

**ISLAMIC REPUBLIC OF PAKISTAN
GOVERNMENT OF PUNJAB**



**REQUEST FOR PROPOSAL
(RFP)**

**CONSULTANCY SERVICES
FOR
TECHNICAL AND DESIGN PARAMETERS,
COSTING AFTER DETAILED INVESTIGATIONS
FOR FINALIZATION OF TECHNOLOGY OPTION,
PREPARATION OF TENDER DOCUMENTS,
SUPERVISION OF IMPLEMENTATION AND
MONITORING OF PERFORMANCE OF WASTE WATER
TREATMENT PLANT PROJECT IN LAHORE.**

**WATER & SANITATION AGENCY
LAHORE DEVELOPMENT AUTHORITY**

Section 1: Letter of Invitation

ISLAMIC REPUBLIC OF PAKISTAN



WATER AND SANITATION AGENCY (LDA)

Zahoor Elahi Road, Near Main Market, B-Block, Gulberg-II Lahore, Pakistan

Phone: +92-42-99263142-43, Fax: +92-42-99263147

Letter No.

Dated: 25.3.2010

(Name and Address of Consultant)

Subject: **LETTER OF INVITATION.**

Dear Mr./ Ms.

1. The Islamic Republic of Pakistan has received financial support (loan) designed for the Construction of Waste Water Treatment Plant of Lahore which is a project included in the economic development priorities of the Islamic Republic of Pakistan. This project will be co-financed by the Government of the Islamic Republic of Pakistan. A Part of this loan proceeds will be utilized for consultancy services to be provided by French consultants only.
2. The Water and Sanitation Agency (WASA), Lahore Development Authority (LDA), Government of the Punjab, Islamic Republic of Pakistan (herein after called "Client") now invites proposals to provide consultancy services for **"Technical and Design Parameters, Costing after Detailed Investigations for Finalization of Technology Option, Preparation of Tender Documents, Supervision of Implementation and Monitoring of Performance of Waste Water Treatment Plant Project in Lahore."**
3. Details of the required services are provided in the Terms of Reference included in Request for Proposal (RFP) which can be downloaded from the following websites:
<http://www.lda.gop.pk>
<http://www.pndpunjab.gov.pk>
<http://www.ppra.org.pk>

4. This request for proposal (RFP) has been addressed to the following consultants short listed by Embassy of French Republic in Islamabad :

- i. EGIS BCEOM INTERNATIONAL
- ii. TRACTEBEL ENGINEERING – COYNE ET BELLIER
- iii. BRGM INTERNATIONAL
- iv. DEGREMONT
- v. BRL
- vi. SAFEGE
- vii. SOGREAH
- viii. SCE
- ix. BURGEAP
- x. HYDRATEC
- xi. SEURECA

The French Consultants other than listed above are also eligible to participate in this selection process by responding to advertisements in newspapers/ websites. All the interested French Consultants (above listed as well as others) are required to provide following information along with their Technical Proposals, in addition to requirement in the RFP:

- i. Legal entity, registration with Income Tax Department in France
- ii. Registration with relevant professional bodies supported by latest/ updated renewal
- iii. Profile of core staff relevant to the assignment
- iv. Audited accounts for up to three years
- v. List of similar works (completed or in-hand) with client, scope, cost of project, cost of consultancy and period details
- vi. Undertaking by the consultant/ firm that it has not been black listed by any Government Agency/ Authority

5. The Consultant will be selected under the Quality and Cost Based Selection (QCBS) method and procedures described in this RFP, in accordance with the policies of the Government of Punjab detailed in the Consultant Selection Guidelines issued by the Planning & Development Department Govt. of the Punjab, Pakistan which can be downloaded from website <http://www.pndpunjab.gov.pk>

6. The RFP includes the following additional documents:
Section 2 - Instructions to Consultants (including Data Sheet)
Section 3 - Technical Proposal - Standard Forms
Section 4 - Financial Proposal - Standard Forms
Section 5 - Terms of Reference

7. It is mandatory for proposals to be made using the Standard Forms of the RFP. Proposals that are not in the prescribed format may be discarded. If any information required in the forms is found missing or written elsewhere, no credit will be given in the relevant section of the evaluation.
8. Firms should submit details of **10** of their most relevant assignments for technical evaluation using the prescribed format. Assignments submitted beyond the given number will not be considered.
9. CVs of key personnel corresponding to the list given in the Data Sheet should provide details of **10** projects done by the individual in the past years.
10. At any time before submission of proposals the client may amend RFP by issuing an addendum to be posted on websites mentioned above.
11. Please inform us in writing about the following upon receipt of this letter:
 - a) that you received the Letter of Invitation; and
 - b) whether you will submit a proposal alone or in association.

This information should be sent to the following address latest by 4th June 2010, at 1500 Hrs.

(Pre-Proposal Conference will be held on 10th May 2010, at 1100 Hrs. at WASA Head Office, Lahore Pakistan)

Name: Syed Zahid Aziz
Designation: Director (WWT)
Address: WASA Head Office Zahoor Elahi Road Gulberg-II,
Lahore Pakistan
Email: pmuwasa@yahoo.com

Yours sincerely,

Deputy Managing Director (Engg)
WASA Head Office, Zahoor Elahi Road,
B- Block, Gulberg-II, Lahore Pakistan.
Ph # 0092-42-35757425

SECTION - 2

INSTRUCTIONS TO CONSULTANTS

Definitions

- (a) “Agreement” means the Agreement signed by the Parties and all the attached documents.
- (b) “Client” means the organization with which the selected Consultant signs the Agreement for the Services.
- (c) “Consultant” means any entity or person that may provide or provides the Services to the Client under the Agreement.
- (d) “Data Sheet” means such part of the Instructions to Consultants used to reflect specific conditions.
- (e) “Day” means calendar day.
- (f) “Government” means the Government of the Punjab and all its associated departments, agencies, autonomous/semi-autonomous bodies, local governments, boards, universities and similar other organizations.
- (g) “Instructions to Consultants” means the document which provides shortlisted Consultants with all information needed to prepare their Proposals.
- (h) “LOI” means the Letter of Invitation included in the RFP as Section 1 being sent by the Client to the shortlisted Consultants.
- (i) “Personnel” means professionals and support staff provided by the Consultant or by any Sub-Consultant and assigned to perform the Services or any part thereof; “Foreign Personnel” means such professionals and support staff who at the time of being so provided had their domicile outside Pakistan; “Local Personnel” means such professionals and support staff who at the time of being so provided had their domicile inside Pakistan.
- (j) “Proposal” means the Technical Proposal and the Financial Proposal.
- (k) “RFP” means the Request for Proposal to be prepared by the Client for the selection of Consultants, based on the Standard RFP.
- (l) “Services” means the work to be performed by the Consultant pursuant to the Agreement.
- (m) “SRFP” means the Standard Request for Proposals, which must be used by the Client as a guide for the preparation of

the RFP.

- (n) “Sub-Consultant” means any person or entity with whom the Consultant sub agreements any part of the Services.
- (o) “Terms of Reference” (TOR) means the document included in the RFP as Section 5 which explains the objectives, scope of work, activities, tasks to be performed, respective responsibilities of the Client and the Consultant, and expected results and deliverables of the assignment.

1. Introduction

- 1.1 The Client named in the Data Sheet will select a consulting firm/organization (the Consultant) in accordance with the method of selection specified in the Data Sheet.
- 1.2 The Consultants are invited to submit a Technical Proposal and a Financial Proposal for consulting services required for the assignment named in the Data Sheet. The proposals should be in separate marked and sealed envelopes. The Proposal will be the basis for agreement negotiations and ultimately for a signed Agreement with the selected Consultant.
- 1.3 Consultants should familiarize themselves with assignment conditions and take them into account in preparing their Proposals. To obtain first-hand information on the assignment, Consultants are encouraged to visit the Client before submitting a proposal and to attend a pre-proposal conference if one is specified in the Data Sheet. Attending the pre-proposal conference is optional. Consultants should contact the Client’s representative named in the Data Sheet to obtain additional information on the pre-proposal conference. Consultants should ensure these officials are informed well-ahead of time in case they wish to visit the Client.
- 1.4 The Client will timely provide at no cost to the Consultants the inputs and facilities specified in the Data Sheet, assist the firm in obtaining visas / licenses and permits needed to carry out the services, and make available relevant project data and reports.
- 1.5 Consultants shall bear all costs associated with the preparation and submission of their proposals and agreement negotiation. The Client is not bound to accept any proposal, and reserves the right to annul the selection process at any time prior to Agreement award, without thereby incurring any liability to the Consultants.
- 1.6 The consultant is required to associate local consulting firm(s) to facilitate the transfer of technology to the locals and ensuring the application of technologies most suitable

to this region.

Conflict of Interest

1.7 Government of Punjab policy requires that Consultants provide professional, objective, and impartial advice and at all times hold the Client's interests paramount, strictly avoid conflicts with other assignments or their own corporate interests and act without any consideration for future work.

1.7.1 Without limitation on the generality of the foregoing, Consultants, and any of their affiliates, shall be considered to have a conflict of interest and shall not be recruited, under any of the circumstances set forth below:

Conflicting activities

- (i) A firm that has been engaged by the Client to provide goods, works or services other than consulting services for a project, and any of its affiliates, shall be disqualified from providing consulting services related to those goods, works or services. Conversely, a firm hired to provide consulting services for the preparation or implementation of a project, and any of its affiliates, shall be disqualified from subsequently providing goods or works or services other than consulting services resulting from or directly related to the firm's consulting services for such preparation or implementation. For the purpose of this paragraph, services other than consulting services are defined as those leading to a measurable physical output, for example surveys, exploratory drilling, aerial photography, and satellite imagery.
- (ii) It should be noted that any combination of the functions of a consultant with those of a contractor and or a manufacturer or any association to, or an equity stake of a contractor or manufacturer in the Consultancy business of the firm submitting the proposal shall render the consultant disqualified for the project. The consultant should therefore furnish an undertaking to the effect that the firm is fully independent having no affiliation, direct or indirect, with any French construction group or company.
- (iii) Any false statement in this regard, disclosed at any stage of the contract, will

make the contract liable to cancellation beside any other punitive action deemed fit by the WASA LAHORE.

Conflicting assignments

- (iv) A Consultant (including its Personnel and Sub-Consultants) or any of its affiliates shall not be hired for any assignment that, by its nature, may be in conflict with another assignment of the Consultant to be executed for the same or for another Client. For example, a Consultant hired to prepare engineering design for an infrastructure project shall not be engaged to prepare an independent environmental assessment for the same project, and a Consultant assisting a Client in the privatization of public assets shall not purchase, nor advise purchasers of, such assets. Similarly, a Consultant hired to prepare Terms of Reference for an assignment should not be hired for the assignment in question.

Conflicting relationships

- (v) A Consultant (including its Personnel and Sub-Consultants) that has a business or family relationship with a member of the Client's staff who is directly or indirectly involved in any part of (i) the preparation of the Terms of Reference of the assignment, (ii) the selection process for such assignment, or (iii) supervision of the Agreement, may not be awarded an Agreement, unless the conflict stemming from this relationship has been resolved in a manner acceptable to the Government of Punjab throughout the selection process and the execution of the Agreement.

1.7.2 Consultants have an obligation to disclose any situation of actual or potential conflict that impacts their capacity to serve the best interest of their Client, or that may reasonably be perceived as having this effect. Failure to disclose said situations may lead to the disqualification of the Consultant or the termination of its Agreement.

1.7.3 No agency or current employees of the Client shall work as Consultants under their own ministries, departments or agencies. Recruiting former government employees of the Client to work for their former ministries, departments or agencies is acceptable provided no conflict of interest exists.

When the Consultant nominates any government employee as Personnel in their technical proposal, such Personnel must have written certification from their government or employer confirming that they are on leave without pay from their official position and allowed to work full-time outside of their previous official position. Such certification shall be provided to the Client by the Consultant as part of his technical proposal.

**Unfair
Advantage**

- 1.7.4 If a shortlisted Consultant could derive a competitive advantage from having provided consulting services related to the assignment in question, the Client shall make available to all shortlisted Consultants together with this RFP all information that would in that respect give such Consultant any competitive advantage over competing Consultants.

