract to be bid; **and**

☐ (i) Original copy of Bid Security. If in the form of a Surety Bond, submit also a certification issued by the Insurance Commission;
or
Original copy of Notarized Bid Securing Declaration; **and**

(j) Project Requirements, which shall include the following:

☐ a. Organizational chart for the contract to be bid;

☐ b. List of contractor's key personnel (*e.g.*, Project Manager, Project Engineers, Materials Engineers, and Foremen), to be assigned to the contract to be bid, with their complete qualification and experience data;

☐ c. List of contractor's major equipment units, which are owned, leased, and/or under purchase agreements, supported by proof of ownership or certification of availability of equipment from the equipment lessor/vendor for the duration of the project, as the case may be; **and**

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

Financial Documents

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

☐ (m) The prospective bidder's computation of Net Financial Contracting Capacity (NFCC).

Class "B" Documents

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

or

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

II. FINANCIAL COMPONENT ENVELOPE

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

Other documentary requirements under RA No. 9184

☐ (p) Original of duly signed Bid Prices in the Bill of Quantities; **and**

☐ (q) Duly accomplished Detailed Estimates Form, including a summary sheet indicating the unit prices of construction materials, labor rates, and equipment rentals used in coming up with the Bid; **and**

☐ (r) Cash Flow by Quarter.

Bid Form

[shall submitted with the Bid]

Date:_____
Invitation to Bid : ITB No. 2020-11/Infra

To: ***University of Southeastern Philippines (USeP)***
Obrero Campus, Davao City

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

(a) We have no reservation to the PBDs, including the Supplemental or Bid Bulletins, for the Procurement Project: **Completion of School and Applied Economics (SAec) Building**.

(b) We offer to execute the Works for this Contract in accordance with the PBDs;

(c) The total price of our Bid in words and figures, excluding any discounts offered below is: *[insert information]*;

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

(e) The total bid price includes the cost of all taxes, such as, but not limited to: *[specify the applicable taxes, e.g. (i) value added tax (VAT), (ii) income tax, (iii) local taxes, and (iv) other fiscal levies and duties],* which are itemized herein and reflected in the detailed estimates,

(f) Our Bid shall be valid within the period stated in the PBDs, and it shall remain binding upon us at any time before the expiration of that period;

(g) If our Bid is accepted, we commit to obtain a Performance Security in the amount of [insert percentage amount] percent of the Contract Price for the due performance of the Contract, or a Performance Securing Declaration in lieu of the allowable forms of Performance Security, subject to the terms and conditions of issued GPPB guidlines12 for this purpose;

(h) We are not participating, as Bidders, in more than one Bid in this bidding process, other than alternative offers in accordance with the Bidding Documents;

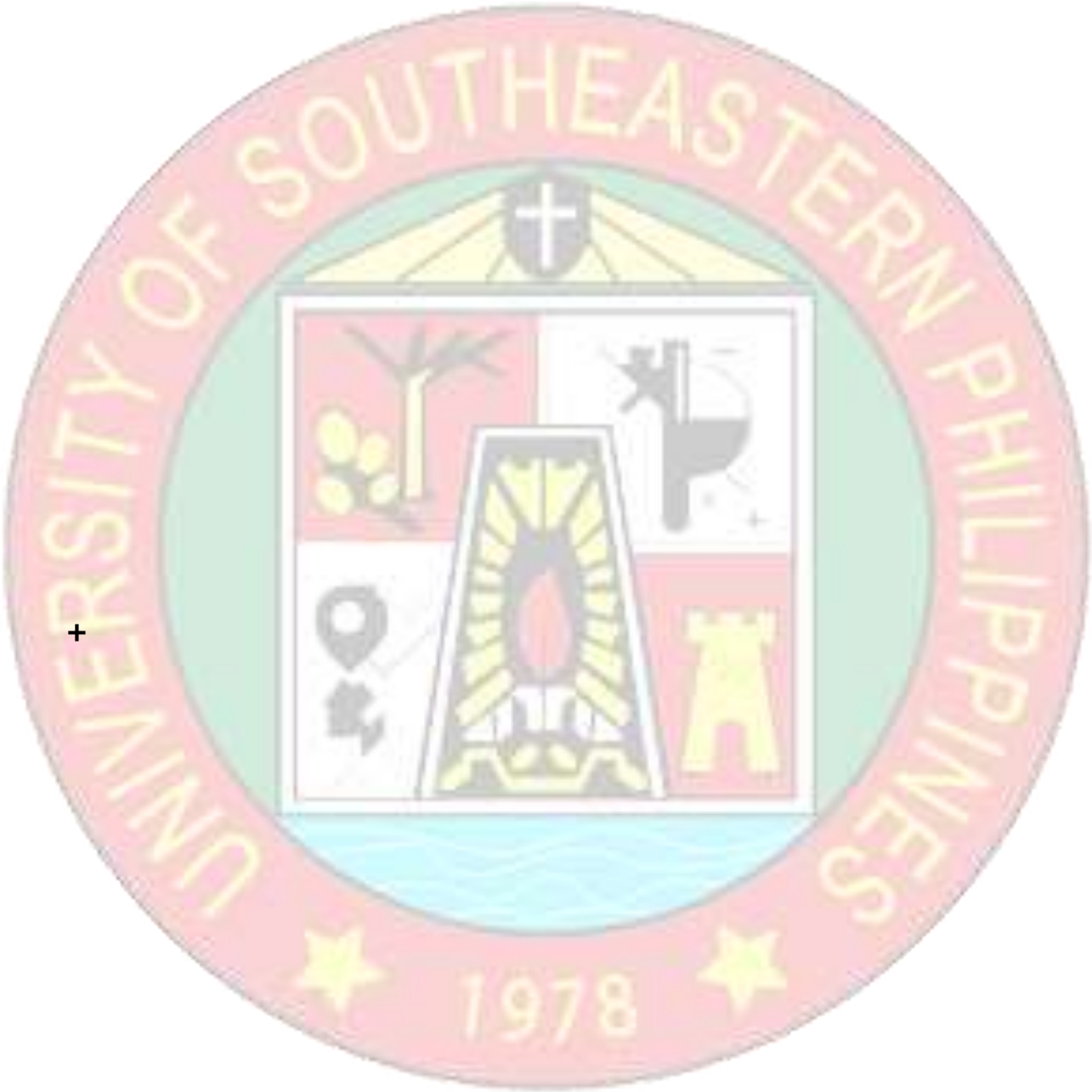
(i) We understand that this Bid, together with your written acceptance thereof included in your notification of award, shall constitute a binding contract between us, until a formal Contract is prepared and executed; and

