



Republic of the Philippines

DEPARTMENT OF SCIENCE AND TECHNOLOGY

Philippine Science High School – Zamboanga Peninsula Region Campus
Cogon, Dipolog City



SCOPE OF WORK

CONSTRUCTION OF ACADEMIC BUILDING III (REBID)

of

Philippine Science High School-Zamboanga Peninsula Region Campus

in Brgy. Cogon, Dipolog City
(DESIGN AND BUILD SCHEME)

I. BACKGROUND

The **PHILIPPINE SCIENCE HIGH SCHOOL-ZAMBOANGA PENINSULA REGION CAMPUS (PSHS-ZRC)**, through the approved allocation for capital outlay under FY 2021 General Appropriations Act, intends to apply the sum of **FORTY-FIVE MILLION PESOS (₱45,000,000.00)** being the approved budget for the **CONSTRUCTION OF ACADEMIC BUILDING III**.

II. PROJECT DESCRIPTION AND LOCATION

The re-bid project will involve the Design and Build Scheme leading to the construction of the Academic Building III pursuant to the technical specifications indicated in this Scope of Work, and the PSHS Building Specifications and Standards, indicated herein. It is located across Academic Building I and beside Academic Building II.

The project will have an Approved Budget for the Contract (ABC) of **FORTY-FIVE MILLION PESOS (₱45,000,000.00)** including all taxes and applicable permits, licenses and clearances.

A maximum of 3% of the Approved Budget Contract shall be allocated for the design, and the balance is for the construction cost. Design and Construction of the project will take 410 calendar days.

III. CONCEPTUAL DESIGN

The building design shall conform to the provisions of the National Building Code of the Philippines (PD 1096), Accessibility Law (BP 344), National Structural Code of the Philippines, Electrical Engineering Law (RA 7920), Mechanical Engineering Law (RA5336), Plumbing Code (RA 1378, 1993-1994 Revisions), Fire Code (RA 9514) and other laws and regulations covering environmental concerns and local ordinances and regulations.

The building is to be oriented based on the approved PSHS-ZRC master plan.

The proposed Academic Building III shall be 3 storeys and with a basement. The building area shall be 17 meters wide and 35 meters long, and SHALL FOLLOW THE DESIGN AND AESTHETICS OF THE ALREADY COMPLETED ACADEMIC BUILDING I to provide symmetry of the two (2) academic buildings, but shall incorporate revisions as specified in this Scope of Work.

The building shall have the following minimum standards and its corresponding dimensions:

Rooms	Location	Qty.	Minimum Requirement	
			Space	Dimension
Classrooms	2 nd to 3 rd floors	10	70 sq.m. , 2.1 sq.m./ person	10m x 7m
Classrooms	Basement	2	70 sq.m. , 2.1 sq.m./ person	10m x 7m
Smart Classrooms	Basement	2	98 sq.m. , 2.97 sq.m./ person	14m x 7m
Lobby	Basement	1	49 sq.m.	7m x 7m
Control Room	Basement	1	22.4 sq.m.	3.2m x 7m
Storage Room	Basement	1	22.4 sq.m.	3.2m x 7m
SMT Faculty Office	1 st Floor	1	105 sq.m.	15m x 7m
Humanities Faculty Office	1 st Floor	1	105 sq.m.	15m x 7m
CID Chief's Office	1 st Floor	1	21 sq.m.	3m x 7m
Assistant CID Chief's Office	1 st Floor	1	21 sq.m.	3m x 7m
Pantry	1 st Floor	1	21 sq.m.	3m x 7m
Mini-conference room	1 st Floor	1	32.2 sq.m.	4.6m x 7m
C.R. (separate for male and female and separate for employees and for students)	1 st Floor	2 for female 2 for male	22.4 sq.m.	3.2m x 7m

C.R. (separate for male and for female)	2 nd and 3 rd floors	1 male and 1 female per floor	22.4 sq.m.	3.2m x 7m
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The Academic Building III must be finished and functional and easily accessible to Persons with Disabilities (PWDs). Each comfort room in each floor should be provided with one cubicle for PWDs.

Provisions in Rooms:

- All classrooms should be provided with electrical, cable television and internet cables for a fully functional 21st century classroom including wall outlets.
- All doors in the offices and the classrooms should be pulled from the outside or pushed from the inside to open
- Glass partition with sliding door in between the Humanities Office and SMT Office.
- Partition with sliding door in between the Mini-Conference Room and CID Office, CID Office and Assistant CID Office, and Assistant CID Office and Pantry. See attached Floor Plan.
- Provision of outlets for Split-type Air-Conditioning Units (ACUs) per office, including the Mini-Conference Room.
- All classrooms in the basement and second to third floors, and all offices/rooms in the first floor should be half-glass, half-concrete design along the hallway.
- Comfort rooms should have provisions where to keep cleaning tools and materials.