**Fraud and
Corruption**

- 1.8 The Government of Punjab requires Consultants participating in its projects to adhere to the highest ethical standards, both during the selection process and throughout the execution of an agreement. In pursuance of this policy, the Government of Punjab:
- (b) defines, for the purpose of this paragraph, the terms set forth below as follows:
 - (i) “corrupt practice” means the offering, giving, receiving, or soliciting, directly or indirectly, of anything of value to influence the action of a public official in the selection process or in agreement execution;
 - (ii) “fraudulent practice” means a misrepresentation or omission of facts in order to influence a selection process or the execution of an agreement;
 - (iii) “collusive practices” means a scheme or arrangement between two or more consultants with or without the knowledge of the Client, designed to establish prices at artificial, noncompetitive levels;
 - (iv) “coercive practices” means harming or threatening to harm, directly or indirectly, persons or their property to influence their participation in a procurement process, or affect the execution of an agreement.
 - (c) will reject a proposal for award if it determines that the Consultant recommended for award has, directly or through an agent, engaged in corrupt, fraudulent, collusive or coercive practices in

competing for the agreement in question;

- (d) will sanction a Consultant, including declaring the Consultant ineligible, either indefinitely or for a stated period of time, to be awarded a Government of Punjab agreement if at any time it determines that the Consultant has, directly or through an agent, engaged in corrupt, fraudulent, collusive or coercive practices in competing for, or in executing, a Government of Punjab agreement; and
- (e) will have the right to require that a provision be included requiring Consultants to permit the Government of Punjab to inspect their accounts and records and other documents relating to the submission of proposals and agreement performance, and have them audited by auditors appointed by the Government of Punjab.

1.9 Consultants, their Sub-Consultants, and their associates shall not be under a declaration of ineligibility for corrupt and fraudulent practices issued by the Government of Punjab in accordance with the above para. 1.7. Furthermore, the Consultants shall be aware of the provisions on fraud and corruption stated in the specific clauses in the General Conditions of Agreement.

1.10 Consultants shall furnish information on commissions and gratuities, if any, paid or to be paid to agents relating to this proposal and during execution of the assignment if the Consultant is awarded the Agreement, as requested in the Financial Proposal submission form (Section 4).

**Only one
Proposal**

1.11 Shortlisted Consultants may only submit one proposal. If a Consultant submits or participates in more than one proposal, such proposals shall be disqualified.

**Proposal
Validity**

1.12 The Data Sheet indicates how long Consultants' Proposals must remain valid after the submission date. During this period, Consultants shall maintain the availability of Professional staff nominated in the Proposal. The Client will make its best effort to complete negotiations within this period. Should the need arise, however, the Client may request Consultants to extend the validity period of their proposals. Consultants who agree to such extension shall confirm that they maintain the availability of the Professional staff nominated in the Proposal, or in their confirmation of extension of validity of the Proposal, Consultants could submit new staff in replacement, who would be considered in the final evaluation for agreement award. Consultants who do not agree have the right to refuse to extend the validity of their Proposals.

- Eligibility of Sub-Consultants** 1.13 In case a shortlisted Consultant intends to associate with Consultants who have not been shortlisted and/or individual expert(s), such other Consultants and/or individual expert(s) shall be subject to the eligibility criteria set forth in the Guidelines.
- 2. Clarification and Amendment of RFP Documents** 2.1 Consultants may request a clarification of any of the RFP documents up to the number of days indicated in the Data Sheet before the proposal submission date. Any request for clarification must be sent in writing, or by standard electronic means to the Client’s address indicated in the Data Sheet. The Client will respond in writing, or by standard electronic means and will send written copies of the response (including an explanation of the query but without identifying the source of inquiry) to all Consultants. Should the Client deem it necessary to amend the RFP as a result of a clarification, it shall do so following the procedure under para. 2.2.
- 2.2 At any time before the submission of Proposals, the Client may amend the RFP by issuing an addendum in writing or by standard electronic means. The addendum shall be sent to all Consultants and will be binding on them. Consultants shall acknowledge receipt of all amendments. To give Consultants reasonable time in which to take an amendment into account in their Proposals the Client may, if the amendment is substantial, extend the deadline for the submission of Proposals.
- 3. Preparation of Proposals** 3.1 The Proposal (see para. 1.2), as well as all related correspondence exchanged by the Consultants and the Client, shall be written in the language (s) specified in the Data Sheet.
- 3.2 In preparing their Proposal, Consultants are expected to examine in detail the documents comprising the RFP. Material deficiencies in providing the information requested may result in rejection of a Proposal.
- 3.3 While preparing the Technical Proposal, Consultants must give particular attention to the following:
- (a) If a shortlisted Consultant considers that it may enhance its expertise for the assignment by associating with other Consultants in a joint venture or sub-consultancy, it may associate with either (a) non-shortlisted Consultant(s), or (b) shortlisted Consultants if so indicated in the Data Sheet. A shortlisted Consultant must first obtain the approval of the Client if it wishes to enter into a joint venture with any other shortlisted Consultant(s). In case of association with non-shortlisted Consultant(s), the shortlisted Consultant

shall act as association leader. Any associations must be clearly indicated in the technical proposal. In case of a joint venture, all partners shall be jointly and severally liable and shall indicate who will act as the leader of the joint venture.

- (b) For fixed-budget-based assignments, the available budget is given in the Data Sheet, and the Financial Proposal shall not exceed this budget.
- (c) Alternative professional staff shall not be proposed, and only one curriculum vitae (CV) may be submitted for each position.

**Technical
Proposal
Format and
Content**

3.4 The Technical Proposal shall provide the information indicated in the following paras from (a) to (g) using the attached Standard Forms (Section 3). Paragraph (c) (ii) indicates the recommended number of pages for the description of the approach, methodology and work plan of the Technical Proposal. A page is considered to be one printed side of A4 or letter size paper.

- (a) A brief description of the Consultants' organization and an outline of recent experience of the Consultants (each partner in case of joint venture) on assignments of a similar nature is required in Form TECH-2 of Section 3. For each assignment, the outline should indicate the names of Sub-Consultants/ Professional staff who participated, duration of the assignment, agreement amount, and Consultant's involvement. Information should be provided only for those assignments for which the Consultant was legally engaged by the Client as a firm 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 Client.
- (b) Comments and suggestions on the Terms of Reference including workable suggestions that could improve the quality/ effectiveness of the assignment; and on requirements for counterpart staff and facilities including: administrative support, office space, local transportation, equipment, data, etc. to be provided by the Client (Form TECH-3 of Section 3).

- (c) A 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. Guidance on the content of this section of the Technical Proposals is provided under Form TECH-4 of Section 3. The work plan should be consistent with the Work Schedule (Form TECH-8 of Section 3) which will show in the form of a bar chart the timing proposed for each activity.
- (d) The list of the proposed Professional staff team by area of expertise, the position that would be assigned to each staff team member, and their tasks (Form TECH-5 of Section 3).
- (e) Estimates of the staff input (staff-months of foreign and local professionals) needed to carry out the assignment (Form TECH-7 of Section 3). The staff-months input should be indicated separately for home office and field activities, and for foreign and local Professional staff.
- (f) CVs of the Professional staff signed by the staff themselves or by the authorized representative of the Professional Staff (Form TECH-6 of Section 3) along with their Computerized National Identity Card numbers (if local) or Passport numbers (if foreign).
- (g) A detailed description of the proposed methodology and staffing for training, if the Data Sheet specifies training as a specific component of the assignment.
- (h) Within ten (10) days of the receipt of notification of award, the successful bidder shall furnish the performance security bond representing 10% (ten percent) of the total value of the contract, as per the Performance Security format provided in (Annex IV) of this section 2.
- (i) The performance security bond shall remain valid till 40 days beyond the completion date of the assignment, and shall be denominated in Euros in the form of Banker's cheque or bank guarantee from a reputable commercial bank operating in France.
- (j) Failure of the successful bidder to comply with the requirements shall constitute sufficient grounds for annulment of the award, in which event WASA

Lahore shall make the award to the next best bidder

- (k) In case of failure of successful bidder to mobilize. The Consultant Selection Committee (CSC) may consider taking up negotiation with second ranking qualified bidder.
- (l) Ten percent (10%) amount from each running payments shall be withheld as security deposit till the successful completion of assignment.
- (m) Equipment, office vehicles etc procured by the consultants to render the services covered by the contract shall be the property of WASA Lahore and shall be handed over to WASA Lahore on completion of the services without any charge thereof, in perfect working condition. The Consultant will also provide the vehicle to counterpart engineers of WASA to render the services during design and implementation phase of treatment plant.

3.5 The Technical Proposal shall not include any financial information. A Technical Proposal containing financial information may be declared non responsive.

Financial Proposals

3.6 The Financial Proposal shall be prepared using the attached Standard Forms (Section 4). It shall list all costs associated with the assignment, including (a) remuneration for staff in the field and at the Consultants' home office), and (b) reimbursable expenses indicated in the Data Sheet. If appropriate, 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.

Taxes

3.7 The Consultant may be subject to local taxes (such as: value added or sales tax or income taxes on non resident Foreign Personnel, duties, fees, levies) on amounts payable by the Client under the Agreement. **The Client will state in the Data Sheet if the Consultant is subject to payment of any taxes.** Any such amounts shall not be included in the Financial Proposal as they will not be evaluated, but they will be discussed at agreement negotiations, and applicable amounts will be included in the Agreement. Payment of corporate and personal income taxes and other related dues shall be responsibility of the firm, as per the rules and regulations of the Government of Punjab and the Government of Pakistan. Payment of Custom duties, sales taxes and surcharges, and other

related dues if any levied on the office equipment required for rendering the aforementioned services shall be responsibility of the firm, as per the rules and regulations of the government of Punjab and the Government of Pakistan.

3.8 Consultants should express the price of their services in Euros

3.9 Commissions and gratuities, if any, paid or to be paid by Consultants and related to the assignment will be listed in the Financial Proposal Form FIN-1 of Section 4.

4. Submission, Receipt, and Opening of Proposals

4.1 The original proposal (Technical Proposal and, if required, Financial Proposal; see para. 1.2) shall contain no interlineations or overwriting, except as necessary to correct errors made by the Consultants themselves. The person who signed the proposal must initial such corrections. Submission letters for both Technical and Financial Proposals should respectively be in the format of TECH-1 of Section 3, and FIN-1 of Section 4.

4.2 An authorized representative of the Consultants shall initial all pages of the original Technical and Financial Proposals. The authorization shall be in the form of a written power of attorney accompanying the Proposal or in any other form demonstrating that the representative has been duly authorized to sign. The signed Technical and Financial Proposals shall be marked "ORIGINAL".

4.3 The Technical Proposal shall be marked "ORIGINAL" or "COPY" as appropriate. The Technical Proposals shall be sent to the addresses referred to in para. 4.5 and in the number of copies indicated in the Data Sheet. All required copies of the Technical Proposal are to be made from the original. If there are discrepancies between the original and the copies of the Technical Proposal, the original governs.

4.4 The original and all copies of the Technical Proposal shall be placed in a sealed envelope clearly marked "TECHNICAL PROPOSAL" Similarly, the original Financial Proposal (if required under the selection method indicated in the Data Sheet) shall be placed in a sealed envelope clearly marked "FINANCIAL PROPOSAL" followed by the name of the assignment, and with a warning "**DO NOT OPEN WITH THE TECHNICAL PROPOSAL.**" The envelopes containing the Technical and Financial Proposals shall be placed into an outer envelope and sealed. This outer envelope shall bear the submission address and title of the Assignment, clearly marked "**DO NOT OPEN, EXCEPT IN PRESENCE OF THE OFFICIAL APPOINTED, BEFORE SUBMISSION DEADLINE.**" The

Client shall not be responsible for misplacement, losing or premature opening if the outer envelope is not sealed and/or marked as stipulated. This circumstance may be case for Proposal rejection. If the Financial Proposal is not submitted in a separate sealed envelope duly marked as indicated above, this will constitute grounds for declaring the Proposal non-responsive.

- 4.5 The Proposals must be sent to the address/addresses indicated in the Data Sheet and received by the Client no later than the time and the date indicated in the Data Sheet, or any extension to this date in accordance with para. 2.2. Any proposal received by the Client after the deadline for submission shall be returned unopened.
- 4.6 The Client shall open the Technical Proposal immediately after the deadline for their submission. The envelopes with the Financial Proposal shall remain sealed and securely stored.