(j) We understand that you are not bound to accept the Lowest Calculated Bid or any other Bid that you may receive.

(k) We likewise certify/confirm that the undersigned, is the duly authorized representative of the bidder, and granted full power and authority to do, execute and perform any and all acts necessary to participate, submit the bid, and to sign and execute the ensuing contract for the **Completion of School and Applied Economics (SAec) Building at the University of Southeastern Philippines.**

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

Name: _____
In the capacity of: _____
Signed: _____
Duly authorized to sign the Bid for and on behalf of: _____
Date: _____



Statement of all On-going Government & Private Contracts Including Contracts Awarded But Not Yet Started

Name of the Procuring Entity
Contract Reference Number
Name of the Contract
Location of the Contract

Standard Form Number: SF-INFR - 15
Revised on: July 29, 2004

List of all Ongoing Government & Private Construction Contracts including contracts awarded but not yet started

Business Name : _____
Business Address : _____

Name of Contract/Location Project Cost	Owner Name a. Address b. Telephone Nos.	Nature of Work	Contractor's Role		Date Awarded a. Date Started b. Date of Completion	% of Accomplishment		Value of Outstanding Works
			Description	%		Planned	Actual	
Government								
Private								
Note: This statement shall be supported with:						Total Cost		

1 Notice of Award and/or Contract
2 Notice to Proceed issued by the owner
3 Certificate of Accomplishments signed by the owner or Project Engineer

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

One of the technical documents required to be in the Eligibility Envelope of a prospective bidder is a list of all its on-going, completed, and awarded but not yet started contracts.

Statement of Single Largest Completed Contract Similar to the Contract to be Bid within the Last Five (5) Years (prior to the deadline for submission and receipt of bid)

Name of the Procuring Entity
Contract Reference Number
Name of the Contract
Location of the Contract

Standard Form Number: SF-INFR - 16
Revised on: July 29, 2004

Statement of all Completed Government & Private Construction Contracts which are similar in nature

Business Name : _____
Business Address : _____

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

Note: This statement shall be supported with:
1 Contract
2 CPES rating sheets and/or Certificate of Completion
3 Certificate of Acceptance

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

One of the technical documents required to be in the Eligibility Envelope of a prospective bidder is a list of all contracts which are similar in nature and complexity to the contract to be bid. This statement will show that the value of the prospective bidder's largest single completed contract, adjusted to current prices using the National Statistics Office (NSO) consumer price indices available at the G-EPS website, and similar to the contract to be bid, must be at least fifty percent (50%) of the approved budget for the contract to be bid.

"Sample Certificate of Acceptance from Previous Clients"
(For Completed Contracts)

Certificate of Acceptance

This is to certify that the item/s delivered under Contract/P.O. No._____and Invoice/Delivery Receipt No._____has been inspected and found out to be in good order and condition, free from defects, and in conformity with our desired specifications.

INSPECTED & RECEIVED BY:

_____
Bidder's Client or Client's Authorized Representative
(Signature over Printed Name)

MANPOWER UTILIZATION SCHEDULE SAMPLE FORMAT

Name of the Procuring Entity
Contract Reference Number
Name of the Contract
Location of the Contract

Standard Form Number: SF-INFR - 42
Revised on: August 11, 2004

MANPOWER UTILIZATION SCHEDULE

Category	Month											
	1	2	3	4	5	6	7	8	9	10	11	12

Contractor's Name:	Name of the Procuring Entity:	Contract Name:

Submitted by:

Name of the Representative of the Bidder Date: _____
Position
Name of the Bidder

The manpower schedule (weekly or monthly scheduling of skilled and unskilled workers, including Project Manager, Project Engineers, Materials Engineers, or Foremen) is required to be in the Technical Envelope of the Bidder.

QUALIFICATION OF KEY PERSONNEL PROPOSED TO BE ASSIGNED TO THE CONTRACT

Name of the Procuring Entity
Contract Reference Number
Name of the Contract
Location of the Contract

Standard Form Number: SF-INFR - 48
Revised on: August 11, 2004

Qualification of Key Personnel Proposed to be Assigned to the Contract

Business Name : _____
Business Address : _____

	Project Manager / Engineer	Materials/Quality Control Engineer	Foreman	Construction Safety and Health Personnel	Other positions deemed required by the Applicant for this project
1 Name					
2 Address					
3 Date of Birth					
4 Employed since					
5 Experience					
6 Previous Employment					
7 Education					
8 PRC License					

Minimum Requirements : Project Manager / Engineer
: Materials Engineer
: Foreman
: Construction Safety and Health Personnel
Note : Attached individual resume and PRC License of the (professional) personnel.