Sun baffles shall be made of aluminum cladding or any material that will suit for the project in terms of purpose and aesthetics. However, the contractor can propose its own design and material to be used. The design of and the material to be used by the winning bidder will then be subject for approval by the procuring entity.

Ceilings on all the floors shall be made of Gypsum Board.

Floors shall be of porcelain tile finish.

Each classroom should be provided with:

- laminated white board (same as in Academic Building II);
- five (5) pieces 3-gang electrical outlet: 2 piece each on the left and right, and 1 piece at front wall;
- one (1) piece cable television outlet; and
- two (2) data outlets for internet connection.

The Humanities and SMT offices, as well as the Mini-Conference Room, should each have:

- eight (8) pieces 3-gang electrical outlet;
- one (1) piece telephone outlet; and
- four (4) pieces data outlet for internet connection.

The CID Chief's Office and Assistant CID Office should have:

- two (2) pieces 3-gang electrical outlet;

- one (1) piece telephone outlet; and
- two (2) pieces data outlet for internet connection;

Each classroom shall be provided with four (4) units ceiling fan.

Stair floor finish shall be porcelain tiles with groove. All railings on both sides of the stairs shall be 2-inch diameter stainless steel pipe.

Comfort rooms shall be:

- of unglazed porcelain tile finish;
- provided with mirrors in the sink areas; and
- with phenolic toilet partition wood grain design nylon series (same as in Academic Building II).

Exhaust fan per comfort room shall also be provided.

The ceilings of the lobbies must have unique design and made of gypsum board.

Office and room signages, fire protection equipment signages and fire evacuation plans and signages shall be provided in each floor.

The following are the features of each other required rooms:

Basement -

Area	Features/Provisions by Contractor
Server Room	<ul style="list-style-type: none"> - All internet, CCTV, Telephone and voice will cables be found here. - Data steel rack(s).
Pantry	<ul style="list-style-type: none"> - Cabinets above and below the sink

The following are the standard building fixtures and facilities required:

- Fire Protection System, Fire Alarm and Fire Sprinkler System -**
Fire and smoke alarms and fire sprinkler system shall be installed. Provisions on fire safety measures and construction under Republic Act (RA) No. 9514 Fire Building Code, shall be adhered to as applicable.
- Plumbing, Drainage and Water Distribution Systems -**
Potable waterline shall be designed with cistern tank system. A bypass line shall be installed in the system to have continuous supply of water in case of power interruption or pump damage. Water closets shall be flush valve type and provided with bidets.

Preferred design for routing of rain water pipes would be to provide false column/pipe chase to hide the pipe or route the pipe where it is more practicable and accessible for repairs.

Septic tank and piping shall be designed/constructed at a location approved by the Master Plumber and the procuring entity.

c. Embankment -

Embankment shall be extended not less than 1.0 meter from the perimeter edge of the building except in the area near Academic Building 2 wherein elevation is higher. Areas facing the formation and along the road network shall be the same elevation as to the existing side walk after compaction.

d. Basement Construction -

Basement shall be poured concrete wall with waterproofing. However, not all walls will be considered as poured concrete as there are areas that are above ground level and are to be designed with windows.

Waterproofing method to be used shall be integral waterproofing, interior waterproofing, application of bituminous waterproofing on exterior and installation of buried perforated drain pipe - 6" pipe with holes along the wall length, filled with gravel around and wrapped with filter cloth.

e. Methodology of Design Aesthetics -

The building shall be designed with sun baffles that are extending the windows to reduce exposure to sun rays. The design of the sun baffles shall take into consideration that these shall also be applied to Academic Building I with minimal work or cost.

f. Doors and Windows -

- Sliding door glass shall be tempered glass
- Window glass shall be standard glass
- Classroom doors shall be made of wood panel door with clear glass design and stopper.
- Fire escape door shall be provided with panic device that conforms to the requirements of the Fire Code of the Philippines.

g. Electrical Diagram -

Provide emergency line to Generator 1 through a panel box near the Academic Building 1. Design and type of lighting fixtures shall be subject for procuring entity's approval.

h. Provision of Information and Communication Technology (ICT) -

ICT Plan and installation of cables shall include:

- Voice Communication (Telephone) System at Mini-Conference Room & offices;
- Data Communication System (Internet);
- Cable Television System; and
- CCTV Television System.

All cables to be used shall be Cat 6 UTP cable.

Location of CCTV cameras should be designed that these can monitor the areas effectively. These can be designed:

- one (1) at the basement lobby;
- one (1) at the ground floor entrance;
- two (2) units at each hallway in the basement and in all floors; and
- one (1) unit per staircase.

Note: To prepare the ICT design of the building ready for future fiber optic connections.

