United Nations Development Programme
Programme of Assistance to the Palestinian People

برنامج الأمم المتحدة الإنمائي/ برنامج مساعدة الشعب الفلسطيني

REQUEST FOR QUOTATION

Reference: RFQ-2010-080
Subject: Consultancy Services for Review and Modification of Detail Design and Tender Documentation of Emergency Water Supply Project - Beit Hanoun Area

Dear Sir / Madam:

The United Nations Development Programme/Programme of Assistance to the Palestinian People (UNDP/PAPP) invites you to submit a quotation for Consultancy **Services for Review and Modification of Detail Design and Tender Documentation of Emergency Water Supply Project - Beit Hanoun Area** as detailed in Annex A.

To enable you to submit a bid, please find enclosed the following:

Annex A	Terms of Reference
Annex B	Special Conditions
Annex C	General Conditions for Professional Services
Annex D	Standard Format of Technical Proposal
Annex E	Standard Format of Financial Proposal

Interested parties are requested to submit the quotation before **12am** (Jerusalem time) on **23rd Aug. 2010**
Pre-bid meeting is to be held on 9th Aug. 2010 at 10:00 am at UND/PAPP Gaza office.

Submissions can either be made in a sealed envelope to the following address:

UNDP/PAPP Office –Gaza
Omar Bin Abed Al Aziz Street
Al Remal Gaza
Att. Rima Manneh

The quotations should be addressed to Mr. Khaled Shahwan, Deputy Special Representative (Operations).

Quotations provided via any other method or received late will be rejected.

For clarifications related to this RFQ please contact
E-mail: proc10.papp@undp.org

Yours sincerely,

Shehadeh Habash
OIC - Procurement Unit
UNDP/PAPP

Annex A
Terms of Reference

Terms of Reference

INTRODUCTION

The United Nation Development Program/Program of Assistant to the Palestinian People (UNDP/PAPP) has been entrusted by the government of Japan with grant of Five million US$ for the Emergency Water Supply and Rehabilitation for Rafah and Northern area (Project PAL10-00052737).

The project is divided into two main parts. The first one in Rafah has been already designed, and the second is proposed to be in the Northern area of Gaza Strip where Palestinian Water Authority (PWA/PMU) has already prepared several Master Planning studies covering all provisions of water issues. These studies were carried out in terms of quantity, quality, coverage, reliability, and compliance relative to the international and national norms and standards up to planning horizon year of 2025 through contribution of all concerned water institutions (PWA, Municipalities, CMWU and others).

In this regard, UNDP/PAPP (Hereafter called the Employer) has prepared the Detail Design tendering for Beit Hanoun part in 2007 but upon request of PWA to modify the design in order to match with changes occurred to the hydraulic system in the town through 2007-2010. Therefore, complete revision and study of water master plan is to be carried out and finalization of the proposed tendering package of Beit Hanoun Area.

The Consultant will enter into a contract with the Employer (the "Contract") based on the following terms and conditions;

The terms of reference have been divided into two Sections comprising;

1. The technical brief, which states the objectives of the Consultant brief, describes the Stages of the Project and itemizes specific tasks and deliverable required from the Consultant. Also includes the Project Program and progress monitoring. The terms of reference also specifies the design criteria and the respective responsibilities of the Consultant and UNDP/PAPP.
2. The financial brief defines the Conditions of Contract, details the Consultant Services to be provided, when they are required and the method of remuneration and reimbursable.

BACKGROUND

The planning area is the Northern Governorate which occupies the northern part of Gaza Strip with a total area of about 60 km^2. It embodies four communities: Jabalia town and camp, Beit Lahia town, Beit Hanoun town, Um Nasser village in addition to the recently constructed Sheikh Zayed City.

The current water supply system comprises water wells, distribution water network and damaged concrete tank. Water is normally abstracted from wells and discharged directly into the network. The current water supply system does not allow the match between the water demand variations and the capacity of the wells pump hence during the peak periods the wells pump can not provide adequate pressures due to the high demand. Consequently, the water system operators divide the community into distribution zones where each zone receives water part of the day. As a result of this distribution practice, the residents used to reserve storage facilities over their roofs to meet their demand during

the periods of shut off water supply. The current water distribution practice is not only uncomfortable to the customers but it requires a routine and tedious work of closing and opening isolating valves

Potential improvements to the water system in the planning area were proposed in the Master Plan of PWA in order to address the existing deficiencies, improve the water distribution system and the future water supply reliability and response under daily operational scenarios, peak flow and cope with future demands throughout the planning period. These potential improvements include the rehabilitation of the existing infrastructure (tanks, wells and pipelines), addition of new facilities (storage tanks, pumping station, trunk lines and distribution pipelines) and development of new sources of supply mainly groundwater wells.

The Detail design will contribute in the following objectives;

- To increase the per capita water consumption as planned by the PWA.
- To improve the water quality distribution over the planning area.
- To eliminate direct pumping into the network.

Therefore and as a part of PWA long-term development strategy program concerning water and wastewater section in Gaza Strip, UNDP/PAPP decided to recruit a Consulting Firm for preparation of full Water Facilities Detail Design and complete set of Tendering documents for Beit Hanoun Area Package.

TECHNICAL BRIEF

1. Statement of Objectives

The objective of the contract is to review, modify the existing design and present full detail design packages and complete set of tendering documents of the following item as shown here below;

A. Storage Facilities

The Consultant shall review, verify, study, modify and document the existing design of the required works related to provision of Construction of new tanks. This assignment includes hydraulic and structural design of two storage Facilities. The existing tank is in disrepair manner and requires immediate attention. Site circumstances, constraints and connections to the distribution system need to be further assessed to arrive at realistic cost estimates.

Storage Tank ST-25

The ST-25 will mainly serve western part of Beit Hanoun locality and some parts of and Beit Lahia in addition to El-Sheikh Zayed City. The ST-25 is located in Beit Hanoun at Um El-Nasser hill at the same location of the existing damaged storage tank. The ground elevation of the damaged tank is around 80 m above MSL but since huge quantity of soil is evacuated from the hill, then the consultant shall assess and recommend the optimum on which the new storage tank will be constructed. The total storage capacity of ST-25 is designed to cover the demand along the planning period, up to year 2025. The ST-25 in Phase "I" is proposed to be 1 unit, 4,000m^3 at year 2010.

Storage Tank at Khadeja Well ST-Khadeja

The storage facility at Khadeja well will mainly serve eastern part of Beit Hanoun locality. This storage tank is located in east of Beit Hanoun at the same site of Khadeja well. The natural ground elevation of site plot is around 70 m above MSL. The total storage capacity of ST-Khadeja is designed to cover the demand along the

planning period, up to year 2025. The ST-Khadeja in Phase "I" is proposed to be 1 unit, 2,000m^3 at year 2010.

B. Water Booster Stations

Water Booster Station at ST-25

This pumping station is located at the site of storage tank ST- 25 and will serve two areas namely; Beit Hanoun west and Izbit Beit Hanoun. The capacity of the booster pump station and the size of the network pipes should be designed using the updated model of Beit Hanoun and Izbit Beit Hanoun.

Water Booster Station at Khadeja Well

This pumping station is located at the site of storage tank of Khadeja well and will serve Beit Hanoun east . The capacity of the booster pump stations and the sizes of the network pipes should be designed using the updated model of Beit Hanoun.
Where practical, pump station design criteria and detailed design should remain as consistent as possible between the various locations in order to facilitate operation and maintenance.

C. Water Network

The Consultant shall review, verify, study the existing design and document new design of the required works related to provision of water network based on the following study output ;

Existing distribution system consists of pipelines of various ages and materials of construction. The system demonstrates high water losses of over 40 percent. Therefore, some of existing mains are replaced with new distribution mains to improve the system reliability and ability to provide peak flows and future demands. Potential improvements to the existing distribution system include:

- Replacement of undersized pipes,
- Replacement of old pipes.
- Additional New pipes

D. Reconfiguration of Existing Wells;

The Consultant shall review, verify, study existing design and document the new design of the required works related to provision of reconfiguration of existing wells & Rehabilitation of Water Network based on the following study output;
Supply improvements comprised rehabilitation of the existing groundwater wells. The following table summarizes the wells IDs, operation characteristics, required in service date of the wells that should be rehabilitated and for each distribution zone throughout the planning period.

"The hydraulic system of supplying water through common main trunk line that collects water from cluster of wells to storage tank should be carefully designed in order to prevent pressure conflict that could result from the operation of cluster of wells simultaneously".

Description			Target Year
Well ID	Name	Operation	
A-185	بئر المشروع	115 m^3/hr; 20 hr/day	2010
A-180	بئر غبن	115 m^3/hr; 20 hr/day	2010
C-20	بئر عايدة	115 m^3/hr; 20 hr/day	2010

A-210	بئر قرية ام النصر	115 m^3/hr; 20 hr/day	2010
C-128	بئر أبو غزالة	115 m^3/hr; 20 hr/day	2010
C-104	بئر خديجة	115 m^3/hr; 20 hr/day	2010
A-205	بئر مدينة زايد1 الشيخ	115 m^3/hr; 20 hr/day	2010
C-127	بئر العزبة	115 m^3/hr; 20 hr/day	2010
C-137	بئر الندى	115 m^3/hr; 20 hr/day	2010

2. Project Tasks

2.1. General

The Consultants' Services for the Project consists of three main Stages comprised of; General design, detailed design and construction tender and Construction Stage.

Scope of the consultancy service is to:

- Obtain all existing utilities service information in the study area;
- Define the design criteria for the different components using PWA and International criteria, standards and regulations;
- Detailed Structural, Mechanical, Electrical design, and layouts drawings;
- Detailed Cost Estimate including specification of works, Construction programme and priced bill of quantities;
- Bidding documents for tendering out for construction;
- Produce tender Material Schedules;
- Complete set of tender Documents for tendering;

Basic Consultancy Service;

- The Consultant shall ensure that all Architectural, Mechanical, Electrical and Structural, Services drawings, details, specifications, calculations and schedules are as far as possible correct and accurately incorporated, in order to avoid related contractual complications and constructional faults.

- The Architectural, Mechanical, Electrical, structural and building services work shall cover all details for complete execution of the Project on site by the Contractor and shall be based on International Standards Codes of Practice governing loading, analysis and designs.

2.2 Particular

The Consultant has to review all the new data that the PWA has or any other stakeholder; this include but not limited to:

- Review **Beit Hanoun Municipality Water Facilities Master Plan** as solid reference for the requested basic consultancy services.
- Review the **developed model** of **Beit Hanoun Municipality Water Facilities Master Plan** in order to pinpoint the main nodes and associated links and any required updating and configuration.
- Review the existing maps and locate all the requested water facilities such as main pipelines, booster stations, treatment units and required fittings on the base maps and schematic layouts.
- Review all the raw data of each existing water facility and existing utilities.

- The Consultant shall point out the required Building Services in the detail design course and it shall include but not limited to electrical, water supply, sanitation, and structural considerations.
- Produce a preliminary design of the mentioned proposed water facilities.
    - **Preliminary Design** containing a summary of the Design criteria, general layout plans for reference, calculations for grading the network mains, location of valves, booster stations and water storage tank.
- Produce a final detail design of the mentioned proposed water facilities.
    - **Detail Design** containing final summary of the designed water facilities, detailed plans and drawings, final calculations of both structural, hydraulic activities and others.
- Produce a list of pipes, fittings and equipments required "catalogues are desired".
- Produce complete set of tendering documents including Special Condition of the Contract, Technical Specifications, Bill of Quantities, Design Drawings and Construction Details.

2.3 Consultant shall cope with the following;

It is the responsibility of the Consultant to obtain all pertinent information and other data as shall be necessary and to carry out all surveys needed to perform his obligation.

The Consultant shall contact and provide the **Service Authorities** "Electrical and Telecommunication companies" with a description of the works and two sets of layout drawings to enable the Service Authorities to mark on their existing and proposed Services in order to resolve any potential conflict to or by the Project. The Consultant shall obtain the requirements of the **Municipality Services Departments** on the Design of the Project. In addition, the Consultant shall obtain, as required, the requirements of other **Ministries and Departments**, including but not limited to the Police and Fire Service. Subject to the approval of the UNDP/PAPP, the Consultant shall incorporate all such requirements in the Design of the Project.

Drafts of all reports and Designs shall be submitted to the UNDP/PAPP for discussion and approval. After such discussions have taken place, the Consultant shall amend and formally submit the reports and designs to the UNDP/PAPP then to distribute.

2.3.1 Survey works;

Field investigations and survey works will be conducted based to the (**TOR**) to produce topographic survey maps for the proposed work. The results of the field survey work will be used to develop the design of the new facilities. The following procedure should be considered;

Reconnaissance, field location survey

- Full details of the existing roads.
- Full details about the location of existing groundwater tanks.
- Boundary sitting out the existing levels of the ground.
- Provide the locations of the existing facilities and utilities.
- Compass bearings to prominent objects.
- Position of quarry required for proposed service.
- Nature of soils encountered.
- List of all bench marks (B.M.) available.

