

DOW UNIVERSITY OF HEALTH SCIENCES, KARACHI



(TOR) TERMS OF REFERENCES

CONSULTANCY SERVICES AT DOW UNIVERSITY OF HEALTH SCIENCES, KARACHI

To,

M/S. _____

You are hereby invited to submit a technical and financial proposal for Consulting Services required for the Assignment in the attached LOI Data Sheet, annexed herewith.

Your proposal could form the basis for future negotiations and ultimately a contract between your Firm and the Client named in the Data Sheet.

1. INTRODUCTIONS

- 1.1 A brief description of the Assignment and its objectives are given in the Data Sheet.
- 1.2 The Client is undertaking the duty to implement the Project as Executing Agency.
- 1.3 To obtain first-hand information on the Assignment and on the local conditions, you are encouraged to visit to Client before submitting a proposal and attend a pre-proposal conference if specified in the Data Sheet. Your representative shall meet the officials named in the Data Sheet. Please ensure that these officials are advised of the visit in advance to allow adequate time for them to make appropriate arrangements. You must fully inform yourself of local conditions and take them into account in preparing your proposal.
- 1.4 The Client shall provide the inputs specified in the Data Sheet.
- 1.5 Please note that:
 - a). The cost of preparing the proposal and negotiating the contract, including a visit to the Client, are not reimbursable as a direct cost for the Assignment.
 - b). The Client is not bound to accept any of the proposals submitted.
 - c). The firm needs to be registered with Pakistan Engineering Council.
 - d). Also please note that, the evaluation committee will correct any computational errors. When correcting computational errors, in case of discrepancy between a partial amount and the total amount, or between word and figures the former will prevail. In addition to the above correction, activities and items described in the technical Proposals but not priced in the financial proposals shall be assumed to be included in the prices of other activities or times. In case any activity or item is quantified in the financial proposal differently from the technical proposal the evaluation committee shall correct the quantification indicated in the financial proposal to make it consistent with that indicated in the technical proposal.

2. DOCUMENTS

- 2.1 To prepare a proposal, please use the attached forms/documents listed in RFP.
- 2.2 Consultants requiring a clarification of the documents must notify the Client, in writing, not later than seven (07) days before the proposal submission date. Any request for clarification in writing, or by cable, telex or telefax shall be sent to the Client's address indicated in the Data Sheet. The Client shall respond by cable, telex or telefax to such request and copies of the response shall be sent to all invited Consultants.

- 2.3 At any time before the submission of proposals, the Client may, for any reason, whether at its own initiative or in response to a clarification requested by consulting firm, modify the Documents by amendment. The amendment shall be sent in writing or by cable, telex or telefax to all short listed consulting firms and will be binding on them. The Client may at its discretion extend the deadlines for the submission of proposals.

3.0 PREPERATION OF PROPOSAL

- 3.1 You are requested to submit technical & financial proposal. Your proposal shall be written in English language.

3.2 Technical Proposal

- a. In preparing the technical proposal, you are expected to examine all terms and instructions included in this RFP. Failure to provide requested information shall be at your own risk and may result in rejection of your proposal.
- b. During preparation of the technical proposal you must give particular attention to the followings:

Form-4	Comments of Suggestion on the Terms of Reference.
Form-5	Approach Paper on Methodology Proposed for Performing the Assignment including: <ul style="list-style-type: none"> • Understanding of Project Objectives and Scope of Work. • Technical Approach and Methodology. • Work Plan. • Organization and Staffing.
Form-6	CVs signed by an authorized person of the firm. Key information should include number of years with the firm and degree of responsibilities held in various assignments.
Form-7	A work plan, illustrated with a bar chart of activities and graphics of the critical path method (CPM) or project evaluation review techniques (PERT) type.
Form-8	A work plan and time schedule for the key personnel showing the total number of person months.
Form-9	Current commitments of the firm.
Form-10	Any additional information as requested in the Data Sheet.

- c. The technical proposal shall not include any financial information.