- i. Provision of Exhaust and Air Conditioning -**
 - Provision only of control wirings, circuit breakers and other controls necessary for the installation of ACU. ACU units are excluded in this scope of work.
 - Contractor's Professional Designer should compute or design the exhaust and ACU capacity according to the size of the offices.

- j. Painting -**

Colors shall be the same as those applied in Academic Building I.

- k. Formworks and Scaffoldings -**

Formwork material shall be phenolic board. It should be considered in the costing that such material could be usable for up to three (3) during construction.

Scaffoldings shall be steel/G.I. pipes and cost to be charged for these shall only be for RENTAL.

Mock-up is required for every installation of works after the approval by the procuring entity of materials to be used/installed in the project. This is done to avoid rework.

IV. SELECTION OF DESIGN AND BUILD CONTRACTOR

The procurement and implementation of the project using the DESIGN & BUILD scheme shall be in accordance with the provisions of RA 9184, specifically, its Annex G. Bidding process shall be conducted by the Bids and Awards Committee (BAC) constituted to conduct the procurement of the project. The DBC and TWG shall prepare the design brief and performance specifications and parameters, review the detailed engineering design, and assist the BAC in the evaluation of technical proposals in accordance with the criteria set.

1. Eligibility Requirements

The eligibility requirements in the construction for infrastructure projects shall comply with the applicable provisions of Section 23-24 of the IRR of RA 9184.

a. Eligibility Documents

Class "A" Documents

- i. PhilGEPS Certificate of Registration and Membership (Platinum)**
- ii. Mayor's/Business permit issued by the city or municipality where the principal place of business of the prospective bidders is located;**
- iii. Registration Certificate from the Securities and Exchange Commission (SEC), Department of Trade and Industry (DTI) for sole proprietorship, or Cooperative Development Authority (CDA) for cooperatives;**



- iv. Tax clearance per E.O. 398, s. 2005, as finally reviewed and approved by the Bureau of Internal Revenue (BIR)
- v. Statement of all on-going, completed, awarded but not yet started design/design and build-related contracts;
- vi. Single Largest Completed Contracts (SLCCs) similar to the project to be bid that must be at least fifty percent (50%) of the ABC to be bid (in a joint venture/consortia, one should have at least one similar project, both in design and construction, with a cost of at least 50% of the ABC of the PSHS-ZRC project)
SLCC must be supported by any of the following documents:
 - Owner's Certificate of Final Acceptance issued by the project owner other than the contractor
 - Final rating of at least Satisfactory in the Constructors Performance Evaluation System (CPES). *In case of contracts with the private sector, an equivalent document shall be submitted.*
- vii. PCAB licenses and registration for the type and cost of the contract for this project; **(Medium A; License Category B)**
- viii. Audited financial statements, showing, among others, the prospective bidder's total and current assets and liabilities, stamped "received" by the BIR for the preceding calendar year which should not be earlier than two (2) years from the date of bid submission;
- ix. NFCC computation
NFCC = [(Current assets minus current liabilities) (15)] minus the value of all outstanding or uncompleted portions of the projects under ongoing contracts, including awarded contracts yet to be started, coinciding with the contract to be bid.

Class " B " Documents

- i. Joint Venture agreement, if applicable.
- ii. Special PCAB license in case of a Joint Venture.

b. Technical Documents

- i. Bid Security (in any form)
- ii. Project Requirements
 - ii1. Schematic documents.

The schematic documents must be based on the approved design brief. These documents shall be scaled presentation drawings comprising, but not limited to, **perspectives, site development plan, floor plans, elevations, sections** and other necessary drawings to illustrate the size and character of the project.

Also included in the presentation drawings is the proposed unique structural and construction system for consideration. **These shall be drawn/printed on 20" x 30" sheets using appropriate scale, and inserted (bound or not) in the technical documents.**

The schematic documents shall also include an outline or specifications, illustrating the size and character of the project, and showing the kinds of materials intended to be used, the structural concept and type, the types

of mechanical, electrical, sanitary and other utility systems and equipment to be installed, including other items of work that are indicated in the Scope of Work and design brief.