5. Proposal Evaluation

- 5.1 From the time the Proposals are opened to the time the Agreement is awarded, the Consultants should not contact the Client on any matter related to its Technical and/or Financial Proposal. Any effort by Consultants to influence the Client in the examination, evaluation, ranking of Proposals, and recommendation for award of Agreement may result in the rejection of the Consultants' Proposal.

Evaluators of Technical Proposals shall have no access to the Financial Proposals until the technical evaluation is concluded.

Evaluation of Technical Proposals

- 5.2 The evaluation committee shall evaluate the Technical Proposals on the basis of their responsiveness to the Terms of Reference, applying the evaluation criteria, subcriteria, and point system specified in the Data Sheet. Each responsive Proposal will be given a technical score (St). A Proposal shall be rejected at this stage if it does not respond to important aspects of the RFP, and particularly the Terms of Reference or if it fails to achieve the minimum technical score indicated in the Data Sheet.

Financial Proposals for QBS

- 5.3 Following the ranking of technical Proposals, when selection is based on quality only (QBS), the first ranked Consultant is invited to negotiate its proposal and the Agreement in accordance with the instructions given under para. 6 of these Instructions.

Public Opening and Evaluation of Financial Proposals (only for QCBS,

- 5.4 After the technical evaluation is completed, the Client shall inform the Consultants who have submitted proposals the technical scores obtained by their Technical Proposals, and shall notify those Consultants whose Proposals did not meet the minimum qualifying mark or

**Fixed Budget
Selection, and
Least-Cost
Selection)**

were considered non responsive to the RFP and TOR, that their Financial Proposals will be returned unopened after completing the selection process. The Client shall simultaneously notify in writing Consultants that have secured the minimum qualifying mark, the date, time and location for opening the Financial Proposals. Consultants' attendance at the opening of Financial Proposals is optional. The opening date shall be set so as to allow interested Consultants sufficient time to make arrangements for attending the opening.

- 5.5 Financial Proposals shall be opened publicly in the presence of the Consultants' representatives who choose to attend. The name of the Consultants, and the technical scores of the Consultants shall be read aloud. The Financial Proposal of the Consultants who met the minimum qualifying mark will then be inspected to confirm that they have remained sealed and unopened. These Financial Proposals shall be then opened, and the total prices read aloud and recorded.
- 5.6 The Evaluation Committee will correct any computational errors. When correcting computational errors, in case of discrepancy between a partial amount and the total amount, or between word and figures, the formers will prevail. In addition to the above corrections, as indicated under para. 3.6, 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. In case an activity or line item is quantified in the Financial Proposal differently from the Technical Proposal, (i) if the Time-Based form of agreement has been included in the RFP, the Evaluation Committee shall correct the quantification indicated in the Financial Proposal so as to make it consistent with that indicated in the Technical Proposal, apply the relevant unit price included in the Financial Proposal to the corrected quantity and correct the total Proposal cost, (ii) if the Lump-Sum form of agreement has been included in the RFP, no corrections are applied to the Financial Proposal in this respect.
- 5.7 In case of QCBS, the lowest evaluated Financial Proposal (Fm) will be given the maximum financial score (Sf) of 100 points. The financial scores (Sf) of the other Financial Proposals will be computed as indicated in the Data Sheet. Proposals will be ranked according to their combined technical (St) and financial (Sf) scores using the weights (T = the weight given to the Technical Proposal; P = the weight given to the Financial Proposal; T + P = 1) indicated in the Data Sheet: $S = St \times T\% + Sf \times P\%$. The firm achieving the highest combined technical and

financial score will be invited for negotiations.

5.8 In the case of Fixed-Budget Selection, the Client will select the firm that submitted the highest ranked Technical Proposal within the budget. Proposals that exceed the indicated budget will be rejected. In the case of the Least-Cost Selection, the Client will select the lowest proposal among those that passed the minimum technical score. In both cases the evaluated proposal price according to para. 5.6 shall be considered, and the selected firm is invited for negotiations.

6. Negotiations

6.1 Negotiations will be held at the date and address indicated in the Data Sheet. The invited Consultant will, as a prerequisite for attendance at the negotiations, confirm availability of all Professional staff. Failure in satisfying such requirements may result in the Client proceeding to negotiate with the next-ranked Consultant. Representatives conducting negotiations on behalf of the Consultant must have written authority to negotiate and conclude an Agreement.

Technical negotiations

6.2 Negotiations will include a discussion of the Technical Proposal, the proposed technical approach and methodology, work plan, and organization and staffing, and any suggestions made by the Consultant to improve the Terms of Reference. The Client and the Consultants will finalize the Terms of Reference, staffing schedule, work schedule, logistics, and reporting. These documents will then be incorporated in the Agreement as “Description of Services”. Special attention will be paid to clearly defining the inputs and facilities required from the Client to ensure satisfactory implementation of the assignment. The Client shall prepare minutes of negotiations which will be signed by the Client and the Consultant.

Financial negotiations

6.3 If applicable, it is the responsibility of the Consultant, before starting financial negotiations, to determine the tax amount to be paid by the Consultant under the Agreement. The financial negotiations will reflect the agreed technical modifications in the cost of the services. In the cases of QCBS, Fixed-Budget Selection, and the Least-Cost Selection methods, financial negotiations can involve the remuneration rates for staff or other proposed unit rates if there is a revision of scope or if the bid rate exceeds the available budget. For other methods, Consultants will provide the Client with the information on remuneration rates described in the Appendix attached to Section 4 - Financial Proposal - Standard Forms of this RFP.

Availability of Professional

6.4 Having selected the Consultant on the basis of, among other things, an evaluation of proposed Professional staff,

staff/experts

the Client expects to negotiate an Agreement on the basis of the Professional staff named in the Proposal. Before agreement negotiations, the Client will require assurances that the Professional staff will be actually available. The Client will not consider substitutions during agreement negotiations unless both parties agree that undue delay in the selection process makes such substitution unavoidable or for reasons such as death or medical incapacity. If this is not the case and if it is established that Professional staff were offered in the proposal without confirming their availability, the Consultant may be disqualified. Any proposed substitute shall have equivalent or better qualifications and experience than the original candidate and be submitted by the Consultant within the period of time specified in the letter of invitation to negotiate.

Conclusion of the negotiations

6.5 Negotiations will conclude with a review of the draft Agreement. To complete negotiations the Client and the Consultant will initial the agreed Agreement. If negotiations fail, the Client will invite the Consultant whose Proposal received the second highest score to negotiate an Agreement.

7. Award of Agreement

7.1 After completing negotiations the Client shall award the Agreement to the selected Consultant and publish details on the Planning & Development Department website and promptly notify all Consultants who have submitted proposals. After Agreement signature, the Client shall return the unopened Financial Proposals to the unsuccessful Consultants.

7.2 The Consultant is expected to commence the assignment on the date and at the location specified in the Data Sheet.

8. Confidentiality

8.1 Information relating to evaluation of Proposals and recommendations concerning awards shall not be disclosed to the Consultants who submitted the Proposals or to other persons not officially concerned with the process, until the publication of the award of Agreement. The undue use by any Consultant of confidential information related to the process may result in the rejection of its Proposal and may be subject to the provisions of the Consultant Selection Guidelines relating to fraud and corruption.

Instructions to Consultants

DATA SHEET

Paragraph Reference	
1.1	<p>Name of the Client: WASA. LDA. Govt of Punjab Pakistan</p> <p>Method of selection: Quality Cost Based Selection (QCBS)</p>
1.2	<p>Financial Proposal to be submitted together with Technical Proposal: Yes ✓</p> <p>Name of the assignment is: “Consultancy Services for Technical and Design Parameters, Costing after Detailed Investigations for Finalization of Technology Option, Preparation of Tender Documents, Supervision of Implementation and Monitoring of Performance of Waste Water Treatment Plant Project in Lahore.”</p>
1.3	<p>A pre-proposal conference will be held: Yes</p> <p>Date : 10th May, 2010 Time: 11:00 A.M</p> <p>Venue: WASA Head Office Zahoor Elahi Road Gulberg Lahore Pakistan</p> <hr/> <p>The Client’s representative is: Director (WWT)</p> <p>Address: WASA Head Office Zahoor Elahi Road Gulberg Lahore Pakistan</p> <p>Telephone: +92-42-35757425 Facsimile: +92-42-99263147</p> <p>E-mail: pmuwasa@yahoo.com</p>
1.4	<p>The Client will provide the following inputs and facilities:</p> <p>To assist in obtaining the Visas and work permit. Assist to visit the proposed site of WWTP.</p>
1.6.1 (a)	<p>The Client envisages the need for continuity for downstream work: Yes</p>
1.12	<p>Proposals must remain valid 180 days after the submission date, i.e. until: 30th November 2010</p>

2.1	<p>Clarifications may be requested not later than 10 days before the submission date.</p> <p>The address for requesting clarifications is:</p> <p>Director (WWT) WASA Head Office Zahoor Elahi Road Gulberg Lahore Pakistan</p> <p>Facsimile: +92-42-99263147 E-mail: pmuwasa @yahoo.com</p>
3.1	Proposals shall be submitted in the following language: English
3.3 (a)	Consultants required to associate with local consulting firm to facilitate the transfer of technology : Yes
3.3 (b)	The Financial Proposal shall not exceed the available budget of: €4.500 Million
3.4 (a)	Firm should submit details of at least 10 assignments carried out in countries with similar conditions.
3.4 (f)	CVs should contain details on 10 projects done by the individual in the past years.
3.4 (g)	<p>Training is a specific component of this assignment: Yes.</p> <p>Capacity building training abroad of WASA Engineers to carry out day to day operation, management and maintenance of the systems created under the project by the contractor.</p>
3.6	<p><i>[List the applicable Reimbursable expenses in foreign currency. A sample list is provided below for guidance: items that are not applicable should be deleted, others may be added.</i></p> <p>All services as mentioned in TORs</p>
3.7	<p>Amounts payable by the Client to the Consultant under the agreement to be subject to local taxation: No</p> <p>If affirmative, the Client will <i>[indicate which of the two options applies]</i>:</p> <p>(a) reimburse the Consultant for any such taxes paid by the Consultant:</p> <p>(b) pay such taxes on behalf of the Consultant:</p>
4.3	Consultant must submit the original and 03 copies of the Technical Proposal, and the original of the Financial Proposal.

