

**TERMS OF REFERENCE FOR  
ENGINEERING DESIGN AND CONSULTANCY SERVICES**

**Project : ENGINEERING DESIGN AND CONSULTANCY SERVICES for the  
PROPOSED RETROFITTING WORKS OF PGH BUILDINGS**

**Location : Taft Avenue, PGH**

**I. Introduction**

The Phil General Hospital buildings was mostly erected in 1912 particularly the Quadrant wards, Dormitory 1, 3 & 5 and Nurses Home as per DPWH recommendation. The buildings will be subjected to structural integrity test and recommend retro-fitting works based in the investigation report, **if necessary**.

The project aims to provide a design that is effective, cost efficient and in accordance with the latest approved National Structural Codes of the Philippines to ensure a safe and reliable structure for the PGH Buildings.

**II. Project Description**

- a. Project Name : Engineering Design and Consultancy Services for Proposed Retrofitting of PGH Buildings
- b. Location : Taft Avenue ,PGH Compound
- c. Total Floor Area : see attached ( 4 quadrant Ward, Dorm 3, Nursing Unit , and other building as per DPWH recommendation)
- d. Owner : Philippine General Hospital
- e. Implementing Agency : OETS , PGH
- f. **Approved Budget for the Consultancy : PhP 5,355,731.98 ( FIVE MILLION THREE HUNDRED FIFTY FIVE THOUSAND SEVEN HUNDRED THIRTY ONE & 98/100 PESOS ONLY ) VAT inclusive**

**III. Project Requirements**

The DESIGN CONSULTANT shall provide/prepare the following:

1. **Structural analysis and investigation** of the specified/existing PGH Buildings based on the provisions of the current National Structural Code of the Philippines 2015 - Volume 1 (NSCP Volume 1- 2015)
2. **Structural retrofitting designs** based on the provisions of the current National Structural Code of the Philippines 2015 - Volume 1 (NSCP Volume 1- 2015) for various structural members which failed based on our previously submitted Project Investigation Report.
3. Submission of 5 sets of Structural Retrofitting Analysis and Design Calculations, signed and sealed by a Civil/ Structural Engineer.

4. Preparation of structural drawings in AutoCAD format and 20"x30" paper setting including the plotting and blue printing of Structural As-Built and Retrofitting drawings.
5. Submission of 5 sets of structural drawings, signed and sealed by a Civil/ Structural Engineer.
6. Submission of 5 sets of Structural Technical Specifications, signed and sealed by a Civil/ Structural Engineer.
7. Preparation and submission of 5 sets of Bill of Quantities/ Cost Estimates of the Building's Structural Retrofitting.
8. Submission of photocopies of current PTR and valid PRC ID, with 3 specimen signatures of the Civil/ Structural Engineer.

#### **IV. Definition of Terms**

- a. OWNER and End User shall mean the Philippine General Hospital.
- b. IMPLEMENTING AGENCY shall mean the OETS.
- c. DESIGN CONSULTANT shall mean the engineering design firm duly registered with the SEC or DTI. The DESIGN CONSULTANT shall be owned and managed by professionals qualified to undertake work in the fields of engineering and allied services, engaged by the Hospital for the PROJECT.
- d. DESIGN TEAM shall mean the group of engineers from the DESIGN CONSULTANT assigned to be responsible for the engineering design of the PROJECT.
- e. DESIGN BRIEF shall mean the document containing all design parameters, design definitive, design guidelines, spatial requirements, schematic designs, massing studies, outline specifications and other relevant data pertaining to the engineering design of the PROJECT.
- f. CONTRACT shall mean the written agreement entered into between the OWNER, the DESIGN CONSULTANT, or individuals or companies, for the purpose of planning, designing and/or constructing the PROJECT.
- g. CONTRACT DOCUMENTS shall mean the agreements or CONTRACTS, including General Conditions, Special Conditions and the drawings, plans and specifications for the execution of the work, as well as any and all documents which are referred to in the CONTRACTS as CONTRACT DOCUMENTS, or any modifications, revisions or alterations authorized by the OWNER and agreed to by the DESIGN CONSULTANT during the negotiation.
- h. PROJECT or WORK shall mean all the works/activities and/or scope of works to be performed and completed as well as any revisions, alterations and any extra work ordered to be done by the OWNER under the CONTRACT.
- i. PROJECT SITE shall mean the place or area where the WORK is or will be carried out.