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

One of the requirements from the bidder to be included in its Technical Envelope is a list of contractor's key personnel (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 (including the key personnel's signed written commitment to work for the project once awarded the contract).

LIST OF EQUIPMENT, OWNED OR LEASED AND/OR UNDER PURCHASE AGREEMENTS, PLEDEGED TO THE PROPOSAL CONTRACT

(Standard Sample Format)

Name of the Procuring Entity
Contract Reference Number
Name of the Contract
Location of the Contract

Standard Form Number: SF-INFR - 49
Revised on: August 11, 2004

List of Equipment, Owned or Leased and/or under Purchase Agreements, Pledged to the Proposed Contract

Business Name : _____
Business Address : _____

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

List of minimum equipment required for the project:

Submitted by : _____
(Printed Name & Signature)

Designation : _____
Date : _____

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

EQUIPMENT UTILIZATION SCHEDULE
(Standard Sample Format)

Name of the Procuring Entity
Contract Reference Number
Name of the Contract
Location of the Contract

Standard Form Number: SF-INFR-50
Revised on: August 11, 2004

EQUIPMENT UTILIZATION SCHEDULE

Category / Equipment	Month											
	1	2	3	4	5	6	7	8	9	10	11	12

Contractor's Name:	Name of the Procuring Entity:	Contract Name:

Submitted by:

Name of the Representative of the Bidder
Position
Name of the Bidder

Date: _____

One of the requirements from the bidder to be included in its Technical Envelope is its equipment utilization schedule, referring to the weekly or monthly scheduling of the minimum equipment required for the project.

STATEMENT OF AVAILABILITY OF KEY PERSONNEL AND EQUIPMENT

(Standard Sample Format)

Name of the Procuring Entity
Contract Reference Number
Name of the Contract
Location of the Contract

Standard Form Number: SF-INFR - 18
Revised on: July 29, 2004

Statement of Availability of Key Personnel and Equipment

(Date of Issuance)

Name of the Head of the Procuring Entity
Position of the Head of the Procuring Entity
(Name of Procuring Entity)
(Address of Procuring Entity)

Attention : The Chairman
Bids and Awards Committee

Dear Sir / Madame:

In compliance with the requirements of the *(Name of the Procuring Entity)* BAC for the bidding of the *(Name of the Contract)*, we certify that *(Name of the Bidder)* has in its employ key personnel, such as project managers, project engineers, materials engineers and foremen, who may be engaged for the construction of the said contract.

Further, we likewise certify the availability of equipment that *(Name of the Bidder)* owns, has under lease, and/or has under purchase agreements, that may be used for the construction contracts.

Very truly yours,

(Name of Representative)
(Position)
(Name of Bidder)

KEY PERSONNEL'S CERTIFICATE OF EMPLOYMENT

(Standard Sample Format)

Name of the Procuring Entity
Contract Reference Number
Name of the Contract
Location of the Contract

Standard Form Number: SF-INFR - 46
Revised on: August 11, 2004

Key Personnel's Certificate of Employment

Issuance Date

Name of the Head of the Procuring Entity
Position of the Head of the Procuring Entity
Name of the Procuring Entity
Address of the Procuring Entity

Dear Sir / Madame:

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

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

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

NAME OF PROJECT	OWNER	COST	DATE COMPLETED
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

At present, I am supervising the following projects:

NAME OF PROJECT	OWNER	COST	DATE COMPLETED
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

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

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

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

I

_____
(Signature of Engineer)

DRY SEAL

Republic of the Philippines)
_____) S.S.

SUBSCRIBED AND SWORN TO before me this _____ day of _____, 2008 affiant exhibiting to me his Residence Certificate No. _____ issued on _____ at _____.

Notary Public
Until December 31, 20___

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

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

KEY PERSONNEL FORMAT OF BIO-DATA

(Standard Sample Format)

Name of the Procuring Entity
Contract Reference Number
Name of the Contract
Location of the Contract

Standard Form Number: SF-INFR - 47
Revised on: August 11, 2004

KEY PERSONNEL
(FORMAT OF BIO-DATA)

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

- Authorized Managing Officer / Representative
- Sustained Technical Employee

1. Name : _____
2. Date of Birth : _____
3. Nationality : _____
4. Education and Degrees : _____
5. Specialty : _____
6. Registration : _____
7. Length of Service with the Firm : ___ Year from ___(months) ___ (year)
   To ___(months) ___ (year)
8. Years of Experience : _____
9. If Item 7 is less than ten (10) years, give name and length of service with previous employers for a ten (10)-year period (attached additional sheets), if necessary:

Name and Address of Employer	Length of Service
_____	___ year(s) from _____ to _____
_____	___ year(s) from _____ to _____
_____	___ year(s) from _____ to _____

10. Experience:

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

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

Name of the Procuring Entity
Contract Reference Number
Name of the Contract
Location of the Contract

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

_____
Name and Signature of Employee

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

_____ _____
(Place and Date) (The Authorized Representative)

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

CONTRACTOR'S ORGANIZATIONAL CHART FOR THE CONTRACT

(Standard Sample Format)