4. SUBMISSION OF PROPOSAL

- 4.1 You shall submit one original technical proposal and one original financial proposal and number of copies of each indicated in the Data Sheet. Each proposal shall be in a separate envelop indicating original or copy, as appropriate. All copies of technical proposal shall be placed in an envelope clearly marked "Technical Proposal" and the financial proposals in the one marked "Financial Proposal". These two envelops, in turn, shall be sealed in an outer envelope bearing the address and information indicated in the Data Sheet. The envelope shall be clearly marked "DO NOT OPEN, EXCEPT IN PRESENCE OF THE EVELUATION COMMITTEE".
- 4.2 The proposal shall contain no interlineations of overwriting except as necessary to correct errors made by the consultants themselves. Any such corrections shall be initialed by the person o persons signing the proposal.
- 4.3 The completed technical and financial proposals shall be delivered on or before the time and date indicated in the Data Sheet.

- 4.4 The proposal shall be valid for the number of days indicated in the Data Sheet from the date of its submission. During this period, you shall keep available the professional staff proposed for the assignment.

5. PROPOSAL EVALUATION

- 5.1 Technical Proposal The evaluation committee appointed by the CLIENT shall carry out Technical Proposal Evaluation, applying the evaluation criteria and point system specified in the Data Sheet. Each responsive proposal shall be attributed a technical score (st). Firms scoring less than seventy (70) percent points shall be rejected and their financial proposal shall be returned unopened.
- 5.2 Financial Proposal: The financial proposals of the technically qualified consulting firms on the basis of evaluation of technical proposals shall be opened in the presence of the representatives of these firms, who shall be invited for the occasion and care to attend. Client shall inform the technically qualified firms regarding the date and time for opening the financial proposals. The total cost of each proposal shall be publicly announced to the attending representatives of the firms.

The evaluation committee shall determine whether the financial proposals are complete and without computational errors. The lowest financial proposal (Fm) among all the qualified bidders shall be given a financial score of (Sf) 100 points. The financial scores of the other qualified proposals shall be computed as follows:

$$Sf = \frac{100 \times Fm}{F}$$

(F= amount of specified financial proposal)

After evaluation of Financial Proposals, final ranking of technically qualified firms shall be worked out for a combined technical and financial score using the weights indicated in the Data Sheet.

6. NEGOTIATIONS

The proposal evaluated as combined ranked No.1, will be invited to negotiate technical and other terms of the contract without delay. The representatives conducting negotiations on your behalf must have written authority to negotiate all terms and to conclude a binding agreement failing which proposal evaluated as combined ranked No.2 will be invited for negotiations. The negotiations will conclude with an agreed form of the contract. On completion of negotiations the client and the firm will initial the agreed draft contract.

7. AWARD OF CONTRACT

The contract shall be awarded after successful negotiations with the selected Consultants and approved by the Competent Authority.

DATA SHEET

1.	The name of the Assignment is: Consultancy Services for Planning, Designing and Construction Supervision of Hospital Buildings and Medical Allied Services at DUHS, Karachi.
2.	The name of the Client is: Dow University of Health Sciences, Karachi (DUHS)
3.	The description and the objectives of the assignment are: Objectives of the assignment is to get the buildings constructed in accordance with specifications and standards:
4.	Phasing of the Assignment (if any): Yes_____ No_____
5.	The consultants are requested to submit written queries on the content of these documents if they wish. A written addendum can be issued subsequently, to all invited participants.
6.	The Client shall provide the following inputs: All Data and Reports available with Client
7.	Association with other Short Listed Consulting Firms : Note Allowed
8.	The number of copies of the Financial Proposal required are: Original Only
9.	Date and time of proposal submission is 31-05-2017 @ 1030 Hours
10.	Date and time of opening of Technical Proposal is 31-05-2017 @ 1100 Hours
11.	Opening of Financial Proposal shall be intimated separately after technical evaluation process is completed.
12.	Validity period of the proposal is: 90 Days
13.	Method of Evaluation Proposals will be evaluated in accordance with Quality cum Cost Based Selection Method. Weightings given to Technical & Financial Proposal are as under: Technical Proposal 80% Financial Proposal 20%
14.	Assignment Completion Period a. Planning, Designing and Tender Documents 06 Months b. Construction Supervision 18 Months

EVALUATION CRITERIA

Participants will be evaluated as per criteria defined below:

1. Profile & Experience

- Experience of the only registered consultants will be accepted from the date of registration with Pakistan Engineer Council.
- In case of firm, experience certificate should be signed by CEO / Senior Executive with supporting documents.