Preliminary, paper map survey

- Selection of route, all the possible routes and provides data for the needed design of network system facilities.

- Selection of the architecture site layout and the proposed facilities for the needed works.
- Selection of the possible alignments and gradients for the proposed mains and connection and disconnection works.

Map drawings, reports and final survey
Provide the general Layout relevant to the required works.

Provide the General layout for roads, detailed plans, cross- section, profiles and control points included the data sheets

2.3.2 Preliminary Design Phase Output
The Consultant shall prepare the **Design**, which shall cover all planning and design features. It will include plans, calculations, tender documents and cost estimates. The design must be carried out by well known computer software and the Consultant has to prepare a theoretical hydraulic model in the designed network and shall submit calculation report accompanied with the soft copy of modeling for revision.

The Assessment phase shall include but not be limited to the following outputs:

1. **Plans** – Separate Plans for the served areas based on 1:1000 scale drawings for cities and towns and 1:500 scale drawings for camp areas. Shall be prepared showing all existing and proposed mains, manholes, chambers, gullies, and any required facilities. Also, the consultant shall prepare plans showing all existing and proposed mains, manholes, chambers, gullies, and any required facilities. The drawings shall detail existing and future services, planned ground levels, depth to invert levels, materials, diameters of network mains, cover levels of manholes and chambers. The Drawings shall detail the new mains supply network in the priority areas including branches, house connections, meter locations, fittings, etc.
2. **Detail Drawings** – Standard Detail drawings for each area/zone shall detail the various types of manholes, connection and disconnection points, piping system for each facility, standard cross – sections and crossing details site works and other necessary works, shall be prepared by the Consultant to a suitable scale to be agreed with UNDP/PAPP. The Drawings shall detail the new mains supply network in the areas including branches, meter locations, fittings, etc. As for each Water tank's vicinity, details the structural sections and geometric plans for the groundwater tanks, as well as any various types of manholes, connection and disconnection points, piping system, standard cross – sections and crossing details site works and other necessary rehabilitation works, shall be prepared by the Consultant to a suitable scale to be agreed with the UNDP/PAPP. The Drawings shall detail the required rehabilitated/replacement piping system, fittings, equipments location and condition, etc.
3. **Specifications** – Particular Specifications shall be prepared for pipe laying and installation of fittings including cover and bedding requirements. Booster Station settings, construction and installation of fittings and electrical pieces and panel. As for Rehabilitation works; particular specifications shall be prepared for any proposed rehabilitation civil works (replacement and construction of walls, roof, foundation, etc… in terms of concrete types, mixture, and additives) as well as any pipe laying and installation of new/rehabilitated fittings including cover and bedding requirements, water sealant and site cleaning and protections.
4. **Topographical Surveys** - Carry out the required surveys, as well as drafting the needed Terms of Reference and any field activities as agreed with the UNDP/PAPP

and concerned Authorities. These activities are carried out by the Consultant as specified in the financial brief section.

5. **Site Investigation** – Where required for the design of Water Tank, pipe bedding, anchor blocks instruments installations and any required site allocation, the Consultant in coordination with the concerned authorities of services shall carry the site investigation and draft the required TOR for any related works.
6. **Soil Investigation** - Preparing programs for soil investigation, supervising the implementation of these programs and studying and evaluating the reports concerning these investigations. The technical proposal shall include the scope of work and methodology for the soil investigation. The soil investigation shall include at least three boreholes for each site of water tanks. The depth of each boreholes shall be minimum 20m and at least one of them SPT.

   Exact location of the boreholes is to be determined by the Employer. This assignment shall be performed via an approved Geotechnical Lab and technical report shall be submitted accordingly.

7. **Material Schedules** – The Consultant shall prepare material schedules for all parts, pipes and fittings to be installed/rehabilitated. The schedules shall be compatible and cross referenced to the fittings and equipments detailed on the drawings.
8. **Cost Estimates** – The Consultant shall prepare cost estimates for the works in total. The estimates shall be updated and the Consultant shall notify the UNDP/PAPP immediately of any significant increase in the project costs arises or is anticipated.

2.3.3 Final Design Phase

After written approval, subject to the incorporation of any comments, of the Preliminary Assessment Stage study and Design the Consultant shall proceed with the Final Detail Design (Construction/Rehabilitation) including finalizing of the tender documents. It will include an updating of the Preliminary Design/Assessment and all approved relevant data and drawings for the required construction/rehabilitation works.

The Detail Design shall companies the finalization of the construction/rehabilitation programme, Design calculations, drawings, details, schedules, and specifications required for the execution of the Project. Any amendment's required to the Design shall be carried out bossed the results of the site investigation.

The Detail Design shall include but not be limited to the following:

1. **Specifications** – Particular Specifications shall be prepared containing detailed civil, mechanical, electrical construction and materials specifications. A specification for the preparation of as built drawings shall also be included "as shown in Appendices A-D ".
2. **Plans** - shall be finalized based on the results of the Topographical surveys "as shown in Appendices A-D ".
3. **Detail Drawings** – Standard Detail drawings previously prepared in the preliminary design stage "as shown in Appendices A-D ".
4. **Structural Works** – All structural calculations with reinforcement drawings for walls, roof, foundations, bases, manholes, chambers, anchor blocks and various types of cover and support slabs shall be prepared and submitted to the UNDP.
5. **Mechanical & Electrical Works** – All hydraulic and electrical calculations with drawings for all relevant Piping System and any supported activities shall be prepared and submitted to UNDP "as shown in Appendices A-D".

6. **Material schedules** - Construction programme and cost estimates "as shown in Appendices A-D ".
7. **Tender Documents** – The tender documents for each Contract shall be finalized and shall include, but not be limited to the following:
    - Description of the Works.
    - General specifications and particular specifications based on the PWA and international Standard Specification.
    - Bill of Quantities, including collection pages and grand Summary sheet which shall be prepared in accordance with the Civil Engineering Standard Method of Measurement.
    - Construction/Rehabilitation Drawings.
    - Maps and Service Drawings, which shall be made available to the Contractor, which shall be listed.
    - Standard Details.
    - Copies of all required consent and approvals, etc. for construction to commence, which shall be listed.
    - Construction Programme.

All tender documentation must be subjected to the UNDP/PAPP 's approval.

2.3.4 Reporting:

The Consultant prior to any report, should present table of contents (**TOC**) for discussion and approval, the following reports are requested to be submitted during the design stage;

1. Inception report which will include as a minimum the following:
    - Introduction.
    - Background.
    - Scope of Works.
    - Key Personnel and Tasks.
    - Methodology and Design procedures.
    - Data Collected and findings.
    - Time planning and forecasting.
    - Proposed Steps and next stages.

2. Preliminary Design report which will include as minimum the following:
    - Soil Investigation Report
    - Detailed Description of Each Package.
    - Main findings and Preliminary data input.
    - Design Criteria.
    - Design references.
    - Preliminary calculations and revisions.

3. Final Design report which will include as a minimum the following as per the proposed packages for each water facilities;
    - Final Detail Design.
    - Final Calculation sheets accompanied with soft copy
    - Detail plans and schematics.

2.3.5 Staff

Design Staff: The Consultant shall provide all Engineer technical advice and skills, which are normally required for all of the Consultants' Services for which he is engaged in this contract.

During the whole period of assessing, investigation, planning, Design and tendering, the Consultant shall have adequate, qualified and experienced staff in attendance.

The senior Design staff of the Consultant must comply with the following minimum requirements to fulfill the design period of four months:

- **Project Manager:** Minimum degree Bsc in civil or mechanical engineering from a recognized university with a minimum relevant experience of 15 years and holding a senior position with the company. He shall be resident in and assume overall responsibility for the Project. The Project Manager shall be based in the Consultant's office and must be available for consultation with UNDP when required.

- **Senior Designers:** Minimum degree Bsc degree from a recognized university with a minimum relevant experience of 10 years. The Senior Designers shall be responsible for the assessment, investigation, analysis, design **and** liaison with the UNDP/PAPP. They must attend meetings as required and explain the Design criteria and be able to answer any relevant questions. The Senior Designers must be based in the Consultant's office and shall not be employed on any other specific project;
  - Hydraulic Engineer.
  - Electrical Engineer.
  - Mechanical Engineer.
  - Civil Engineer.

- **Architect/Cad Operator;** With minimum diploma degree from recognized college and a minimum relevant experience of 5 years. Cad operator must be based in the consultant office, and shall not be employed on any other job.

- **Procurement Specialist;** Registered professional engineer with at least 7years experience in preparing tender documents and implementing procurement process.

- Any proposed technical or administrative supporting staff.

2.4 Monthly Progress Reports:
The Consultant shall prepare and submit progress reports every month.

2.5 Progress Meetings:
Progress meetings shall be held every month, after submission of the Monthly Progress Reports, in UNDP/PAPP Offices. The Consultant shall attend and minute the meetings. The Consultant shall submit the minutes of the meetings within three days after the meeting for UNDP to comment on and approve the minutes.

2.6 Approval of Final Detailed Design:
It is anticipated that written approval, subject to the incorporation of any comments, of the Detail Design shall be given within the period stated later, after it is established that all amendments to the Preliminary Design have been incorporated and that the Detail Design satisfies the Contractual requirements.
After written approval of the Detail works by UNDP/PAPP, and to enable the UNDP to obtain competitive tenderers, the Consultant shall submit sets of the approved tender documents to UNDP/PAPP.

2.7 Tender Procedure:

In accordance to the MOU between UNDP/PAPP and The PWA ; The UNDP/PAPP shall carry out the tendering solicitation procedure in accordance with International Guidelines and shall receive all tenders. After the opening and registration of the tenders, copies of the tender submissions will be distributed to the concerned parties.

2.8 Acceptance of Tender:

The UNDP/PAPP shall carry out the Tendering and awarding process. The winning Consultant shall prepare complete Contract drawings and documents and issue them to the Contractor, plus copies to the UNDP/PAPP on written instruction.

3. Project Deliverables;

The Consultant shall provide the Employer with the project deliverables "Tender Packages" that include all needed drawings and documents in the following packages scheme;

1. **Tender Package of Construction of Water Tank at ST-25**
2. **Tender Package of Construction of Water Tank at Khadija Well.**
3. **Tender Package of Reconfiguration of existing wells & Rehabilitation of existing Water Networks.**
4. **Tender Package of Construction of Booster Station at ST-25**
5. **Tender Package of Construction of Booster Station at site of Kadija Well**
6. **Tender Package of Construction of New Water Networks**.

As soon as they are prepared, the drawings and documents submitted for approval must be stamped "For Approval". Following the approval of the submission all drawings and documents must be stamped "Approved".

4. Miscellaneous

- **Alterations:**

  It is the **duty** and the **responsibility** of the Consultant to **prepare** all documents in such a way that the **necessity** for **variation orders** during the construction stage is minimized. If, however, it is considered necessary by the Consultant or PWA and UNDP/PAPP that any alterations in any of the Contract Documents, plans or Specifications are **advisable**, the Consultant shall prepare and submit all these alterations to UNDP/PAPP for approval supported by the necessary calculations, details and cost implications. On receiving written approval, the Consultant shall **promptly amend** the existing or supply any additional Design, plans, drawings and specification when required or found necessary for the satisfactory completion of the Works. He **shall** furthermore review and approve the Contractor's and any manufacturer's drawings incorporate these drawings into the overall Design and review alterations, which shall be requested by the Contractor during the course of works.

- **Property of Documents:**

  All plans, drawings, documents, data, etc. **prepared** by the Consultant or **submitted** by the **Consultant** or **submitted** by the **UNDP/PAPP** to the Consultant in connection with this Agreement (**TOR**) shall be and shall remain the **full property** of the UNDP/PAPP whether the Project for which they are produced be executed or not. While in the **custody** of the Consultant, the said documents shall be fully **safe-guarded** and treated as confidential and shall not be copied or their contents **divulged** to any third party without the written approval of the UNDP/PAPP.

FINANCIAL BRIEF

1. Conditions of Engagement

The Conditions of engagement shall be as stated in the Standard Form of Contract for Consultants' Services for lump sum.

2. Consultants Services

The Consultant shall provide Services for the Preliminary Stage and Detail Design Stage all as detailed in previous Sections.

3. Timing of Services and Deliverables

Submission of Drawings and Documents

Consultant shall be required by the UNDP/PAPP to submit all reports and drawings as listed below and/or recorded on computer media using software and formats to be specified.