Name of the Procuring Entity
Contract Reference Number
Name of the Contract
Location of the Contract

Standard Form Number: SF-INFR - 44
Revised on: August 11, 2004

Contractor's Organizational Chart for the Contract

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

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

1. *This organization chart should represent the "Contractor's Organization" required for the Project, and not the organizational chart of the entire firm.*
2. *The Bidders shall comply with and submit sample form SF-INFR-46 for each of such key personnel.*
3. *Each such nominated engineer/key personnel shall comply with and submit sample forms SF-INFR-47 and SF-INFR-48.*
4. *All these are required to be in the Technical Envelope of the Bidder.*

CONTRACTOR'S ORGANIZATIONAL CHART FOR THE CONTRACT
(Standard Sample Format)

Name of the Procuring Entity
Contract Reference Number
Name of the Contract
Location of the Contract

Standard Form Number: SF-INFR - 43
Revised on: August 11, 2004

OUTLINE

NARRATIVE DESCRIPTION

OF

CONSTRUCTION METHODS

1.0 INTRODUCTION

Refer to Bidding, etc.

2.0 BRIEF DESCRIPTION OF CONTRACT WORKS

State general features of contract works. Use tables as necessary.

3.0 CONSTRUCTION METHODS AND PROCEDURES

3.1 Methodology or General Approach

State general approach in construction in terms of use of equipment-intensive or labor-based methods, any special techniques, methods or procedures to ensure completion on time and quality of construction financing the project, etc.

3.2 Program of Work

CPM, Progress Bar Schedule and Development Schedules submitted.

3.3 Financial Program

Cash flow schedules, provision for working capital, schedule of receipts, etc.

The narrative description of construction procedures / methods is required to be in the Technical Envelope of the bidder. The above is the recommended outline in the bidder's presentation of the documents.

FINANCIAL DOCUMENTS FOR ELIGIBILITY CHECK

NFCC Computation

A. Summary of the Applicant Supplier's/Distributor's/Manufacturer's assets and liabilities on the basis of the attached income tax return and audited financial statement, stamped "RECEIVED" by the Bureau of Internal Revenue or BIR authorized collecting agent, for the immediately preceding year and a certified copy of Schedule of Fixed Assets particularly the list of construction equipment.

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

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

NFCC = [(15) x (Current assets minus current liabilities)] 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 to be bid.

NFCC = P _____

Note: The values of the domestic bidder's current assets and current liabilities shall be based on the latest Audited Financial Statements submitted to the BIR.

Submitted by:

_____
Bidder's Authorized Representative
(Signature over Printed Name)

NOTE:

1. If Partnership or Joint Venture, each Partner or Member Firm of Joint Venture shall submit the above requirements.

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

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

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

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

NOW THIS AGREEMENT WITNESSETH AS FOLLOWS:

1. In this Agreement, words and expressions shall have the same meanings as are respectively assigned to them in the Conditions of Contract hereinafter referred to.

2. The following documents as required by the 2016 revised Implementing Rules and Regulations of Republic Act No. 9184 shall be deemed to form, and be read and construed as integral part of this Agreement, *viz*:

   (a) Philippine bidding Documents (PBDs);

   i. Drawings/Plans;

   ii. Specifications;

   iii. General and Special Conditions of Contract;

   iv. Supplemental or Bid Bulletins, if any;

   (b) Winning bidder's bid, including the Eligibility requirements, Technical and Financial Proposals, and all other documents or statements submitted;

   Bid form, including all the documents/statements contained in the Bidder's bidding envelopes, as annexes, and all other documents submitted (e.g., Bidder's response to request for clarifications on the bid), including corrections to the bid, if any, resulting from the Procuring Entity's bid evaluation;

   (c) Performance Security;

   (d) Notice of Award of Contract and the Bidder's conforme thereto;

   (e) Other contract documents that may be required by existing laws and/or the Procuring Entity concerned in the PBDs. **Winning bidder agrees that additional contract documents or information prescribed by the GPBB that are subsequently required for submission after the contract execution, such as the Notice to Proceed, Variation Orders, and Warranty Security, shall likewise form part of the Contract.**

3. In consideration for the sum of *[total contract price in words and figures]* or such other sums as may be ascertained, [Name of bidder] agrees to *[state the object of the contract]* in accordance with his/her/its Bid.

4. The University of Southeastern Philippines agrees to pay the above-mentioned sum in accordance with the terms of the Bidding.

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

[Insert Name and Signature]	[Insert Name and Signature]
[Insert Signatory's Legal Capacity]	[Insert Signatory's Legal Capacity]
for:	for:
[Insert Procuring Entity]	[Insert Name of Supplier]

Acknowledgement

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

Omnibus Sworn Statement

[shall be submitted with the Bid]

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

A F F I D A V I T

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

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

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

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

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

   If a sole proprietorship: As the owner and sole proprietor, or authorized representative of *[Name of Bidder]*, I have full power and authority to do, execute and perform any and all acts necessary to participate, submit the bid, and to sign and execute the ensuing contract for **Completion of School of Applied Economics (SAec) Building at USeP, Obrero Campus, Davao City***, as shown in the attached duly notarizedSpecial Power of Attorney*;

