

Request for Proposal (RFP) for "Consultancy services for carrying out Hydraulic Modeling and Preparation of Detailed Project Report (DPR) for Creation of DMAs and ultimately reduction of NRW for improvement in consumer service level under the command area of primary Under Ground Reservoirs (UGRs) in Delhi"

(Amended)

Bid document for:
SE (East)/Package-1
SE (North-East)/Package-2
SE (South)/Package-3
SE (South-West)/Package-4
SE (West)/Package-5
SE (North-West)/Package-6

EXECUTIVE ENGINEER (PROJECT) WATER-I DELHI JAL BOARD

5th Floor, Varunalaya, Phase-I, Jhandewalan, New Delhi-110055 Phone No. 011-23510242 E-mail: dmacelldjb@gmail.com

Disclaimer

The information contained in this Request for Proposal document ("**RFP**") or subsequently provided to Applicants, whether verbally or in documentary or any other form by or on behalf of the Authority (Delhi Jal Board) or any of its employees or advisers, is provided to Applicants on the terms and conditions set out in this RFP and such other terms and conditions subject to which such information is provided.

This RFP is not an agreement or an offer by the Delhi Jal Board, herein after referred as Authority, to the prospective Applicants or any other person. The purpose of this RFP is to provide information to interested firms that may be useful to them in the formulation of their Bids pursuant to this RFP. This RFP includes statements, which reflect various assumptions and assessments arrived at by the Authority in relation to the Consultancy. Such assumptions, assessments and statements do not purport to contain all the information that each Applicant may require. This RFP may not be appropriate for all persons, and it is not possible for the Authority, its employees or advisers to consider the objectives, technical expertise and particular needs of each party who reads or uses this RFP. The assumptions, assessments, statements and information contained in this RFP, may not be complete, accurate, adequate or correct. Each Applicant should, therefore, conduct its own investigations and analysis and should check the accuracy, adequacy, correctness, reliability and completeness of the assumptions, assessments and information contained in this RFP and obtain independent advice from appropriate sources.

Information provided in this RFP to the Applicants may be on a wide range of matters, some of which may depend upon interpretation of law. The information given is not intended to be an exhaustive account of statutory requirements and should not be regarded as a complete or authoritative statement of law. The Authority accepts no responsibility for the accuracy or otherwise for any interpretation or opinion on the law expressed herein.

The Authority, its employees and advisers make no representation or warranty and shall have no liability to any person including any Applicant under any law, statute, rules or regulations or tort, principles of restitution or unjust enrichment or otherwise for any loss, damages, cost or expense which may arise from or be incurred or suffered on account of anything contained in this RFP or otherwise, including the accuracy, adequacy, correctness, reliability or completeness of the RFP and any assessment, assumption, statement or information

contained therein or deemed to form part of this RFP or arising in any way in this Selection Process.

The Authority also accepts no liability of any nature whether resulting from negligence or otherwise however caused arising from reliance of any Applicant upon the statements contained in this RFP.

The Authority may in its absolute discretion, but without being under any obligation to do so, update, amend or supplement the information, assessment or assumption contained in this RFP.

The issue of this RFP does not imply that the Authority is bound to select an Applicant or to appoint the Selected Applicant, as the case may be, for the Consultancy and the Authority reserves the right to reject all or any of the Bids without assigning any reasons whatsoever.

The Applicant shall bear all its costs associated with or relating to the preparation and submission of its Bid including but not limited to preparation, copying, postage, delivery fees, expenses associated with any demonstrations or presentations which may be required by the Authority or any other costs incurred in connection with or relating to its Bid. All such costs and expenses will remain with the Applicant and the Authority shall not be liable in any manner whatsoever for the same or for any other costs or other expenses incurred by an Applicant in preparation or submission of the Bid, regardless of the conduct or outcome of the Selection Process.

Index

S No.	Description	Page No.
1	Introduction	06
2	Instructions to Applicants	12
	Part-A General	12
	Part-B Document	22
	Part-C Preparation and Submission of Proposal	25
	Part-D Evaluation Process	31
_	Part-E Appointment of Consultant	33
3	Criteria for Evaluation	35
4	Fraud and corrupt practices	37
5	Miscellaneous	39
	Schedules	40
	Terms of Reference	40
	Guidance Note on Conflict of Interest	51
	Appendices	53
	Appendix – I: Technical Proposal	53
	Form 1 : Letter of Proposal	
	Form 2 :Particulars of the Applicant	
	Form 3 : Statement of Legal Capacity	
	Form 4: Power of Attorney	
	Form 5: Relevant Assignments of Applicant	
	Form 6 : Particulars of Key Personnel	
	Form 7 : Abstract of Relevant Assignments of Key Personnel	
	Form 8 : CVs of Key Professional Personnel	
	Form 9 : Proposal for Sub-consultant(s)	
	Annexure – II: Financial Proposal	65
	Form A: Financial proposal submission form	
	Form B: Summary of Cost	

Form C: Break down of price per activity	
Annexure -III (A): Broad details related to scope of work of SE (East) Package-1	67
Annexure -III (B): Details of minimum Manpower requirement of SE (East) Package-1	69
Annexure -IV(A): Broad details related to scope of work of SE (North-East) Package-2	71
Annexure -IV (B): Details of minimum Manpower requirement of SE (North-East) Package-2	73
Annexure -V(A): Broad details related to scope of work of SE (South) Package-3	75
Annexure -V(B): Details of minimum Manpower requirement of SE (South) Package-3	77
Annexure -VI(A): Broad details related to scope of work of SE (South-West) Package-4	79
Annexure -VI(B): Details of minimum Manpower requirement of SE (South-West) Package-4	80
Annexure -VII(A): Broad details related to scope of work of SE (West) Package-5	82
Annexure -VII(B): Details of minimum Manpower requirement of SE (West) Package-5	83
Annexure -VIII(A): Broad details related to scope of work of SE (North-West) Package-6	85
Annexure -VIII(B): Details of minimum Manpower requirement of SE (North-West) Package-6	86

1. INTRODUCTION

1.1 Background

Delhi Jal Board (DJB) under the Govt. of NCT of Delhi was established for construction, operation and maintenance of the water supply and wastewater infrastructure facilities within the NCT of Delhi and therefore it intends to create and manage water infrastructure, to provide equitable water supply and to reduce water losses. To achieve these objectives, RFP is invited for the work of "Consultancy services for carrying out Hydraulic Modeling and Preparation of Detailed Project Report (DPR) for Creation of DMAs and ultimately reduction of NRW for improvement in consumer service level under the command area of primary Under Ground Reservoirs (UGRs) in Delhi".

The cost of consulting services will be financed out of the DJB own funds.