Assessment Phase:		
	Format of the drawings: max size (paper prints)	A2
	Format of the documents	A4
	Number of copies of the draft drawings	4
	Number of copies of the draft documents	4
	Number of copies of the drawings	4
	Number of copies of the documents	4
Final Detail Design: Rehabilitation & Repair		
	Format of the Drawings: maximum size	A0
	Format of the documents.	A4
	Number of sets of the tender documents.	4
	Number of sets of the tender drawings	4
	Number of sets of the contract documents.	4
	Number of sets of all design calculation.	4
	Number of sets of all measurement sheets	4
	Number of sets of final cost estimate.	4
	Number of CD's containing all above documents	4
Reports:		
	Format of all reports	A4
	Number of copies of the monthly report	4
Periods for Approvals by the UNDP/PAPP :		
The periods of time allowed for the written acceptance or approval by PWA, CMWU and UNDP/PAPP of the stages of the consultancy services;		
▪	Assessment study (inception) report approval	1 wk
▪	Preliminary design approval subject to incorporation of any comments	1 wk
▪	Detail design approval subject to incorporation of any comments	1 wk
▪	Detail drawings & Plans subject to incorporation of any comments	1 wk
▪	Complete Set of tendering documents subject to incorporation of any comments	1.5 wks

4. Completion Time:
Four calendar months from the date of work commencement.

5. Payment of Services

☐ **Remuneration**

The remuneration of the Consultant for the performance of the duties shall be based on the Consultants financial offer.

The contract price shall be a lump sum based on the break down of prices given the formats of filling the technical and financial proposals. The lump sum price includes all direct and indirect cost of the consultant for the performance of the duties. Payments shall be a lump sum price if the consultant will be committed to perform the design works within the given time-frame. No compensation will be paid to the consultant due to unavailability of enough design and survey staff. The Cost of any transportation or personnel expenses is included in the fees.

The cost of survey works and soil investigation tests will be INCLUDED in the lump sum price of the contract. UNDP/PAPP will not pay any additional costs for these works.

☐ **Payment Modalities:**

All payments will be as follows:

- 20 % of the value of the design will be paid upon approval of preliminary design.
- 25 % after approval of final design, including Structural and Hydraulic calculations and related drawings.
- 25% after approval of Draft Tendering Dossiers and BoQ and costing.
- 30% after approval of Final Tendering Documents.

Appendix A
Guidelines and Requirements of Water Storage Tanks;

General

The consultants' services for the project consist of three main stages comprised of structural, hydraulic and general assessment and recommendations;

Basic Consultancy Service;

- The Consultant shall ensure that all Architectural, Mechanical, Electrical and Structural, Services drawings, details, specifications, calculations and schedules are as far as possible correct and accurately incorporated, in order to avoid related contractual complications and constructional faults.

- The Architectural, Mechanical, Electrical, structural and building services work shall cover all details for complete execution of the Project on site by the Contractor and shall be based on International Standards Codes of Practice governing loading, analysis and designs.

A. Design Report should include the following;

A.1 Design Procedures;

Item Description & Criteria;

- **Brief Description of the Project Background and Objectives**
  - The design report includes a paragraph that describes the project background and its relation with the master plan.
  - Project Objectives are clearly defined and presented (Brief Paragraph).
- **Selection a Location**
- **Identification Source of Water**
- **Topographic Survey**
- **Analyzing Soil Test Results (Geotechnical Investigation)**
- **Determining the Size, Shape and Dimension of the Water Tank**
- **Structural Design Method**
- **Type and Diameter of the Piping System for the Water Tank**
- **Structural Design for the Foundations, Floors, Walls, Roofs (Bracing Beams and Columns for Elevated**
- **Tanks)**
- **Structural Details for the Valve Chamber, and Other Structures**
- **Selection of Tank Finishes, Accessories, Internal Coating, Necessary Arrangements and Paving around the Tank**
- **Permit Requirements**
  - The Owner or Designer applied to the Licensing Department at PWA
- **Pumping Requirements**
  - Relationship between tank and pump, if any is presented
- **Property Owned or Long-Term Leased by the Authority**
  - The ownership document or lease agreement is presented
- **List of References**
  - PWA Standards
  - Relevant WHO Standards
  - UNDP Standards

A.2 Design Parameters;

Item Description & Criteria

- **Design Reliability**
  - Planning and Design Period for;
  - Structural
  - Mechanical & Electrical equipment
  - Internal and external pipes
- **The Location**
  - Site feasibility considerations should include:
  - Provide adequate pressure
  - Site accessibility \Site drainage
  - Tank located at least 15m a way from any non-potable waterline, septic tank drain field, or surface water
- **Type of Tank**
  - Usually elevated tanks are used in areas of flat topography, or when more pressure is needed to supply house at the same level.
  - Usually On ground tanks are used in the following cases:
    - Where enough land is available.
    - When used as reservoir for collection of water from different resources.
- **Tank Material**
  - Tank material should be according to PWA & UNDP Standards.
- **Soil Test Results**
  - Soil type/soil bearing strength
  - Ground water table
  - Acidity (pH) for steel tanks
  - Soil Test Profile
- **Size of the Water Tank**
  - Summation of the following for system providing fire protection:
    A. Fire protection storage
    B. 25 % of projected Maximum Day Demand
    C. Emergency storage (25% of (A+B))
  - Average daily consumption for system not providing fire protection
  - Dead volume, overflow volume and pump switch volume should be considered in sizing the above two systems as follows:
    - Dead volume = V2/2g + 0.1 m, where V: velocity m/sec, g: gravity
    - Overflow level = 0.15 - 0.20 m
    - Pump switching level = 0.15 - 0.20 m
- **Shape of the Water Tank**
  - Approval of relevant authorities
  - Acceptance of shape to surrounding (aesthetic value) taking into considerations the economic factors
- **Tank Appurtenant System**
  - Piping Requirements
    - Separate inlet pipe and fittings
    - Outlet pipe and fittings
    - Isolation valves
    - Drain facilities

        - Overflow pipe
        - Atmospheric vents
        - Water meter
        - Air release valves
        - Sample tap
    - Control Requirements
        - Level control valve (float or altitude valve)
        - Local level indication (pressure gauge or mechanical water level indicator)
        - High level and low level alarm system
    - Accessories
        - Hatches, access entries, ladder of all with locks
        - Removable silt-stop on the outlet pipe
        - Lightning arrests and electrical grounding
    - Chlorination System used. (if needed)
    - Boundary wall, fence and gates
- **Structural Design**
    - Structural report for all tank components
    - Cases for all loading combinations are considered
    - Underground and on ground tanks:
        - Inside water pressure
        - Lateral earth pressure for underground tanks
        - Lateral water pressure for submerged underground tanks
    - Elevated tanks:
        - Water pressure
        - Wind loads
        - Seismic loads
- **Structural Requirements**
    - Type of concrete
    - Minimum cover of reinforcement
        - Works against earth faces and in liquid retaining structures 35-40 mm
        - Internal work in non-liquid retaining structures:
        - For a beam 25-35 mm.
        - For a column wall or strut 25-35 mm.
        - For slab reinforcement in building - 25mm, or the diameter of the main bar, whichever is greater.
        - For slab reinforcement subject to chemical attack 23- 40 mm.
        - The minimum concrete cover in no case should not be less than the maximum diameter of steel reinforcement bars used.
    - Minimum thickness of a wall is 200 mm
    - Two wire mesh of steel reinforcement for wall
    - Steel Grade
- **Structural Analysis of Roof Slab for Rectangular Tank**
    - If length/width ≥ 2, roof slab is designed as one way slab
    - If length/width < 2, roof slab is designed as two way slab
- **Special Design Consideration**
    - Provision of back up power supply (If possible)
    - Ground level should be placed outside and above flood level
    - Grading the area surrounding the tank that water will not stand within 15 m of structure
- **Internal Coating**

- All materials (additives, coatings, etc.) used in contact with potable water should be safe

- **External Corrosion Control**
  - Painting or coating should protect tank against corrosion
  - Cathodic protection should be provided especially for underground or partially buried tank installations
  - In case the designer specifies the commercial name of the material, documents evidence should be provided.
- **Earthing**
  - Existence of earthing system

B. Types of Drawings

Item Description & Criteria;

Cover Sheet

- The name and logo of the Client are mentioned in block letters
- The project name and location is mentioned in block letters
- The designer name and address is mentioned

General Location Map

- Location of the storage tank in relation to surrounding areas and country map
- Scale is not less than 1:50,000

Index, Legend, Abbreviations and General Notes

- List of drawings is included
- Symbols used in the drawings are illustrated in the legend
- Abbreviations used in the proceeding drawings to be listed

Land Use Maps

- All land use areas to be shown
- Scale is not less than 1:5,000

Topographic Survey

- Recent survey has been carried out
- Survey control information points should be shown on a general plan with reference ties to permanent physical features (GPS and benchmarks)
- Contour lines of 0.5-1 m intervals should be shown

General Site Layout and Grading Plan

- Scale not less than 1:250
- Contours of 0.5-1.0 m contour interval
- The boundaries of the site
- The surrounding roads and access roads
- Grading level for the site
- The general layout of the water tank should consider:
  - Space for tank, flow meter, and other valves
  - Space for the control room and guard room, if required
  - Space for future expansion
  - Space for on site piping
  - The risk of vandalism, site security, fencing and gates

Piping Layout Plan

- Locations, material and diameters for the following pipelines and appurtenances are shown:
  - Inlet or feeding pipeline
  - Outlet pipeline
  - Overflow pipeline
  - Drain pipeline
  - Flow meter(s)
  - Bypass connection.
  - Control valve
  - Float/altitude valve
  - Gate valves
  - Reducers, bends, others

Site Plan-Electrical

- Lighting system
- Cables and conduits for electrical control system
- Incoming power supply system.

C. Details;

Details of the followings are included

C.1 Civil Details

- **Joints (contraction, expansion, sliding, construction)**
- **Construction Joint at end of concrete placement:**
  - Reinforcement is continuous
  - Either using a water stop or bonding new concrete to old
- **Contraction Joint:**
  - Water stops are used across the joint
  - Un-bonded dowels or keys may be used
- **Expansion Joint:**
  - Discontinuation of reinforcement and concrete
- **Sliding Joint to facilitate movement in place of the joint:**
  - Discontinuation of reinforcement and concrete
  - Used also between wall and floor in cylindrical tank designs
- **Reinforcement details**
- **Roof opening;**
  - 10-15 cm above surface of the roof at the opening
  - 60-90 cm above the roof surface of the tank for underground tanks
  - Manholes cover on top of the tank to be solid, water tight and insect proof with locking device
  - Should be hinged at one side
- **Roof Drainage;**
  - The slope of the tank roof should be 1 % minimum
  - Downspout pipes must not enter or pass through the tank to avoid possible contamination

C.2 Mechanical Details

- **Inflow pipe**
- **Roof vent;**

- Upward facing vents should not be used.
- Provision of non-corrodible mesh screen.
- An inverted 'U' vent above the roof or ground to be used for ground and underground tanks

- **Intermediate water sluice gate (in case of internally divided tanks)**
- **Access ladder**
- **Outlet pipe**
- **Overflow pipe;**
  - Start 15 cm or more below the top of tank
  - No direct connection between tank overflow and a sewer or storm drain or other non-potable system
  - Screened with non-corrosive mesh down-turned end, or provided with flap valve
  - End of pipe and overflow visible
  - Overflow capacity exceeds maximum tank inflow rate
- **Roof handrails**
- **Water level indicator**
- **Fences and gate**
- **Washouts**
  - To provide a sump pump when topography is an obstacle for drainage
- **Air release valve**
- **Float/altitude valve**
- **Flow control valve**
- **Flow meter**
- **Gate valves**
- **Pipe trench**

Appendix B
Guidelines and Requirements of Construction of Water Booster Pump Stations;

A. Design Report should include the following;

A.1 Design Procedures

Item Description & Criteria;

- **Brief Description of the Project Background and Objectives**
  - The design report includes a paragraph that describes the project background and its relation with the master plan
  - Project Objectives are clearly defined and presented (Brief Paragraph)
- **Location Assessment**
  - Geo-technical Investigation of the Booster Pump Station Site
  - Environmental Factors
  - Technical Factors
- **List of References**
  - PWA Standards
  - Relevant WHO Standard
  - UNDP Standard
- **Permit Requirements**
  - The Owner or Designer applied to the Licensing Department at PWA
- **Property Owned or Long-Term Lease by the Authority**
  - The ownership document or lease agreement is presented
- **Design of the Expected Booster Pump Setting**
  - Type of the pump
  - No of Units per station
  - Characteristic Curve

A.2 Design Parameters (Elements)

Item Description & Criteria;

- Station Capacity & Flow Rates
- Pumping stations shall be needed to handle peak flows in a distribution system which can otherwise handle the normal flow requirements.
- Firm capacity of each pumping station shall be the total station capacity at the peak flow of target year 2025 and shall be in accordance with Northern Governorate Water Facilities Master Plan demand forecasting.
- Topographic map of the areas

- **Pump Type**
  - Split case horizontal or vertical centrifugal pumps are considered for the pumping conditions.
  - Horizontal type pumps are usually selected to applications where the quantity of water to be pumped is large.
  - Split case pump design shall be used for ease of maintenance of the rotating elements, which can be removed without disconnecting the suction or discharge piping.

- **Pumping Units**
  - Consider the number of pumping units to be installed for each station.
  - The more pumps, the greater flexibility in delivering various flow rates. However, multiple pumps may have the opportunity of reducing the operating cost.
  - For ease of operation and maintenance, it is generally desirable to have equal size pumping units.
  - Pumps will be cycled on a rotating basis so duty and standby pumps are cycled evenly.
  - The appropriate number of pumps to provide both flexibility in operation and economy have been evaluated for each application.
  - Constant speed pumps are expected to achieve the design objectives with lower cost, have higher reliability, and less equipment service requirements.