4.5	<p>The Proposal submission address is: Director (WWT) WASA Head Office Zahoor Elahi Road, B-Block Gulberg-II, Lahore Pakistan</p> <p>Proposals must be submitted no later than the following date and time: 4th June 2010 up to 3:00 P.M</p>																																																												
5.2 (a)	<p>Criteria, sub-criteria, and point system for the evaluation of Technical Proposals are:</p> <table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 80%;"></th> <th style="text-align: right; border-bottom: 1px solid black;"><u>Points</u></th> </tr> </thead> <tbody> <tr> <td>(i) Company Profile:</td> <td style="text-align: right;">[100]</td> </tr> <tr> <td> a) Number of similar assignments</td> <td style="text-align: right;">[45]</td> </tr> <tr> <td> b) Value of similar assignments</td> <td style="text-align: right;">[45]</td> </tr> <tr> <td> c) Organizational structure</td> <td style="text-align: right;">[10]</td> </tr> <tr> <td></td> <td style="text-align: right; border-top: 1px solid black;">Total = A₁</td> </tr> <tr> <td> </td> <td></td> </tr> <tr> <td>(ii) Project Team:</td> <td style="text-align: right;">[100]</td> </tr> <tr> <td> a) Team Leader/Project Manager</td> <td style="text-align: right;">[20]</td> </tr> <tr> <td> b) Senior Engineer WWT</td> <td style="text-align: right;">[10]</td> </tr> <tr> <td> c) Senior Engineer Mech.</td> <td style="text-align: right;">[10]</td> </tr> <tr> <td> d) Senior Engineer Elect</td> <td style="text-align: right;">[10]</td> </tr> <tr> <td> e) Senior Engineer Structure</td> <td style="text-align: right;">[10]</td> </tr> <tr> <td> f) Procurement and Contract Management Specialist</td> <td style="text-align: right;">[10]</td> </tr> <tr> <td> g) Resident Engineer</td> <td style="text-align: right;">[15]</td> </tr> <tr> <td> h) Material Cum QA Engineer</td> <td style="text-align: right;">[5]</td> </tr> <tr> <td> i) O&M Engineer</td> <td style="text-align: right;">[10]</td> </tr> <tr> <td></td> <td style="text-align: right; border-top: 1px solid black;">Total = A₂</td> </tr> <tr> <td colspan="2" style="padding: 10px 0;"> <p>The number of points to be assigned to each of the above positions or disciplines shall be determined considering the following three sub criteria and relevant score:</p> </td> </tr> <tr> <td> 1) Education and qualifications</td> <td style="text-align: right;">[25]</td> </tr> <tr> <td> 2) Relevant background</td> <td style="text-align: right;">[70]</td> </tr> <tr> <td> 3) Time with firm</td> <td style="text-align: right;">[5]</td> </tr> <tr> <td></td> <td style="text-align: right; border-top: 1px solid black;">Total score: 100</td> </tr> <tr> <td> </td> <td></td> </tr> <tr> <td>(ii) Approach & Methodology:</td> <td style="text-align: right;">[100]</td> </tr> <tr> <td> a) Understanding & Innovativeness</td> <td style="text-align: right;">[40]</td> </tr> <tr> <td> b) Methodology & Work plan</td> <td style="text-align: right;">[60]</td> </tr> <tr> <td></td> <td style="text-align: right; border-top: 1px solid black;">Total = A₃</td> </tr> <tr> <td colspan="2" style="text-align: center; padding: 10px 0;"> $\text{Technical Score} = \frac{A_1[35]}{100} + \frac{A_2[45]}{100} + \frac{A_3[20]}{100}$ </td> </tr> <tr> <td colspan="2" style="padding: 10px 0;"> <p>The minimum technical score St required to pass is: 65 Points</p> </td> </tr> </tbody> </table>		<u>Points</u>	(i) Company Profile:	[100]	a) Number of similar assignments	[45]	b) Value of similar assignments	[45]	c) Organizational structure	[10]		Total = A ₁	 		(ii) Project Team:	[100]	a) Team Leader/Project Manager	[20]	b) Senior Engineer WWT	[10]	c) Senior Engineer Mech.	[10]	d) Senior Engineer Elect	[10]	e) Senior Engineer Structure	[10]	f) Procurement and Contract Management Specialist	[10]	g) Resident Engineer	[15]	h) Material Cum QA Engineer	[5]	i) O&M Engineer	[10]		Total = A ₂	<p>The number of points to be assigned to each of the above positions or disciplines shall be determined considering the following three sub criteria and relevant score:</p>		1) Education and qualifications	[25]	2) Relevant background	[70]	3) Time with firm	[5]		Total score: 100	 		(ii) Approach & Methodology:	[100]	a) Understanding & Innovativeness	[40]	b) Methodology & Work plan	[60]		Total = A ₃	$\text{Technical Score} = \frac{A_1[35]}{100} + \frac{A_2[45]}{100} + \frac{A_3[20]}{100}$		<p>The minimum technical score St required to pass is: 65 Points</p>	
	<u>Points</u>																																																												
(i) Company Profile:	[100]																																																												
a) Number of similar assignments	[45]																																																												
b) Value of similar assignments	[45]																																																												
c) Organizational structure	[10]																																																												
	Total = A ₁																																																												
(ii) Project Team:	[100]																																																												
a) Team Leader/Project Manager	[20]																																																												
b) Senior Engineer WWT	[10]																																																												
c) Senior Engineer Mech.	[10]																																																												
d) Senior Engineer Elect	[10]																																																												
e) Senior Engineer Structure	[10]																																																												
f) Procurement and Contract Management Specialist	[10]																																																												
g) Resident Engineer	[15]																																																												
h) Material Cum QA Engineer	[5]																																																												
i) O&M Engineer	[10]																																																												
	Total = A ₂																																																												
<p>The number of points to be assigned to each of the above positions or disciplines shall be determined considering the following three sub criteria and relevant score:</p>																																																													
1) Education and qualifications	[25]																																																												
2) Relevant background	[70]																																																												
3) Time with firm	[5]																																																												
	Total score: 100																																																												
(ii) Approach & Methodology:	[100]																																																												
a) Understanding & Innovativeness	[40]																																																												
b) Methodology & Work plan	[60]																																																												
	Total = A ₃																																																												
$\text{Technical Score} = \frac{A_1[35]}{100} + \frac{A_2[45]}{100} + \frac{A_3[20]}{100}$																																																													
<p>The minimum technical score St required to pass is: 65 Points</p>																																																													

5.7	<p>The formula for determining the financial scores is the following:</p> $S_f = 100 \times F_m / F,$ <p>in which S_f is the financial score, F_m is the lowest price and F is the price of the proposal under consideration.</p> <p>The weights given to the Technical (T) and Financial Proposals (P) are: $T = 0.85$ $P = 0.15$</p>
6.1	<p>Expected date and address for agreement negotiations: 10th June 2010 Dy. Managing Director (Engg.) WASA Head Office Zahoor Elahi Road Gulberg Lahore Pakistan</p>
7.2	<p>Expected date for commencement of consulting services 1st July 2010 at: Lahore Pakistan</p>
3.4 (i)	<p>Performance Security Bond: 10% of value of contract</p>

Section 3: Technical Proposal - Standard Forms

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

Refer to Reference Paragraph 3.4 of the Data Sheet for format of Technical Proposal to be submitted, and paragraph 3.4 of Section 2 of the RFP for Standard Forms required and number of pages recommended.

- TECH-1 Technical Proposal Submission Form
- TECH-2 Consultant's Organization and Experience
 - A Consultant's Organization
 - B Consultant's Experience
- TECH-3 Comments or Suggestions on the Terms of Reference and on Counterpart Staff and Facilities to be provided by the Client
 - A On the Terms of Reference
 - B On the Counterpart Staff and Facilities
- TECH-4 Description of the Approach, Methodology and Work Plan for Performing the Assignment
- TECH-5 Team Composition and Task Assignments
- TECH-6 Curriculum Vitae (CV) for Proposed Professional Staff
- TECH-7 Staffing Schedule
- TECH-8 Work Schedule

FORM TECH-1 TECHNICAL PROPOSAL SUBMISSION FORM

[Location, Date]

To:

The Director (WWT)
Water and Sanitation Agency LDA
WASA Head Office, Zahoor Elahi Road,
Block-B, Gulberg-II, Lahore, Pakistan.

Dear Sir,

We, the undersigned, offer to provide the consulting services for **“Technical and Design Parameters, Costing after Detailed Investigations for Finalization of Technology Option, Preparation of Tender Documents, Supervision of Implementation and Monitoring of Performance of Waste Water Treatment Plant Project in Lahore.”**

in accordance with your Request for Proposal dated *[Insert Date]* and our Proposal. We are hereby submitting our Proposal, which includes this Technical Proposal, and a Financial Proposal sealed under a separate envelope¹.

We are submitting our Proposal in association with: *[Insert a list with full name and address of each associated Consultant]*²

We hereby declare that all the information and statements made in this Proposal are true and accept that any misinterpretation contained in it may lead to our disqualification.

If negotiations are held during the period of validity of the Proposal, i.e., before the date indicated in Paragraph Reference 1.12 of the Data Sheet, we undertake to negotiate on the basis of the proposed staff. Our Proposal is binding upon us and subject to the modifications resulting from Agreement negotiations.

We undertake, if our Proposal is accepted, to initiate the consulting services related to the assignment not later than the date indicated in Paragraph Reference 7.2 of the Data Sheet.

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

We remain,

Yours sincerely,

Authorized Signature *[In full and initials]*: _____

Name and Title of Signatory: _____

Name of Firm: _____

Address: _____

FORM TECH-2 CONSULTANT'S ORGANIZATION AND EXPERIENCE

A - Consultant's Organization

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

1. Firm Background:
2. Chief Executive Officer:
3. Board of Directors / Partners.
4. Departmental Structure of the Firm
5. Organogram

A-I

Whether your Firm is ISO Certified? If so provide a copy of ISO Certification.

B - Consultant's Experience

[Using the format below, provide information on each assignment for which your firm, and each associate for this assignment, was legally contracted as a corporate entity or as one of the major companies within an association, for carrying out consulting services similar to the ones requested under this Assignment. Use maximum 20 pages. Please provide Client's certification and/or evidence of the contract agreement.]

Assignment name:	Cost of the Project
Country: Location within country:	Duration of assignment (months):
Name of Client:	Total N ^o of staff-months (by your firm) on the assignment:
Start date (month/year): Completion date (month/year):	1- Total Value of the Consultancy Agreement. 2- Value of consultancy services provided by your firm under the agreement
Name of associated Consultants, if any:	N ^o of professional staff-months provided by associated Consultants:
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	
1. Firms Name: 2. Certificate by the Client / Employer that the work was successfully completed by the consultant.	

**FORM TECH-3 COMMENTS AND SUGGESTIONS ON THE TERMS OF
REFERENCE AND ON COUNTERPART STAFF AND FACILITIES TO BE PROVIDED
BY THE CLIENT**

A - 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.]

B - On Counterpart Staff and Facilities

[Comment here on counterpart staff and facilities to be provided by the Client according to Paragraph Reference 1.4 of the Data Sheet including: administrative support, office space, local transportation, equipment, data, etc.]

FORM TECH-4 DESCRIPTION OF APPROACH, METHODOLOGY AND WORK PLAN FOR PERFORMING THE ASSIGNMENT

[Technical approach, methodology and work plan are key components of the Technical Proposal. You are suggested to present your Technical Proposal (50 pages, inclusive of charts and diagrams) divided into the following three chapters:

- a) Technical Approach and Methodology,
- b) Work Plan, and
- c) Organization and Staffing,

a) 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.

b) 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 Client), 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-8.

c) 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 expert responsible, and proposed technical and support staff.]

FORM TECH-5 TEAM COMPOSITION AND TASK ASSIGNMENTS

Professional Staff					
Name of Staff	CNIC No./Passport No.	Firm	Area of Expertise	Position Assigned	Task Assigned

FORM TECH-6 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. **CNIC No (if Pakistani):** _____ **or Passport No:** _____

6. **Education :**

<i>Degree</i>	<i>Major/Minor</i>	<i>Institution</i>	<i>Date (MM/YYYY)</i>

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

8. **Other Training** [*Indicate significant training since degrees under 6 - Education were obtained*]: _____

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.*]:

<i>Employer</i>	<i>Position</i>	<i>From (MM/YYYY)</i>	<i>To (MM/YYYY)</i>

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.]

- 1) Name of assignment or project & Location: _____ Cost of Project _____
Date of Start _____ Date of Completion _____
Actual Time Spent on the Project: _____ in months.
Client: _____
Main project features: _____
Positions held: _____
Activities performed: _____

- 2) Name of assignment or project & Location: _____ Cost of Project _____
Date of Start _____ Date of Completion _____
Actual Time Spent on the Project: _____ in months.
Client: _____
Main project features: _____
Positions held: _____
Activities performed: _____

3) Name of assignment or project & Location: _____ Cost of Project _____
 Date of Start _____ Date of Completion _____
 Actual Time Spent on the Project: _____ in months.
 Client: _____
 Main project features: _____
 Positions held: _____
 Activities performed: _____

[Unroll the project details group and continue numbering (4, 5, ...) as many times as is required]

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.

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

Full name of authorized representative: _____

FORM TECH-7 STAFFING SCHEDULE¹



Full time input
Part time input

Year: _____		Staff input (in the form of a bar chart) ²												Total staff-month input		
N°	Name of Staff	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Home	Field ³	Total
		Foreign		[Home] [Field]												
1																
2																
3																
n																
Subtotal																
Local		[Home] [Field]														
1																
2																
n																
Subtotal																
Total																

- 1 For Professional Staff the input should be indicated individually; for Support Staff it should be indicated by category (e.g.: draftsmen, clerical staff, etc.).
- 2 Months are counted from the start of the assignment. For each staff indicate separately staff input for home and field work.
- 3 Field work means work carried out at a place other than the Consultant's home office.

Section 4: Financial Proposal - Standard Forms

[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.]

Financial Proposal Standard Forms shall be used for the preparation of the Financial Proposal according to the instructions provided under para. 3.6 of Section 2. Such Forms are to be used whichever is the selection method indicated in para. 4 of the Letter of Invitation.

[The Appendix “Financial Negotiations - Breakdown of Remuneration Rates” is to be only used for financial negotiations when Quality-Based Selection, Selection Based on Qualifications, or Single-Source Selection method is adopted, according to the indications provided under para. 6.3 of Section 2.]