## V. Scope of Services

The engineering design services to be rendered by the ENGINEERING DESIGN CONSULTANT for the PROPOSED INTEGRITY TEST PGH BUILDINGS shall be *Structural Retrofitting Design of the Building*, includes Structural Retrofitting Design, details, schedules specifications, Bill of Quantities and cost estimate.

The professional regular services shall be done in phases, as follows:

### a. Pre-Design Phase

- i. The DESIGN CONSULTANT shall conduct, examine and review the Investigation report for the Structural Integrity Test results of the building.
- ii. The DESIGN CONSULTANT shall notify the IMPLEMENTING AGENCY of any issues, discrepancies, conflicts or other considerations that may cause problems during the design and implementation of the project and recommend necessary revisions/refinements.

### b. Design Development Phase

- i. The DESIGN CONSULTANT shall consult with the OWNER, END-USER and the IMPLEMENTING AGENCY as may be necessary to ensure the proper development of a responsive design.
- ii. As gained from consultation with the OWNER, END-USER and the IMPLEMENTING AGENCY, the DESIGN CONSULTANT shall reply to comments and advise as to concurrence or non-concurrence with said comments.
- iii. The DESIGN CONSULTANT shall prepare from the Investigation Report of the Structural Integrity Test of the building, the design development documents, consisting of detailed working drawings PROJECT, for submission to and approval by the IMPLEMENTING AGENCY.
- iv. The DESIGN CONSULTANT shall prepare specifications, and fix and illustrate the size and character of the PROJECT showing the kinds of materials intended to be used to be installed, including other items of work that may be required by the IMPLEMENTING AGENCY and the END-USER.
- v. To aid the IMPLEMENTING AGENCY in its communication of design ideas to the OWNER and/or END-USER, the DESIGN CONSULTANT shall present the Design Development output and subsequently solicit comments from the IMPLEMENTING AGENCY and the END-USER.
- vi. To ensure that the cost of the PROJECT remains within the budget, the DESIGN CONSULTANT shall submit to the IMPLEMENTING AGENCY a more probable cost estimate based on the design.
- vii. The DESIGN CONSULTANT shall provide the IMPLEMENTING AGENCY a set of design development documents out of which the END-USER, and OWNER shall approve which shall be returned to the DESIGN CONSULTANT for adoption and finalization.

c. *Contract Document Phase*

- i. The DESIGN CONSULTANT shall provide the IMPLEMENTING AGENCY five (5) sets of complete engineering working drawings, specifications, Bill of Quantities and Cost Estimate of the Structural Retrofitting Design.

d. *Construction Phase*

- i. The DESIGN CONSULTANT shall provide the IMPLEMENTING AGENCY periodic supervision and engineers to attend the coordination meetings.

**VI. Key Staff Qualifications**

The DESIGN CONSULTANT shall be an engineering design firm duly registered with the SEC or DTI, owned and managed by professionals qualified to undertake work in the fields of engineering and allied services. The DESIGN CONSULTANT must have at least ten (10) years' experience in similar or related works to the PROJECT.

The members and respective qualifications of the DESIGN TEAM shall be as follows:

1. *TEAM LEADER*

The Team Leader shall serve as the representative of the DESIGN TEAM. All communications with the DESIGN TEAM shall thus be through the Team Leader. The Team Leader must be a duly-licensed structural engineer with at least ten (10) years' experience in the planning, execution and integration of building design work and affiliated with the Structural Engineers of the (ASEP).

2. *DESIGN STRUCTURAL ENGINEER*

The Design Structural Engineer must be duly-licensed with at least five (5) years' experience, and with experience in the retrofitting design standards and innovations for the PROJECT.

**VII. Proposal Structure and Evaluation**

The procurement of the consulting services, including its processes, requirements for eligibility, bid proposal and evaluation by the infrastructure Bids and Awards Committee of the University of the Philippines Manila (UPM-BAC2), shall be governed by RA 9184, otherwise known as the Government Procurement Reform Act, and its implementing rules and regulations and amendments.