- **Pump Station Requirements**
  - Each pump discharge line should be equipped with a valve for pump control, a check valve to prevent backflow in the event of a power failure or other pump shutdown, a butterfly valve for closing the discharge line when a component upstream of the butterfly valve must be removed for servicing, air relief valves (to eliminate air pockets in the discharge line), a pressure sensor (for low and high discharge pressure shutdown), and a pressure gauge.
  - Connections to intake lines and discharge manifolds should be made using flanged connections meeting AWWA specifications. Insulating flanged connections will be provided at the intake and discharge sides of the station.

- **Head Capacity Curves**
  - System curves reflect the extreme maximum friction losses which will be expected during the lifetime of the pumping units (peak flow of year 2025) as well as low suction pressures .
  - The pumps are selected so that the total required capacity of the pump station can be delivered with minimum suction pressure and a maximum friction in the discharge line.
  - The pump efficiency shall be maximum at the design operating conditions.

- **Operating Limits-NPSH Restrictions**
  - To combat cavitations the net positive suction head available (NPSHA) shall be greater over the entire operating range of the pump than the manufacturers net positive suction head required (NPSHR).

- **Pumps Efficiency**
  - Pumps shall be selected to operate between 60% and 120% of best efficiency flow for any particular pump selection.

- **Selection of Diameters**
  - The selection of pipe diameter force mains is usually based on self-cleansing criteria rather than the economic criteria.
  - International design manuals indicate that solids will not settle out at velocities greater than 0.60 m/sec.

- Maximum velocity for the peak flow can reach 3 m/sec.
  For water booster stations equipped with 1, 2 or 3 pumps, they recommended the following velocities:
  - 1.2 m/sec for one pump station
  - 0.9 m/sec for two pump station and the two in operation
  - 1.5 m/sec for two pump station and one of them in operation
  - 0.7 m/sec for three pump station and the three in operation
  - 1.2 m/sec for three pump station and two of them in operation
  - 1.7 m/sec for three pump station and one of them in operation
- **Suction Piping Sizing**
  - The suction pipe is normally one or two sizes bigger than diameter of the pump nozzle.
  - Velocity of flow in the suction pipe ranges from (1.2-2.4 m/s) (Hydraulic Institute).
  - Straight pipe runs upstream of the pump.
  - Velocity at pumping nozzle up to 3 m/sec. /straight-run=3x nozzle.
  - m/sec /5x nozzle diam.
  - > 6 m/sec /10x nozzle diam.
  - Eccentric reducer is to be used between the suction pipe and suction nozzle (flat on top);
  - Providing a smooth entrance;
  - Suction elbow is preferred but increases station depth;
  - All bends shall be kept in a single plane;
  - Long radius bends;
  - Velocity in the suction and discharge nozzle ranges from 3-4.25 m/s.

- **Discharge Piping**
  - The layout and sizing is not critical as the suction pipe but affects: (friction losses, power consumption, clogging);
  - Velocity ranges from 1.8 to 2.4 m/sec;
  - Concentric increaser on the pump discharge nozzle to be installed;
  - The discharge pipe is one or two sizes bigger than the discharge nozzle;
  - Flexible connection is to be provided;
  - Check valve located in the horizontal profile;
  - Gate valve in horizontal or vertical.

- **Booster Pump Station Piping Material**
  Interior BPS piping design shall use AWWA C205 steel piping. PVC piping should not be used. Special anchoring or support requirements for equipment and piping shall also be addressed.
- **Key Design Requirement for Pumps**
  1. Pump type: Horizontal split case - centrifugal pumps.
  2. Maximum pump speed: 2,950 rpm.
  3. Min number of pumps per facility for year 2025 design: 1.
  4. Max number of pumps per facility for year 2025 design: 3.
  5. Installed spare pumps per facility: BPS-one.

6. Maximum suction velocity: 1.5 m/s.
7. Maximum discharge velocity: 2.5 m/s.
8. Minimum clear access clearance around pumps: 1.0 m.
9. Pump removal: Monorail hoist.
10. Control automatic, manual override.
11. Efficiency minimum: 75%.
12. Maximum noise level in pump buildings 85 db measured 1 m from building wall at any point.
13. Pump duty selection:
    a. Select pumps to operate between 65% and 125% of best efficiency point (BEP) flow under all conditions of operation.
    b. Select pumps to operate at a constant flow rate under varying head conditions.
14. Check valves - Provide discharge check valves for each pump provided on the project supplemented as required to provide or assist in surge control.
15. Flow meter on pump discharge pipe. The flow meter shall be mechanical and the measuring mechanism shall be equipped to enable telemetric (pulse) connection without destruction of the seal and/or requirement for the meter parts removing.
16. Equip the suction and discharge of each pump with a pressure gauge.
17. Air and vacuum relief valves on the discharge pipe of pumps: 1.
18. Wash out facilities at all low points and where it is required.
19. Isolation gate valve minimum requirements:
    - For all pump stations provide isolation gate valves on suction and discharge of every pump provided for the project. Provide isolation gate valves on tees of intake and discharge manifolds at locations of all future pumps.
    - Provide isolation gate valves on all by pass lines around all booster pump stations.
    - Provide an isolation gate valve at every pipe inlet and outlet from every storage tank the project.
    - Valves to be equal in size to line size.
    - Provide three isolation gate valves for by-pass piping for each installation of motorized, mechanical, hydraulic or pneumatic control valves including:
        a. Altitude valves.
        b. Pressure reducing valves.
        c. Flow control valves.
        d. Back pressure valves.

Note: Valves outside the pumps room shall be buried and installed in concrete service boxes or in valve chambers. Valve chambers shall be provided for all valves installed below grade in unpaved areas. Valves installed below grade in paved areas may be direct buried with a riser provided to grade to access the valve operator.

Regulation

Regulation facilities shall be used where necessary to control the flow or direction or limit the pressure in a section of the pipeline. Field automatic control valves shall have backup electric power supply or pneumatic control.

Power Supply and Distribution

- **Transformer Compartment**
  A new transformer station with adequate capacity should be installed to cover the pumps including all utilities in the pumping station.
  The transformer station is connected to Main Distribution Board (MDB) which will be prepared to feed the pumps in addition to the other components connected to the Motor Control Center (MCC). The MCC is prepared with all the components needed to operate the pumps.

- **Standby Generator**
  To meet the power demand of the pumping station in case of failing of the main supply, a new standby generator set with adequate capacity will be installed. Diesel engine generator sets shall be provided at pumping facility. Facilities shall be sized to provide power for the firm pumping capacity. The generator shall be weather protective and sound attenuated housed under steel shed. Furthermore, the generator shall be complete with radiators, automatic transfer switch, batteries, fuel system, fuel storage tank and fuel tank containment. Radiators and electrical equipment shall be indoors.

- **Locations of Electrical Equipments**
  The location of most electrical parts is placed inside the service building. The transformer room which contains the transformer and H.V. switch gear. The Panels room contains the main distribution board (MDB), and the motor control center (MCC).
  Cable trenches are used to make a connection between the several parts installed in these rooms (transformer, H.V. switchgear, MDB and MCC). The generator set will be located outside the service building. This requires that the generator set should be installed inside a sound and weather proof enclosure.

- **Motor Circuits**
  Starting Method for the motors will be soft starting, so every motor circuit shall be provided with:
  - Solid start soft starter, which includes overload protection.
  - By-pass contactors, to give pumps transfer from the soft starter to the full voltage when the machine reaches the full load.

- **Power Factor Correction**
  An automatic system including step regulator, capacitors, contactors and control devices will be erected to improve the system operation according to GEDCO recommendations.

- **Fire Alarm System**
  An automatic fire alarm system with all linking to the civil defense station is appropriate. Other systems could be possible. A sprinkler system can be made but it extinguishes the fire with water as we can not use halogens to put out the fire.

Control System

- **General**
  The purpose of the control system is to operate the pumping station and transmit the information about the operational status of the pump station utilities to the Motor
  Control Center (M.C.C). The control system will be operated manually and automatically by using PLC system.
- **PLC-System**
  PLC will be programmed to manage the operation of the pumping station and it could be reprogrammed via connection with computer software. For regular calibration, the hand held programmer cou;d be used.
  PLC will monitor any fault caused by the internal or the external protection. PLC also shows the location of all levels of float switches and the high- or low-pressure on the main header. It also identify the generator condition, the no flow caused by any reason through out the check valves micro switches, and will check the fuel tank levels.
- **Power supply**
  Electrical power will be connected to the High Voltage Switch Gear Room.

- **Telephone connections**
  Guardhouse building (one connection) will be supplied with telephone connections.
- **Other key design requirements are as follows:**
  1. Maximum noise level: 85 dBA measured 1.0 meter from any part of the generator building.
  2. Maximum running time: Continuous, indefinite
  3. Minimum day tank capacity: 2000 liters
  4. Minimum fuel storage capacity: 2 days, continuous operation
  5. Fuel tank containment capacity: 110% of tank volume.

Booster Pumping Station Appurtenant Design

The housing for the booster pump stations shall be designed and installed so that it:
1. Complies with applicable building and electrical codes;
2. Is secure from vandalism, trespass and severe weather conditions;
3. Is adequately insulated;
4. Provides for fire extinguishing system ;
5. Provides for adequate ventilation.
6. Provides for adequate drainage; and
7. Provides for easy access to allow for replacement or repair of equipment.

Other appurtenances:

1. A sampling tap (installed on the common discharge line) to aid in water quality monitoring and investigation; and
2. An injection tap on the common discharge line to aid in emergency treatment.

SAFETY

All structures shall be designed with fire resistive materials and adequate fire exits to minimize risk to personnel and conform to all code requirements for maximum travel distance.

B. Types of Drawings

Item Description & Criteria;

Cover Sheet

The name and logo of the Client are mentioned in block letters
The project name and location is mentioned in block letters
The designer name and address is mentioned

General Location Map

Location of the storage tank in relation to surrounding areas and country map
Scale is not less than 1:50,000

Index, Legend, Abbreviations and General Notes

List of drawings is included
Symbols used in the drawings are illustrated in the legend
Abbreviations used in the proceeding drawings to be listed

Land Use Maps

All land use areas to be shown
Scale is not less than 1:5,000

Site Plan

Scale not less than 1:50
The boundaries of the site that have permanent monuments are clearly shown
The surrounding roads and access roads are shown

General Layout of the Pump Station Site

Architectural, civil and mechanical layout
Layout of Piping system and fittings are shown
Grading (elevations) for pump station facilities

C. Details

Details of the following modification and upgrading are included

Architectural Details
Structural Details
Mechanical Details
Piping Details
Chlorination System (if needed)
Fencing and Gate
Electrical Works
Stand by Generator and Diesel Tank
Others

Appendix C
Guidelines and Requirements of Water Transmission Network;

A. Design Report should include the following;

A.1 Design Procedures

Item Description & Criteria;

- **Brief Description of the Project Background and Objectives**
  - The design report includes a paragraph that describes the project background and its relation with the master plan
  - Project Objectives are clearly defined and presented (Brief Paragraph)
- **Topographic Survey**
- **Assessment of Existing Water Supply System**
- **Locating and Numbering Main Nodes**
- **Identifying the Service Area Limits for each Main**
- **Conducting a Hydraulic Analysis and Tabulating the Data**
- **List of References**
  - PWA Standards
  - Relevant WHO Standard
  - UNDP Standard

A.2 Design Parameters

Item Description & Criteria;

- **Design Reliability**
  - Planning and Design Period
- **Water Source**
- **Population Projection and Water Consumption Requirements**
- **Nodes Location**
- **Hydraulic Analysis**
  - Modeling (simulation) should be done for the average, peak and low demand.
  - The simulation results (reports) should cover the following:
    - **Pipe results including**: Interior Diameter ID, upstream node, downstream node, length, diameter, flow, velocity, head loss and head loss/length unit
    - **Node results including**: ID, demand, elevation, hydraulic grade, pressure and chlorine concentration
    - **Tank report**
    - **Pump report**
    - Model results to be displayed on time-series graphs including patterns presentation
    - Draw Hydraulic Grade Line (HGL) for the transmission line.
- **Demand Factors**
- **Velocity Limits**
- **Friction Loss Factor**
- **System Pressure Limits**

B. Types of Drawings

Item Description & Criteria;

Cover Sheet;

- The name and logo of the Client are mentioned in block letters
- The project name and location is mentioned in bold letters
- The designer name and address is mentioned

General Location Map

- Location of the transmission lines in relation to surrounding areas and country map
- Scale is not less than 1:2500

Index, Legend, Abbreviations and General Notes

- List of drawings is included
- Symbols used in the drawings are illustrated in the legend
- Abbreviations used in the proceeding drawings shall be listed

Topographic Survey

- Recent survey has been carried out
- Survey control information points should be shown on a general plan with reference ties to permanent physical features (GPS and benchmarks)
- Contour lines of 5-10m intervals should be shown as well as spot elevations for street intersection points.
- All houses, streets, alleys, unusual obstructions, trees and rights-of-way should be shown.
- Underground existing utilities and structures, such as telephone cables, electricity cables, sewers, water systems and culverts should be shown.