2. No. of Assignments / Projects successfully completed

- Over 10, well recognized Assignments undertaken in last 10 years, worth more than or equal to 100 million preferably public sector Enterprise at National / International level.
- Between 6 to 9, well recognized Assignments undertaken in last 10 years, worth more than or equal to 100 million preferably public sector Enterprise at National / International level.
- 05, well recognized Assignments undertaken in last 10 years, worth more than or equal to 100 million preferably public sector Enterprise at National / International level.
- Participant will provide the list of clients along with completion certificates.

3. Qualification and Competence of the Key Staff detailed

A dedicated team of full time personnel who have adequate exposure to undertake the project. Personnel constituting the team would comprise of Senior Professionals & Lead Consultant.

PERSONNEL	QUALIFICATION	NO. OF PERSONNEL
Project Manager / Team Leader	M.S, B.E (Preferred in relevant field) 20 year's experience, minimum 05 year's service with existing firm.	01
Sr. Associates	B.E (Preferred in relevant field) 15 years experience, minimum 05 years service with existing firm.	01
Design Engineers	B. Architect.	01
	B.E (Electrical Engineering) 15 year's experience.	01
	B.E (Mechanical / HVAC&R)	01
Site Engineers	B.E (Civil)	01
	B.E (Electrical)	01

4. Financial Position of the Firm

ANNUAL TURN OVER
Average Annual turnover of last three years > PKR 75 Millions
Average Annual Turnover of last three years > PKR 50 Millions
Average Annual Turnover of last three years > PKR 25 Millions

Financial statement duly audited by a firm of chartered accountant registered with institute of chartered of Pakistan (ICAP).

5. Adequacy of the proposed Work Plan and Methodology in responding to TORs

<u>QUALIFICATION</u>
Organizational Structure illustrating the composition and reporting relationship of the team
Methodology and approach for tasks identified in TORs
Work plan giving comprehensive description of the work activities and time schedule etc.

ANNEXURE-A

TECHNICAL PROPOSAL FORMS

TECHNICAL PROPOSAL SUBMISSION LETTER

To:

(insert name and address of client)

Sub: _____.

Dear Sir,

We, the undersigned, offer to provide the consultancy services for *(insert name of project)* in accordance with your request for proposal vide Advertisement dated _____.

We are hereby submitting our Proposal which includes this Technical Proposal *(insert number of copies)* and Financial Proposal sealed under a separate envelope.

We are submitting our Proposal as _____ *(insert JV or single entity)*. We hereby declare that all the information and statement made in this proposal are true and accept that any misinterpretation contained in it may lead to our disqualification. If negotiations are held during the period of validity of the Proposal i.e. indicated in the Data Sheet, we undertake to negotiate on the basis of the proposed Personnel.

Our proposal is binding upon us and subject to the modifications resulting from Contract negotiations.

We understand that you are not bound to accept any Proposal you receive.

Yours sincerely,

For _____

Signature _____

Designation Official Stamp

Registration with PEC / PCATP Provide copies of registration with Pakistan Engineering Council and Pakistan Council of Architects and Town Planners.

Provide brief description of the firm (not more than 02 A4 size pages)

**FIRM REFERENCE
RELEVANT SERVICES CARRIED OUT THAT BEST
ILLUSTRATE QUALIFICATION**

PROJECT NAME:		COUNTRY:
PROJECT LOCATION WITHIN COUNTRY:		PROFESSIONAL STAFF PROVIDED BY THE FIRM :
NAME OF CLIENT:		NO. OF STAFF:
START DATE (Month/Year):	COMPLETION DATE (Month/Year).	APPROX. VALUE OF SERVICES:
NAME OF ASSOCIATED FIRM(S) OF ANY:		NO. OF MAN-MONTHS OF PROFESSIONAL STAFF PROVIDED BY ASSOCIATED FIRM(S):
NAME OF SENIOR STAFF INVOLVED AND FUNCTIONS PERFORMED:		
DETAILED NARRATIVE DESCRIPTION OF PROJECT:		
DETAILED DESCRIPTION OF ACTUAL SERVICES PROVIDED BY THE FIIM		

COMMENTS OR SUGGESTIONS ON TOR

It is suggested that any Comments / Observations on Terms of Reference may be presented in this form.