Another complete set of the drawings should be printed on A4-size sheets and bound and submitted together with the other technical documents.

ii2. Design and Construction Method

ii3. Value engineering analysis of design and construction method. Prospective bidders shall prepare a value engineering analysis report of their proposed design and construction method to be applied for the PROJECT. Importance shall be made on the following criteria:

- Cost-saving, measured on a per square meter average figure
- Time-saving in design and construction duration, measured using the HOPE approved PERTCPM of the project.
- Operational efficiency to take advantage of natural lighting and ventilation in some areas and use of efficient toilet.

ii4. Organizational Chart

ii5. List of Contractor's Personnel with complete qualification and experience data

ii6. List of Contractor's Equipment units, which are owned, leased, and/or under purchase agreements, supported by certification of availability of equipment from the equipment lessor/vendor for the duration of the project.

iii. Omnibus Sworn Statement

c. Financial Component

- i. Financial Bid Form
- ii. Bill of Quantities - Indirect Cost (OCM, Contractor's Profit and VAT) should follow the percentage of Estimated Direct Cost set by DPWH
- iii. Detailed Cost Estimates
- iv. Summary Sheet indicating the unit prices of materials, labor rates and equipment rental
- v. Payment schedule

Three (3) sets of documents [i.e., one (1) original and two (2) photocopies] - each set containing the eligibility, technical and financial components -- shall be submitted. These sets of documents should be hard-bound or soft-bound or ring-bound.

2. Eligibility Criteria

- a) The eligibility of the Contractors shall be based on the legal, technical and financial requirements above-mentioned. In the technical requirements, the Contractor (as solo or in joint venture/consortia) should be able to comply with the experience requirements under the IRR of RA 9184; and if a joint venture/consortia, one of the parties (in a joint venture/consortia) should have at least one similar project, with at least 50% of the cost of the Approved Budget for the Contract (ABC).

- b) If the bidder has no experience in design and build projects on its own, it may enter into subcontracting, partnerships or joint venture with design or engineering firms for the design portion of the contract.
- c) The relevant provisions under Section 23.4 of the IRR of RA 9184 on eligibility requirements shall be observed.

V. FOR DESIGN PERSONNEL

The key professionals and the respective qualifications of the DESIGN PERSONNEL shall be as follows:

A. Design Architect

The Design Architect must be duly-licensed with at least five (5) years of experience in the design of residential, academic or institutional facilities, and shall preferably be knowledgeable in the application of Green Design Technology in school construction.

B. Structural Engineer

The Structural Engineer must be duly-licensed Civil Engineer with at least five (5) years of experience in structural design and shall preferably be knowledgeable in the application of Green Design Technology in school construction.

C. Electrical Engineer

The Electrical Engineer must be a registered Professional Electrical Engineer with at least five (5) years of experience in the design of lighting, power distribution and preferably knowledgeable in developments in emergent efficient lighting technologies and energy management.

D. Electronics Engineer

The Electronics Engineer must be a registered Professional Electronics Engineer with at least five (5) years of experience in the related field and knowledgeable in communication systems (specifically on structured and local area network cabling, PABX) and building management systems.

E. Mechanical Engineer

The Mechanical Engineer must be a Professional Mechanical Engineer with at least five (5) years of experience in HVAC and fire protection systems and preferably knowledgeable in emergent, alternative energy-efficient HVAC technologies.

F. Master Plumber

The Master Plumber must be duly-licensed with at least five (5) years of experience in the design of building water supply and distribution, plumbing, and preferably knowledgeable in waste water management/treatment, and emergent, alternative effluent collection and treatment systems.

The key professionals listed are required. The DESIGN & BUILD contractor may, as needed and at its own expense, add additional professionals and/or support personnel for the optimal performance of all Architectural and Engineering Design Services, as stipulated in this Scope of Work for the Project. Prospective bidders shall attach each individual's resume and PRC license of the (professional) staff.

VI. CONSTRUCTION PERSONNEL

The key professionals and the respective qualifications of the CONSTRUCTION PERSONNEL shall be as follows:

A. Project Manager

The Project Manager shall be a licensed architect or engineer with at least five (5) years relevant experience on similar and comparable projects in different locations. The Project Manager should have a proven record of managerial capability through the directing/managing of major civil engineering works, including projects of a similar magnitude.

B. Project Engineer/Architect

The Project Engineer/Architect shall be a licensed architect or engineer with at least five (5) years of experience in similar and comparable projects and shall preferably be knowledgeable in the application of rapid construction technologies.

C. Materials Engineer

The Materials Engineer must be duly accredited with at least five (5) years of experience in similar and comparable projects and shall preferably be knowledgeable in the application of rapid construction technologies.

D. Electrical Engineer

The Electrical Engineer must be a registered Electrical Engineer with at least five (5) years of experience in the design of lighting, power distribution and preferably knowledgeable in developments in emergent efficient lighting technologies and energy management.

E. Electronics Engineer

The Electronics Engineer must be a registered Electronics Engineer with at least five (5) years of experience in the related field, knowledgeable in communication systems (specifically structured and local area network cabling, PABX), building management systems.

F. Mechanical Engineer

The Mechanical Engineer must be duly-licensed with at least five (5) years of experience in similar and comparable projects in the installation of HVAC and fire protection.

G. Master Plumber

The Master Plumber must be duly-licensed with at least five (5) years of experience in similar and comparable projects in the installation of building water supply and distribution, plumbing.