General Transmission Lines Layout (Key Map)

- A plan view of piping system showing the serial number of individual plan for detailed drawings (key plan)
- Scale should not be less than 1:5,000.
- Preparing schematic layout showing water source(s), pipelines, reservoirs, booster stations and connection to existing lines and distribution networks
- Include all required kinds of valves (isolation valves, air release valves, pressure reducing valves, washouts, pressure sustaining valves, pressure breakers, throttling valves, float valves)

Pipe Plans

The pipe plan shall include the following:

- **Pipe location and diameter**
- **Location of isolation valves**

  The following shall be considered when locating the shut-off or isolation valves:
  - Valves to be located at entrances of localities, reservoirs, pumping stations, intermediate pipe connecting double main pipes
  - The diameter of isolation valve shall be equal to the diameter of the main pipeline
  - Valves of 300mm and less could be installed inside surface boxes and valves greater than 300mm shall be installed inside chambers

- **Location of wash outs**
  The following are considered when locating the washout facilities:
  - To be located at the lowest point
  - To install washout valves inside chambers
  - To discharge water without causing any troubles to residents/traffic
- **Location of vacuum / air release valves**
  The following are considered when locating the ventilation facilities:
  - Located at the highest point
  - To be installed in a valve chamber
  - To connect the chamber with ventilator
- **Location of main meters**
  If any Water flow meters may be installed at the following locations:
  - Entrance of each locality \ Exit of reservoir \ at booster pumps at well head
- **Location of reservoir(s) and pumping station(s)**
- **Location of control valves**
  (e.g., Pressure Release Valves, pressure sustaining valves, flow control valve, etc)
- **The connection to existing water pipelines shall be shown with detailed drawings.**
- **The plan shall also show houses, roads, contour lines, other existing utilities (e.g., sewers, electrical poles and cables, transformers, telephone poles and cables, etc)**
- **General notes explaining important issues to be considered during implementation and/or operation**
- **Legend explaining symbols used**
  - Scale for plan shall be 1:1000
  - Scale for profile: Horizontal 1:1000 Vertical 1:100

Appendix D
Guidelines and Requirements of Rehabilitation of Wells ;

A. Design Report should include the following;

A.1 Design Procedures

Item Description & Criteria;

- **Brief Description of the Project Background and Objectives**
  - The design report includes a paragraph that describes the project background and its relation with the master plan
  - Project Objectives are clearly defined and presented (Brief Paragraph)
- **Location Assessment**
  - Geo-technical Investigation of the Well Site
  - Environmental Factors
  - Technical Factors
- **Geological column and Lithology**
- **Test of Depth of the Borehole and the Expected Static Water Level**
- **Test of Yield and Dynamic Water Level**
- **Review Design of the Casing**
- **Review Design of the Screen**
- **Review of the Drilling Program**
- **Review of the Well Drilling Diameter**
- **Review the adequacy of electricity supply and electrical control panel.**
- **Review the mechanical installations and replacement if necessary**
- **Review the service buildings and facilies and required rehabilitation**
- **Review of Disinfection Methods and Technique**
  - Disinfectant material and required concentrations
  - Disinfection method
  - Disinfectant residual concentration is determined
- **List of References**
  - PWA Standards
  - Relevant WHO Standard
  - UNDP Standard
- **Permit Requirements**
  - The Owner or Designer applied to the Licensing Department at PWA
- **Property Owned or Long-Term Lease by the Authority**
  - The ownership document or lease agreement is presented
- **Design of the Expected Pump Setting**
  - Type of the pump
  - Depth of the pump from the ground level is determined

A.2 Design Parameters (Elements)

Item Description & Criteria;

- **Design Reliability Geo-technical Investigation of the Well Site**
  - Hydrogeological report about proposed well site
  - Geological map of the area identifying the main faults and fractures is prepared
  - Topographic map of the areas
  - The targeted aquifer and its thickness is selected
  - Cementing of the upper aquifer is investigated

- **Estimation of the Geological Column and Lithology**
  - The expected stratigraphic log is prepared to accompany the set of drilling samples, noting:
  - Depth
  - Strata thickness
  - Lithology including:
    - Size
    - Range
    - Shape of constituent particles
    - Smoothness
    - Rock type
    - Rate of penetration
- **Check Design of the Casing**
  - The casing length and diameter should be for the:
    - Conductor casing
    - Pump house casing
    - Optional final casing
  - The casing diameter is:
    - Large enough to accommodate the pump with enough clearance for installation and efficient operation
    - Of sufficient size to ensure that up-hole velocity is not less than 1.5 m/sec
    - Providing an annulus between casing and the borehole that is sufficient to accommodate centralizers
  - Locations of the casing centralizers are determined
- **Check Design of the Screen**
  - To give the required well yield without exceeding an entrance velocity into the screens of 0.03 m/sec.
- **Check Well Drilling Diameter**
  - Well drilling diameter is determined based on:
    - Expected well yield
    - Nature of the formations
    - Total well depth
    - Anticipated draw down
    - Techniques of casing installation including backfilling techniques
    - Techniques of well development

B. Types of Drawings

Item Description & Criteria;

Cover Sheet

2 The name and logo of the Client are mentioned in block letters
3 The project name and location is mentioned in block letters
4 The designer name and address is mentioned

General Location Map

5 Location of the storage tank in relation to surrounding areas and country map
6 Scale is not less than 1:50,000

Index, Legend, Abbreviations and General Notes

7 List of drawings is included
8 Symbols used in the drawings are illustrated in the legend
9 Abbreviations used in the proceeding drawings to be listed

Land Use Maps

10 All land use areas to be shown
11 Scale is not less than 1:5,000

Site Plan

12 Scale not less than 1:50
13 The boundaries of the site that have permanent monuments are clearly shown
14 The surrounding roads and access roads are shown

General Layout of the Well Site and Grading Facilities

15 Existing and Upgrading of Piping system and fittings are shown
16 Existing Grading (elevations) for well facilities and proposed rehabilitation works are shown on the general layout plan

Cross-Section of Well Borehole (Existing and Upgraded Borehole)

17 Borehole diameter and depth
18 Casing depth
19 Screen location
20 Grout area
21 Well head
22 Expected geological column
23 Aquifer thickness
24 Proposed pump location
25 Static Water Level

C. Details

Details of the following modification and upgrading are included

26 Casing and screen
27 Well head
28 Piping Layout
29 Chlorination System
30 Fencing and Gate
31 Electrical Works
32 Stand by Generator and Diesel Tank
33 Others

Appendix E
Brief Description of the Existing Design

- **Storage Tank**

One of the main components of the old design was the storage tank. The available old design includes a design for Storage Tank (ST-25) - Phase "I" circular shape with total capacity of 4000 m3. The ST-25 is ground storage tank will serve Beit Hanoun locality and some parts of Um EL Nasser. The storage tank was proposed to be located north west of Al Nada towers.

- **Water Network**

The available old design works include installation of new pipes, pipes replacement and new trunk lines from the existing wells to be re-configured to the water tank.

- **Reconfiguration of Existing Wells**

Based on the NGWFMP, the main purpose of reconfiguring the existing water wells is to protect the aquifer from depletion by limiting the maximum production rate of the wells to 115 m3/hr and reconfigure the supply schemes from the wells by preventing the direct pumping into the network and diverting all of the supplied water via trunk lines to the storage tanks. This may need to resize the well pump capacity and examine the power of the pump motor and the electrical and mechanical installations. The old design includes the following wells to be reconfigured with the system:

1- Almashrou' well with capacity of 115 m3/hr; 20 hr/day.
2- Ghaben well with capacity of 115 m3/hr; 20 hr/day.
3- Aidah well with capacity of 115 m3/hr; 20 hr/day.
4- Alnasser village well with capacity of 115 m3/hr; 20 hr/day.
5- Abu Ghazalah well with capacity of 115 m3/hr; 20 hr/day.
6- Alshaikh Zaied well with capacity of 115 m3/hr; 20 hr/day.
7- Al Ezbah well with capacity of 115 m3/hr; 20 hr/day.
8- Al nada well with capacity of 115 m3/hr; 20 hr/day.

- **Water Booster Pumping Stations**

The old design include two booster pumping stations and designed to be at the site of the storage tank ST-25 where there will be a centralized compound for installing the booster pumping stations of the ST-25. The water is pumped directly by the first PS from ST-25 to the eastern part of BH through a separate trunk line, 12" Diameter Steel Pipe, with length of about 3.6 km and connects the existing 225mm diam. UPVC pipeline at J-175 in the pressure zone (Z3). The design capacity of PS- is 320m3/hr and 40m head

at the peak hour of the target year 2025. The second PS pumps water from ST-25 to the Izbet Beit Hanoun. The design capacity of PS- is 290m3/hr and 30m head at the peak hour of the target year 2025.

Note:
The winning consultant will obtain the full detail of existing design

Annex B
Special Conditions

Annex B
Special Conditions

Address where service should be undertaken	Gaza
Payment Terms	The Consultant's total remuneration shall be based on the Consultant Financial Offer, shall not exceed the contract price and shall be a fixed lump sum including all staff costs, sub consultants' costs , communications, printing, and the like, and all other direct and in direct costs to be incurred by the consultant in carrying out the assignment, as are defined and required in the pertinent sections of the TOR, and provided that the Consultant will be committed to perform the assignment within the given time frame. Payments will be made to the account of the Consultant, upon achievement of the corresponding milestones, in accordance with the under mentioned percentages of the contract total price, and in accordance with the following payments schedule: 1. 20 % of the contract total price will be paid upon approval of preliminary design. 2. 25 % of the contract total price will be after approval of final design, including Structural and Hydraulic calculations and related drawings. 3. 25% of the contract total price will be after approval of Draft Tendering Dossiers and BoQ and costing. 4. 30% of the contract total price will be after approval of Final Tendering Documents. Invoices shall indicate the milestones achieved and corresponding amount payable. In case the assignment is not completed within the specified contractual duration, UNDP will be entitled to apply on the consultant a penalty of an amount equivalent to 0.1% of the contract total price for every working day of unjustified delay.
Validity of Quotation	✓ 120 DAYS
Partial bids accepted	✓ No
Duration of the Contract	4 months
Evaluation	**CRITERIA FOR ESTABLISHING THE SUCCESSFUL BIDDER** A two-stage procedure will be utilized in evaluating the proposals, with evaluation of the Technical Proposal being completed prior to any Financial Proposal being opened and compared. The Technical Proposal is evaluated on the basis of its responsiveness to the Terms of Reference (TOR). Each responsive proposal shall be attributed a technical score ***(Ts)*** on the Technical Proposal based on the under mentioned ***Technical Evaluation Criteria.***

The Financial Proposal will be opened only for submissions that passed the minimum technical score of 70% of the obtainable score of 1,000 points in the evaluation of the technical proposals.
In the Second Stage, the Financial Proposal of all offerors, who have attained a minimum 70% score in the technical evaluation, will be compared. The evaluation committee will determine whether the Financial Proposals are complete and without computational errors.

The Financial scores of the Financial Proposals shall be computed based on the following Criteria:

The Lowest evaluated Financial Proposal ***(Fm)*** shall be given a maximum "Financial Score" ***(Fs)*** of 1000 points. Then, the financial scores of the other Financial Proposals shall be computed based on the following formula:

Fs = 1,000 * Fm / F
In which;
Fs = Financial scores of the Financial Proposal under consideration.
Fm = Amount of lowest Financial Proposal.
F = Amount of the Financial Proposal under consideration.

Final Scoring:
The final cumulative score (Cs) of the Proposals will be computed for both the technical scores (Ts) and financial scores (Fs), based on the following formula:

Cs = (Ts * 70% + Fs * 30%)/10

The Contract will be awarded to the Consultant whose proposal achieves the highest final cumulative score (Cs).