**APPROACH PAPER ON METHODOLOGY PROPOSED FOR PERFORMING THE
ASSIGNMENT**

Technical approach, methodology and work plan are key components of the Technical Proposal. You are suggested to present the Technical Proposal, divided into following sections.

- Understanding of Project Objectives and Scope of Work
- Technical Approach and Methodology
- Work Plan
- Organization and Staffing

FORMAT FOR CURRICULUM VITAE (CV) FOR PROPOSED STAFF

1. Proposed Position :
2. Name of Firm :
3. Name of Staff :
4. Date of Birth :
5. Years with Firm :
6. Nationality :
7. Membership in Professional Societies :
8. Tasks Assigned on the Project :
9. Education :
10. Employment Record: [Starting with present Position, list in reverse order every employment held. List all positions held by staff member since graduation, giving dates, names of employing organization, title of position held and location of assignment. Also give types of activities performed / responsibilities held].
11. Languages
12. Certification:

I, the undersigned certify that to the best of my knowledge and belief, these bio-data correctly describe myself, my qualifications and my experience.

Or:

Signature of Staff Member

Authorized Representative of the firm

CURRENT COMMITMENTS OF THE FIRM

It is suggested that detail of firm's current project (in hand assignments) are provided under this section as per format given below.

SR. NO.	NAME OF PROJECT	PROJECT COST (MILLION RS.)	START DATE	EXPECTED DATE OF COMPLETION	CLIENT
1.					
2.					

ADDITIONAL INFORMATION

It is suggested that any additional information, for which the firm believes that the same may enhance its standing, may be provided under this section.

ANNEXURE-B

FINANCIAL PROPOSAL FORMS

FINANCIAL PROPOSAL SUBMISSION LETTER

To:

Sub: _____.

Dear Sir,

We, the undersigned, offer to provide the **Consultancy Services for** (*insert name of the project*) in accordance with your request for Proposal vide Advertisement dated _____ and our Technical Proposal.

Our attached Financial Proposal is for the sum or Rs. (in figure) [Pak Rupees (in words)].

Our financial proposal shall be binding upon us and subject to the modifications resulting from Contract negotiations, up to expiration of the validity period of the Proposal i.e. indicated in the Data Sheet. If negotiations are held during the period of validity of the Proposal, we confirm availability of our team of proposed personnel. Our proposal is binding upon us and subject to the modification resulting from Contract negotiations.

We understand that you are not bound to accept any Proposal you receive.

We remain,

Yours sincerely,

For _____

Signature _____

Designation
Official Stamp

DIRECT (NON-SALARY) COSTS

SR. NO.	NOMENCLATURE	UNIT	QUANTITY	UNIT PRICE (RS.)	AMOUNT
1	Rent for Office Accommodation	Month			
2	Office Utilities Costs	Month			
3	Cost/rental of Furniture/Furnishing		LS		
4	Cost (Rentals) of Office/Other Equipment		LS		
5	Computer and Accessories		LS		
6	Photocopy Machine				
7	Communication Expenses	Month			
8	Office Drafting/Supplies	Month			
9	Laboratory Testing		LS		
10	Transport/Vehicle				
11	Drafting/Reproduction of Reports	Month			
12	Other not covered above to comply with TOR requirements		LS		
TOTAL					

ANNEXURE – C

**SCOPE OF WORK & DUTIES
/ RESPONSIBILITIES OF CONSULTANT**

SCOPE OF WORK & DUTIES / RESPONSIBILITIES OF CONSULTANT

The Consultant shall provide Professional and technical Personnel and also all the equipment necessary for the proper execution of the Services as requested in the Scope of Services outlined below. The Consultant's Team shall liaise and coordinate with all concerned Authorities and shall be familiar with all local government laws and regulations.

Stages

The scope of services to be performed and successfully completed by the Consultants to the full satisfaction of the Client and in accordance with the Contract shall include but not limited to the phases and stages as described herein:

3.1 Phase 1: Design

Stage1: Data collection, survey, analysis, and Project Brief Feasibility

Stage 2: Draft Master Planning of Site

Stage 3: Concept Architectural Design Stage

Stage 5: Draft Engineering Design Stage

Stage 6: Detailed Design / Working Drawings and "Draft Tender Documents

Stage 7: Pre-Qualification of Contractor

Stage 8: Final Design and Tender Documents

Stage 9: Services during tendering stage.