H. Foreman

The Foreman must have at least five (5) years of experience in similar and comparable projects and shall preferably be knowledgeable in the application of Green Building technologies.

I. Safety Officer

The safety officer must be an accredited safety practitioner by the Department of Labor and Employment (DOLE) and has undergone the prescribed 40-hour Construction Safety and Health Training (COSH).



The above key personnel listed are required. The DESIGN & BUILD contractor may, as needed and at its own expense, add additional professionals and/or support personnel for the optimal performance of all Construction Services, as stipulated in this Scope of Work for the PROJECT. Prospective bidders shall attach each individual's resume and PRC license of the (professional) staff, proof of qualifications, and related documents as necessary.

VII. PRELIMINARY DESIGN AND CONSTRUCTION STUDIES

No bidding and award of DESIGN & BUILD contracts shall be made unless the required preliminary design and construction studies have been sufficiently carried out and duly approved by the Head of the Procuring Entity that shall include, among others, the following:

- i. Project Description
- ii. Conceptual Design
- iii. Performance Specifications and Parameters
- iv. Preliminary Survey and Mapping
- v. Preliminary Investigations
- vi. Utility Locations
- vii. Approved Budget for the Contract
- viii. Proposed Design and Construction Schedule
- ix. Minimum requirements for a Construction Safety and Health Program for the project being considered
- x. Tender/Bidding Documents, including Instructions to Bidders and Conditions of Contract

The above data are for reference only. The procuring entity does not guarantee that these data are fully correct, up to date, and applicable to the project at hand. The contractor is responsible for the accuracy and applicability of all data, including the above, that it will use in its design and build proposal and services.

The acquisition of right-of-way and the conduct of eminent domain proceedings shall still be the responsibility of the procuring entity, which shall include a preliminary budget for this purpose.

VIII. DETAILED ENGINEERING REQUIREMENT

1. Upon award of the DESIGN & BUILD contract within a period of 30 Calendar Days, the winning bidder shall be responsible for the preparation and submission of all necessary detailed engineering investigations, surveys and designs in accordance with the provisions of Annex "A" of this IRR (with the exception of the Bidding Documents and the ABC).

2. The procuring entity shall ensure that all the necessary schedules with regard to the submission, confirmation and approval of the detailed engineering design and the details of the construction methods and procedures shall be included in the contract documents.

3. The procuring entity shall review, order rectification, and approve or disapprove - for implementation only - the submitted plans within these schedules. All instructions for rectification shall be in writing stating the reasons



for such rectification. The DESIGN & BUILD contractor shall be solely responsible for the integrity of the detailed engineering design and the performance of the structure irrespective of the approval/confirmation by the procuring entity.

IX. SCOPE OF WORKS AND PROJECT IMPLEMENTATION

a. Design

The Philippine Science High School -Zamboanga Peninsula Region Campus, through the PSHS System Design and Build Committee for Design and Build Scheme, shall provide the design brief description of the project in accordance to RA9184 Annex G Sec. 11.

In compliance with the DESIGN & BUILD Scope of Work, the DESIGN & BUILD Contractor shall submit a detailed program of work within thirty (30) calendar days after the issuance of the Notice to Proceed for approval by the procuring entity that shall include, among others:

- a. The order in which it intends to carry out the work including anticipated timing for each stage of design/detailed engineering and construction;
- b. Periods for review of specific outputs and any other submissions and approvals;
- c. Sequence of timing for inspections and tests as specified in the contract documents;
- d. General description of the design and construction methods to be adopted;
- e. Number and names of personnel to be assigned for each stage of the work;
- f. List of equipment required on site for each major stage of the work;
- g. Description of the quality control system to be utilized for the project;
- h. Utilize the existing geotechnical/soil investigation report as basis for the computation of structural analysis of the building.
- i. From the approved schematic design documents, prepare the complete construction drawings and detailed technical specifications, cost estimates and the bill of quantities, setting forth in detail the work required for the architectural, structural, civil, landscape architecture, electrical, plumbing/sanitary, mechanical and other service-connected equipment, utilities, site planning aspects and related works, electronic and communications and the site development plan of the PROJECT's immediate environs.
- j. Prepare layouts, specifications and estimates of all furniture and equipment required for the fit-out of the buildings, specifically items that are owner- furnished materials.
- k. Prepare the scope of work for construction based on the prepared bill of quantities and cost estimates while fitting within the approved budget.
- l. Provide value engineering analysis on all prepared construction documents. Coordinate with all offices and agencies concerned, within and outside the Campus regarding utility connections, permits and other requirements needed.
- m. Periodically coordinates and presents the status of the design phase to the Head of Procuring Entity and the PSHS Design & Build Committee.