   If a partnership, corporation, cooperative, or joint venture: I am granted full power and authority to do, execute and perform any and all acts necessary to participate, submit the bid, and to sign and execute the ensuing contract for **COMPLETION OF SCHOOL OF APPLIED ECONOMICS at University of Southeastern Philippines, Obrero Campus, Davao City** as shown in the attached *[state title of attached document showing proof of authorization (e.g., duly notarized Secretary's Certificate, Board/Partnership Resolution, or Special Power of Attorney, whichever is applicable;)]*;

3. *[Name of Bidder]* is not "blacklisted" or barred from bidding by the Government of the Philippines or any of its agencies, offices, corporations, or Local Government Units, foreign government/foreign or international financing institution whose blacklisting rules have been recognized by the Government Procurement Policy Board;

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

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

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

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

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

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

7. *[Name of Bidder]* complies with existing labor laws and standards; and

8. *[Name of Bidder]* is aware of and has undertaken the 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 **Completion of School of Applied Economic (SAec) Buildings at USeP, Obrero Campus, Davao City**

9. *[Name of Bidder]* did not give or pay directly or indirectly, any commission, amount, fee, or any form of consideration, pecuniary or otherwise, to any person or official, personnel or representative of the government in relation to any procurement project or activity.

10. In case advance payment was made or given, failure to perform or deliver any of the obligations and undertakings in the contract shall be sufficient grounds to constitute criminal liability for Swindling (Estafa) or the commission of fraud with unfaithfulness or abuse of confidence through misappropriating or converting any payment received by a person or entity under the obligation involving the duty to deliver certain goods or services, to the prejudice of the public and the government of the Philippines pursuant to Article 315 of Act No. 3815 s. 1930, as amended, or the Revised Penal Code.

IN WITNESS WHEREOF, I have hereunto set my hand this __ day of____, 20___at_____, Philippines.

_____
Bidder's Representative/Authorized Signatory

SUBSCRIBED AND SWORN to before me this day of *[month] [year]* at *[place of execution],* Philippines. Affiant/s is/are personally known to me and was/were identified by me through competent evidence of identity as defined in the 2004 Rules on Notarial Practice (A.M. No. 02-8-13-SC). Affiant/s exhibited to me his/her [insert type of government identification card used], with his/her photograph and signature appearing thereon, with no._____and his/her Community Tax Certificate No. __issued on_at_.

Witness my hand and seal this____day of *[month] [year]*.

NAME OF NOTARY PUBLIC
Serial No. of Commission _____
Notary Public for_____until_____
Roll of Attorneys No. _____
PTR No.___*[date issued], [place issued]* IBP No. *[date issued], [place issued]*

Doc. No. Page No. Book No. Series of _____
* This form will not apply for WB funded projects.

Bank Guarantee Form for Advance Payment

To: ***UNIVERSITY OF SOUTHEASTERN PHILIPPINES***
Obrero Campus, Davao City

Project Title : Completion of School of Applied Economics (SAec) Building at USeP-Obrero Campus, Davao City

Gentlemen and/or Ladies:

In accordance with the payment provision included in the Special Conditions of Contract, which amends Clause 10 of the General Conditions of Contract to provide for advance payment, *[name and address of Supplier]* (hereinafter called the "Supplier") shall deposit with the PROCURING ENTITY a bank guarantee to guarantee its proper and faithful performance under the said Clause of the Contract in an amount of *[amount of guarantee in figures and words]*.

We, the *[bank or financial institution]*, as instructed by the Supplier, agree unconditionally and irrevocably to guarantee as primary obligator and not as surety merely, the payment to the PROCURING ENTITY on its first demand without whatsoever right of objection on our part and without its first claim to the Supplier, in the amount not exceeding *[amount of guarantee in figures and words]*.

We further agree that no change or addition to or other modification of the terms of the Contract to be performed thereunder or of any of the Contract documents which may be made between the PROCURING ENTITY and the Supplier, shall in any way release us from any liability under this guarantee, and we hereby waive notice of any such change, addition, or modification.

This guarantee shall remain valid and in full effect from the date of the advance payment received by the Supplier under the Contract until *[date]*.

Yours truly,

Signature and seal of the Guarantors

_____
[name of bank or financial institution]

_____
[address]

_____
[date]

Bid Securing Declaration Form

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

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

BID SECURING DECLARATION
Project Identification No.: [2010-11]

To: UNIVERSITY OF SOUTHEASTERN PHILIPPINES
Obrero Campus, Davao City

I/We, the undersigned, declare that:

1. I/We understand that, according to your conditions, bids must be supported by a Bid Security, which may be in the form of a Bid-Securing Declaration.

2. I/We accept that: (a) I/we will be automatically disqualified from bidding for any contract with any procuring entity for a period of two (2) years upon receipt of your Blacklisting order; and, (b) I/we will pay the applicable fine provided under Section 6 of the Guidelines on the Use of Bid Securing Declaration, within fifteen (15) days from receipt of the written demand by the procuring entity for the commission of acts resulting to the enforcement of the bid securing declaration under Sections 23.1(b), 34.2, 40.1 and 69.1, except 69.1(f), of the IRR of RA 9184; without prejudice to other legal action the government may undertake.