FIN-1 Financial Proposal Submission Form

FIN-2 Summary of Costs

FIN-3 Breakdown of Costs by Activity

FIN-4 Breakdown of Remuneration

FIN-5 Reimbursable expenses

Appendix: Financial Negotiations - Breakdown of Remuneration Rates

FORM FIN-1 FINANCIAL PROPOSAL SUBMISSION FORM

[Location, Date]

To:

Deputy Managing Director (Engg)
Water and Sanitation Agency LDA
WASA Head Office, Zahoor Elahi Road,
Block-B, Gulberg-II, Lahore, Pakistan.

Dear Sir,

We, the undersigned, offer to provide the consulting services for ***“Consultancy Services for Technical and Design Parameters, Costing after detailed Investigations for Finalization of Technology Option, Preparation of Tender documents, Supervision of Implementation and Monitoring of Performance of Waste Water Treatment Plant Project in Lahore”*** in accordance with your Request for Proposal dated [Insert Date] and our Technical Proposal. Our attached Financial Proposal is for the sum of [Insert amount(s) in words and figures¹]. This amount is inclusive of the taxes.

Our Financial Proposal shall be binding upon us subject to the modifications resulting from Agreement negotiations, up to expiration of the validity period of the Proposal, i.e. before the date indicated in Paragraph Reference 1.12 of the Data Sheet.

No commissions or gratuities have been or are to be paid by us to agents relating to this Proposal and Agreement execution.

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

We remain,

Yours sincerely,

Authorized Signature [In full and initials]: _____

Name and Title of Signatory: _____

Name of Firm: _____

Address: _____

FORM FIN-2 SUMMARY OF COSTS

Item	Costs in Euro
Total Costs of Financial Proposal ²	

- 1 Indicate between brackets the name of the foreign currency.
- 2 Indicate the total costs, net of local taxes, to be paid by the Client. Such total costs must coincide with the sum of the relevant Subtotals indicated in all Forms FIN-3 provided with the Proposal.

FORM FIN-3 BREAKDOWN OF COSTS BY ACTIVITY¹

Group of Activities (Phase): ² _____ _____	Description: ³ _____ _____	
Cost component	Costs	
	Euros	
Remuneration ⁵		
Reimbursable Expenses ⁵		
Subtotals		

- 1 Form FIN-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-3 for each group of activities. For each currency, the sum of the relevant Subtotals of all Forms FIN-3 provided must coincide with the Total Costs of Financial Proposal indicated in Form FIN-2.
- 2 Names of activities (phase) should be the same as, or correspond to the ones indicated in the second column of Form TECH-8.
- 3 Short description of the activities whose cost breakdown is provided in this Form.
- 4 Indicate between brackets the name of the foreign currency.
- 5 For each currency, Remuneration and Reimbursable Expenses must respectively coincide with relevant Total Costs indicated in Forms FIN-4, and FIN-5.

FORM FIN-4 BREAKDOWN OF REMUNERATION¹

(This Form FIN-4 shall only be used when the Time-Based Form of Agreement has been included in the RFP)

Group of Activities (Phase): _____					
Name ²	Position ³	Staff-month Rate ⁴	Input ⁵ (Staff-months)	EURO	
Foreign Staff					
		[Home]			
		[Field]			
Local Staff					
		[Home]			
		[Field]			
Total Costs					

- 1 Form FIN-4 shall be filled for each of the Forms FIN-3 provided.
- 2 Professional Staff should be indicated individually; Support Staff should be indicated per category (e.g.: draftsmen, clerical staff).
- 3 Positions of Professional Staff shall coincide with the ones indicated in Form TECH-5.
- 4 Indicate separately staff-month rate and currency for home and field work.
- 5 Indicate, separately for home and field work, the total expected input of staff for carrying out the group of activities or phase indicated in the Form.
- 6 Indicate between brackets the name of the foreign currency. For each staff indicate the remuneration in the column of the relevant currency, separately for home and field work. Remuneration = Staff-month Rate x Input.

FORM FIN-5 BREAKDOWN OF REIMBURSABLE EXPENSES¹

(This Form FIN-5 shall only be used when the Time-Based Form of Agreement has been included in the RFP)

Group of Activities (Phase): _____						
N°	Description ²	Unit	Unit Cost ³	Quantity	EURO	
	Per diem allowances	Day				
	International flights ⁵	Trip				
	Miscellaneous travel expenses	Trip				
	Communication costs between [<i>Insert place</i>] and [<i>Insert place</i>]					
	Drafting, reproduction of reports					
	Equipment, instruments, materials, supplies, etc.					
	Shipment of personal effects	Trip				
	Use of computers, software					
	Laboratory tests.					
	Subagreements					
	Local transportation costs					
	Office rent, clerical assistance					
	Training of the Client's personnel ⁶					
Total Costs						

1 Form FIN-5 should be filled for each of the Forms FIN-3 provided, if needed.

2 Delete items that are not applicable or add other items according to Paragraph Reference 3.6 of the Data Sheet.

3 Indicate unit cost and currency.

4 Indicate between brackets the name of the foreign currency. Indicate the cost of each reimbursable item in the column of the relevant currency. Cost = Unit Cost x Quantity.

- 5 Indicate route of each flight, and if the trip is one- or two-ways.
- 6 Only if the training is a major component of the assignment, defined as such in the TOR

FORM FIN-5 BREAKDOWN OF REIMBURSABLE EXPENSES

(This Form FIN-5 shall only be used when the Lump-Sum Form of Agreement has been included in the RFP. Information to be provided in this Form shall only be used to establish payments to the Consultant for possible additional services requested by the Client)

N°	Description ¹	Unit	Unit Cost ²
	Per diem allowances	Day	
	International flights ³	Trip	
	Miscellaneous travel expenses	Trip	
	Communication costs between [<i>Insert place</i>] and [<i>Insert place</i>]		
	Drafting, reproduction of reports		
	Equipment, instruments, materials, supplies, etc.		
	Shipment of personal effects	Trip	
	Use of computers, software		
	Laboratory tests.		
	Subagreements		
	Local transportation costs		
	Office rent, clerical assistance		
	Training of the Client's personnel ⁴		

- 1 Delete items that are not applicable or add other items according to Paragraph Reference 3.6 of the Data Sheet.
- 2 Indicate unit cost and currency.
- 3 Indicate route of each flight, and if the trip is one- or two-ways.
- 4 Only if the training is a major component of the assignment, defined as such in the TOR.

Appendix

Financial Negotiations - Breakdown of Remuneration Rates

(Not to be used when cost is a factor in the evaluation of Proposals)

1. Review of Remuneration Rates

1.1 The remuneration rates for staff are made up of salary, social costs, overheads, fee that is profit, and any premium or allowance paid for assignments away from headquarters. To assist the firm in preparing financial negotiations, a Sample Form giving a breakdown of rates is attached (no financial information should be included in the Technical Proposal). Agreed breakdown sheets shall form part of the negotiated agreement.

1.2 The Client is charged with the custody of government funds and is expected to exercise prudence in the expenditure of these funds. The Client is, therefore, concerned with the reasonableness of the firm's Financial Proposal, and, during negotiations, it expects to be able to review audited financial statements backing up the firm's remuneration rates, certified by an independent auditor. The firm shall be prepared to disclose such audited financial statements for the last three years, to substantiate its rates, and accept that its proposed rates and other financial matters are subject to scrutiny. Rate details are discussed below.

(i) Salary

This is the gross regular cash salary paid to the individual in the firm's home office. It shall not contain any premium for work away from headquarters or bonus (except where these are included by law or government regulations).

(ii) Bonus

Bonuses are normally paid out of profits. Because the Client does not wish to make double payments for the same item, staff bonuses shall not normally be included in the rates. Where the Consultant's accounting system is such that the percentages of social costs and overheads are based on total revenue, including bonuses, those percentages shall be adjusted downward accordingly. Any discussions on bonuses shall be supported by audited documentation, which shall be treated as confidential.

(iii) Social Costs

Social costs are the costs to the firm of staff's non-monetary benefits. These items include, *inter alia*, social security including pension, medical and life insurance costs, and the cost of a staff member being sick or on vacation. In this regard, the cost of leave for public holidays is not an acceptable social cost nor is the cost of leave taken during an assignment if no additional staff replacement has been provided. Additional leave taken at the end of an assignment in accordance with the firm's leave policy is acceptable as a social cost.

(iv) Cost of Leave

The principles of calculating the cost of total days leave per annum as a percentage of basic salary shall normally be as follows:

$$\text{Leave cost as percentage of salary}^1 = \frac{\text{total days leave} \times 100}{[365 - w - ph - v - s]}$$

It is important to note that leave can be considered a social cost only if the Client is not charged for the leave taken.

- (v) **Overheads**
Overhead expenses are the firm's business costs that are not directly related to the execution of the assignment and shall not be reimbursed as separate items under the agreement. Typical items are home office costs (partner's time, non-billable time, time of senior staff monitoring the project, rent, support staff, research, staff training, marketing, etc.), the cost of staff not currently employed on revenue-earning projects, taxes on business activities and business promotion costs. During negotiations, audited financial statements, certified as correct by an independent auditor and supporting the last three years' overheads, shall be available for discussion, together with detailed lists of items making up the overheads and the percentage by which each relates to basic salary. The Client does not accept an add-on margin for social charges, overhead expenses, etc., for staff who are not permanent employees of the firm. In such case, the firm shall be entitled only to administrative costs and fee on the monthly payments charged for subcontracted staff.
- (vi) **Fee or Profit**
The fee or profit shall be based on the sum of the salary, social costs, and overhead. If any bonuses paid on a regular basis are listed, a corresponding reduction in the profit element shall be expected. Fee or profit shall not be allowed on travel or other reimbursable expenses, unless in the latter case an unusually large amount of procurement of equipment is required. The firm shall note that payments shall be made against an agreed estimated payment schedule as described in the draft form of the agreement.
- (vii) **Away from Headquarters Allowance or Premium**
Some Consultants pay allowances to staff working away from headquarters. Such allowances are calculated as a percentage of salary and shall not draw overheads or profit. Sometimes, by law, such allowances may draw social costs. In this case, the amount of this social cost shall still be shown under social costs, with the net allowance shown separately. For concerned staff, this allowance, where paid, shall cover home education, etc.; these and similar items shall not be considered as reimbursable costs.
- (viii) **Subsistence Allowances**
Subsistence allowances are not included in the rates, but are paid separately and in pakistani currency. No additional subsistence is payable for dependents—the subsistence rate shall be the same for married and single team members.

¹ Where *w* = weekends, *ph* = public holidays, *v* = vacation, and *s* = sick leave.

2. Reimbursable expenses

- 2.1 The financial negotiations shall further focus on such items as out-of-pocket expenses and other reimbursable expenses. These costs may include, but are not restricted to, cost of surveys, equipment, office rent, supplies, international and local travel, computer rental, mobilization and demobilization, insurance, and printing. These costs may be either unit rates or reimbursable on the presentation of invoices, in foreign or local currency.

3. Government of Punjab Guarantee

- 3.1 Payments to the firm, including payment of any advance based on cash flow projections, shall be verified according to an agreed estimated schedule ensuring the firm regular payments in foreign currency, as long as the services proceed as planned.

Sample Form

Consulting Firm:

Assignment:

Date:

Consultant's Representations Regarding Costs and Charges

We hereby confirm that:

- (a) the basic salaries indicated in the attached table are taken from the firm's payroll records and reflect the current salaries of the staff members listed which have not been raised other than within the normal annual salary increase policy as applied to all the firm's staff;
- (b) attached are true copies of the latest salary slips of the staff members listed;
- (c) the away from headquarters allowances indicated below are those that the Consultants have agreed to pay for this assignment to the staff members listed;
- (d) the factors listed in the attached table for social charges and overhead are based on the firm's average cost experiences for the latest three years as represented by the firm's financial statements; and
- (e) said factors for overhead and social charges do not include any bonuses or other means of profit-sharing.