1.2 Requests for Proposal

The Authority (Delhi Jal Board) invites proposals from consultancy firms (the "**Proposals**") for selection of a consultancy firm (the "**Consultant**") who shall assist the Authority as per the scope of work specified in the TOR (collectively the "**Consultancy**"). The Authority intends to select the Consultant by inviting open tender through L1 based **Lump Sum** (**LS**) contract in accordance with the procedure set out herein and from the bidders who fulfill the following eligibility criteria and bid document shall be submitted as per the checklist mentioned at page 32 under cl. 3.1.6:

Eligibility criteria:

1. "Experience of completed / ongoing/ awarded work of DMAs creation, Hydraulic modeling and preparation of detailed estimates of DMAs rehabilitation works which should be targeted towards NRW reduction, for any National/International water utility".

The minimum experience criteria (in the last 10 years) of completed / ongoing/ awarded work of DMAs shall be as following:

(i) experience of at least one aforecited work of minimum 60% of water connections of the UGR having maximum no. of water connections in that particular SE circle for which the bidder intends to bid.

(ii) Experience of at least two works of minimum 40% of water connections of the UGR having maximum no. of water connections in that particular SE circle for which the bidder intends to bid.

Or

(iii) Experience of at least three works of minimum 30% of water connections of the UGR having maximum no. of water connections in that particular SE circle for which the bidder intends to bid.

Note: The illustration for finding UGR having maximum number of connection is given in Part-'A' of Annexure-III for SE(East), Annexure-IV for SE(North-East), Annexure-V for SE(South), Annexure-VI for SE(South-West), Annexure-VII for SE(West) and Annexure-VIII for SE(North-West).

2. Net worth of the firm shall be positive during each of the last 3 years.

Lowest bidder can win in two SE Circles/Packages & bids having maximum number of connections in SE circle concerned will be given priority.

1.3 Due diligence by Applicants

Applicants are encouraged to inform themselves fully about the assignment before submitting the Proposal and attending a Pre-Bid Conference on the date and time specified in Clause 1.8.

1.4 Availability of RFP Document

RFP document has been uploaded on DJB website. The agencies may obtain the RFP document from the office of EE(Project) Water-I w.e.f. 06.03.2019 from 10.00 AM to 5.00 PM on the working days or also may download from Delhi Jal Board website www.delhijalboard.nic.in and further follow the link "Expression of Interest". Before bidding, the applicants should deposit the requisite tender fees of Rs. 1500/- in favour of Delhi Jal Board to be deposited through RTGS to EE (Project) Water-I in the Account No. 90231010000265, IFSC Code-SYNB0009023, Syndicate Bank, Branch- Rani Jhansi Road, New Delhi -110055 and its proof to be attached in technical bid.

Bidder shall submit the EMD amount of Rs. 68,000/- electronically and separately for each bid which bidder intends to bid on or before the last date & time of bid submission in DJB EMD A/c No. 90231010012261 at Syndicate Bank, Rani Jhansi Road Branch, New Delhi -110055 (IFSC / RTGS Code No. SYNB0009023) through Bidder's bankers. While submitting EMD through RTGS mode (RTGS timing are 10:00 hrs to 16.00 hrs on all working days except second and fourth Saturdays. Bidder must mention Name of Work, Name of Division, closing date & time of tender and Bidder's Name and address in the Applicant details column in the RTGS form as shown in the example below:-

DETAILS OF APPLICANT		
A	Account No.	
В	Name	Name of Work, Earnest Money, Name of Division, closing date & time of tender, Bidder's Name
С	Address	Bidder's Address

- **1.4.1** Bids submitted without EMD and the tender fee as prescribed above shall be liable for rejection.
- **1.4.2** For any further assistance, the bidder may contact, Manager/ Sr. Manager, Syndicate Bank, 43, Rani Jhansi Raod, New Delhi-110055, Contact No.011-23528976
- **1.4.3** A copy of the RTGS of the EMD must be submitted along with the proposal.

1.5 Validity of the Proposal

The submitted proposal shall be valid for a period of not less than 180 days from the Proposal Due Date ("PDD").

1.6 Brief description of the Selection Process

1.6.1 From the time the technical proposals are opened to the time the Contract 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, and recommendation for award of Contract may result in the rejection of the Consultants' Proposal. The financial proposal shall be opened only after complete evaluation of Technical Proposal.

- **1.6.2** The Technical Proposal will be evaluated on the basis of their responsiveness to the mandatory requirements of bid submission as per Part-C page no.22 of RFP i.e. preparation and Submission of Proposal. A Proposal shall be rejected at this stage if it does not respond to any of the mandatory submissions of the RFP. The bidders have to additionally submit following details as additional details for informing its methodology to the authority:
- (i) Its proposed technical approach and methodology, (ii) work plan and schedule, and (iii) organization and personnel.

The above details are not the criteria for technical evaluation, but necessarily apprise the authority for the general methodology to be adopted by the firm

- **1.6.3** After the checking of responsiveness (as per tentative checklist mentioned under the head of Technical Proposal page no.32 clause 3.1.6) is completed, the Client shall notify those consultants whose Proposals not qualified, indicating that their Financial Proposals will be returned unopened after completing the selection process. Consultants' attendance at the opening of Financial Proposals is optional. No price adjustment provision on remuneration rates shall be applicable for this project
- **1.6.4** Financial Proposals shall be opened publicly in the presence of the Consultant/Consultants' representatives, who are technically qualified and may like to attend on due date and time, as intimated by the Authority. These Financial Proposals shall be then opened, and the total prices read aloud and recorded.
- **1.6.5** Financial Proposals will be reviewed to ensure that these are complete. When correcting computational errors, in case of discrepancy between (a) a partial amount and the total amount the partial amount shall prevail; (b) in case of words and figures, the words shall prevail.
- **1.6.6** Consultant/applicant may be invited for contract negotiations. The invited Consultant will, as a pre-requisite for attendance at the negotiations, confirm availability of all experts named in its proposal in the absence of death or medicalim capacity. Representatives conducting negotiations on behalf of the Consultant must have written authority to negotiate and conclude a Contract.
- **1.6.7** The technical negotiations will not alter the Terms of Reference attached to the RFP and the Technical Proposals submitted by the Consultant. Negotiations will include a discussion of

the Technical Proposal, the proposed technical approach and methodology, work plan and schedule, and organization and personnel, and any suggestions made by the Consultant to improve the Terms of Reference. The Client and the Consultants will finalize the Terms of Reference, personnel schedule, work schedule, logistics, and reporting. These documents will then be incorporated in the Contract as "Description of Services."

Special attention will be paid to clearly defining the inputs and facilities required from the Authority/Client to ensure satisfactory implementation of the assignment. The Consultant shall submit negotiated final amount which will be signed by the Client and the Consultant.