3. I/We understand that this Bid Securing Declaration shall cease to be valid on the following circumstances:

   (a) Upon expiration of the bid validity period, or any extension thereof pursuant to your request;

   (b) I am/we are declared ineligible or post-disqualified upon receipt of your notice to such effect, and (i) I/we failed to timely file a request for reconsideration or (ii) I/we filed a waiver to avail of said right;

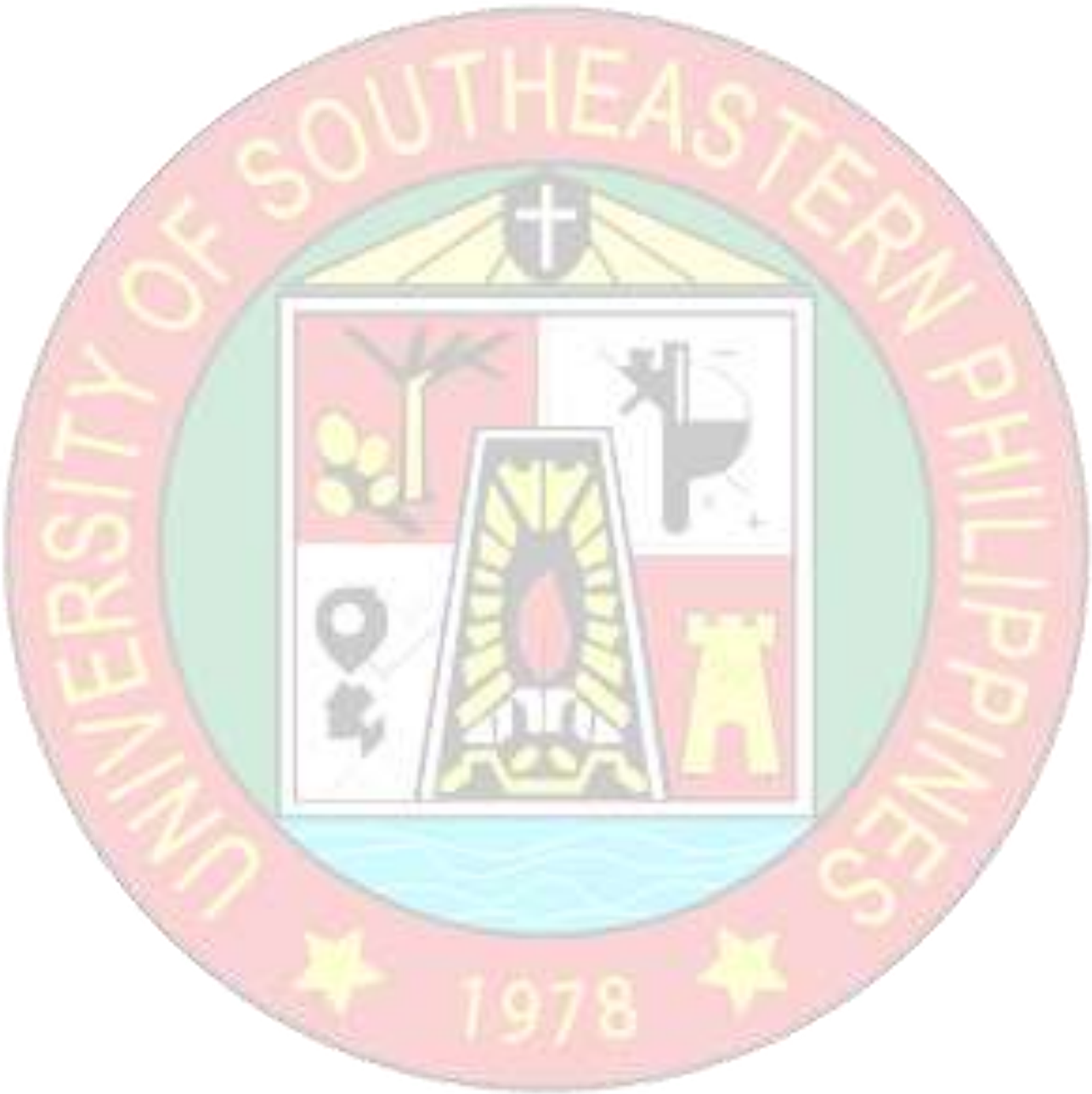
   (c) I am/we are declared the bidder with the Lowest Calculated Responsive Bid, and I/we have furnished the performance security and signed the Contract.

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

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

[Jurat]

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



SUBSCRIBED AND SWORN to before me this day of *[month] [year]* at *[place of execution],* Philippines. Affiant/s is/are personally known to me and was/were identified by me through competent evidence of identity as defined in the 2004 Rules on Notarial Practice (A.M. No. 02-8-13-SC). Affiant/s exhibited to me his/her [insert type of government identification card used], with his/her photograph and signature appearing thereon, with no._____and his/her Community Tax Certificate No._____issued on_____at _____.

Witness my hand and seal this ___ day of *[month] [year]*.

NAME OF NOTARY PUBLIC
Serial No. of Commission _____
Notary Public for_____until_____
Roll of Attorneys No. _____
PTR No.___*[date issued], [place issued]* IBP No. *[date issued], [place issued]*

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

Performance Securing Declaration Form

REPUBLIC OF THE PHILIPPINES)
CITY OF_____) S.S
x.....x

PERFORMANCE SECURING DECLARATION

Invitation to Bid: **Completion of School of Applied Economics (SAec) Building at USeP, Obrero Campus, Davao City**

To: UNIVERSITY OF SOUTHEASTERN PHILIPPINES
Obrero Campus, Davao City

I/We, the undersigned, declare that:

1. I/We understand that, according to your conditions, to guarantee the faithful performance by the supplier/distributor/manufacturer/contractor/consultant of its obligations under the Contract, I/we shall submit a Performance Securing Declaration within a maximum period of ten (10) calendar days from the receipt of the Notice of Award prior to the signing of the Contract.