3.2 Phase II: Construction Supervision

Stage 1: Construction Supervision

Stage 2: Services during Defects Liability Period

3.3 Coverage

The Consultancy services shall cover the entire project's works inclusive of all Design Disciplines and necessary specialty services such and as described below:

- a. Architecture and Interior design for public and back of house spaces
- b. Internal and External Signage and way finding
- c. Façade Engineering
- d. Structure and Civil Engineering
- e. Mechanical and HVAC
- f. Plumbing and Public Health
- g. Fire & Life Safety
- h. Fire Protection and Loss Prevention.

- i. Code Consulting
- j. Electrical
 - a) ELV including security, structured cabling, ITV, PABX, ICT, data alarm, BMS/RMS, GCS data center, HOS/PMS, POST, DECT, Disabled alarm, BMS/RMS and access control, master key home automation, A V System.
 - b) Internal and External Lighting
 - c) Energy Conservation Engineering
 - d) Vertical Transportation System.
 - e) Acoustics
 - f) Landscaping including reticulation and landscape lighting.
 - g) Functional, Departmental and Room by Room Space Program.
 - h) Waste Management Services
 - i) Roads and infrastructure
 - j) Traffic / Parking Impact Assessment.
 - k) Building Parking Systems
 - l) Surveying – Hydrological / Hydrographical, Topographical and Geotechnical.
 - m) Coordination with the Facility Operator
 - n) Approval of all drawings, specifications and other design
 - o) Documents from all authorities having jurisdiction within the
 - p) Prescribed project schedule.
 - q) Procurement of all construction NOCs/ Permits from all Authorities having jurisdiction.
 - r) Others as may be necessary as a result of the design and to complete the

Consultant's scope under this request for proposal.

4. Obligations of Consultants

4.1 The Services to be performed by the Consultant in relation to the Project include:

- 4.1.1. Full designs to meet Client's requirements and objectives (architectural, engineering and specialties concept and preliminary designs and production of the final detailed architectural and engineering design to develop construction drawings, specifications, tender documents, construction (contract documents)
- 4.1.2 Coordination with the Clients procurement strategy.
- 4.1.3 Assist the Client with procurement of the construction contract.

4.1.4 Construction documentation and construction supervision and services during the defects liability period.

4.2 The Consultant must comply with all requirements stated within this request for Proposal any exclusion should be highlighted with its impact on the proposed fees, failure to comply may result disqualifying the submitted proposal.

4.3 The Consultant shall:

4.3.1 Serve as an integral part of the Client's team. The scope of works stated below concentrates on deliverable. However, the Consultant should provide a complete proactive consultancy services, attending monthly meetings and workshops as and when required and give comments and advice to other team members when required.

4.3.2 Submit the Final Detailed Working Drawings for review and approved by the Client. Interim review sessions will be scheduled at strategic points throughout each of the design stages.

4.3.3 Obtain all pertinent information and other data as shall be necessary and liaise with the Client, End Users, Facility Operator, other Consultants (if any) and third parties to carry out his obligations under this Request for proposal.

4.3.4 Employ procedures which will provide for a proactive approach and shall be supported by efficient control systems.

4.3.5 Complete the whole of the Services and each part of the services at the times and within Agreed periods.

4.3.6 Take due account of the Client's primary objectives in relation to the project as described above, and the budget.

4.3.7 Cooperate, coordinate and liaise with other Consultant appointed by the Client (if any), to provide professional services in relation to the Project.

4.3.8 Submit reports to the Client on its progress in the performance of the Services at such intervals and in such form and numbers and with such detail as the Client may require.

4.3.9 Use its best endeavors to identify those technical and economic solutions that are most suited to the requirements of the Project and the Project construction budget.

4.3.10. Participate, cooperate, coordinate and facilitate value Engineering workshops either internally or as requested by the Client.

4.3.11 Carry out, Manage, coordinate and facilitate Risk Management and review workshops throughout the different design and construction phases.

4.3.12 In relation to the project and at the appropriate times, obtain all necessary consents, approvals, no object certificate, permits (including without limitation the preliminary building permit and the final building permit) and the like from all relevant authorities and departments as may be applicable.