1.6.8 Availability of Personnel: The Technical Personnel required for the project may or may not be the permanent employee of the firm. Having selected the Consultant, the Client expects to negotiate a Contract on the basis of the personnel named in the Proposal. Before contract negotiations, the Client will require assurances that the personnel will be actually available. The Client will not consider substitutions during contract negotiations unless both parties agree that undue delay in the selection process makes such substitution unavoidable or for reasons such as death or medical in capacity. Any proposed substitute shall have equivalent or better qualifications and experience than the original candidate. Failure to meet either of these requirements may result in disqualification.

1.7 Payment to Consultants

All payments to the Consultant shall be made in INR in accordance with the provisions of RFP.

1.8 Schedule of Selection Process

The Authority would endeavor to adhere to the following schedule:

S.No.	Particulars	Date and Time
	Time and Date of Pre bid meeting at:	Date: 28-03-2019
1	Conference Hall No. 2, Delhi Jal Board	at 4:00 P.M,
	Varunalaya Phase-II, Karol Bagh, New Delhi-110005	
2	Last date (deadline) for receipt of technical and financial	Date: 08-05-2019
	proposals in response to RFP notice	at 4:00 P.M,
2	Time and Date of opening of technical proposals received in	Date: 08-05-2019
3	response to the RFP notice	at 4:10 P.M

4	Place, Time and Date of Announcing of agencies fulfilling	Shall be intimated
7	technical criteria and opening of Financial Proposal.	later

1.9 Pre-Bid visit/Communication

Prospective applicants may visit the office of the Authority as mentioned in clause 2.5 and Annexure-III, to review the available documents and data at any time prior to last date of submission of proposal.

2. INSTRUCTION TO APPLICANTS

A. GENERAL

2.1 Scope of Proposal

- **2.1.1** Detailed description of the objectives, scope of services, deliverables and other requirements relating to this Consultancy are specified in this RFP. In case an applicant firm possesses the requisite experience and capabilities required for undertaking the Consultancy, it may participate in the Selection Process either individually (the "Sole Firm") or as lead member of a consortium/association of firms (the "Lead Member") or lead member of JV firm, in response to this invitation. The term applicant (the "Applicant") means the Sole Firm or the Lead Member, as the case may be.
- **2.1.2** Applicants are advised that the selection of Consultant shall be on the basis of decision by the Authority through the Selection Process specified in this RFP. Applicants shall be deemed to have understood and agreed that no explanation or justification for any aspect of the Selection Process will be given and that the Authority's decisions are without any right of appeal whatsoever.
- **2.1.3** The Applicant shall submit its Proposal in the form and manner specified in this Section of the RFP. The Technical proposal shall be submitted in the form at Appendix-I and the Financial Proposal in the form at Appendix-II.

2.2 Key Personnel

The Consultant's team (the "Consultancy Team") shall consist of the following key personnel (the "Key Personnel") who shall discharge their respective responsibilities as specified below:

S.No.	Position	Responsibilities
	Team Leader	Lead, co-ordinate and supervise the Team for delivering
1		the Services in a timely manner as envisaged in this RFP.
2	Civil /Hydraulic	Shall be responsible for overall feasibility study, Civil GA
4	Design Engineer	Drawing Design, Hydraulic Design and estimate preparation

	Hydraulic Modeler	Shall be responsible for network hydraulic modeling using
3	and Network	Water GEMS and DMA planning
	Engineer	
4	Electrical/Mechanical	Shall be responsible for Pumping Station assessment and
	Engineer	improvement advice
5	CAD/GIS Specialist	Shall be responsible for CAD/GIS Map preparation and
		updation.
6	Structural Engineer	For structural assessment of UGRs, BPSs, On-Line-Boosters
		OLBs, pipe supports, SV chambers etc.

All Key & Non-Key Experts as minimum required shall be provided by the Consultant as per Part-B of the Annexure-III, IV, V, VI, VII & VIII for respective Package

2.3 Conditions of Eligibility of Applicants

Applicants must read carefully the minimum conditions of eligibility (the "Eligibility criteria" as mentioned in check list under Cl. 3.1.6 Page- 32) provided herein. Proposals of only those Applicants who satisfy the Eligibility criteria will be considered for evaluation. The eligibility conditions as mentioned in Cl. No. 1.2 above is being reproduced as under:

1. "Experience of completed / ongoing/ awarded work of DMAs creation, Hydraulic modeling and preparation of detailed estimates of DMAs rehabilitation works which should be targeted towards NRW reduction, for any National/International water utility".

The minimum experience criteria (in the last 10 years) of completed / ongoing/ awarded work of DMAs shall be as following:

(i) Experience of at least one aforecited work of minimum 60% of water connections of the UGR having maximum no. of water connections in that particular SE circle for which the bidder intends to bid.

Or

(ii) Experience of at least two works of minimum 40% of water connections of the UGR having maximum no. of water connections in that particular SE circle for which the bidder intends to bid.

Or

(iii) Experience of at least three works of minimum 30% of water connections of the UGR having maximum no. of water connections in that particular SE circle for which the bidder intends to bid.

Note: The illustration for finding UGR having maximum number of connection is given in Part-'A' of Annexure-III for SE (East), Annexure-IV for SE (North-East), Annexure-V for SE (South), Annexure-VI for SE (South-West), Annexure-VII for SE (West), Annexure-VIII for SE (North-West)

2. Net worth of the firm shall be positive during each of the last 3 years

Lowest bidder can win in two SE Circles/Packages & bids having maximum number of connections will be given priority.

2.3.2 To be eligible for evaluation of its Proposal, the Applicant shall fulfill the following:

- a) The first part of the evaluation is the technical bid. The firm is expected to qualify technical bid submission document of Mandatory documents requirements as per RFP, in order to make itself eligible for competing in the financial bid.
- b) The experience and qualification of the key personnel required under technical proposal is given as under. These personnel may or may not be the regular employees of the firm, but at the time of putting in the bid, the firm should get confirmation from their intended key personnel on board & submit the same with bid.