2. I/We accept that: I/we will be automatically disqualified from bidding for any procurement contract with any procuring entity for a period of one (1) year if in case it is my first offense, or two (2) years if I have a prior similar offense upon receipt of your Blacklisting Order if I/we have violated my/our obligations under the Contract.

3. I/We understand that this Performance Securing Declaration shall cease to be valid upon:

   (a) issuance by the Procuring Entity of the Certificate of Final Acceptance, subject to the following conditions:

      i. Procuring Entity has no claims filed against the contract awardee;
      ii. It has no claims for labor and materials filed against the contractor; and
      iii. Other terms of the contract; or

   (b) replacement by the winning bidder of the submitted PSD with a performance security in any of the prescribed forms under Section 39.2 of the 2016 IRR of RA No. 9184 as required by the end-user.

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

[Insert NAME OF BIDDER'S AUTHORIZED REPRESENTATIVE]
[Insert Signatory's Legal Capacity]
Affiant

SUBSCRIBED AND SWORN to before me this day of [month] [year] at [place of execution], Philippines. Affiant/s is/are personally known to me and was/were identified by me through competent evidence of identity as defined in the 2004 Rules on Notarial Practice (A.M. No. 02-8-13-SC). Affiant/s exhibited to me his/her [insert type of government identification card used], with no._____issued on _____at_____.

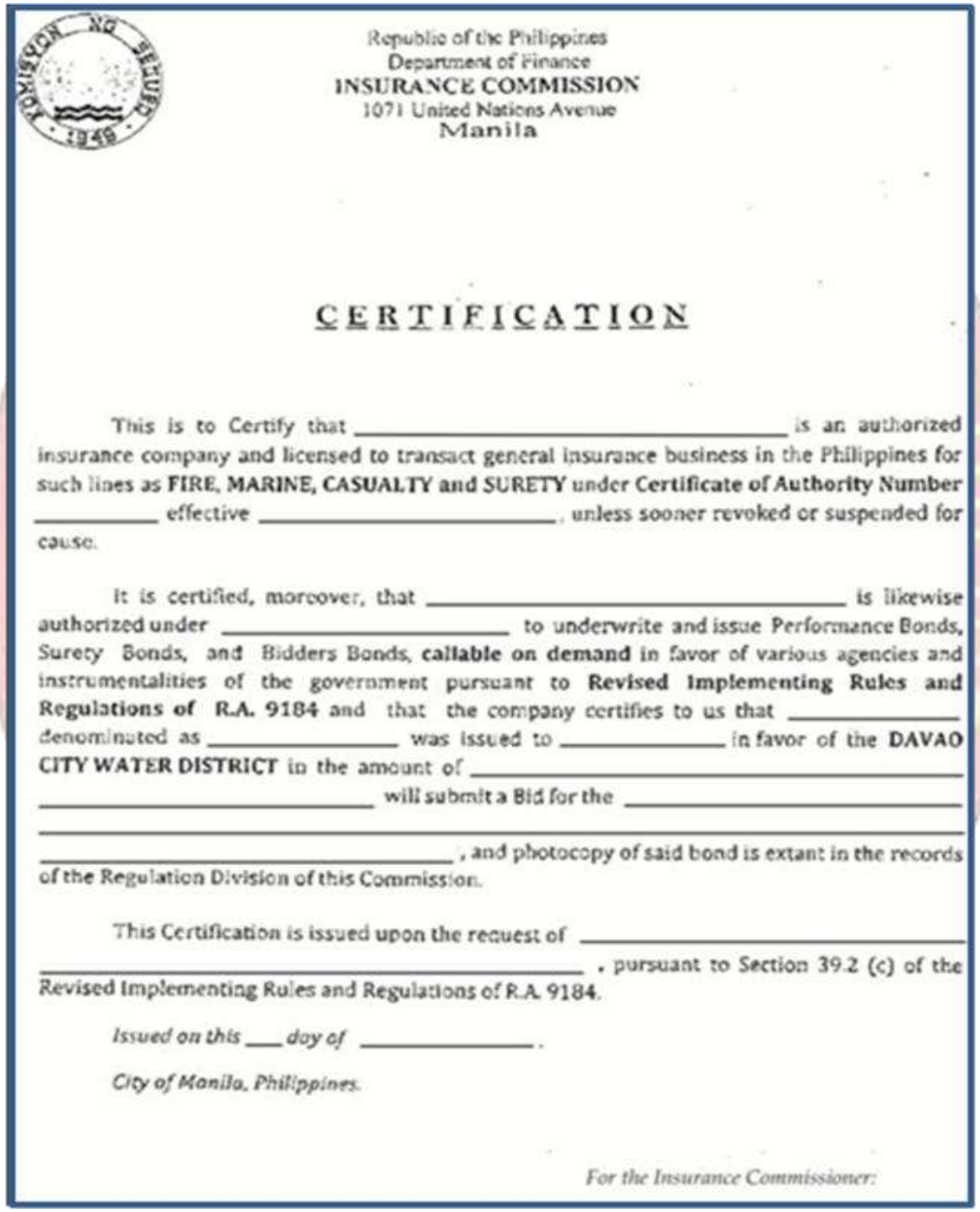
Witness my hand and seal this____day of_____, 2020.