[Name of Consulting Firm]

Signature of Authorized Representative

Date

Name: _____

Title: _____

Consultant's Representations Regarding Costs and Charges

(Expressed in *[insert name of currency]*)

Personnel		1	2	3	4	5	6	7	8
Name	Position	Basic Salary per Working Month/Day/Year	Social Charges ¹	Overhead ¹	Subtotal	Fee ²	Away from Headquarters Allowance	Proposed Fixed Rate per Working Month/Day/Hour	Proposed Fixed Rate per Working Month/Day/Hour ¹
Home Office									
Field									

1. Expressed as percentage of 1
2. Expressed as percentage of 4

ANNEXURE IV

Performance Security Bank Guarantee

Date: [insert: *date*]

Contract: [insert: *name or number of Contract*]

To: [insert: *name and address of Purchaser*]

Dear Sir or Madam:

We refer to the Contract Agreement ("the Contract") signed on [insert: *date*] between you and [insert: *name of Supplier*] ("the Supplier") concerning the supply and delivery of [insert: *a brief description of the goods*]. By this letter we, the undersigned, [insert: *name of bank*], a bank (or company) organized under the law, of [insert: *country of bank*] and having its registered/ principal office at [insert: *address of bank*], (hereinafter, "the Bank") do hereby jointly and severally with the Supplier irrevocably guarantee payment owed to you by the Supplier, pursuant to the Contract, up to the sum of [insert: *amount in numbers and words*].

This amount being equal to 10% of the Signed contract value.

We undertake to make payment under this Letter of Guarantee upon receipt by us of your first written demand signed by your duly authorized officer declaring the Supplier to be in default under the Contract and without cavil or argument any sum or sums within the above-named limits, without your need to prove or show grounds or reasons for your demand and without the right of the Supplier to dispute or question such demand. Our liability under this Letter of Guarantee shall be to pay to you whichever is the lesser of the sum so requested or the amount then guaranteed under this Letter in respect of any demand duly made under this Letter prior to expiry of this Letter of Guarantee, without being entitled to inquire whether or not this payment is lawfully demanded.

This Letter of Guarantee shall be valid from the date of issue until the date of expiration of the guarantee, as governed by the Contract. Except for the documents herein specified, no other documents or other action shall be required, notwithstanding any applicable law or regulation. Our liability under this Letter of Guarantee shall become null and void immediately upon its expiry, whether it is returned or not, and no claim may be made under this Letter after such expiry or after the aggregate of the sums paid by us to you shall "equal the sums guaranteed under this Letter, whichever is the earlier. All notices to be given under this Letter shall be given by registered (airmail) post

to the addressee at the address herein set out or as otherwise advised by and between the parties here to.

We hereby agree that any part of the Contract may be amended, renewed, extended, modified, compromised, released, or discharged by mutual agreement between you and the Supplier, and this security may be exchanged or surrendered without in any way impairing or affecting our liabilities hereunder without notice to and without the necessity for any additional endorsements, consent, or guarantee by us, provided, however, that the sum guaranteed shall not be increased or decreased.

No action, event, or condition that by any applicable law should operate to discharge us from liability hereunder shall have any right we may have to apply such law, so that in all respects our liability hereunder shall be irrevocable and, except as stated herein, unconditional in all respects.

For and on behalf of the Bank

Signed: _____

Date: _____

in the capacity of: *insert: title or other appropriate designation*]

Common Seal of the Bank

TERMS OF REFERENCE. (TOR)

CONSULTANCY SERVICES FOR TECHNICAL AND DESIGN PARAMETERS, COSTING AFTER DETAILED INVESTIGATIONS FOR FINALIZATION OF TECHNOLOGY OPTION, PREPARATION OF TENDER DOCUMENTS, SUPERVISION OF IMPLEMENTATION AND MONITORING OF PERFORMANCE OF WASTE WATER TREATMENT PLANT PROJECT IN LAHORE.

1.0 Background of Project - General Introduction

- 1.1 Lahore is the 2nd largest city of Pakistan and capital city of Province of Punjab with a population of about 8.00 Million. It is an old historic city situated at the bank of River Ravi.
- 1.2 Presently, no sewage treatment facility exists in Lahore and the raw sewage is being disposed-off without any treatment into river Ravi and / or used for irrigation purpose. This practice is causing environmental hazards. In short, River Ravi water has become unfit for human consumption, livestock, and marine life. Furthermore, it has completely lost its economical and social place within the Lahore community.
- 1.3 The primary objective of construction of a wastewater treatment facility is to restore the river's initial water quality, and overcome the devastating health and economical consequences of relentless sewage dumping. Provision of Sewage Treatment facility is also an obligation as per Pakistan Environmental Protections Laws and Regulations and the international treaties for discharge of effluents. The sewage to be disposed-off into recipient bodies or used for irrigation should be treated as per National Environmental Quality Standards (NEQS) or Irrigation Standards respectively.
- 1.4 The Financial protocol has been signed by Govt. of Pakistan and French authorities on 11-12-2009. According to the financial protocol the Govt. of France will give a loan of the 70.20 Million Euros for construction of waste water treatment plant. Consultancy services would be funded under loan. Cost of consultancy services would be as per the deliverable consultant/experts and their man months for the consultancy services as per consultants Selection guidelines of Government of the Punjab.

- 1.5 The cost of the consultancy services will be met out of a loan extended for the Project by the French Government to the Government of Pakistan. The "Employer" will be the WASA LDA Govt. of Punjab.
- 1.6 According to the financial protocol, only French consultants would compete for the consultancy services.
- 1.7 The Treatment Plant was originally proposed for the site in South West near Sabzazar Scheme/ Babu Sabu Lahore. Now it has been decided to construct the plant in the North of the city. The exact site of the proposed treatment plant would be finalized in the light of the study by the consultants.
- 1.8 It should be noted that any combination of the functions of a consultant with those of a contractor and or a manufacturer or any association to, or an equity stake of a contractor or manufacturer in the Consultancy business of the firm submitting the proposal shall render the consultant disqualified for the project. The consultant should therefore furnish an undertaking to the effect that the firm is fully independent having no affiliation, direct or indirect, with any French construction group or company. The contractor should neither be the subsidiary nor the principal of the consultant. Any false statement in this regard, disclosed at any stage of the contract, will make the contract liable to cancellation beside any other punitive action deemed fit by the WASA Lahore.
- 1.9 Equipment, office and vehicles etc procured by the consultants to render the services covered by the contract shall be the property of WASA Lahore and shall be handed over to WASA Lahore on completion of the services without any charge thereof, in perfect working condition. The consultant will also provide the vehicles to the counterpart engineers of WASA to render the services during design and implementation phase of treatment plant.
- 1.10 The French Foreign consultant will also be required to associate Pakistani consulting firm(s)/individual (s) to facilitate the transfer of technology to the locals and ensuring the application of technologies most suitable to this region.
- 1.11 The consultant shall be selected by the client as per guideline of the P&D Department Govt. of Punjab on the basis of Quality & Cost Based Selection (QCBS) method on the basis of the criteria and their relevant experience in developing countries under similar conditions.

2 Overall Scope of Work

The work under this consultancy for the treatment Plant at Lahore will mainly consist of (a) carry out requisite surveys, investigation and studies for selection of least cost and most viable technology option for construction of the proposed waste water treatment plant at an appropriate location for North and North East Sewerage District Lahore (Mehmood Booti/Salamat Pura and Shadbagh) (b) technical and design parameters / standards, cost analysis for finalization of technology option after detailed investigations, bidding documents, technical specifications and comprehensive criteria for selection of contractor (c) evaluation/vetting of technical & financial proposals of contractors (d) review of detailed engineering designs and cost estimates submitted by the contractor (e) preparation of detailed estimates and the PC.1 for the project (f) construction supervision and contract monitoring, (g) supervise commissioning and operation & maintenance of the plant and training of staff (h) facilitate contract management (i) preparation of manuals and other related unforeseen tasks.

(a) Studies, Surveys, Investigations

The scope of work covering the required services to be rendered by the consultant shall include, but not limited to the following:-

1. The consultancy shall include collection of available data and other related primary data/information necessary to carry out the required feasibility study and construction work.
2. The survey work shall comprise necessary surveying, leveling and establishing bench marks with respect to Geodetic Traversing Survey (GTS) bench mark, drawing cross-sections where required, and other related works required for preparation of design and construction of the waste water treatment plant. It shall take into account survey of the area where treatment plant is going to be proposed. The survey plan etc. will be produced on scale acceptable to WASA.
3. Preparation of base maps on scale 1:2400 and other scales acceptable to WASA. It will also include marking of Ring Road, and allied structures. The incoming sewer lines laid / to be laid in the study area, likely to contribute sewage for this treatment plant will be marked on the plan. The consultant will also furnish soft copies of these plans on AutoCAD. The Consultant will prepare

and submit the topographic plan for design and construction of the WWTP including waste water inlet and treated water outlet location, and drainage and flood protection requirements.

4. Calculation of ultimate projected population of the contributing areas and corresponding ultimate sewage flows likely to reach to the proposed waste water treatment plants during the Planning Horizon of 25 years.
5. Preliminary soil investigations required for the selection of site and construction of the WWTP and its other components including inlet/outlet channels and other ancillary works. The consultant shall carry out appropriate Geo Technical Investigations of Soil through bore holes up to desired depth at suitable intervals with all related laboratory testing to submit recommendations for Construction of Treatment Plants, Disposal works, where required, access and out flow Channels and other allied components. Laboratory testing of soil in the areas will be carried out to check their suitability for construction of STP, embankments etc.
6. The Consultant will examine the possible site(s) for dumping the sludge waste to be generated during the treatment process including examining the Environmental Impact of the site(s) on the people. The site(s) should be selected in such a manner that it has minimum impact on the health & safety of people. While selecting the location for transfer station, the Consultant will examine the possibility of availability of soil to be used for covering the sludge to control the emission of gases and odour problem likely to be created by the sludge. The Consultant will select the soil to be used for covering purposes on the basis of availability, economy and easy access. The Consultant will examine the possible application of sludge to be generated for the agriculture purposes and forestry. The possibility of use of sludge as fertilizer or other uses will also be explored by the Consultant.
7. The Consultant will examine the chances of permeability of soil and penetration of waste water at the treatment site. The Consultant will examine the possibility / danger of any ground water contamination due to penetration of waste water.
8. The Consultant will prepare the proposal and measures to check the problems rising due to emission of gases. This will include comprehensive proposal to overcome the Odour Problem. The Consultant will also prepare the proposal and look into the matter

of dust arising from the dry sludge. The Consultant will examine the possibility of emission of hazardous gases, which may cause the degradation to the environment and may have hazardous effect on life of human being and other living creatures. The Consultant will suggest the devices / precautions for minimization of emission of such gases and their impact. The Consultant will also examine the possibility of any noise caused by the machinery / equipment to be used for the whole process of Waste Water Treatment Plant starting from the collection of waste water up to the disposal of effluent and sludge including generation of power.

9. The Consultant will examine the possibility of production of energy. It will also include examining the possibility of sustainability of production and use of energy in the treatment plant and will prepare the comprehensive proposal.
10. The Consultant will examine the option for reuse of treated water and prepare the proposal for reuse of treated water for irrigation purposes or to recharge of ground water keeping in view the quality of expected effluent / treated water.
11. Carry out the hydraulic model study of the proposed site for the construction of treatment plant to assess its safety against flood or safety measure required against flood.
12. The Consultants will examine that whether, separate waste water treatment plant(s) (nodal) will be feasible for Mehmood Booti / Salamat Pura (North East Lahore) and Shadbagh and adjoining areas (North Lahore) or a combined waste water treatment plant will be feasible for North East and Northern Lahore.
13. The consultant will prepare the detailed report of different waste water treatment options i/c Waste Stabilization Ponds, Oxidation Ditches, Aerated Lagoons, Activated Sludge Process, Up-flow Anaerobic Sludge Blanket Reactors, Biological fixed media filter, Biological Trickling Filter, Membrane Bed Reactor (MBR) and Membrane Moving Bed Reactor (MBBR) ...etc; with comparison of capital (land, construction, and machinery/equipment etc) & O&M (electricity, personnel, fuel, repair & maintenance etc) costs to arrive at the most suitable, economical, viable and sustainable option keeping in view the objective of the treatment and overall goal of the treatment. The study and detailed working with recommendation of the most suitable options will be submitted by the Consultant in the report for seeking approval of the same from

HUD&PHED/WASA Government of Punjab. All pros and cons of waste water treatment options may be considered with respect to availability of land, nature / composition of waste water, climatic conditions, capital cost, economization, energy bills and operation & maintenance cost.