Technical Evaluation Criteria

Summary of Technical Proposal Evaluation Forms		Score Weight	Points Obtainable	Company / Other Entity				
				A	B	C	D	E
1.	Expertise of Firm submitting Proposal	20%	200					
2.	Technical Approach, proposed Methodology and Management Work Plan	30%	300					
3.	Personnel	50%	500					
	Total		**1000**					

The evaluation forms for Technical Proposals are shown below. The obtainable number of points specified for each evaluation criterion indicates the relative significance or weight of the item in the overall evaluation process. The Technical Proposal Evaluation Forms are:

The evaluation forms for Technical Proposals are shown below. The obtainable number of points specified for each evaluation criterion indicates the relative significance or weight of the item in the overall evaluation process. The Technical Proposal Evaluation Forms are:

Form 1 Expertise of Firm submitting Proposal
Form 2**:** Technical Approach, proposed Methodology and Management Work Plan
Form 3: Personnel

Technical Proposal Evaluation Form 1		Points obtainable	Company / Other Entity				
			A	B	C	D	E
Expertise of Firm submitting Proposal							
1.1	General Organizational Capability and past experience and capacity in designing, supervising similar projects in quality and quantity.	80					
1.2	Specific Organizational Capability and past experience and capacity in designing, supervising water supply projects.	120					
Total Form 1		**200**					

Technical Proposal Evaluation Form 2		Points Obtainable	Company / Other Entity				
			A	B	C	D	E
Technical Approach, proposed Methodology and Management Work Plan							
2.1	To what degree does the Offeror understand the task?	20					
2.2	Have the important aspects of the task been addressed in sufficient detail?	60					
2.3	Are the different components of the project adequately weighted relative to one another?	20					
2.4	Is the proposal based on a survey of the project environment and was this data input properly used in the preparation of the proposal?	30					
2.5	Is the conceptual framework adopted appropriate for the task?	50					
2.6	Is the scope of task well defined and does it correspond to the TOR?	80					
2.7	Is the presentation clear and is the sequence of activities and the planning logical, realistic and promise efficient implementation to the project?	40					
Total Form 2		**300**					

Technical Proposal Evaluation Form 3		Points Obtainable	Company / Other Entity				
			A	B	C	D	E
Personnel							
3. Professional Staff							
3.1	Project Manager	100					
3.2	Hydraulic Engineer	90					
3.3	Electrical Engineer	80					
3.4	Mechanical Engineer	80					
3.5	Civil Engineer	70					
3.6	Procurement Specialist	30					
3.7	Architect / CAD Operator	30					
3.8	Supporting Staff	20					
Total Form 3		**500**					

The obtainable points assigned to each of the above mentioned personnel will be determined, ranked and calculated in accordance with the evaluation criteria and the relevant given percentage weights as classified and stated in the under mentioned table Form 3-1 for the project manager as an example and such alike for the rest of personnel adopting the same weight percentages.

Technical Proposal Evaluation Form 3-1: Individual Assessment			*Points Obtainable	Company / Other Entity				
				A	B	C	D	E
Personnel								
3.1	**Project Manager**	%						
	Criteria							
3.1.1	- General Qualification	30%	30					
3.1.2	- Professional Experience in the area of specialization	60%	60					
3.1.3	- English Language Qualifications	10%	10					
Total Points Obtainable (Ranked out of 100)			**100**					

Award criteria, award of contract

The procuring UNDP entity reserves the right to accept or reject any Proposal, and to annul the solicitation process and reject all Proposals at any time prior to award of contract, without thereby incurring any liability to the affected Offeror or any obligation to inform the affected Offeror or Offerors of the grounds for the Employer's action

Prior to expiration of the period of proposal validity, the procuring UNDP entity will award the contract to the qualified Offeror whose Proposal after being evaluated achieving the highest final cumulative score.

Subcontractors	Bidder is required to bear full responsibly for all services performed by his employees, agents, or sub-contractors. If Subcontractors are to be utilised for this contract, this should be specified in the submission.

Currency	All currencies of the received bids will be converted to US$ based on the United Nations prevailing rate of exchange at date of bid opening for comparison purpose. Resulted contract with wining contractor will reflect the currency originally quoted by the contractor.
Payment of taxes by the United Nations	Prices must not include VAT since the UN is exempt from taxes.
Language	All documentation shall be provided in English
Documents to be submitted	**The eligible participants (Local Companies) in the RFQ must have the following "as mandatory":** • Commercial Registration • Valid VAT clearance • Valid classification from the Engineering Offices and Consulting Firms-Engineering Association in Architecture, Civil, Water and Wastewater and Electromechanical. • **Technical Proposal includes:** The Technical Proposal shall provide the information indicated in the following parts from (A) to (C) using the Standard Formats attached in Annex D of this RFQ. The proposal pages are to be one printed side of A4 or letter size paper. The Offeror shall structure the Technical Proposal as follows: **(A) Expertise of Offeror Firm and Experience:** This section should comprise of two sub sections to be arranged in accordance with Tech. Form -2 attached in Annex D as follow: **A.1 Offeror's Firm** This sub section should provide corporate orientation to include the year and state/country of incorporation and a brief description of the background, present activities and organization of the Offeror's firm/organization and of each joint venture or associate for providing the consultancy services for the assignment (if any). It should focus on specific services related to the Proposal. **A.2 Offeror's Specific Experience** This sub section should provide a brief description and an outline of the Offeror's specific and recent experience on assignments of a similar nature and in accordance to the required Formats, Tech. Form -2 of Annex D. for each assignment, the outline should indicate the names of Sub-Consultants/Professional staff who participated, duration of the assignment, contract amount and the Consultant's involvement. Information should be provided only for those assignments for which the Consultant was legally contracted as a corporation or as one of the major firms within a joint venture. Assignments completed by individual Professional staff working privately or through other consulting firms cannot be claimed as the experience of the Consultant, or that of the Consultant's associates, but can be claimed by the Professional staff themselves in their CVs. Consultants should be prepared to substantiate the claimed experience if so requested by the Employer. **(B) Technical Approach, Proposed methodology and Management Work Plan** This section should provide description of the approach, methodology and work plan for performing the assignment covering the following subjects: technical approach and methodology, work plan, and organization and staffing schedule. The proposed work plan should be consistent with the technical approach and methodology, showing understanding of the TOR and ability to translate them into a feasible working plan. This section of the Technical Proposal should comprise of three sub sections; in accordance with the guidance on the content provided under Tech. Form -3, attached in Annex D, and should be prepared and arranged as follows:

	B1. Comments and suggestions on the Terms of Reference This sub section should provide comments and suggestions on the Terms of Reference including workable suggestions that could improve the quality and effectiveness of the assignment; and on services and facilities to be provided by the Employer. **B2. Technical Approach and Proposed methodology** This sub section should demonstrate the offeror's understanding of the objectives of the assignment, approach to the services, methodology for carrying out the activities and obtaining the expected output, and the degree of detail of such output. The Offeror should highlight the problems being addressed and their importance, and explain the technical approach to be adopted to address them. The Offeror should also explain the methodologies he proposes to adopt and highlight the compatibility of those methodologies with the proposed approach. **B3. Management Work Plan** This sub section should describe the organizational unit(s) that will become responsible for the contract, and the general management approach towards an assignment of this kind. The Offeror should comment on its experience in similar projects and identify the person(s) representing the Offeror in any future dealing with the procuring UNDP entity. In this sub section, the offeror should propose the main activities of the assignment, their content and duration, phasing and interrelations, milestones (including interim approvals by the Employer), and delivery dates of the reports. A list of the final documents, including reports, drawings, and tables to be delivered as final output, should be included. The work plan should be consistent with the Work Schedule Tech. Form-7 of Annex D, which will show in the form of a bar chart the timing proposed for each activity. **(C) Resource Plan / Organization and Staffing** This section should fully explain the Offeror's resources in terms of personnel and facilities necessary for the performance requirement. It should describe the Offeror's current capabilities/facilities and any plans for their expansion. It should propose the structure, composition and organization of the offereor's staffing team, listing the main disciplines of the assignment, the key Engineer responsible, and proposed technical support staff, and should be presented in accordance with Tech. Form -4 attached in Annex D. The Offeror shall provide a list of the proposed Professional staff by area of Engineering, the position that would be assigned to each staff team member, and their tasks in accordance with Tech. Form -5 of Annex D. The Offeror shall provide estimates of the staff input (staff-months of professionals) needed to carry out the assignment in accordance with Tech. Form -6 of Annex D. The Offeror shall provide CVs of the Professional staff signed by the staff themselves or by the authorized representative of the Professional staff in accordance with Tech. Form -8 of Annex D. The Technical Proposal should not contain any pricing information whatsoever on the services offered. Pricing information shall be separated and only contained in the Financial Proposal. It is mandatory that the Offeror's Proposal numbering system corresponds with the numbering system used in the body of this RFP. All references to descriptive material and brochures should be included in the appropriate response paragraph, though material/documents themselves may be provided as annexes to the Proposal/response. Information which the Offeror considers proprietary, if any, should be dearly marked "proprietary" next to the relevant part of the text and it will then be treated as such accordingly.

	• **Financial Proposal includes:** The Offeror shall prepare a Financial Proposal and shall indicate the prices of services proposed under the contract in accordance with the Financial Proposal Standard Formats as attached in Annex E. It shall list all costs associated with the assignment, including (a) remuneration for staff and (b) reimbursable expenses indicated in Fin. Form - 5 attached in Annex E. These costs should be broken down by activity. All activities and items described in the Technical Proposal must be priced separately. Activities and items described in the Technical Proposal but not priced, shall be assumed to be included in the prices of other activities or items.

Annex C
General Conditions

UNDP
GENERAL CONDITIONS OF CONTRACT FOR SERVICES

1.0 LEGAL STATUS:

The Contractor shall be considered as having the legal status of an independent contractor vis-à-vis the United Nations Development Programme (UNDP). The Contractor's personnel and sub-contractors shall not be considered in any respect as being the employees or agents of UNDP or the United Nations.

2.0 SOURCE OF INSTRUCTIONS:

The Contractor shall neither seek nor accept instructions from any authority external to UNDP in connection with the performance of its services under this Contract. The Contractor shall refrain from any action that may adversely affect UNDP or the United Nations and shall fulfill its commitments with the fullest regard to the interests of UNDP.

3.0 CONTRACTOR'S RESPONSIBILITY FOR EMPLOYEES:

The Contractor shall be responsible for the professional and technical competence of its employees and will select, for work under this Contract, reliable individuals who will perform effectively in the implementation of this Contract, respect the local customs, and conform to a high standard of moral and ethical conduct.

4.0 ASSIGNMENT:

The Contractor shall not assign, transfer, pledge or make other disposition of this Contract or any part thereof, or any of the Contractor's rights, claims or obligations under this Contract except with the prior written consent of UNDP.

5.0 SUB-CONTRACTING:

In the event the Contractor requires the services of sub-contractors, the Contractor shall obtain the prior written approval and clearance of UNDP for all sub-contractors. The approval of UNDP of a sub-contractor shall not relieve the Contractor of any of its obligations under this Contract. The terms of any sub-contract shall be subject to and conform to the provisions of this Contract.

6.0 OFFICIALS NOT TO BENEFIT:

The Contractor warrants that no official of UNDP or the United Nations has received or will be offered by the Contractor any direct or indirect benefit arising from this Contract or the award thereof. The Contractor agrees that breach of this provision is a breach of an essential term of this Contract.

7.0 INDEMNIFICATION:

The Contractor shall indemnify, hold and save harmless, and defend, at its own expense, UNDP, its officials, agents, servants and employees from and against all suits, claims, demands, and liability of any nature or kind, including their costs and expenses, arising out of acts or omissions of the Contractor, or

the Contractor's employees, officers, agents or sub-contractors, in the performance of this Contract. This provision shall extend, inter alia, to claims and liability in the nature of workmen's compensation, products liability and liability arising out of the use of patented inventions or devices, copyrighted material or other intellectual property by the Contractor, its employees, officers, agents, servants or sub-contractors. The obligations under this Article do not lapse upon termination of this Contract.

8.0 INSURANCE AND LIABILITIES TO THIRD PARTIES:

8.1 The Contractor shall provide and thereafter maintain insurance against all risks in respect of its property and any equipment used for the execution of this Contract.

8.2 The Contractor shall provide and thereafter maintain all appropriate workmen's compensation insurance, or the equivalent, with respect to its employees to cover claims for personal injury or death in connection with this Contract.

8.3 The Contractor shall also provide and thereafter maintain liability insurance in an adequate amount to cover third party claims for death or bodily injury, or loss of or damage to property, arising from or in connection with the provision of services under this Contract or the operation of any vehicles, boats, airplanes or other equipment owned or leased by the Contractor or its agents, servants, employees or sub-contractors performing work or services in connection with this Contract.

8.4 Except for the workmen's compensation insurance, the insurance policies under this Article shall:

8.4.1 Name UNDP as additional insured;

8.4.2 Include a waiver of subrogation of the Contractor's rights to the insurance carrier against the UNDP;

8.4.3 Provide that the UNDP shall receive thirty (30) days written notice from the insurers prior to any cancellation or change of coverage.

8.5 The Contractor shall, upon request, provide the UNDP with satisfactory evidence of the insurance required under this Article.

9.0 ENCUMBRANCES/LIENS:

The Contractor shall not cause or permit any lien, attachment or other encumbrance by any person to be placed on file or to remain on file in any public office or on file with the UNDP against any monies due or to become due for any work done or materials furnished under this Contract, or by reason of any other claim or demand against the Contractor.

10.0 TITLE TO EQUIPMENT: Title to any equipment and supplies that may be furnished by UNDP shall rest with UNDP and any such equipment shall be returned to UNDP at the conclusion of this Contract or when no longer needed by the Contractor. Such equipment, when returned to UNDP, shall be in the same condition as when delivered to the Contractor, subject to normal wear and tear. The Contractor shall be liable to compensate UNDP for equipment determined to be damaged or degraded

beyond normal wear and tear.