All drawings included in the contract documents should be drawn using CAD software and plotted on 20"x30" sheets. All other textual submittals shall be printed and ring-bound on A4-sized sheets.

Where required, design components shall be designed in coordination with the agencies concerned (e.g., coordinate with electric company for power lines and concerned company/agency for water and sewage lines).

Partial and earlier submission of the construction drawings, such as those affecting the preliminary stages of construction (site works, foundation works, etc.) shall be allowed. The DESIGN & BUILD Contractor may only proceed with the CONSTRUCTION PHASE after the approval of Design & Build Committee of the drawings, designs and bill of estimates as recommended by the Technical Working Group and upon accomplishing all necessary PRE-CONSTRUCTION tasks.

b. Pre-Construction

- a) Secures all necessary building permits prior to construction. All incidental fees shall be included in the cost estimate of the building.
- b) Prepares of the PERT-CPM of the construction phase.
- c) Provides all other necessary documents that shall be required by the Design & Build Committee

c. Construction Phase

- a) Implements all works indicated in the approved construction drawings and documents. All revisions and deviation from the approved plans, especially if it shall impact the overall cost of the project, shall be subject for approval.
- b) Provides soil filling, grading and other soil protection measures of the delivery and installation of all owner-furnished materials and equipment during construction. Conducts all necessary tests (to be required by Design & Build Committee) and issues reports of results, building and other elements of the site, in response to the results of soil and materials testing.
- c) Constructs the buildings and other necessary structures, complete with utilities and finishes, resulting in operable and usable structures.
- d) Provides protection or relocation of existing trees indigenous to the area, and proper removal and replacement of all introduced trees and vegetation affected by the construction.
- e) Layouts piping, conduits, manholes, boxes and other lines for utilities including tapping to existing utility lines. Facilitate the connection of all utilities (power, water, sewer, structured cabling and telephone) with their corresponding utility companies. All application fees shall be included in the project cost.
- f) Installs fire protection systems and fixtures, fire extinguishers, emergency lights and lighted fire exit signs.
- g) Prepares shop-drawings for approval.
- i) Coordinates with the Design & Build Committee regarding scheduling of delivery and installation of all owner-furnished materials and equipment during construction.
- j) Rectifies punch-listing works to be inspected and issued by the Design & Build Committee and/or the End-user.
- k) Complies with the DOLE-OSH requirements and submit periodic reports concerning occupational safety and health.
- l) Provides all other necessary documents that shall be required by the Design & Build Committee.

d. Post Construction Phase

- a) Prepares of as-built plans



- b) Turn-overs of all manuals, certificates and warranties of installed items.
- c) Secures building certificate of occupancy and fire safety inspection certificate

e. Variation Orders

Any errors, omissions, inconsistencies, inadequacies or failure submitted by the contractor that do not comply with the requirements shall be rectified, resubmitted and reviewed at the contractor's cost. If the Contractor wishes to modify any design or document which has been previously submitted, reviewed and approved, the contractor shall notify the procuring entity within a reasonable period of time and shall shoulder the cost of such changes.

As a rule, changes in design and construction requirements shall be limited only to those that have not been anticipated in the contract documents prior to contract signing and approval. The following guidelines shall govern approval for change or variation orders:

- i. Change Orders resulting from design errors, omissions or non-conformance with the performance specifications and parameters and the contract documents by the contractor shall be implemented by the contractor at no additional cost to the procuring entity.
- ii. Provided that the contractor suffers delay and/or incurs costs due to changes or errors in the procuring entity's performance specifications and parameters, he shall be entitled to either one of the following:
 - a. an extension of time for any such delays under Section 10 of Annex "E"; or
 - b. Payment for such costs as specified in the contract documents, provided, that the cumulative amount of the variation order does not exceed ten percent (10%) of the original contract

f. Defects and Liability

- a. All DESIGN & BUILD projects shall have a minimum Defects Liability Period of one (1) year after contract completion or as provided for in the contract documents. This is without prejudice, however, to the liabilities imposed upon the engineer/architect who drew up the plans and specification for a building sanctioned under Section 1723 of the New Civil Code of the Philippines.
- b. The contractor shall be held liable for design and structural defects and/or failure of the completed project within the warranty periods specified in Section 62.2.3.217 of the IRR.

X. OVERALL PROJECT TIME SCHEDULE

The DESIGN & BUILD Contractor shall propose the most reasonable time schedule for the completion of the project. It is expected that this period will not exceed 410 calendar days from the date of the issuance of the Notice to Proceed (NTP): THIRTY (30) calendar days for the Design Phase and THREE HUNDRED EIGHTY (380) calendar days for the Construction Phase.