4.3.13 Carry out all surveys and site investigations of the Project site (funded by the client) as follows:

a) Carry out "As Existing" site surveys of existing facilities and underground services as appropriate. Project site survey shall include verification of underground services where appropriate. Consultant shall also carry out survey of existing adjacent facilities and structure appropriate to the services.

b) Identify preliminary locations for both temporary and permanent works.

- c) Carry out a detailed topographical survey and underground services survey to determine and record the exact layout, physical features, location of existing roads, services (above and belowground) and all other pertinent information and conditions relevant to the Project Site.
- d) Carry out a geotechnical investigations, by specialized sub-contractor that is approved by the Client. The investigations shall provide detailed information on the nature of the sub-strata, superficial deposits, ground water and recommendations on the foundation design required for the project. Site investigations shall be carried out in accordance with the British Standards BS5930 and 1377.
- e) Prepare site plans that shall show new and existing contours, controlling grades, adjacent drainage, floor elevation of buildings and the relations of buildings to existing or proposed roads, utilities, parking, pedestrian and vehicular circulation, landscaped spaces boundary walls, special features such as retaining walls, terracing or other elements unique to the project. A site area analysis shall be conducted, indicating the total area (and percent to total) in each land use.

4.3.14 Ascertain and coordinate the requirements of all relevant authorities and departments in relation to the project and, subject to the approval of the Client, shall incorporate all such requirements into the design of the Project.

The Consultant shall also attend meetings as necessary with the relevant authorities and departments in relation to the project. Obtain all relevant information and data necessary to perform its obligations under this Request For proposal.

4.4 The Consultant must submit a statement confirming that the Consultant has:

- (a) Visually inspected the proposed locations of all adjacent buildings and major facilities (if any), and
- (b) Visited the site.

4.5 Procurement Packaging

If requested, provide advice and assistant to the Client in the identification and consideration of alternative procurement routes and in establishing the most appropriate route for Project.

4.6 Attendance in Meetings

The Consultant's key design professionals, covering the various technical disciplines shall attend, actively participate and cooperate with the Client's request for meetings at its expenses, which shall include but not be limited to the following meetings:

- (a) Design review Meetings
- (b) Progress Meetings
- (c) Value Engineering Studies / Workshops.
- (d) Risk Management & Review Workshop (Technical issues only)
- (e) Any other meetings held in relation to the project.

4.7 Design Codes

4.7.1 The Consultant shall provide all his services in accordance with internationally recognized codes, standards and recommended best practices (CAA, BS, NF A, ASTM, AIA, HTM etc). All specified Equipments and material shall comply with recognized codes and standards.

4.7.2 The Consultant shall advise the Client in writing of all codes, standard and recommended best practices that he intends adopting throughout the design for the written acceptance and written approval of the Client and shall provide the Client with three hard copies and of soft copy of all intended and approved codes, standards and recommended practices.

4.7.3 Emphasis shall be placed on energy conservation measures and techniques.

4.8 Green Elements

4.8.1 The Consultant shall, on a regular basis, report on environmental issues (both positive and negative) and shall report on “green” elements initiatives and practices built into the design, construction and operation of the Project.

4.8.2 The design shall take into consideration environmental requirement, and constraints that may be raised at different stages of the project whenever applicable.

4.9 Use of Local Elements

To the extent possible, the Consultant will maximize the use of local products and materials in the design, in the meantime ensuring that state-of-the are concepts and technologies are applied to the design:

4.10 Construction analysis

4.10.1 In conjunction with the Client, the Consultant shall undertake constructability analysis of the design. Constructability is the process of review, analysis and application of ideas and methods that will result in a final product that can be built most effectively and in the shortest period of time without sacrificing quality, taking into consideration, such items as schedule, materials, required construction equipment, available manpower, work methods and required quality control measures etc.

4.10.2 The design and construction documents should be developed with consideration for constructability to make sure that there are no ambiguities, inconsistencies or other problems, which could lead to otherwise, preventable difficulties during construction.

5. Disabled Friendly Design

The design shall also cater for the accessibility for the disabled for all services / facilities and processing and movement throughout the facilities / buildings. The consultant shall fully liaise with all relevant services authorities and provide them with a description of the works and all required sets of layout drawings to enable the service authorities to mark on their existing and proposed services in order to resolve any effect to or by the project.