14. The consultant will carry out the financial and economic analysis:

- (i) Compute the Financial Internal Rate of Return (FIRR) and other financial indicators to assess the financial viability of various alternatives of Treatment.
- (ii) Compute the Economic Internal Rate of Return (EIRR) and other economic indicators to assess the economic viability of various alternatives of Treatment.
- (iii) Carry out sensitivity analysis for FIRR and EIRR with respect to important parameters such as project risks, revenues, capital investments, O&M costs, availability of land, nature / composition of waste water, climatic conditions, economization, energy bills etc.

15. The consultant will also study the following:

- (i) Carry out requisite IEE / EIA environmental impact assessment of the proposed alternatives in accordance with Environmental Protection Department (EPD) /Government Guidelines and prepare necessary Initial Environmental Examination (IEE) or Environmental Impact Assessment (EIA) reports for approval of EPD.
- (ii) Assess the need for resettlement corresponding to various alternatives of the project and help in identifying the best solution as per social analysis. Prepare Resettlement Plan or a Short Resettlement Plan (SRP) for the projects if required.
- (iii) Prepare socio-economic profile of the project including social maps using appropriate techniques and give results regarding social, economic, health and sanitation status of the community, especially focusing on the likely improvement in environment, to restore social place of river Ravi, health status of the citizens;
- (iv) Develop general criteria for socio-economic stratification of the society and prepare profile based on these criteria.
- (v) The consultant will liaise with all concerned agencies / departments working on urban services & infrastructure to ensure programme compatibility.

- (vi) Request and monitor that the construction company will prepare Hydraulic calculations and hydraulic flow diagram for the proposed sewage treatment plant components by providing a buffer zone between sewage treatment plant and adjacent villages by providing thick vegetation through forestation will also be explored.

16. Submit feasibility study with the recommendation for most feasible/cost effective technology option under local conditions to the Govt. of Punjab for its consideration /decision.

17. Government of the Punjab/client may engage local/international specialist (individual / firm(s)) for its facilitation in selection of most viable technology suiting to the local conditions and clearance of design / cost estimates.

(b) Technical and design parameters/ standards, technical specifications cost analysis for finalization of technology option after detailed investigations.

- (i) The consultant will lay down after detailed investigations, the design standards and specifications for:
 - a. Selection of site
 - b. Optimal technology option suitable to local conditions.The consultant will also carry out cost analysis to provide the base line for evaluation and selection
- (ii) The consultant will submit bidding documents based on the aforementioned survey(s) / studies/ feasibility, cost estimate for consideration / approval. He will also propose criteria for selection of Construction Companies.
- (iii) Assist WASA in inviting bids, and facilitate the pre-bid meeting with potential contractor (s), receiving of bids for award of the contract and signing of the contract.

(c) Evaluation/vetting of technical & financial proposals of contractors

- (i) The consultant (s) will evaluate the technical and financial proposals received from the construction companies and give recommendations to Govt of Punjab for selection of the contractor.

(d) Review of detailed engineering designs, technical specifications and cost estimates submitted by the contractor

- (i) The consultant will evaluate the detail engineering designs of Waste Water Treatment Plants submitted by the Construction Company along with all its components including access and out flow channels, etc. Ensure that the detailed designs should also include, construction of the pumping station, if required, access and outflow channel for disposal of treated water complete in all respects and in conformity with the best international /WASA & PHE engineering standards. Evaluate that all design should provide accommodation of WWTP extension for the planning horizon of 25 year. All necessary calculations to be prepared by the construction company have to determine and justify the engineering solution proposed for the project/ component. Evaluate the possibility of production of energy. It will also include examining the possibility of sustainability of production and use of energy in the treatment plant. The Consultant will evaluate the option for reuse of treated water. The Consultant will also evaluate the proposal for reuse of treated water for irrigation purposes or recharge of ground water keeping in view the quality of expected effluent / treated water. The Consultant will also review the possible site(s) for dumping the sludge waste to be generated during the treatment process.
- (ii) Evaluate the cost estimates, drawings submitted by the contractor for treatment plant, technical specifications of all components in accordance with WASA & PHE specifications,

(e) Review/Vetting of detailed estimates and the PC.I for the project

- (i) The consultant will review/vet all necessary tender drawings for the treatment plant, technical specifications of all components in accordance with WASA & PHE specifications, bill of quantities (BOQ), Detailed Engineers Cost Estimates. Civil works (Local components) will be based on MRS rates duly supported with detail of quantities, PC-Is on format duly supported with all requisite data and information including Economical Analysis etc. implementation schedule etc. The technical specifications should be in accordance with the best international /WASA & PHE practices and should be prepared to achieve the highest standards

of quality. The consultant will provide the soft copies of all above, i/c tracing / soft copies of all drawings and hard copies to the client.

(f) Construction supervision and contract monitoring

1. The consulting service for construction supervision is to assist the WASA to implement the project for construction of waste water treatment plant for Lahore.
 - (i.) ensuring standards of quality assurance in executing the works,
 - (ii.) Ensuring completion of the work within the stipulated time limit.
2. The consultant will assist WASA in execution of construction contracts and ensure that the contractual clauses for both quality and quantity of work are respected and the works are constructed in accordance with the provisions of the construction contracts.
3. The supervisory consultants shall be fully responsible that the Works are executed in accordance with the plans and confirm to the specifications.
4. The consultant will ensure the proper testing of all construction material prior to its utilization in construction work.
 - (a) Soil
 - (b) Concrete
 - (c) Reinforce Bars
 - (d) Structural steel
 - (e) Others
5. The consultant's authorized representative and other staff will implement the civil work contracts and ensure that the works are constructed in accordance with its provisions. The consultant will have all the powers defined in the Conditions of Contract as being the engineer, except the following, which will be retained and exercised by the employer, generally on the advice of the Consultant:
 - (i) Issuing the order to commence the works,
 - (ii) Approving variation orders that have financial implications,
 - (iii) Approving significant variations in quantities,
 - (iv) Approving subletting of any part of the works, and
 - (v) Approving extensions of time.

6. The Supervisory Consultant is also responsible for encountered site problems during the implementation stage where revised detailing/design review for a particular location is required due to the encountered site problem including investigation, monitoring of design and drawings etc complete till the approval by the Employer.
7. The supervision consultant while supervising construction works will make all necessary measurements and control the quality of works and implementation of the works. The Consultant in consultation with the Director (WWT) WASA, will make all engineering decisions required for the successful and timely implementation of the construction contracts, and have necessary powers.
8. The Consultant will carry out a critical review of the detailed design prior to the physical commencement of works to identify defects or omissions that compromise the completeness or consistency of the design. This review will be carried out immediately after the commencement of services. On completion of the review, the supervision consultant will prepare a report, setting out all findings and recommendations for correcting any defects or omissions identified during the review stage. Notwithstanding these, the supervision consultant will also immediately inform the employer of any defect or omission that may have a substantial impact on the Project at the time the defect or omission is uncovered. The consultant will submit four copies of the review report(s) to the employer. During execution stage, the suggested improvement(s), if any, shall be designed and prepared by the Consultant after approval from the Client so that work progress does not suffer. This will include site specific problems with measures
9. The Construction Supervision services shall include but not be limited to the following tasks:
 - (i.) Ensure that the construction methods as proposed by the contractor for carrying out the works are satisfactory, inspection of contractor's construction equipment; and safety of the works, property, personnel, and general public; the schedule of mitigation measures for adverse environmental impacts to be monitored by the consultant will be provided;
 - (ii.) Undertake project performance monitoring and evaluation and submit the report on monthly basis to WASA till the completion of project.
 - (iii.) Ensure that the contractor does not use child labor for the execution of the civil works contracts.
 - (iv.) Prepare and issue the following reports, the format and content of which are to be acceptable to the employer: an inception report, a brief monthly progress report, a detailed quarterly report,

a detailed project completion report.

- (v) Check that "as built" drawings are prepared for all works as construction process;
- (vi) Project completion reports - draft report at 90 percent physical completion;
- (vii.) Project completion report - final report two month before project physical completion or alternative date as agreed with WASA; and
- (viii.) Other details to be provided include following specific tasks.
 - (a) Provide advance advice to WASA concerning the Schedule of handing over of sites, and possible delays due to lack of possession with a view to assure that the Contractors are given Possession of Site in accordance with the agreed work programs.
 - (b) Review and approval of proposal on variation orders and implementation schedule prepared by the contractor.
 - (c) Review, evaluate and approve the planned construction methodology by the contractor.
 - (d) Regular review of implementation and progress schedules by the contractor and ensuring that the Contractors have incorporated the most effective and expeditious methodology of carrying out the works; and advise the Contractors in setting up a computerized project control system for reporting physical and financial progress as well as the forecasts, if included in the bids and/or if demanded later on by the WASA. Subsequently, closely monitor the construction progress on regular basis to determine whether it is proceeding in accordance with the approved work program.
 - (e) Inspect and evaluate Contractors' facilities especially laboratory items to ensure compliance with the terms and conditions of the Contract Agreement. Without relieving the Contractors of their obligations under the Contract, monitor the Contractors' laboratory testing, evaluate the Portland cement concrete and concrete mix designs prepared by the Contractors, and recommend improvements (if any) to ensure the desired performance, and accord approval thereof.

- (f) Assure quality of the works during construction, continuously inspect the soils and materials, construction operations and the works with regard to workmanship and compliance with the specifications; and carry out independent testing in the field and/or in the "Engineer" laboratory, and approve or disapprove and certify the works that conform with the specifications and maintain permanent records of results of all the tests made.
- (g) Give notice to the Contractors of any defects and deficiencies, and issue instructions for the removal and substitution of the improper works, where provided under the contract. If required, order suspension of the work(s) and/or recommend to WASA other recourse available under the Contract.
- (h) Advising on the selection of contractor's equipment. Assess minimum construction equipment, plant and machinery requirements, by type and specification, and monitor, keep and regularly update a list of the Contractors' equipment, plant and machinery in order to keep a check on the Contractors' mobilization.
- (i) Assure the receipt of and maintain permanent records of all warranties required under terms and conditions of the Contract Agreement for items/materials including their source and equipment accepted and incorporated in the project.
- (j) Monitor and appraise progress of the works, and maintain a day by day project diary which shall record all events pertaining to the administration of the contract, requests from and orders given to the Contractors, and any other information which may be at a later date be of assistance in resolving queries which may arise concerning execution of the works.
- (k) Issue monthly-consolidated progress reports on a format to be agreed with the WASA including payment estimates and comments on the Contractors' work program, and advise WASA of any problems or potential problems which might arise and cause delay in implementation and recommend corrective action(s) to be taken. A specimen copy is attached for finalization of the format as envisaged.
- (l) Monitor and control progress *of* works and initiate corrective

measures if required.

- (m) Inspect construction material alongwith representative of client and advice requisite tests of materials and ensure adherence to specifications, and approve the sources of materials.
- (n) Assist WASA in contractual matters with the contractor (performance bonds, insurances, claims, advance payment guarantees etc.). Assist with interpretation of the Contract Documents, explain and or reconcile any ambiguities and or discrepancies in the Contract Documents, and apply various provisions of the contract documents; and provide WASA all relevant documentation needed for settling disputes (if any) with the Contractors, and make recommendations to WASA for resolving the Contractors' escalation claims, contract time extensions, variation orders, subletting, quantification of claims, rate and price fixing etc.
- (o) Shall assist for settlement of the Audit Paras and Enquiries (if any) pertain to the Project until one (01) year after completion without any remuneration to be made separately on this account.
- (p) Jointly inspect with WASA the completed civil works, and assist in Review and approve or prepare "as built" drawings and plans (as the case may be), and provide report(s) testifying to the satisfactory completion of the contracts.
- (q) Inspect the completed works periodically during the defect liability period within the term covering the Consultant's Agreement, prepare lists of deficiencies (if any), and carry out supervision of the remedial works, and issue the Defects Liability certificates after the rectification of notified defects by the Contractors.
- (r) Establish a comprehensive system of maintaining site records including site correspondence, survey data, inspection records, test data, site diaries, records of meetings, financial records, progress records etc.
- (s) Consultant shall prepare movie as per international standard of all the activity on the project from the date of start to the end and hand over three copies of the same at the time of completion to the client.