XI. THE IMPLEMENTING AGENCY'S GENERAL RESPONSIBILITY

The implementing agency for the project is the Campus Director of PSHS-ZRC with final approval for all decisions and actions from the PSHS System Office of the Executive Director through the Build and Design Committee. The D&B Committee shall:

- a) Prepare the design brief for the project in accordance with PSHS Systems' policies, existing codes, traditions, standards, and the conditions and design criteria enumerated in the Terms of Reference.
- b) Coordinate with DESIGN & BUILD CONTRACTOR, and the Campus Director of PSHS-ZRC with regard to the design and implementation of the project.
- c) Assist in the coordination of the DESIGN & BUILD CONTRACTOR with various utility agencies during the detailed design and implementation phases of the project.
- d) Conduct regular coordination meetings between the DESIGN & BUILD CONTRACTOR and the end-user to facilitate the implementation of the project.

XII. THE DESIGN & BUILD CONTRACTOR'S GENERAL RESPONSIBILITY

- a) The DESIGN & BUILD CONTRACTOR shall certify that he has, at his own expense, inspected and examined the proposed project site, its surroundings and existing infrastructure and facilities related to the execution of the work and has obtained all the pieces of information that are considered necessary for the proper execution of the work covered under these Terms of Reference.
- b) The DESIGN & BUILD CONTRACTOR shall ensure that all works at the stages of design, construction, restoration of affected areas, and testing and commissioning shall be carried out efficiently and effectively.
- c) The DESIGN & BUILD CONTRACTOR shall provide the school with complete reports such as technical analysis, maps and details regarding the existing conditions and proposed improvements within the site.
- d) The DESIGN & BUILD CONTRACTOR shall consider the academic calendar and critical dates and occasions within the School, in order to align his work schedule with the academic calendar of the school to avoid unnecessary disruption of school activities due to construction activities such as closure of water and power supply and non-usage of the existing roads.
- e) The DESIGN & BUILD CONTRACTOR shall inform the school of critical events during construction, especially when such events can potentially disrupt school activities.
- f) The DESIGN & BUILD CONTRACTOR shall be PCAB-accredited and shall have a Construction Safety and Health Program approved by DOLE and designed specifically for the CONSTRUCTION OF ACAD BUILDING II.
- g) The DESIGN & BUILD CONTRACTOR will be held accountable for accidents that might occur during the execution of the project. The DESIGN & BUILD CONTRACTOR is required to install warning signs and barriers for the safety of the general public and the avoidance of any accidents and provide appropriate and approved type personal protective equipment for their construction personnel.



- h) The DESIGN & BUILD CONTRACTOR shall be professionally liable for the design and shall submit a signed and sealed copy of the approved construction documents to form part of the Contract Documents.
- i) Only the plans approved by the Head of Procuring Entity (HOPE) shall be signed and sealed by the DESIGN & BUILD CONTRACTOR, and thereafter shall be the plans used for construction.
- j) All works designed and constructed should be guaranteed to seamlessly fit into the overall system general design standards of the PSHS System.

XIII. PROJECTED SUBMITTALS DURING THE PROJECT

The following submittals and accomplished documents shall be duly completed and turned-over by the DESIGN & BUILD CONTRACTOR for the project:

A. FOR THE DESIGN PHASE

- a) Construction plans (signed and sealed) that include Architectural, Civil, Structural, Electrical, Structured Cabling, Mechanical, Fire Protection and Plumbing plans (12 sets hard copy and softcopy)
- b) Technical specifications (7 sets hard copy and softcopy)
- c) Detailed cost estimate (7 sets hard copy and softcopy)
- d) Bill of quantities (7 sets hard copy and softcopy)
- e) Site survey, topographic survey, survey of existing trees and all other pertinent data related to the conditions of the project site
- f) Documents required for securing the Building Permit
- g) Drawings and reports that the Design & Build Committee may require for the periodic update concerning the status of the design phase.

B. FOR THE CONSTRUCTION PHASE (7 copies each)

- a) As-built plans (hard copy and softcopy)
- b) All necessary permits (Fees shall be included in the contract)
- c) Shop drawings (hard copy and softcopy)
- d) PERT-CPM
- e) Test results
- f) Guarantees, warranties and other certificates
- g) Fire and Life Safety Assessment Report 2 and 3 (FALAR 2 and3)

C. FOR THE POST-CONSTRUCTION PHASE

- a) Certificate of Occupancy
- b) Fire Safety Inspection Certificate
- c) All other necessary documents to be required by Design & Build Committee

XIV. CODES AND STANDARDS

The project shall be designed, engineered, installed, tested, commissioned and handed over in conformity with the Building and Design Standards of the PSHS System and with the latest editions of the National Building Code of the Philippines, the National Structural Code of the Philippines, the Philippine Electrical Code, Philippine Mechanical Code, the National Plumbing Code of the Philippines, National Fire Code of the Philippines and other relevant codes and standards.