11.0 COPYRIGHT, PATENTS AND OTHER PROPRIETARY RIGHTS:

11.1 Except as is otherwise expressly provided in writing in the Contract, the UNDP shall be entitled to all intellectual property and other proprietary rights including, but not limited to, patents, copyrights, and trademarks, with regard to products, processes, inventions, ideas, know-how, or documents and other materials which the Contractor has developed for the UNDP under the Contract and which bear a direct relation to or are produced or prepared or collected in consequence of, or during the course of, the performance of the Contract, and the Contractor acknowledges and agrees that such products, documents and other materials constitute works made for hire for the UNDP.

11.2 To the extent that any such intellectual property or other proprietary rights consist of any intellectual property or other proprietary rights of the Contractor: (i) that pre-existed the performance by the Contractor of its obligations under the Contract, or (ii) that the Contractor may develop or acquire, or may have developed or acquired, independently of the performance of its obligations under the Contract, the UNDP does not and shall not claim any ownership interest thereto, and the Contractor grants to the UNDP a perpetual license to use such intellectual property or other proprietary right solely for the purposes of and in accordance with the requirements of the Contract.

11.3 At the request of the UNDP; the Contractor shall take all necessary steps, execute all necessary documents and generally assist in securing such proprietary rights and transferring or licensing them to the UNDP in compliance with the requirements of the applicable law and of the Contract.

11.4 Subject to the foregoing provisions, all maps, drawings, photographs, mosaics, plans, reports, estimates, recommendations, documents, and all other data compiled by or received by the Contractor under the Contract shall be the property of the UNDP, shall be made available for use or inspection by the UNDP at reasonable times and in reasonable places, shall be treated as confidential, and shall be delivered only to UNDP authorized officials on completion of work under the Contract.

12.0 USE OF NAME, EMBLEM OR OFFICIAL SEAL OF UNDP OR THE UNITED NATIONS:

The Contractor shall not advertise or otherwise make public the fact that it is a Contractor with UNDP, nor shall the Contractor, in any manner whatsoever use the name, emblem or official seal of UNDP or THE United Nations, or any abbreviation of the name of UNDP or United Nations in connection with its business or otherwise.

13.0 CONFIDENTIAL NATURE OF DOCUMENTS AND INFORMATION:

Information and data that is considered proprietary by either Party and that is delivered or disclosed by one Party ("Discloser") to the other Party ("Recipient") during the course of performance of the Contract, and that is designated as confidential ("Information"), shall be held in confidence by that Party and shall be handled as follows:

13.1 The recipient ("Recipient") of such information shall:

13.1.1 use the same care and discretion to avoid disclosure, publication or dissemination of the Discloser's Information as it uses with its own similar information that it does not wish to disclose, publish or disseminate; and,

13.1.2 use the Discloser's Information solely for the purpose for which it was disclosed.

13.2 Provided that the Recipient has a written agreement with the following persons or entities requiring them to treat the Information confidential in accordance with the Contract and this Article 13, the Recipient may disclose Information to:

13.2.1 any other party with the Discloser's prior written consent; and,

13.2.2 the Recipient's employees, officials, representatives and agents who have a need to know such Information for purposes of performing obligations under the Contract, and employees officials, representatives and agents of any legal entity that it controls, controls it, or with which it is under common control, who have a need to know such Information for purposes of performing obligations under the Contract, provided that, for these purposes a controlled legal entity means:

13.2.2.1 a corporate entity in which the Party owns or otherwise controls, whether directly or indirectly, over fifty percent (50%) of voting shares thereof; or,

13.2.2.2 any entity over which the Party exercises effective managerial control; or,

13.2.2.3 for the UNDP, an affiliated Fund such as UNCDF, UNIFEM and UNV.

13.3 The Contractor may disclose Information to the extent required by law, provided that, subject to and without any waiver of the privileges and immunities of the United Nations, the Contractor will give the UNDP sufficient prior notice of a request for the disclosure of Information in order to allow the UNDP to have a reasonable opportunity to take protective measures or such other action as may be appropriate before any such disclosure is made.

13.4 The UNDP may disclose Information to the extent as required pursuant to the Charter of the UN, resolutions or regulations of the General Assembly, or rules promulgated by the Secretary-General.

13.5 The Recipient shall not be precluded from disclosing Information that is obtained by the Recipient from a third party without restriction, is disclosed by the Discloser to a third party without any obligation of confidentiality, is previously known by the Recipient, or at any time is developed by the Recipient completely independently of any disclosures hereunder.

13.6 These obligations and restrictions of confidentiality shall be effective during the term of the Contract, including any extension thereof, and, unless otherwise provided in the Contract, shall remain effective following any termination of the Contract.

14.0 FORCE MAJEURE; OTHER CHANGES IN CONDITIONS

14.1 In the event of and as soon as possible after the occurrence of any cause constituting force majeure, the Contractor shall give notice and full particulars in writing to the UNDP, of such occurrence or change if the Contractor is thereby rendered unable, wholly or in part, to perform its obligations and

meet its responsibilities under this Contract. The Contractor shall also notify the UNDP of any other changes in conditions or the occurrence of any event that interferes or threatens to interfere with its performance of this Contract. On receipt of the notice required under this Article, the UNDP shall take such action as, in its sole discretion; it considers to be appropriate or necessary in the circumstances, including the granting to the Contractor of a reasonable extension of time in which to perform its obligations under this Contract.

14.2 If the Contractor is rendered permanently unable, wholly, or in part, by reason of force majeure to perform its obligations and meet its responsibilities under this Contract, the UNDP shall have the right to suspend or terminate this Contract on the same terms and conditions as are provided for in Article 15, "Termination", except that the period of notice shall be seven (7) days instead of thirty (30) days.

14.3 Force majeure as used in this Article means acts of God, war (whether declared or not), invasion, revolution, insurrection, or other acts of a similar nature or force.

14.4 The Contractor acknowledges and agrees that, with respect to any obligations under the Contract that the Contractor must perform in or for any areas in which the UNDP is engaged in, preparing to engage in, or disengaging from any peacekeeping, humanitarian or similar operations, any delays or failure to perform such obligations arising from or relating to harsh conditions within such areas or to any incidents of civil unrest occurring in such areas shall not, in and of itself, constitute force majeure under the Contract..

15.0 TERMINATION

15.1 Either party may terminate this Contract for cause, in whole or in part, upon thirty (30) days notice, in writing, to the other party. The initiation of arbitral proceedings in accordance with Article 16.2 ("Arbitration"), below, shall not be deemed a termination of this Contract.

15.2 UNDP reserves the right to terminate without cause this Contract at any time upon 15 days prior written notice to the Contractor, in which case UNDP shall reimburse the Contractor for all reasonable costs incurred by the Contractor prior to receipt of the notice of termination.

15.3 In the event of any termination by UNDP under this Article, no payment shall be due from UNDP to the Contractor except for work and services satisfactorily performed in conformity with the express terms of this Contract.

15.4 Should the Contractor be adjudged bankrupt, or be liquidated or become insolvent, or should the Contractor make an assignment for the benefit of its creditors, or should a Receiver be appointed on account of the insolvency of the Contractor, the UNDP may, without prejudice to any other right or remedy it may have under the terms of these conditions, terminate this Contract forthwith. The Contractor shall immediately inform the UNDP of the occurrence of any of the above events.

16.0 SETTLEMENT OF DISPUTES

16.1 **Amicable Settlement**: The Parties shall use their best efforts to settle amicably any dispute, controversy or claim arising out of this Contract or the breach, termination or invalidity thereof. Where the parties wish to seek such an amicable settlement through conciliation, the conciliation shall take place

in accordance with the UNCITRAL Conciliation Rules then obtaining, or according to such other procedure as may be agreed between the parties.

16.2 Arbitration: Any dispute, controversy, or claim between the Parties arising out of the Contract or the breach, termination, or invalidity thereof, unless settled amicably under Article 16.1, above, within sixty (60) days after receipt by one Party of the other Party's written request for such amicable settlement, shall be referred by either Party to arbitration in accordance with the UNCITRAL Arbitration Rules then obtaining. The decisions of the arbitral tribunal shall be based on general principles of international commercial law. For all evidentiary questions, the arbitral tribunal shall be guided by the Supplementary Rules Governing the Presentation and Reception of Evidence in International Commercial Arbitration of the International Bar Association, 28 May 1983 edition. The arbitral tribunal shall be empowered to order the return or destruction of goods or any property, whether tangible or intangible, or of any confidential information provided under the Contract, order the termination of the Contract, or order that any other protective measures be taken with respect to the goods, services or any other property, whether tangible or intangible, or of any confidential information provided under the Contract, as appropriate, all in accordance with the authority of the arbitral tribunal pursuant to Article 26 ("Interim Measures of Protection") and Article 32 ("Form and Effect of the Award") of the UNCITRAL Arbitration Rules. The arbitral tribunal shall have no authority to award punitive damages. In addition, unless otherwise expressly provided in the Contract, the arbitral tribunal shall have no authority to award interest in excess of the London Inter-Bank Offered Rate ("LIBOR") then prevailing, and any such interest shall be simple interest only. The Parties shall be bound by any arbitration award rendered as a result of such arbitration as the final adjudication of any such dispute, controversy, or claim.

17.0 PRIVILEGES AND IMMUNITIES:

Nothing in or relating to this Contract shall be deemed a waiver, express or implied, of any of the privileges and immunities of the United Nations, including its subsidiary organs.

18.0 TAX EXEMPTION

18.1 Section 7 of the Convention on the Privileges and Immunities of the United Nations provides, inter-alia that the United Nations, including its subsidiary organs, is exempt from all direct taxes, except charges for public utility services, and is exempt from customs duties and charges of a similar nature in respect of articles imported or exported for its official use. In the event any governmental authority refuses to recognize the United Nations exemption from such taxes, duties or charges, the Contractor shall immediately consult with the UNDP to determine a mutually acceptable procedure.

18.2 Accordingly, the Contractor authorizes UNDP to deduct from the Contractor's invoice any amount representing such taxes, duties or charges, unless the Contractor has consulted with the UNDP before the payment thereof and the UNDP has, in each instance, specifically authorized the Contractor to pay such taxes, duties or charges under protest. In that event, the Contractor shall provide the UNDP with written evidence that payment of such taxes, duties or charges has been made and appropriately authorized.

19.0 CHILD LABOUR

19.1 The Contractor represents and warrants that neither it, nor any of its suppliers is engaged in any practice inconsistent with the rights set forth in the Convention on the Rights of the Child, including

Article 32 thereof, which, inter alia, requires that a child shall be protected from performing any work that is likely to be hazardous or to interfere with the child's education, or to be harmful to the child's health or physical mental, spiritual, moral or social development.

19.2 Any breach of this representation and warranty shall entitle UNDP to terminate this Contract immediately upon notice to the Contractor, at no cost to UNDP.

20.0 MINES:

20.1 The Contractor represents and warrants that neither it nor any of its suppliers is actively and directly engaged in patent activities, development, assembly, production, trade or manufacture of mines or in such activities in respect of components primarily utilized in the manufacture of Mines. The term "Mines" means those devices defined in Article 2, Paragraphs 1, 4 and 5 of Protocol II annexed to the Convention on Prohibitions and Restrictions on the Use of Certain Conventional Weapons Which May Be Deemed to Be Excessively Injurious or to Have Indiscriminate Effects of 1980.

20.2 Any breach of this representation and warranty shall entitle UNDP to terminate this Contract immediately upon notice to the Contractor, without any liability for termination charges or any other liability of any kind of UNDP.

21.0 OBSERVANCE OF THE LAW:

The Contractor shall comply with all laws, ordinances, rules, and regulations bearing upon the performance of its obligations under the terms of this Contract.

22.0 SEXUAL EXPLOITATION:

22.1 The Contractor shall take all appropriate measures to prevent sexual exploitation or abuse of anyone by it or by any of its employees or any other persons who may be engaged by the Contractor to perform any services under the Contract. For these purposes, sexual activity with any person less than eighteen years of age, regardless of any laws relating to consent, shall constitute the sexual exploitation and abuse of such person. In addition, the Contractor shall refrain from, and shall take all appropriate measures to prohibit its employees or other persons engaged by it from, exchanging any money, goods, services, offers of employment or other things of value, for sexual favors or activities, or from engaging in any sexual activities that are exploitive or degrading to any person. The Contractor acknowledges and agrees that the provisions hereof constitute an essential term of the Contract and that any breach of this representation and warranty shall entitle UNDP to terminate the Contract immediately upon notice to the Contractor, without any liability for termination charges or any other liability of any kind.

22.2 The UNDP shall not apply the foregoing standard relating to age in any case in which the Contractor's personnel or any other person who may be engaged by the Contractor to perform any services under the Contract is married to the person less than the age of eighteen years with whom sexual activity has occurred and in which such marriage is recognized as valid under the laws of the country of citizenship of such Contractor's personnel or such other person who may be engaged by the Contractor to perform any services under the Contract.