S. No.	Key Experts		
S. No.	Position	Qualification and Experience	
1	Team Leader	Engineer with a post graduate qualification in Civil, Environmental/Water Resources or Public Health Engineering with minimum 10 years of post-graduation experience in water supply and sewerage projects, services, trainings related to Hydraulic Modelling out of which 1 years should be as a team leader/hydraulic modelling expert for Water Network Design and DMA planning projects.	
2	Civil / Hydraulic Design Engineer	Graduate in Civil Engineering with minimum 5 years of overall feasibility study, design and estimate preparation experience in water/waste water projects of which 2 year should be in Water Supply network	

		design, DMA planning and Flow and Pressure		
		Measurement works.		
		Graduate in Civil Engineering with minimum 2 years		
		of experience/exposure to Hydraulic Modelling of		
	Hydraulic Modeler and	water supply networks having thorough knowledge of network hydraulic modeling using WaterGEMS,		
3	Network Engineer			
		Network Data Collection and Management, DMA		
		planning, Flow and Pressure Measurement works.		
		Graduate in Electrical/Mechanical Engineering with 5		
	Electrical/Mechanical Engineer	years of experience in design of similar utilities projects		
4		of which minimum 2 years should be in Water Supply		
		Network pumping station design / assessment /		
		rehabilitation works.		
		Graduate in a relevant discipline with minimum 5 years		
_	CAD/GIS Specialist	of overall experience of which 2 years should be in the		
5		use of CAD/GIS for water/wastewater network drawing		
		works.		
	Structural Engineer	Having 5 years experience after Post Graduation in		
6	Su uctural Engineer	Structural Engineering,		
		~ woodan _mgmootmg,		

- **2.3.3** The Applicant should submit a Power of Attorney as per the format at **Form 4** of **Appendix- I**; provided, however, that such Power of Attorney would not be required if the Application is signed by a proprietor, managing partner or Director (on the Board of Directors) as the Applicant.
- **2.3.4** While submitting a Proposal, the Applicant should attach clearly marked and referenced continuation sheets in the event that the space provided in the specified forms in the Appendices is insufficient. Alternatively, Applicants may format the specified forms making due provision for incorporation of the requested information.

2.4 Conflict of Interest

2.4.1 An Applicant shall not have a conflict of interest that may affect the Selection Process or the Consultancy (the "Conflict of Interest"). Any Applicant found to have a Conflict of Interest shall be disqualified. In the event of disqualification, the Authority shall forfeit and appropriate Page **15** of **87**

the Performance Security, if available, as mutually agreed genuine pre-estimated compensation and damages payable to the Authority for, inter alia, the time, cost and effort of the Authority including consideration of such Applicant's Proposal, without prejudice to any other right or remedy that may be available to the Authority hereunder or otherwise.

- **2.4.2** The Authority requires that the Consultant provides professional, objective, and impartial advice and at all times hold the Authority's interests paramount, avoid conflicts with other assignments or its own interests, and act without any consideration for future work. The Consultant shall not accept or engage in any assignment that would be in conflict with its prior or current obligations to other clients, or that may place it in a position of not being able to carry out the assignment in the best interests of the Authority.
- **2.4.3** Some guiding principles for identifying and addressing Conflicts of Interest have been illustrated in the Guidance Note at Schedule-2. Without limiting the generality of the above, an Applicant shall be deemed to have a Conflict of Interest affecting the Selection Process, if:
- a) the Applicant, its consortium member (the "Member") or Associates (or any constituent thereof) and any other Applicant, its consortium member or Associate (or any constituent thereof) have common controlling shareholders or other ownership interest; provided that this disqualification shall not apply in cases where the direct or indirect shareholding or ownership interest of an Applicant, its Member or Associate (or any shareholder thereof having a shareholding of more than 5 per cent of the paid up and subscribed share capital of such Applicant, Member or Associate, as the case may be) in the other Applicant, its consortium member or Associate is less than 5% (five per cent) of the subscribed and paid up equity share capital thereof.
- b) Such Applicant or its Associate receives or has received any direct or indirect subsidy or grant from any other Applicant or its Associate; or
- c) Such Applicant has the same legal representative for purposes of this Application as any other Applicant; or
- d) Such Applicant has a relationship with another Applicant, directly or through common third parties, that puts them in a position to have access to each other's' information about, or to influence the Application of either or each of the other Applicant; or

- e) There is a conflict among this and other consulting assignments of the Applicant (including its personnel and other members, if any) and any subsidiaries or entities controlled by such Applicant or having common controlling shareholders. The duties of the Consultant will depend on the circumstances of each case. While providing consultancy services to the Authority for this particular assignment, the Consultant shall not take up any assignment that by its nature will result in conflict with the present assignment; or
- f) A firm which has been engaged by the Authority to provide goods or works or services for a project, and its Associates, will be disqualified from providing consulting services for the same project save and except as provided in Clause 2.4.4; conversely, a firm hired to provide consulting services for the preparation or implementation of a project, and its Members or Associates, will be disqualified from subsequently providing goods or works or services related to the same project; or
- g) The Applicant, its Member or Associate (or any constituent thereof), if any, for the Project, its contractor(s) or sub-contractor(s) (or any constituent thereof) have common controlling shareholders or other ownership interest; provided that this disqualification shall not apply in cases where the direct or indirect shareholding or ownership interest of an Applicant, its Member or Associate (or any shareholder thereof having a shareholding of more than 5% (five per cent) of the paid up and subscribed share capital of such Applicant, Member or Associate, as the case may be,) in the Concessionaire, if any, or its contractor(s) or sub-contractor(s) is less than 5% (five per cent) of the paid up and subscribed share capital of such Concessionaire or its contractor(s) or sub- contractor(s); provided further that this disqualification shall not apply to ownership by a bank, insurance company, pension fund or a Public Financial Institution referred to in section 4A of the Companies Act 1956. For the purposes of this Sub-clause (h), indirect shareholding shall be computed in accordance with the provisions of Sub-clause (a) above.
- h) For purposes of this RFP, Associate means, in relation to the Applicant, a person who controls, is controlled by, or is under the common control with such Applicant, or is deemed or published as an "Associate Office"; or has a formal arrangement such as tie up for client referral or technology sharing, joint venture with the Applicant (the "Associate"); provided, however, that if the Applicant has any formal arrangement such as consortium membership in a consortium of advisers/ consultants for a particular assignment/ project, not being this project, with any other person, then such other person

shall not be treated to be an Associate of the Applicant solely due to the reason of forming such consortium. As used in this definition, the expression "control" means, with respect to a person which is a company or corporation, the ownership, directly or indirectly, of more than 50% (fifty per cent) of the voting shares of such person, and with respect to a person which is not a company or corporation, the power to direct the management and policies of such person by operation of law or by contract.