XV. INSTALLATION AND WORKMANSHIP

Personnel of the DESIGN & BUILD Contractor should be specialists highly skilled in their respective trades, performing all labor according to first-class standards. A full time Project Engineer/Architect and Construction Safety Engineer shall be assigned by the DESIGN & BUILD Contractor at the job site during the construction of the project.

All work to be subcontracted shall be declared by the DESIGN & BUILD Contractor and shall be approved by the Campus Director of PSHS-ZRC and its respective technical offices. However, subcontracting of any portion shall not relieve the DESIGN & BUILD Contractor from any liability or obligation that may arise from the contract for this project.

Tapping for utilities such as power supply, water supply and sewage drainage shall be coordinated with their respective utilities/service provider/companies, and all works involved, including access to utilities tapping point, excavation, removal of obstructions, concrete breaking, backfilling and restoration of affected areas, shall be coordinated and included in the scope of work and cost of the project.

Any errors, omissions, inconsistencies, inadequacies or failure submitted by the DESIGN & BUILD Contractor that do not comply with the requirements shall be rectified, resubmitted and reviewed at the DESIGN & BUILD Contractor's cost. If the DESIGN & BUILD Contractor wishes to modify any design or document which has been previously submitted, reviewed and approved, the DESIGN & BUILD Contractor shall notify the procuring entity within a reasonable period of time and shall shoulder the cost of such changes.

XVI. MATERIALS

All materials and equipment shall be standard products of manufacturers engaged in the production of such materials and equipment and shall be the manufacturer's latest standard design.

The materials and workmanship supplied shall be of the best grade and constructed and/or installed in a practical and first class manner. It will be completed in operation, nothing being omitted in the way of labor and materials required and it will be delivered and turned over in good condition, complete and perfect in every respect.

Materials and systems for structured cabling shall be in accordance with standards set by the PSHS System.

All materials shall be in conformance with the latest standards and with inspection and approval from Design & Build Committee.

XVII. MODE OF PAYMENT

- a. The PSHS-ZRC shall pay the winning DESIGN & BUILD Contractor progress payments based on billings for actual works accomplished, as certified by Design & Build Committee of the PSHS System. In no case shall progress billing be made more than once every thirty (30) calendar days. Materials or equipment delivered on the site but not completely put in place or used in the project shall not be included for payment.



- b. All progress payment shall be subject to retention of ten percent (10%) based on the amount due to the winning DESIGN & BUILD Contractor prior to any deduction. The total retention money shall be released only upon Final Acceptance of the Project. The winning DESIGN & BUILD Contractor may, however, request for its release prior to Final Acceptance subject to the guidelines set forth in R.A. 9184 and its Implementing Rules and Regulations.
- c. The DESIGN & BUILD Contractor may request in writing which must be submitted to form part of the Contract Documents, for an advanced payment equivalent to fifteen percent (15%) of the total Contract Price. The advance payment shall be made once the DESIGN & BUILD Contractor issues its irrevocable standby letter of credit from a reputable bank acceptable to the PSHS System, or GSIS Surety Bond of equivalent value, within fifteen (15) days from the signing of the Contract Agreement to cover said advanced payment.
- d. First Payment/Billing (after the mobilization) shall have an accomplishment of at least 20% of the construction phase.
- e. The following documents must be submitted to the Design & Build Committee before processing of payments to the DESIGN & BUILD Contractor can be made:
 - i. Progress Billing
 - ii. Request for payment by the DESIGN & BUILD CONTRACTOR
 - iii. Pictures/photographs of original site conditions (for First Billing only)
 - iv. Pictures/photographs of work accomplished
 - v. Detailed Statement of Work Accomplished (SWA)
 - vi. Payment of utilities (power and water consumption)
 - vii. DESIGN & BUILD CONTRACTOR's affidavit (if accomplishment is more than 60%)

Note: The DESIGN & BUILD CONTRACTOR can bill the PSHS-ZRC of up to a maximum of 90% accomplishment.




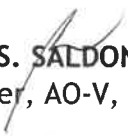
Prepared by:

THE TECHNICAL WORKING GROUP:


ENGR. ANGELIE M. MOROSCALLO
Chairperson, SST-II


ENGR. JUNE CARLO F. REYES
Member, SST-II


ENGR. ANTONIO ESCABARTE JR.
Member, Resident Engineer


MILO S. SALDON
Member, AO-V, FAD Chief


ENGR. SHARON T. PARAGUYA
Member, Resident Engineer


Recommending Approval:


ANNE FATIMA T. PELAYRE
Chief, CID


HAZEL R. LAGAPA
Chief, SSD


MILO S. SALDON
Chief, FAD

Approved by:


ENGR. LOUIE C. JAMORA
Campus Director