6. The Consultant shall satisfy the requirements of the Services Authorities on the design of the Project. Subject to the approval of the Client, the Consultant shall incorporate all such requirements in the design of the Project.

7. Design Software

The Consultant, in the preparation of the Project Specifications, shall utilize FPS System.

8. Deliverables

8.1 The Consultant’s deliverable shall be produced and submitted in accordance With an approved program of work and in accordance with set Milestones.

8.2 The Consultant’s deliverables shall be produced at appropriate scales and level of details and not less than those stated. These shall be produced for all systems and

services and shall be fully coordinated, each with the architectural and specialist elements and each service with one another.

9. Complete Design by Consultants

- 9.1 The Consultant is responsible for the complete design of all non priority systems in the project, and coordination / modification of design to accommodate all propriety system. Use of contractor provided specialist suppliers, vendors or subcontractors to assist or perform design tasks and prepare specifications on behalf of the Consultant shall be accepted other than with the specific written approval of the Client.
- 9.2 The Consultant shall ensure that all materials, products and / or equipment specified for use on the Project have been proven satisfactorily for commercial use for at least five (05) years. The Consultant shall ensure, demonstrate and substantiate that such materials, products and equipment can be competitively procured by the Client from at least four different independent sources.

10. Indemnity

- 10.1 If the Client suffers and losses or damages as a result of proven faults, errors or omissions in the design of the project, the Consultant shall make good such losses or damages, subject to conditions that the maximum liability, as aforesaid, shall not exceed twice the total remuneration of the Consultants for design phase in accordance with the terms of Contract.
- 10.2 The liability of Consultant expires after (01) year from the stipulated date of completion of construction or after three (03) years from the date of final completion of the design whichever is earlier.

11. Third Party Verification

The Consultant shall directly appoint at its cost qualified Technical Verification Third Party firms(s) to certify the structure design. The Consultant shall obtain the Client's approval of his proposed Technical Verification Third Party Firm (s).

12. Travel Cost

All trips during all the phases, by senior professionals from the Consultant's Head Office, shall be allowed for and included in the Consultant's Lump Sum fee. This excludes travel specifically requested by the Client over and above what would normally be appropriate for a project of this scale and complexity. This also excludes international travel as many be requested by the Client from time to time for some specific purpose.

13. Budget Control

The Consultant is to ensure that the Project is designed and constructed within the Approved Budget. In doing so, the Consultant must monitor the estimated construction cost throughout all stages of design. The Consultant shall submit detailed cost estimate reports at the end of each design stage. If the final cost estimate exceeds the approved project budget in Section 5.7 by more than 5%, the Client may instruct the Consultant to amend the final designs to ensure that the final design cost estimate does not exceed the approved budget. An additional design required will be performed by the Consultant without any additional fee.

14. Copyrights

Promotional rights for publication of the Projects are the sole property of the Client, and any use by the Consultant of such shall be subject, in all instances, to the Client's prior written approval.

15. Coordination with other Consultants

- 15.1 Duties to be undertaken by the Consultant are highlighted within this Section though accordingly the Consultant shall be responsible for the coordination of all relevant commercial / contractual project activities. The Consultant shall, where appropriate, assist other Consultants as and when required.
- 15.2 The duties of the Consultant shall include, inter alia, those prescribed within this Section and those which may reasonably be inferred from a professional Consultant to ensure the Project completion within the Client's time and budget constraints through effective management and control procedures. The Consultant shall ensure that the Client receives real "value" for the Project.
- 15.3 The Client may employ other parties to provide services for the Project and the Consultant shall closely liaise and coordinate with the party (or parties) throughout the Design and construction stages of the project and provide them with all required information, drawings, schedules, etc to enable them undertake the Services for the Project.
- 15.4 The Consultant shall provide overall design project Management to coordinate all designs, disciplines and specialties and other requirements defined in the contract. The Consultant shall also coordinate its design with other Consultants appointed directly by the Client or any other entity or advisor as well as statutory authorities.

16. Error Free Design

The Consultant in preparing tender documents, contract documents and documentation required for the construction of the Project, take care to ensure that these are complete in all respects and there are no errors or omissions in relation thereto which may necessitate the issue of variation orders and / or entitle the contractor (s) to additional payments and / or time under the construction contract.

17. Cost estimation

All Cost Estimate activities shall be carried out by the Consultant.