- An Applicant eventually appointed to provide Consultancy for this Project, its 2.4.4 Associates, affiliates, shall be disqualified from subsequently providing goods or works or services related to the construction and operation of the same Project and any breach of this obligation shall be construed as Conflict of Interest; provided that the restriction herein shall not apply after a period of 3 (three) years from the completion of this assignment or to any consulting assignments granted by banks/ lenders at any time; provided further that this restriction shall not apply to consultancy/ advisory services performed for the Authority in continuation of this Consultancy or to any subsequent consultancy/ advisory services performed for the Authority in accordance with the rules of the Authority. For the avoidance of doubt, an entity affiliated with the Consultant shall include a partner in the Consultant's firm or a person who holds more than 5% (five per cent) of the subscribed and paid up share capital of the Consultant, as the case may be, and any Associate thereof. For the avoidance of doubt, in the event that: (a) the Process Engineer of an Applicant/ Consultant was a partner or an employee of another firm, which attracts the provisions relating to Conflict of Interest hereunder; and (b) was directly or indirectly associated with any assignment that causes a Conflict of Interest hereunder, then such Process Engineer shall be deemed to suffer from Conflict of Interest for the purpose hereof.
- 2.4.5 In the event that the Consultant, its Associates or affiliates are auditors or financial advisers to any of the bidders for the Project, they shall make a disclosure to the Authority as soon as any potential conflict comes to their notice but in no case later than 7 (seven) days from the opening of the RFP applications for the Project and any breach of this obligation of disclosure shall be construed as Conflict of Interest. The Authority shall, upon being notified by the Consultant under this Clause 2.4.5, decide whether it wishes to terminate this Consultancy or otherwise, and convey its decision to the Consultant within a period not exceeding 15 (fifteen) days.

2.5 Number of Proposals

Separate bids for each of 6 SE circles/Packages of DJB are being invited through this RFP. complete RFP is same for all the six SE circles/ Package with broad difference as per given Appendix.

Annexure-III(A): Broad details related to scope of work of SE (East) Package-1

Annexure -III(B): Details of minimum Manpower requirement of SE (East) Package-1

Annexure -IV(A): Broad details related to scope of work of SE (North-East) Package-2

Annexure -IV(B): Details of minimum Manpower requirement of SE (North-East) Package-2

Annexure -V(A): Broad details related to scope of work of SE (South) Package-3

Annexure -V(B): Details of minimum Manpower requirement of SE (South) Package-3

Annexure -VI(A): Broad details related to scope of work of SE (South-West) Package-4

Annexure -VI(B): Details of minimum Manpower requirement of SE (South-West) Package-4

Annexure -VII(A): Broad details related to scope of work of SE (West) Package-5

Annexure -VII(B): Details of minimum Manpower requirement of SE (West) Package-5

Annexure -VIII(A): Broad details related to scope of work of SE (North-West) Package-6

Annexure -VIII(B): Details of minimum Manpower requirement of SE (North-West) Package-6

Applicant or its Associate can submit bid in any or all the six SE circles separately. If any of the bidder wants to bid for more than one SE circle, then he is required is to provide details of two teams as per cl.2.3.2 page 14 because maximum two circles can be awarded to a bidder. For the purpose of submitting the bids by the applicants, the six SE circles have been designated into following six Packages;

S.No.	Superintending Engineer Circle (SE Circle)	Package Designation of SE circle for submitting the bid	Chief Engineer
1	SE(East)	Package-1	Chief Engineer (East)
2	SE(North-East)	Package-2	Chief Engineer (East)
3	SE(South)	Package-3	Chief Engineer(South)
4	SE(South-West)	Package-4	Chief Engineer(South)
5	SE(West)	Package-5	Chief Engineer(West)
6	SE(North-West)	Package-6	Chief Engineer(West)

Lowest bidder can win in two SE Circles/Packages & bids having maximum number of connections will be given priority. All the bids have to be submitted separately by clearly marking SE Circle and respective Package No. on the sealed envelope in compliance of Cl. 2.16.4.

All the bids are to be submitted in the office of EXECUTIVE ENGINEER (PROJECT) Water-I, Delhi Jal Board, 5th Floor, Varunalaya, Phase-I, Jhandewalan, New Delhi-110055 as per date & time mentioned in the RFP.

Pre-bid meeting for all the SE Circles held in conference hall No. 2, Ground Floor, Delhi Jal Board Varunalaya Ph-II, Karol Bagh, New Delhi-110005.

For the purpose of preparing the bids, the applicant can collect field data from the DMA cell as per following details:

Sh. Narender Kumar,

Executive Engineer (DMA),

Delhi jal Board, Govt. of NCT of Delhi,

Room No.-603-C, Varunalaya Phase-II,

Karol Bagh, New Delhi -110005

Telephone: 01123510242, Mob. No. 9650291512

E-mail: dmacelldjb@gmail.com

2.6 Cost of Proposal

The Applicants shall be responsible for all of the costs associated with the preparation of their Proposals and their participation in the Selection Process including subsequent negotiation, visits to the Authority, Project site etc. The Authority will not be responsible or in any way liable for such costs, regardless of the conduct or outcome of the Selection Process.

2.7 Visit to the Authority and verification of information

Applicants are encouraged to submit their respective Proposals after visiting the DMA Cell office/Concerned Authority and ascertaining for themselves the availability of documents and other data with the Authority, Applicable Laws and regulations or any other matter considered relevant by them.

2.8 Acknowledgement by Applicant

- **2.8.1** It shall be deemed that by submitting the Proposal, the Applicant has:
- a) made a complete and careful examination of the RFP;
- b) received all relevant information requested from the Authority;
- c) accepted the risk of inadequacy, error or mistake in the information provided in the RFP or furnished by or on behalf of the Authority or relating to any of the matters referred to in Clause 2.7 above:
- d) satisfied itself about all matters, things and information, including matters referred to in Clause 2.7 herein above, necessary and required for submitting an informed Application and performance of all of its obligations there under;
- e) Acknowledged that it does not have a Conflict of Interest; and
- f) Agreed to be bound by the undertaking provided by it under and in terms hereof.
- **2.8.2** The Authority shall not be liable for any omission, mistake or error in respect of any of the above or on account of any matter or thing arising out of or concerning or relating to RFP or the Selection Process, including any error or mistake therein or in any information or data given by the Authority.

2.9 Right to reject any or all Proposals

- **2.9.1** Notwithstanding anything contained in this RFP, the Authority reserves the right to accept or reject any Proposal and to annul the Selection Process and reject all Proposals, at any time without any liability or any obligation for such acceptance, rejection or annulment, and without assigning any reasons there for.
- **2.9.2** Without prejudice to the generality of Clause 2.9.1, the Authority reserves the right to reject any Proposal if:
- a) At any time, a material misrepresentation is made or discovered, or
- b) Applicant does not provide, within the time specified by the Authority, the supplemental information sought by the Authority for evaluation of the Proposal.

Misrepresentation/ improper response by the Applicant may lead to the disqualification of the Applicant. If the Applicant is the Lead Member of a consortium, then the entire consortium may be disqualified / rejected.