NAME OF NOTARY PUBLIC
Serial No. of Commission _____
Notary Public for_____until_____
Roll of Attorneys No. _____
PTR No.____[date issued], [place issued] IBP No. [date issued], [place issued]

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

Certificate from Insurance Commission to be Attached to the Surety Bond

SAMPLE ONLY:



Republic of the Philippines
Department of Finance
INSURANCE COMMISSION
1071 United Nations Avenue
Manila

CERTIFICATION

This is to Certify that _____ is an authorized insurance company and licensed to transact general insurance business in the Philippines for such lines as **FIRE, MARINE, CASUALTY and SURETY** under **Certificate of Authority Number** _____ effective _____, unless sooner revoked or suspended for cause.

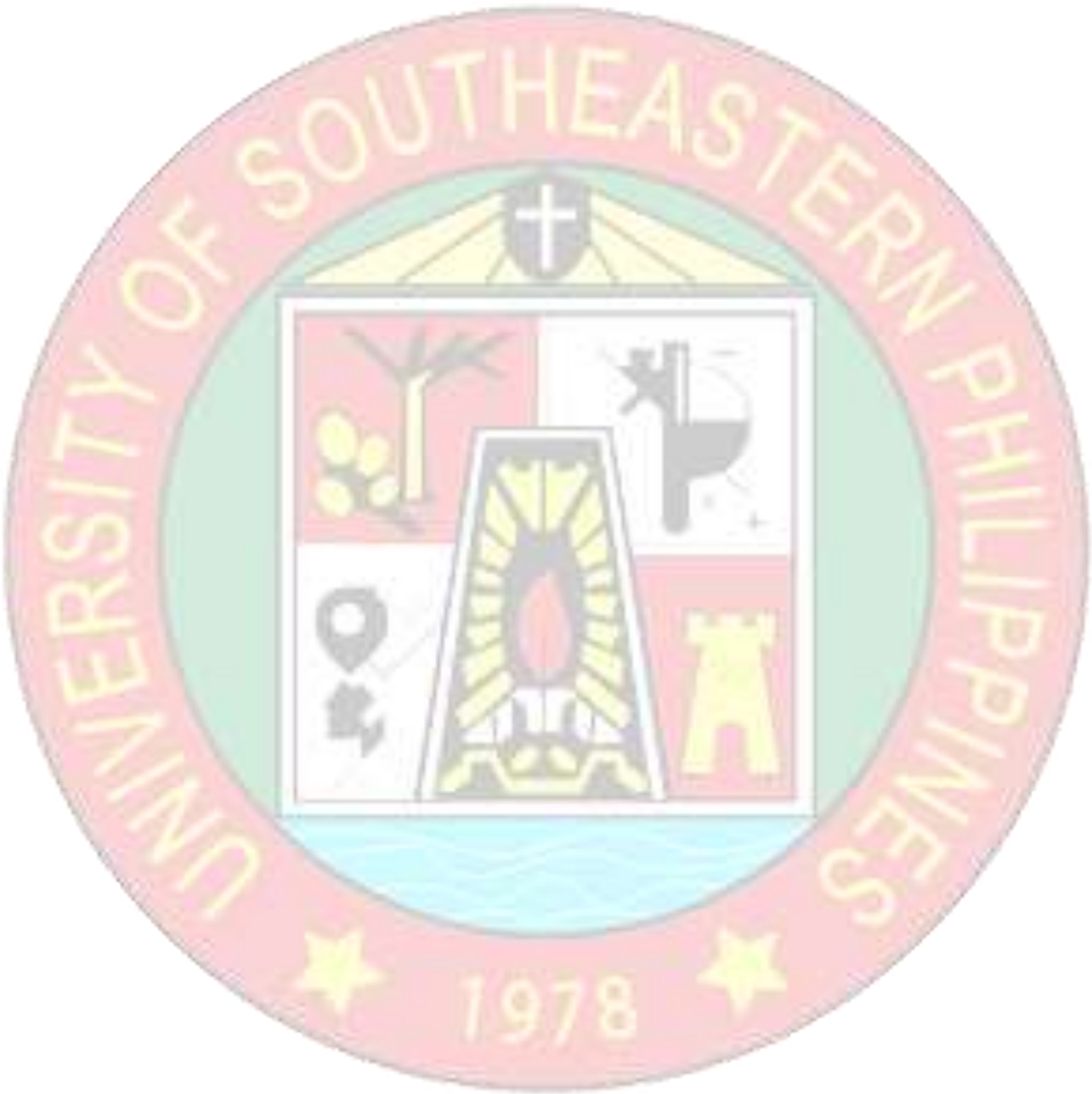
It is certified, moreover, that _____ is likewise authorized under _____ to underwrite and issue Performance Bonds, Surety Bonds, and Bidders Bonds, **callable on demand** in favor of various agencies and instrumentalities of the government pursuant to **Revised Implementing Rules and Regulations of R.A. 9184** and that the company certifies to us that _____ denominated as _____ was issued to _____ in favor of the **DAVAO CITY WATER DISTRICT** in the amount of _____ _____ will submit a Bid for the _____ _____ _____, and photocopy of said bond is extant in the records of the Regulation Division of this Commission.

This Certification is issued upon the request of _____ _____, pursuant to Section 39.2 (c) of the Revised Implementing Rules and Regulations of R.A. 9184.

Issued on this ___ day of _____.

City of Manila, Philippines.

For the Insurance Commissioner:


UNIVERSITY OF SOUTHEASTERN PHILIPPINES
1978