Prospective bidders must therefore prepare their respective technical and financial proposals accordingly.

Eligibility of prospective bidders shall be checked using non-discretionary "pass/fail" criteria. Short listing of eligible consultants will be done based on the following criteria: experience of the consultant, qualification of personnel and current workload. Only five (5) eligible bidders shall make up the shortlist.

The eligible bidders technical proposal shall be evaluated by the Technical Working Group created for this specific project. The criteria for evaluation is enumerated in the ENGINEER's brief.

The evaluation should not exceed 15 calendar days. The evaluation procedure to be adopted for shortlisted bidders shall be Quality-Cost Based Evaluation/Selection (QCBE/QCBS).



The OWNER shall indicate the numerical weights to be allocated for the Technical and Financial Proposals.

**VIII. General Design Description**

The PGH Buildings are two (2)-storey structures within the PGH Compound. The plans and designs shall be in accordance with the Investigation Report for the Structural Integrity Test of the Building provided by the IMPLEMENTING AGENCY.

Due to unavailability of in-house engineering professionals, the provision of detailed engineering design (structural), technical specifications and detailed estimates shall be outsourced in accordance with the pertinent provisions Of RA 9184 and this Terms of Reference.

**IX. Overall Project Time Schedule**

The DESIGN CONSULTANT shall fulfill the Pre-Design Phase, Design Development Phase, and Contract Document Phase of the PROJECT in **One hundred twenty (120) Calendar Days** from the date of the issuance of the **Notice of Proceed**.

**X. The Design Consultant's General Responsibility**

- a. The DESIGN CONSULTANT shall certify that it has, at its 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.
- b. The DESIGN CONSULTANT shall provide the Hospital with complete reports such as technical analyses, maps and details regarding the existing conditions and proposed improvements within the PROJECT SITE.
- c. The DESIGN CONSULTANT shall be professionally liable for the design and shall submit five (5) sets of copies of working drawings, specifications, cost estimates and other CONTRACT DOCUMENTS, signed and sealed, relevant to the complete work required for the PROJECT.
- d. Only the plans approved by the Hospital shall be signed and sealed by the DESIGN CONSULTANT, and thereafter shall be the plans used for the PROJECT.

**XI. The Implementing Agency's General Responsibility**

- a. The IMPLEMENTING AGENCY, with the assistance of the END-USER, shall provide the DESIGN CONSULTANT with full information regarding the requirements of the PROJECT.
- b. The OWNER, through the facilitation of the IMPLEMENTING AGENCY, shall ensure the availability, programming and allocation of funds for the payment of the services of the DESIGN CONSULTANT.
- c. The IMPLEMENTING AGENCY shall coordinate with the DESIGN CONSULTANT, the END-USER and the OWNER in regard to the design and implementation of the PROJECT.

- d. The IMPLEMENTING AGENCY shall assist in the coordination of the DESIGN CONSULTANT with various utility agencies in regard to the design and subsequent construction of the PROJECT.
- e. The IMPLEMENTING AGENCY shall assist in the evaluation of technical and financial bids for the engineering design of the PROJECT.
- f. The IMPLEMENTING AGENCY shall facilitate the proper implementation of the PROJECT, in coordination with the END-USER and the OWNER, in compliance with approved construction plans, specifications and budget.

## **XII. Codes and Standards**

The PROJECT shall be designed, engineered, and turned over in conformity with the general policies of the Philippine General Hospital and with the latest editions of the National Building Code of the Philippines, Department of Health Laboratory Design guidelines and other relevant codes and standards.

## **XIII. Mode of Payment**

The OWNER shall pay the services of the DESIGN CONSULTANT through the following partial payments:

DESCRIPTION	PAYMENT	SCHEDULE/MILESTONE OF ACTIVITIES			
		1 <sup>ST</sup> MONTH	2 <sup>nd</sup> MONTH	3 <sup>rd</sup> MONTH	4 <sup>th</sup> MONTH
UPON REQUEST OF DOWNPAYMENT	15 % Downpayment	✓			
SCHEMATIC DEVELOPMENT: prepare the INITIAL Investigation Report	20 % Design Consultant fee		✓		
FINAL STRUCTURAL DESIGN ANALYSIS REPORT INDICATING THE LOCATION OF RETROFITTING AND AS BUILT PLAN	65% Design Consultant fee				✓
<b>TOTAL</b>	<b>100%</b>				