B. DOCUMENTS

2.10 Contents of the RFP

2.10.1 This RFP comprises the Disclaimer set forth hereinabove, the contents as listed below and will additionally include any Addendum / Amendment issued in accordance with Clause 2.12:

Request for Proposal

- 1 Introduction
- 2 Instructions to Applicants
- 3 Criteria for Evaluation
- 4 Fraud and corrupt practices
- 5 Miscellaneous

SCHEDULES

- 1 Terms of Reference
- 2 Guidance Note on Conflict of Interest
- 3 Appendices

Appendix – I: Technical Proposal

Form 1 : Letter of Proposal

Form 2 : Particulars of the Applicant Form 3 : Statement of Legal Capacity

Form 4 : Power of Attorney

Form 5 : Relevant Assignments of Applicant

Form 6 : Particulars of Key Personnel with their confirmation to be available for

project if selected (mandatory requirement)

Form 7 : Abstract of Relevant Assignments of Key Personnel

Form 8 : CVs of Key Professional Personnel

Appendix – II: Financial Proposal

Form A : Financial proposal submission form

Form B : Summary of Cost

Form C : Break down of price per activity

Appendix-III: Specific details of respective SE

a) Broad details related to scope of work for respective SE circle

Annexure-III(A): Broad details related to scope of work of SE (East) Package-1

Annexure -III(B): Details of minimum Manpower requirement of SE (East) Package-1

Annexure -IV(A): Broad details related to scope of work of SE (North-East) Package-2

Annexure -IV(B): Details of minimum Manpower requirement of SE (North-East) Package-2

Annexure -V(A): Broad details related to scope of work of SE (South) Package-3

Annexure -V(B): Details of minimum Manpower requirement of SE (South) Package-3

Annexure -VI(A): Broad details related to scope of work of SE (South-West) Package-4

Annexure -VI(B): Details of minimum Manpower requirement of SE (South-West) Package-4

Annexure -VII(A): Broad details related to scope of work of SE (West) Package-5

Annexure -VII(B): Details of minimum Manpower requirement of SE (West) Package-5

Annexure -VIII(A): Broad details related to scope of work of SE (North-West) Package-6

Annexure-VIII(B): Details of minimum Manpower requirement of SE(North-West)Package-6

b) Details of minimum Manpower requirement for respective SE

2.11 Clarifications

2.11.1 Applicants requiring any clarification on the RFP may send their queries to the Authority in writing via e-mail i.e dmacelldjb@gmail.com, before the Pre Bid Meeting date mentioned in Clause 1.8. The subject of e-mail shall clearly bear the following identification:

"Queries/Request for Additional Information concerning Request for Proposal (RFP) for "Consultancy services for carrying out Hydraulic Modeling and Preparation of Detailed Project Report (DPR) for Creation of DMAs and ultimately reduction of NRW for improvement in consumer service level under the command area of primary Under Ground Reservoirs (UGRs) in Delhi" Package 1/2/3/4/5/6/

The Authority shall endeavor to respond to the queries received before pre-bid meeting. The Authority will e-mail the reply to all such queries on the Official e-mail ID without identifying the source of queries.

2.11.2 The Authority reserves the right not to respond to any queries or provide any clarifications, in its sole discretion, and nothing in this Clause 2.11 shall be construed as obliging the Authority to respond to any question or to provide any clarification.

2.12 Amendment of RFP

- **2.12.1** At any time prior to the deadline for submission of Proposal (the PDD), the Authority may, for any reason, whether at its own initiative or in response to clarifications requested by an Applicant, modify the RFP document by the issuance of Addendum/ Amendment and posting it on the Official Website and by conveying the same to the prospective Applicants (who have got the RFP document) by e-mail.
- **2.12.2** All such amendments will be notified on the Official Website along with the revised RFP (if required) containing the amendments and will be binding on all Applicants.

In order to afford the Applicants a reasonable time for taking an amendment into account, or for any other reason, the Authority may, in its sole discretion, extend the bid submission date.

C. PREPARATION AND SUBMISSION OF PROPOSAL

2.13 Language

The Proposal with all accompanying documents (as per checklist mentioned under clause 3.1.6 technical proposal page no. 32) and all communications in relation to or concerning the Selection Process shall be in English language and strictly on the forms provided in this RFP. No supporting document or printed literature shall be submitted with the Proposal unless specifically asked for and in case any of these Documents is in another language, it must be accompanied by an accurate translation of all the relevant passages in English, in which case, for all purposes of interpretation of the Proposal, the translation in English shall prevail.

2.14 Format and signing of Proposal

- **2.14.1** The Applicant shall provide all the information sought under this RFP. The Authority would evaluate only those Proposals that are received in the specified forms and complete in all respects.
- **2.14.2** The Proposal shall be typed or written in indelible ink and signed by the authorized signatory of the Applicant who shall initial each page. All the alterations, omissions, additions, or any other amendments made to the Proposal shall be initiated by the person(s) signing the Proposal.
- **2.14.3** The Proposals must be properly signed by the authorized representative (the "**Authorized Representative**") as detailed below:
- a) By the proprietor, in case of a proprietary firm; or
- b) By a partner, in case of a partnership firm and/or a limited liability partnership; or
- By a duly authorized person holding the Power of Attorney, in case of a Limited
 Company or a corporation; or
- (d) By the authorized representative of the Lead Member, in case of consortium.

A copy of the Power of Attorney certified by a notary public in the form specified in Appendix-I (Form-4) shall accompany the Proposal (if required).

2.14.4 Applicants should note the PDD, as specified in Clause 1.8, for submission of Proposals. Except as specifically provided in this RFP, no supplementary material will be entertained by the Authority, and that evaluation will be carried out only on the basis of Documents received by the closing time of bid submission as specified in Clause 2.18. Applicants will ordinarily not be asked to provide additional material information or documents subsequent to the date of submission, and unsolicited material if submitted will be summarily rejected.

2.15 Technical Proposal

- **2.15.1** Applicants shall submit the technical proposal in the formats at Appendix-I (the "Technical Proposal").
- **2.15.2** While submitting the Technical Proposal, the Applicant shall, in particular, ensure that following mandatory documents have been filled and submitted along with the bid:
- a) All forms as per appendix-I i.e. are submitted in the prescribed formats and signed by the prescribed signatories;
- b) power of attorney, if applicable, is executed as per Applicable Laws;
- CVs of all Key Personnel recently signed and dated, in blue ink by the respective
 Personnel and countersigned by the Applicant. Photocopy or unsigned / countersigned
 CVs shall be rejected
- d) Key Personnel have been proposed only if they meet the Conditions of Eligibility laid down at Clause 2.3.2 of the RFP;
- e) No alternative proposal for any Key Personnel is being made and only one CV for each position has been furnished;
- f) The CVs shall contain an undertaking from the respective Key Personnel about his/her availability for the duration specified in the RFP;
- g) Key Personnel proposed have good working knowledge of English and Hindi language;
- h) No Key Personnel should have attained the age of 65 years at the time of submitting the proposal; and
- i) The proposal is responsive in terms of Clause 2.21.3.