23.0 AUTHORITY TO MODIFY:

Pursuant to the Financial Regulations and Rules of UNDP, only the UNDP Authorized Official possesses the authority to agree on behalf of UNDP to any modification of or change in this Agreement, to a waiver of any of its provisions or to any additional contractual relationship of any kind with the Contractor. Accordingly, no modification or change in this Contract shall be valid and enforceable against UNDP unless provided by an amendment to this Agreement signed by the Contractor and jointly by the UNDP Authorized Official.

Annex D: Technical Proposal - Formats

[*Comments in brackets* [ ] *provide guidance to the shortlisted Consultants for the preparation of their Technical Proposals; they should not appear on the Technical Proposals to be submitted.*]
:

The standard formats for the Technical Proposal to be submitted and the number of the pages recommended are as follow:

Tech. Form - 1	Proposal Submission Form
Tech. Form - 2	Consultant's Organization and Experience A- Consultant's Organization B- Consultant's Specific Experience
Tech. Form - 3	Description of the Technical Approach, Methodology and Management Work Plan
Tech. Form - 4	Resource Plan /Organization and Staffing
Tech. Form - 5	Team Composition and Task Assignments
Tech. Form - 6	Staffing Schedule
Tech. Form - 7	Work Schedule
Tech. Form - 8	Curriculum Vitae (CV) for Proposed Professional Staff

Tech. Form -1 Proposal Submission Form

[*Location, Date*]

Dear Sir / Madam,

Having examined the Solicitation Documents, the receipt of which is hereby duly acknowledged, we, the undersigned, offer to provide Professional Consulting services (profession/activity for Project/programme/office) for the sum as may be ascertained in accordance with the financial proposal attached herewith and made part of this Proposal. We are herby submitting our Proposal, which includes this Technical Proposal, and a Financial Proposal sealed under a separate envelop.

We undertake, if our Proposal is accepted, to commence and complete delivery of all services specified in the contract within the time frame stipulated.

We agree to abide by this Proposal for a period of 120 days from the date fixed for opening of Proposals in the Invitation for Proposal, and it shall remain binding upon us and may be accepted at any time before the expiration of that period.

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

Dated this day /month of year

Signature

(In the capacity of)

Duly authorized to sign Proposal for and on behalf of

Tech. Form -2 Consultant's Organization and Experience

A1 - Consultant's Organization

[*Provide here a brief (five pages) description of the background and organization of your firm/entity and each associate for this assignment.*]

Tech. Form -2 Consultant's Organization and Experience

A2 - Consultant's Specific Experience

[*Using the format below, provide information on each assignment for which your firm, and each associate for this assignment, was legally contracted either individually as a corporate entity or as one of the major companies within an association, for carrying out consulting services with specific experience similar to the ones requested under this assignment. Use 20 pages.*]

Assignment name:	Approx. value of the contract (in current US$):
Country: Location within country:	Duration of assignment (months):
Name of Client:	Total Nº of staff-months of the assignment:
Address:	Approx. value of the services provided by your firm under the contract (in current US$):
Start date (month/year): Completion date (month/year):	Nº of professional staff-months provided by associated Consultants:
Name of associated Consultants, if any:	Name of senior professional staff of your firm involved and functions performed (indicate most significant profiles such as Project Director/Coordinator, Team Leader):
Narrative description of Project:	
Description of actual services provided by your staff within the assignment:	

Firm's Name: _____

Tech. Form -3 Description of Technical Approach, Proposed Methodology and Management Work Plan

B - Technical Approach, Proposed methodology and Management Work Plan

The section of the Technical Proposal shall be of around 30 pages, inclusive of charts and diagrams
Technical approach, proposed methodology and management work plan are key components of the Technical Proposal. You are suggested to present your Technical Approach, Proposed methodology and Management Work Plan divided into the following three chapters:

B1) Comments and suggestions on the TOR and services and facilities to be provided by the Employer
B2) Technical Approach and Methodology, and
B3) Management Work Plan,

Tech. Form-3 Description of Technical Approach, Proposed Methodology and Management Work Plan

B1 - Comments and Suggestions on the Terms of Reference and on Services and Facilities to be Provided by the Employer or Client

B1.1. – Comments on the Terms of Reference

[*Present and justify here any modifications or improvement to the Terms of Reference you are proposing to improve performance in carrying out the assignment (such as deleting some activity you consider unnecessary, or adding another, or proposing a different phasing of the activities). Such suggestions should be concise and to the point, and incorporated in your Proposal.*]

Tech. Form -3 Description of Technical Approach, Proposed Methodology

and Management Work Plan

B1 - Comments and Suggestions on the Terms of Reference and on Services and Facilities

to be Provided by the Employer or Client

B1.2. – Comments on services and facilities to be Provided by the Employer or Client

[*Comment here on requirements to be provided by the Employer according to clause reference 11 of the TOR, data, services, facilities ,supporting in getting permissions , etc.*]

Tech. Form -3 Description of Technical Approach, Proposed Methodology

and Management Work Plan

B2- Technical Approach and Methodology

In this chapter you should explain your understanding of the objectives of the assignment, approach to the services, methodology for carrying out the activities and obtaining the expected output, and the degree of detail of such output. You should highlight the problems being addressed and their importance, and explain the technical approach you would adopt to address them. You should also explain the methodologies you propose to adopt and highlight the compatibility of those methodologies with the proposed approach.

Tech. Form -3 Description of Technical Approach, Proposed Methodology

and Management Work Plan

B.3 - Management Work Plan

In this chapter you should propose the main activities of the assignment, their content and duration, phasing and interrelations, milestones (including interim approvals by the Employer), and delivery dates of the reports. The proposed work plan should be consistent with the technical approach and methodology, showing understanding of the TOR and ability to translate them into a feasible working plan. A list of the final documents, including reports, drawings, and tables to be delivered as final output, should be included here. The work plan should be consistent with the Work Schedule of Form, Tech. Form -7.

.

Tech. Form -4 Description of Resource Plan / Organization and Staffing

C. Resource Plan / Organization and Staffing

In this chapter you should propose the structure and composition of your team. You should list the main disciplines of the assignment, the key Engineer responsible staff, and proposed technical and support staff.]

Tech. Form -5 Team Composition and Task Assignments

Professional Staff				
Name of Staff	Firm	Area of Expertise	Position Assigned	Task Assigned

Tech. Form-6 Staffing Schedule1

N°	Name of Staff[1]	Staff input in week (in the form of a bar chart)[2]													Total staff-month input		
		1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**n**	**Full Time**	**Part Time**	**Total**
1																	
2																	
3																	
											Total						

1 For Professional Staff the input should be indicated individually; for Support Staff it should be indicated by category (e.g.: Secretary, clerical staff, etc.).

2 Weeks are counted from the start of the assignment. For each staff indicate separately staff input for full time and part time work.

Full time input

Part time input

Tech. Form -7 Work Schedule

N°	Activity[1]	Weeks[2]												
		1	2	3	4	5	6	7	8	9	10	11	12	n
1														
2														
3														
4														
5														
n														

1 Indicate all main activities of the assignment, including delivery of reports (e.g.: inception, initial design, final design, final reports, etc.), and other benchmarks such as Employer approvals. For phased assignments indicate activities, delivery of reports, and benchmarks separately for each phase.

2 Duration of activities shall be indicated in the form of a bar chart.

Tech. Form-8 Curriculum Vitae (CV) for Proposed Professional Staff

1. **Proposed Position** [*only one candidate shall be nominated for each position*]: _____

2. **Name of Firm** [*Insert name of firm proposing the staff*]: _____

_____

3. **Name of Staff** [*Insert full name*]: _____

4. **Date of Birth**: _____ **Nationality**: _____

5. **Education** [*Indicate college/university and other specialized education of staff member, giving names of institutions, degrees obtained, and dates of obtainment*]: _____

_____

6. **Membership of Professional Associations**: _____

_____

7. **Other Training** [*Indicate significant training since degrees under 5 - Education were obtained*]: ___

_____

8. **Countries of Work Experience**: [*List countries where staff has worked in the last ten years*]:___

_____

9. **Languages** [*For each language indicate proficiency: good, fair, or poor in speaking, reading, and writing*]: _____

_____

10. **Employment Record** [*Starting with present position, list in reverse order every employment held by staff member since graduation, giving for each employment (see format here below): dates of employment, name of employing organization, positions held.*]:

From [*Year*]: _____ To [*Year*]: _____

Employer: _____

Positions held: _____

11. Detailed Tasks Assigned

[*List all tasks to be performed under this assignment*]

12. Work Undertaken that Best Illustrates Capability to Handle the Tasks Assigned

[*Among the assignments in which the staff has been involved, indicate the following information for those assignments that best illustrate staff capability to handle the tasks listed under point 11.*]

Name of assignment or project: _____

Year: _____

Location: _____

Client: _____

Main project features: _____

Positions held: _____

Activities performed: _____

13. Certification:

I, the undersigned, certify that to the best of my knowledge and belief, this CV correctly describes myself, my qualifications, and my experience. I understand that any wilful misstatement described herein may lead to my disqualification or dismissal, if engaged.

_____ Date: _____
[Signature of staff member or authorized representative of the staff] *Day/Month/Year*

Full name of authorized representative: _____

Annex E : Financial Proposal - Formats

[*Comments in brackets* [ ] *provide guidance to the shortlisted Consultants for the preparation of their Financial Proposals; they should not appear on the Financial Proposals to be submitted.*]

The standard formats for the Financial Proposal to be submitted are as follow:

Fin. Form -1	Financial Proposal Submission Form
Fin. Form - 2	Summary of Costs
Fin. Form - 3	Breakdown of Costs by Activity
Fin. Form - 4	Breakdown of Remuneration
Fin. Form - 5	Reimbursable expenses

Fin. Form -1 Financial Proposal Submission Form

[*Location, Date*]

Dear Sir / Madam,

Having examined the Solicitation Documents, the receipt of which is hereby duly acknowledged, we, the undersigned, offer to provide Professional Consulting services (profession/activity for Project/programme/office) in accordance with your Request For Proposal dated [*Insert date*] and our Technical Proposal for the sum of [*Iinsert amount in words and figures* *] as may be ascertained in accordance with the financial proposal attached herewith and made part of this Proposal. This amount is exclusive of all taxes, since the UNDP is exempt from taxes as detailed in Section II, Clause 18.

We agree to abide by this Proposal for a period of 120 days from the date fixed for opening of Proposals in the Invitation for Proposal, and it shall remain binding upon us and may be accepted at any time before the expiration of that period.

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

Dated this day /month of year

Signature

(In the capacity of)

Duly authorized to sign Proposal for and on behalf of

---

* Amounts must coincide with the ones indicated under total Cost of Financial Proposal in Form, Fin. Form-2.

Fin. Form - 2 Summary of Costs

Cost component	**Costs (US$)**
Total Costs of Remuneration	
Total Costs of Reimbursable Expenses	
Total Costs of Financial Proposal	

Please insert amount in words and figures.

Name of authorized person to sign the tender documents:

Signature:

Date:

Stamp:

Fin Form - 3 Breakdowns of Costs by Activity[1]

Group of Activities (Phase):[2] _____ _____	**Description:**[3]
Cost component	**Costs (US$)**
Remuneration	
Reimbursable Expenses	
Subtotals	

1 Form, Fin. Form -3, shall be filled at least for the whole assignment. In case some of the activities require different modes of billing and payment (e.g.: the assignment is phased, and each phase has a different payment schedule), the Consultant shall fill a separate Form, Fin. Form-3 for each group of activities.

2 Names of activities (phase) should be the same as, or correspond to the ones indicated in the second column of Form, Tech. Form -7.

3 Short description of the activities whose cost breakdown is provided in this Form.

Fin Form - 4 Breakdown of Remuneration[1]

Group of Activities (Phase): _____				
Name[2]	**Position**[3]	**Staff-month Rate (US$)**	**Input** (Staff-months)	US$
Staff Member				
			Total Costs	

1 Form, Fin. Form-4 shall be filled for each of the Forms, Fin Form-3 provided.
2 Professional Staff should be indicated individually; Support Staff should be indicated per category
3 Positions of Professional Staff shall coincide with the ones indicated in Form, Tech. Form-5.

Fin. Form - 5 Breakdown of Reimbursable Expenses[1]

Group of Activities (Phase): _____					
N°	**Description[2]**	**Unit**	**Unit Cost[3]**	**Quantity**	US$
	Per diem allowances				
	Drafting, reproduction of reports				
	Equipment, instruments, materials, supplies, etc.				
	Use of computers, software				
	Laboratory tests.				
	Subcontracts				
	Local transportation costs				
	Others				
				Total Costs	

1 Form, Fin Form-5 should be filled for each of the Forms, Fin. Form-3 provided, if needed.
2 Delete items that are not applicable or add other items.
3 Indicate unit cost.

Proposed Man Month of Personnel

Nomination	**Man Month**
Project Manager	
Hydraulic Engineer	
Electrical Engineer	
Mechanical Engineer	
Civil Engineer	
Procurement Specialist	
Architect / CAD Operator	
Supporting Staff	
**	
Total Man-Month	

The Consultant is to fill-in the proposed man months and costing details for the types of personnel that the Consultant believes are actually required to complete the works.

** The consultant may use the rows marked by an "**" in the table to insert any additional staff.