## **XIV. Submission Information**

The BAC Activities for this PROJECT's procurement, in accordance with these Terms of Reference, shall be as follows:

Pre-bid Conference : \_\_\_\_\_  
 Receipt of Technical and Financial Proposals : \_\_\_\_\_  
 Opening of Technical Proposals : \_\_\_\_\_  
 Opening of Financial Proposals : \_\_\_\_\_

The Pre-bid Conference, as well as all pertinent submissions, shall be at the 8<sup>th</sup> Floor, PGH Building, U.P. Manila BAC 2 Secretary Office, Taft Avenue, Manila, and University of the Philippines Manila. All payments shall be made at the UPM Cashier.

The Philippine General Hospital assumes no responsibility whatsoever to compensate or indemnify bidders for any expenses incurred in the preparation of their bids.

## **XV. CRITERIA FOR EVALUATION OF TECHNICAL PROPOSAL**

	ITEM	WEIGHT	RATING
1.	EXPERIENCE IN THE FIELD (MIN. 10 YEARS)	40.00 %	40.00 %
	The Consultant must have min of 10 years' experience in the industry		
	10 - 15 Years – 5 pts (20%)		
	15 years and above - 10 pts (40%)		



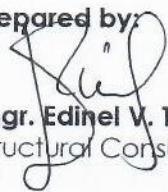
2.	LIST OF CREDIBLE PERSONNEL	40.00 %	40.00 %
	A complete team shall be composed of the following: Team Leader (Professional Structural Engineer) and Registered Civil Engineer. Incomplete – 5 pts (20%) Complete – 10 pts (40%)		
3.	LIST OF SIMILAR/COMPARABLE PROJECTS (minimum - PhP 1M)	20.00 %	20.00 %
	As to cost Php.5M – 2M = 5pts (10%) Php2.1M – above = 10 pts (20%)		
TOTAL		100.00%	100.00%
MINIMUM SCORE REQUIRED		75%	

#### XVI. CRITERIA FOR RANKING (QUALITY-COST BASED EVALUATION)

EVALUATION OF TECHNICAL PROPOSAL (80%)				
ITEM	RANGE	SCORE	WEIGHT	RATING
1. EXPERIENCE IN THE FIELD				
a. Min. of 10 yrs. In the industry (As per PRC License No.)	5 – 9 yrs = 5 pts (5%) 10 yrs. Above = 10 pts (10%)		15%	
b. Member of Institute for respective field	5 pts (5%)			
2. KEY PERSONNEL				
a. Professional Structural Engineer	10 pts (15%)		30%	
b. Registered Civil Engineer	10 pts (8%)			
c. Staff/s	1 staff = 5 pts (3.5%) 2 or more staff = 10 pts (7%)			
3. LIST OF SIMILAR/COMPARABLE PROJECTS (with photos)	As to Cost Php.5M – 2M = 5pts (10%) Php2.1M – above = 10pts (20%)		20%	
4. DATA GATHERING, ASSESMENT & ANALYSIS CAPACITY				
a. The ability of the consultant to gather and validate of pertinent data and information on the existing site condition.	Best – 15 pts (15%) Better – 10 pts (10%) Good – 5 pts (5%)		15%	
b. Analysis of existing architectural design, auxiliary, electrical and sanitary/plumbing system.				
c. Review of the existing site condition.				
SUB-TOTAL				

EVALUATION OF FINANCIAL PROPOSAL (20%)				
ITEM	FORMULA	SCORE	WEIGHT	RATING
BID AMOUNT	Score = $\frac{100 \times \text{Bid under evaluation}}{\text{Lowest bid}}$		20%	
SUB-TOTAL				


Prepared by:

  
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 Structural Consultant


Verified Correct:

  
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 Asst. Chief, OETS

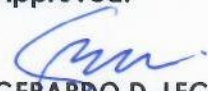
Favorably Endorsed:

  
**ENGR. MAKIMO V. TORREJOS**  
 Acting Chief -OETS

Recommending Approval:

  
**MARIA TERESA U. BENEDICTO, MD**  
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