- **2.15.3** Failure to comply with the requirements spelt out in this Clause 2.15 shall make the Proposal liable to be rejected.
- **2.15.4** If an individual Key Personnel makes a false averment regarding his qualification, experience or other particulars, he shall be liable to be debarred for any future assignment of the Authority for a period of 3 (three) years. The award of this Consultancy to the Applicant may also be liable to cancellation in such an event.
- **2.15.5** The Technical Proposal shall not include any financial information relating to the Financial Proposal.
- 2.15.6 The proposed team shall include experts and specialists (the "Professional Personnel") in their respective areas of expertise and managerial/support staff (the "Support Personnel") such that the Consultant should be able to complete the Consultancy within the specified time schedule. The Key Personnel specified in Clause 2.2 shall be included in the proposed team of Professional Personnel. The team shall comprise other competent and experienced professional personnel in the relevant areas of expertise (where applicable) as required for successful completion of this Consultancy. The CV of each such professional personnel, if any, should also be submitted in the format at Form-8 of Appendix-I.
- **2.15.7** An Applicant may, from time to time, if it considers necessary, propose suitable Sub-Consultants in specific areas of expertise like non destructive testing of UGR/BPS/OLB, Temporary flow and pressure measurement, Random survey verification, Verification of meter reading data and Elevation survey. A Sub-Consultant, however, shall not be a substitute for any Key Personnel.
- **2.15.8** The Authority reserves the right to verify all statements, information and documents, submitted by the Applicant in response to the RFP. Any such verification or the lack of such verification by the Authority to undertake such verification shall not relieve the Applicant of its obligations or liabilities hereunder nor will it affect any rights of the Authority there under.
- **2.15.9** In case it is found during the evaluation or at any time before signing of the Agreement or after its execution and during the period of subsistence thereof, that one or more of the eligibility conditions have not been met by the Applicant or the Applicant has made material

mis-representation or has given any materially incorrect or false information, the Applicant shall be disqualified forthwith if not yet appointed as the Consultant either by issue of the LOA (Letter of award) or entering into of the Agreement, and if the Selected Applicant has already been issued the LOA or has entered into the Agreement, as the case may be, the same shall, notwithstanding anything to the contrary contained therein or in this RFP, be liable to be terminated, by a communication in writing by the Authority without the Authority being liable in any manner whatsoever to the Selected Applicant or Consultant, as the case may be.

In such an event, the Authority shall forfeit 100% EMD and process for appropriate action as deemed fit.

2.15.10 The agency shall have to comply with all the relevant labor laws applicable to the agency's employees, including laws relating to their employment, health, safety, welfare, immigration and emigration, and shall allow them all their legal rights.

2.16 Submission of Proposal

The technical proposal shall contain following documents:

2.16.1 Technical proposal containing the following mandatory documents by taking into account all the conditions mentioned in the RFP:

Sl. No.	Description
1	Tender Fee (Rs.1500/-)
2	EMD through RTGS (Rs. 68,000/-)
3	Letter of Proposal (Form-1 of Schedule-2)
4	GST registration certificate
	Copies of completed/ongoing works/awarded works as desired in Eligibility
5	criteria. Relevant Assignments of the Applicant -(Form-5 of Schedule-2)
6	Proof of Positive net worth in each of last three years
7	Power of attorney for appointing the lead member (if applicable)
8	Power of attorney for appointing the authorized signatory (if applicable) -(Form-4 of Schedule-2)

9	Affidavit on non-judicial stamp paper of Rs 100/- duly Notarised in original that the participating firms have not been blacklisted or debarred anywhere in India or abroad.
10	Copy of the TIN/TAN/PAN as applicable
11	Particulars of the Applicant – (Form-2 of Schedule-2)
12	Statement of Legal Capacity-(Form-3 of Schedule-2)
13	Particulars of Key Personnel-(Form-6 of Schedule-2)
14	Joint Venture agreement or the letter of association or the MoU as the case may be (if applicable)
15	Abstract of Relevant Assignments of Key Personnel-(Form-7 of Schedule-2)
16	CVs of all Key Personnel recently signed and dated -(Form-8 of Schedule-2)

2.16.2 Technical bid shall be complete as per check list and requirements of RFP.

2.16.3 Submission of Financial Proposal.

Covering letter along with proposal as per Appendix – II Form A to C.

2.16.4 SEALING AND SUBMISSION OF THE PROPOSAL

The proposal shall be type written. The Completed proposal shall be duly signed on all pages by the authorized signatory. There should be no inter-lineation or overwriting except necessary corrections. Any such correction shall be initialed by the authorized signatory. All the pages should be numbered.

The Consultants are required to submit one original copy of the Technical Proposal and Financial Proposal.

The original and soft copy of the Technical Proposal shall be placed in a sealed envelope clearly marked "Technical Proposal," and the original and soft copy of the Financial Proposal in a separate sealed envelope clearly marked "Financial Proposal". Both envelopes shall be placed into an outer envelope marked "Consultancy services for carrying out Hydraulic Modeling and Preparation of Detailed Project Report (DPR) for Creation of DMAs and ultimately reduction of NRW for improvement in consumer service level under the command area of primary, Under Ground Reservoirs (UGRs) in Delhi" Package No. 1/2/3/4/5/6/ (whichever is

applicable) and sealed. This outer envelope shall also bear the submission address, the name of the consultant with complete address along with e- mail. The completed Technical and Financial Proposal must be delivered at the submission address on or before the due time and date. Any Proposal received after the closing time for submission of proposals mentioned in the data sheet shall be returned unopened. Proposals submitted by Telex/Telegraph/Fax/email shall not be considered. The Client will not be responsible for any delay or loss in transit of any proposal submitted by the Consultants.

2.16.5 The offer of consultant shall be firm throughout the period of performance of the assignment upto and including discharge of all obligations of the Consultant under the Agreement.

2.17 Proposal Due Date

- **2.17.1** Proposal should be submitted on or before date as specified in RFP at Clause 1.8
- **2.17.2** The Authority may, in its sole discretion, extend the PDD by issuing an Addendum in accordance with Clause 2.12 uniformly for all Applicants.

2.18 Proposal Submission

The completed Proposal must be **submitted physically in sealed cover** on or before the specified date and time of bid submission. Proposals submitted by fax, telex, telegram or e- mail shall not be entertained.

2.19 Modification/ substitution of Proposals

Modifications to submission can be done by over-riding the earlier submission, prior to the PDD.

2.20 Earnest Money

The Applicant, by submitting its Application pursuant to this RFP, shall be deemed to have acknowledged that without prejudice to the Authority's any other right or remedy hereunder or in law or otherwise, the Earnest Money, if available, shall be forfeited

a) If an Applicant engages in any of the Prohibited Practices specified in Clause 4.1 of this RFP:

- b) If the Applicant is found to have a Conflict of Interest as specified in Clause 2.4; and
- c) If the selected Applicant commits a breach of the Agreement.