10. The supervision consultant will measure the executed work and verify and process interim and final payments certificate to WASA for release of payment to the contractors.
11. If so required by the employer, the supervision consultant will provide any of the following as additional services: (i) prepare reports, including technical appraisals, additional contract documentation, and/or review and comment on the contractor's proposals, as may be required for the successful completion of the Project; and (ii) provide any other specialist services as may be required from time to time.
12. The employer will authorize all additional services, other than minor extras that do not materially affect the scope of the supervision work, at the rates established in the construction supervision contract, or at rates mutually agreed upon when the services require the use of specialists not listed in the contract.

(g) Supervision Supply, Installation, Commissioning O&M of Plant and Training of Staff

The Consultant will assist WASA in the supply and installation of all the equipments, machineries, accessories etc required for the treatment plant for Lahore, by

1. Ensuring the quality assurance of supplied equipments, machinery etc.
2. Ensuring installation is in accordance with the standards prescribed by the manufacturer or any other standards required for the installation.
3. Ensuring all equipments, machineries and accessories are according to required specifications.

The consultant will assist WASA in supply and installation of all the machineries, equipments, accessories etc for treatment plant in Lahore and will confirm that;

- Supply and installation of electrical and electronic equipment and other related accessories is according to the required standards.
- Supply and installation of mechanical equipment and other related accessories is according to the required standards.
- Supply and installation of other equipment required for waste water treatment plant is according to the required standards.

- Test run and commissioning of waste water treatment plant is satisfactory.
- All materials and goods are new. All the equipment is supplied by following the relevant Standards and Guidelines and confirm to the prevailing National Standards of the manufacturing country.
- All the equipment is installed in accordance with the Standards and codes of practice.
- The consultant will arrange pre shipment inspection of all equipments and machinery by Engineer in charge of WASA

Operation, Maintenance and Training of WASA's Staff

1. Consultant will review & monitor all activities associated with the operation & Maintenance of treatment plant, pumping stations, all Electrical, Civil & Mechanical portions.
2. To review & monitor operation and maintenance of whole of the plant successfully & satisfactory for :
 - a. Operation and maintenance of all the water treatment process facilities from the waste water inlet to the treated water.
 - b. Operation and maintenance of all the buildings associated to the treatment works.
 - c. Operation and maintenance of all mechanical, electrical equipments including all the instruments at various installations of the system.
3. To monitor sewage water quality criteria.
4. To monitor final treated water quality which must in accordance with the required NEQS standards.
5. To supervise the operation of complete treatment works including all plant and associated services, on a regular basis to treat all the flow conveyed to the works.
6. To monitor electricity consumption on weekly & monthly basis for all the units and suggest the corrective measures if there is any excess consumption.
7. To review and monitor the laboratory services and ensure that all test,

sampling and analysis as & when required by O & M standard.

8. To monitor & supervise treatment quality on daily, weekly & monthly basis.
9. To review, ensure & monitor the engagement of experienced managerial, technical, supervisory, non-technical, maintenance staff as per scope, to operate & maintain the treatment works properly, safely & efficiently on almost continuous basis for the full term of O&M period. The qualification & capacity of O&M personnel shall be appropriate for the task they are assigned to perform.
10. To monitor the safety of the personnel & equipment at site during the Operation & Maintenance period and ensure that safety awareness procedure in every element of operation and maintenance.
11. To supervise & monitor the maintenance of installed plant & machinery as per maintenance schedule. Whether planned & regular maintenance are carried out or only break down maintenance is attended, to guide for the maintenance schedule on day to day basis, preventive and corrective maintenance, fault & break down, repairs and replacement of parts as per approved maintenance plan.
12. To supervise the maintenance of building & site by the consultant is as given below.
 - a. The full maintenance of building electrical, ventilation and air conditioning, plumbing and drainage installations.
 - b. Buildings maintenance.
 - c. Full maintenance of the site waste water services, cabling systems.
 - d. Site maintenance including the upkeep of landscaped areas.
13. To ensure that data recording and reporting requirement of the WASA is fulfilled.
14. Supervision over proper monitoring and management of all Civil, Electrical & Mechanical operation and maintenance work.
15. Monitoring & reporting of the performance of satisfactory operation &

maintenance of the plant & pumping station as per standards.

16. Scrutinize the detailed operation & maintenance programme/manual and suggest modification if any in the performance after a careful study.
17. Supervise all matters concerning safety and care of the work including Environmental aspects and labor welfare.
18. To monitor & ensure energy efficiency awareness and efficiency evaluation of treatment system & equipment available at site.
19. The Consultant shall undertake periodic inspection of the treatment plant to determine the condition of the treatment plant including its compliance or otherwise with the Maintenance Manual, the Maintenance Programme, Specifications and Standards and the maintenance required and shall submit reports of such inspection (Maintenance Reports) to WASA.
20. The Consultant shall also submit the remedy of the defects and deficiencies, if any, set forth in such O&M Inspection Report and submit its report in respect thereof to WASA.
21. The consultant will review O&M Manual, prior to handing over of treatment plant to WASA, primary objective of the supervision manual will be to evolve guidelines for administration, supervision, operation and maintenance of the treatment plant. The Manual will merely act as a guide and reference to the WASA staff in the management and supervision of the project in discharging their duties in a smooth and systematic manner.
22. Assist in handing over of site after completion of O& M period.

Training of WASA Engineers / Staff, Capacity Building Program:

- (i) Identify capacity building requirement of WASA engineers and staff work on the project.
- (ii) Special emphasis to be given to identify the training needs of WASA Engineers and staff. Capacity building of WASA Engineers will be effectively carried out at France so that they are able to carry out day to day operations, management and maintenance of the systems created under the project.
- (iii) Prepare, in co-ordination with WASA training modules, training manuals, resource material etc.
- (iv) Prepare schedule of training programs at France, and carry out trainings over the period of the project.

- (v) Prepare schedule for trainings for waste water quality testing to WASA engineer and establish a field lab unit at the Plant.

(h) Management of Project

- (i) Work with WASA- Lahore in planning, implementing, managing and monitoring all project activities; take a proactive role in advising the Director (WWT) on all project-related issues, including policy issues, grant covenants and special conditions.
- (ii) Work with WASA Lahore to establish a Project Performance Management System (PPMS)
- (iii) Give the concrete suggestions for improvement and approve the feasibility reports, concept reports, preliminary and detailed engineering design reports and bid documents.
- (iv) Review and approve the designs and drawings prepared by Construction Company; prepare bid documents and establish an efficient system for the same in PMC.
- (v) Prepare an appraisal report of each subproject including economic and social justifications based on the feasibility study and detailed design.
- (vi) Establish a system in PMC or through an independent outside reliable agency to proof-check all structural designs prepared by Construction Company.
- (vii) Work with WASA Lahore to establish a proper financial accounting and control system for the entire project to ensure accurate and timely report submissions; and to ensure smooth funds flow.
- (viii) Regularly undertake visits of projects sites, supervise the activities and provide concrete suggestions for improvement.

(i) Project Performance Management System (PPMS)

- (i) Work with WASA Lahore for preparation of Project Performance Management System (PPMS).
- (ii) Develop Computerized Subprojects Monitoring System and Contract Ledger including work plans for all stages (feasibility, design, and construction) of all subprojects; monitor and analyze regularly the physical and financial progress; recommend ways to accelerate project implementation; assess reasons for delay and identify measures for improvement.
- (iii) Assist WASA Lahore with the implementation of PPMS developed and agreed including a benchmark survey and subsequent monitoring and evaluation surveys.

- (iv) Continuously monitor progress of the project as per PPMS and prepare regular progress reports identified in the PPMS and based on the progress reports, take appropriate corrective action.
- (j) Preparation of Manuals and Other related tasks**
 - (i) Preparation of Standard Specifications for civil, mechanical, and electrical works based on the best International/WASA & PHE practices and to be used in the construction Project so as to ensure the highest standards of quality in design and construction.
 - (ii) Preparation of Quality Assurance and Quality Control (QA & QC) Manual delineating a consistent, comprehensive and uniform system of quality assurance and quality control of the Project including but not limited to systems of checks and reviews; description of type, frequency and procedures of on-site as well as laboratory tests and inspections etc. and to enforce implementation for design and construction so as to enforce the highest standards of quality.
 - (iii) Preparation of Safety Manual to enforce implementation on construction site so as to enforce safety of construction workers, engineers, and citizens.
 - (iv) Preparation of Contract Administration Manual delineating procedures and assigning responsibilities at various competent levels for day to day contract administration requirements such as Measurement of works, certification and payment of contractors' bill; Release of retention money; Approval of variation, time extension and contractors' claim; Issue of completion certificate; Financial closure of contract; Management during Defects Liability Period etc and to use it in administration of contracts.
 - (v) Preparation of a standard Construction Management System to be followed at construction sites comprising of important components such as Planning of activities (Work Plan); Procurement of construction material and equipment; Construction methodology; Deployment of construction machinery; Deployment of workers; Flow of funds etc and enforce use of such a system by the contractors.
 - (vi) Review/Vet the Operations and Maintenance Manual prepared by contractor in user-friendly language and format (usable by WASA) for carrying out Operations and Maintenance (O&M) of various systems developed during the project.
 - (vii) Work with WASA to ensure effective functioning of these laboratories for treatment works.
 - (viii) Identify the resource requirement of Lab and work with WASA Lahore to provide such resources through management contract or

any other suitable means in order to ensure their proper functioning.

- (ix) Assist WASA Lahore in establishing the framework for waste water quality monitoring based on the NEQS Standards and Implementation Guidelines,

A- Core Team for Feasibility Study and Project Formulation

S. No	Position	Qualification	Experience (Mini)	Man Month	Duties/ area of work
1	Project Manager / Team leader	M.Sc., B.Sc (Civ/PHE/Sanitary/ Env.) Engr	20 Years	48	To Co-ordinate and monitor the project and liaison with WASA.
2	Senior Engineer WWT	M.Sc., B.Sc (Civ/PHE/Sanitary/ Env.)	15 Years	10	To review Design of Sewerage & Waste Water Treatment Plant.
3	Senior Electrical Engineer	M.Sc./ Bsc (Elect) Engr	15 Years	10	He will be responsible for reviewing the design of electrical installations related to WWTP disposal stations
4	Senior Mechanical Engineer	M.Sc./ BSc (Mech) Engr	15 Years	10	He will be responsible for reviewing the design of mechanical installations related to WWTP
5	Senior Structure Engineer	M.Sc.(Structure) Engr	15 Years	10	He will be responsible to review the structure design of WWTP & disposal stations
6	Procurement and Contract Management Specialist	B.Sc (Mech or Civil), MBA	10 Years	12	He will be responsible for procurement and contract management.
7	Financial Analyst	Post-graduate in Economics/Finance /Business administration	10 Years	10	To analyze the financial indicators and contract

Deliverables as per TORs

Feasibility Study Report	10 Copies
Environmental Impact Assessment	10 Copies
Evaluation Report on Detailed Engineering Design	10 Copies
PC-I / Cost Estimates	10 Copies
Bidding Documents	15 Copies
O&M Manual	10 Copies

Training Manual	10 Copies
Other Required Manuals/Documents	10 Copies
Soft Copies of above	5 Nos

B- Core Team of Expert for Supervision (*)

Sr. No	Experts	No. of Person	Qualifications	Man Month	Experience Min.
1	Resident Engineer	1	M,Sc Engg (Civil)	36	20 years
2	Material cum QA Engineer	1	B.Sc Engg (Civil)	36	15 years
3	Assistant Resident Engineers (Civil + Elect & Mech.)	2	B.Sc Engg	36	10 years
4	Site Inspectors	3	Diploma	36	10 years
5	Quantity Surveyor	1	Diploma in Q.S	36	8 years

* Staff/Man-months to be determined on the basis of scope/technology of project

Deliverable as per TORs

Inception Report (month 1)	6 copies
Progress Reports (monthly)	6 copies
Project Completion Report	6 copies
Final Project Completion Report	6 copies
Movies of project	3 copies
Soft Copies of above	5 Nos

C- Core Team for Operation & Maintenance (*)

Sr. No	Experts	Qualifications	Experience	Man Month	Duties/Area of Work
1	O&M Engineer	B.Sc Engg. (Electrical or Mechanical)	10 Years	36	Operate and maintain treatment plant
2	Allied Staff			36	

* Staff/Man-months to be determined on the basis of scope/technology of project

Time Period:

Study Period:	10 Months
Construction Supervision	36 Months
O&M Period	36 Months

Language

The language will be in English, which shall be the building and controlling language for all matters relating to the project.