

## TERMS OF REFERENCE

### Services for the Architectural and Detailed Engineering Design And Consultancy Services

For the Project - ***Construction of Science Research Facility, Phase 1***

of Philippine Science High School, Central Mindanao Campus  
located at Nangka, Balao-i, Lanao del Norte

#### A. BACKGROUND

This is a three-storey reinforced concrete, elliptical-oval shaped building with wind breakers. It should support the components of a green and SMART building. This building shall house the following:

##### Ground Floor

- Information, Lobby and Visitors' Holding Area
- Display Area and/or Museum
- Office (good for 5 personnel)
- One- Pantry
- Comfort Rooms (Male and Female) and for Disabled/Elderly Persons
- Utility Room

##### Second Floor

- Robotics Lab
- Simulation Lab
- Air Lab
- Water Lab
- Soil Lab
- Material Science Lab
- Comfort Rooms (Male and Female)

##### Third Floor

- AVR and Function Room
- Science Garden and Showroom
- Interactive Room
- Comfort Rooms (Male and Female)

This building will be located in the central part of the campus with an allowable foot print of 30-meters x 30-meters.

## B. MAIN OBJECTIVE

The proposed building shall have facilities that are appropriate to the needs and requirements of a research center. The said building is to be designed and constructed in an ecologically sustainable manner in compliance with the Philippine Building and Fire Code.

## C. SCOPE OF WORK AND SERVICES

### 1. Pre-Construction Phase

- a. Prepare / submit at least two (2) - preliminary drawings of the proposed building for the review and approval of Philippine Science High School Central Mindanao Campus (PSHS-CMC).
- b. Upon approval by PSHS-CMC, Consultant shall prepare complete plans to include, architectural, structural, electrical, sanitary/plumbing and mechanical.
- c. Prepare Bill of materials and cost estimates based on the plans.
- d. Prepare Technical Specification to be used in the construction.
- e. Prepare the Structural Design/ Analysis.
- f. Provide all necessary plans and specifications needed in the bidding process.
- g. Attend the bidding conferences.
- h. Provide all the necessary documents needed for Building Permit purposes.

### 2. Construction Phase

- a. Be available for upon request of the Philippine Science High School (PSHS).
- b. Regularly visit the work site (during construction) to assure compliance with drawings, specifications and bring to the attention of PSHS on matters requiring immediate action or decision.
- c. Conduct joint inspection of the project at agreed regular intervals during construction, with the contractor and the PSHS and other concern parties.

### 3. Post Construction Phase

- a. Conduct final inspection with the PSHS and Contractor.
- b. Certify completion of works in accordance with the approved plans and specifications and recommend the issuance of certificate of completion after final inspection and acceptance.

- c. Assist the Philippine Science High School and the contractor(s) on the preparation and submission of all forms and supporting documents required by the concerned government agencies.

#### **D. SUBMITTALS AND OTHERS**

The Consultancy Firm shall prepare and submit the following reports:

- a) Three (3) sets of Inception Report.
- b) Three (3) sets of Preliminary drawings (20"x30") and design reports.
- c) Six (6) sets of final report including all supporting analyses complete construction drawings (20"x30"), General Conditions and Technical Specifications. Include soft-copy of all submitted drawings / documents stored in CD.
- d) Contract Time Extension Endorsement
- e) Variation Order Endorsement
- f) Acceptance Documentary Requirements

#### **E. MINIMUM REQUIREMENTS**

##### **1. Personnel**

- a) Architect- *The Design Architect must be duly-licensed with at least ten (10) years experience in the design of residential, academic or institutional facilities and other buildings. Must have an experience in green building design.*
- b) Civil Engineer / or Structural Engineer - *The Civil Engineer / Structural Engineer must be a duly-licensed Civil Engineer with at least five (5) years experience in structural design.*
- c) Electrical Engineer - *The Electrical Engineer must be a registered Professional Electrical Engineer with at least five (5) years experience in the design of lighting, power distribution, and communication systems.*
- d) Mechanical Engineer - *The Mechanical Engineer must be a Professional Mechanical Engineer with at least five (5) years experience in HVAC and fire protection systems.*
- e) Sanitary Engineer / or Master Plumber - *The Sanitary Engineer must be duly-licensed with at least five (5) years experience in the design of building water supply and distribution, plumbing.*
- f) CAD operators / Draftsmen - *with at least two (2) years experience in CAD works.*

##### **2. Equipment**

2. Equipment
  - a) Computer sets
  - b) Printer
3. Experience – The Company should have at least designed building/s similar in nature with cost above twenty Million Pesos for each building.

F. DATA, LOCAL SERVICES AND FACILITIES (Provided by PSHS)

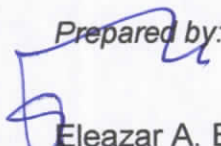
- a) Campus Master Plan
- b) Infra Road Map of the PSHS-System

G. CONTRACT DURATION– Sixty (60) - calendar days

H. MODE OF PAYMENT

- a) Upon submission of Preliminary Drawings – 15%
- b) Upon submission of basic drawings and Tender documents – 35%
- c) Upon submission of final drawings and tender documents – 35%
- d) Upon Completion of Project –15%

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