D. EVALUATION PROCESS

2.21 Evaluation of Proposals

- **2.21.1** The Authority shall open the Proposals at 16.10 hours on the PDD, at the place specified in Clause 1.8 and in the presence of the Applicants who choose to attend.
- **2.21.2** The Technical Proposal shall be opened and Financial Proposal shall be held in safe custody by the authority and shall be opened after complete checking of technical bid.
- **2.21.3** Prior to evaluation of Proposals, the Authority will determine whether each Proposal is responsive to the requirements of the RFP. A Proposal shall be considered responsive only if:
- a) The Technical Proposal is received in the forms specified at Appendix-I & other clauses as mentioned in the RFP;
- b) It is received by the PDD including any extension thereof pursuant to Clause 2.17;
- c) It is accompanied by the Power of Attorney if required as specified in Clause 2.3.4;
- (e) It contains all the information (complete in all respects) as requested in the RFP;
- (f) It does not contain any condition or qualification; and
- **2.21.4** The Authority reserves the right to reject any Proposal which is non-responsive and no request for alteration, modification, substitution or withdrawal shall be entertained by the Authority in respect of such Proposals.
- **2.21.5** The Authority shall subsequently examine and check responsive Proposals in accordance with the Selection Process specified at Clause 1.6 of this RFP.
- **2.21.6** After the evaluation of technical responsiveness, the Authority shall prepare a list of qualified Applicants. A date, time and venue for opening of financial bid will be notified to all the qualified Applicants.
- **2.21.7** Applicants are informed that Selection shall be entirely at the discretion of the Authority.

Applicants shall be deemed to have understood and agreed that the Authority shall not be required to provide any explanation or justification in respect of any aspect of the Selection Process or Selection.

2.21.8 Any information contained in the Proposal shall not in any way be construed as binding on the Authority, its agents, successors or assigns, but shall be binding against the Applicant if the Consultancy is subsequently awarded to it.

2.22 Confidentiality

Information relating to the examination, clarification, evaluation, and recommendation for the selection of Applicants shall not be disclosed to any person who is not officially concerned with the process or is not a retained professional adviser advising the Authority in relation to matters arising out of, or concerning the Selection Process. The Authority shall treat all information, submitted as part of the Proposal, in confidence and shall require all those who have access to such material to treat the same in confidence. The Authority may not divulge any such information unless it is directed to do so by any statutory entity that has the power under law to require its disclosure or to enforce or assert any right or privilege of the statutory entity and/or the Authority or as may be required by law or in connection with any legal process.

2.23 Clarifications

- **2.23.1** To facilitate checking/evaluation of Proposals, the Authority may, at its sole discretion, seek clarifications from any Applicant regarding its Proposal. Such clarification(s) shall be provided within the time specified by the Authority for this purpose. Any request for clarification(s) and all clarification(s) in response thereto shall be in writing.
- **2.23.2** If an Applicant does not provide clarifications sought under Clause 2.23.1 above within the specified time, its Proposal shall be liable to be rejected. In case the Proposal is not rejected, the Authority may proceed to evaluate the Proposal by construing the particulars requiring clarification to the best of its understanding, and the Applicant shall be barred from subsequently questioning such interpretation of the Authority.

E. APPOINTMENT OF CONSULTANT

2.24 Negotiations

- **2.24.1** The negotiations will be as per clause 1.6.
- **2.24.2** The Authority will examine the CVs of all other Professional Personnel and those not found to possess the required qualifications and experience then the bid shall be rejected.
- **2.24.3** The Authority will examine the credentials of all Sub-Consultants/ Consortium Members proposed for this Consultancy and those not found suitable shall be replaced by the Selected Applicant to the satisfaction of the Authority.

2.25 Substitution of Key Personnel

- **2.25.1** The Authority will not normally consider any request of the Selected Applicant for substitution of the Experts as the ranking of the Applicant is based on the evaluation of the Expert and any change therein may upset the ranking. Substitution will, however, be permitted in exceptional circumstances due to health, subject to equally or better qualified and experienced personnel being provided to the satisfaction of the Authority.
- **2.25.2** The Authority expects the Key Personnel to be available during implementation of the Agreement. The Authority will not consider substitution of the Key Personnel except for reasons of any incapacity or due to health. Such substitution shall ordinarily be limited to one Key Personnel subject to equally or better qualified and experienced personnel being provided to the satisfaction of the Authority.

2.26 Award of Consultancy and Execution

After selection, a Letter of Award (the "LOA") shall be issued, by the Authority to the Selected Applicant.

2.27 Execution of Agreement

After issue of LOA as aforesaid to the Selected Applicant, it shall execute the Agreement within the scope and period prescribed in Schedule-I (TOR). The Selected Applicant shall not be entitled to seek any deviation in scope as per the Agreement.

2.28 Commencement of Assignment

The Consultant shall commence the Consultancy within fifteen days of the date of the LOA, or such other date as may be mutually agreed. If the Consultant fails to either sign the Agreement as specified in Clause 2.28 or commence the assignment as specified herein, the earnest money shall be forfeited. In such an event, the LOA or the Agreement, as the case may be, may be cancelled / terminated.

2.29 Proprietary data

Subject to the provisions of Clause 2.22, all documents and other information provided by the Authority or submitted by an Applicant to the Authority shall remain or become the property of the Authority. Applicants and the Consultant, as the case may be, are to treat all information as strictly confidential. The Authority will not return any Proposal or any information related thereto. All information collected, analyzed, processed or in whatever manner provided by the Consultant to the Authority in relation to the Consultancy shall be the property of the Authority.

3. CRITERIA FOR EVALUATION

- 3.1 The Evaluation Criteria for Technical Proposal is subjected to submission/fulfillment of requirements of cl. 2.15.2, 2.16.1, conditions as mentioned in checklist at clause 3.1.6 at page no.33 & other criteria/conditions mentioned in the RFP.
- **3.1.1** DJB will review the technical bids to determine whether the technical bids are responsive as per cl.3.1.6 page 33. Bids that are not responsive shall be disqualified at DJB's discretion.
- **3.1.2** The bidders' technical proposal in the bid document will be evaluated as per the requirements specified in the RFP and technical evaluation framework as mentioned in Section 3.1.
- **3.1.3** The date & time of opening of financial bid shall be intimated to the technically qualified bidders only.
- **3.1.4** The bid price will exclude all taxes and shall be shall be as per Form-C of Appendix-II.
- **3.1.4.1** Any conditional bid would be rejected
- **3.1.5** The bidder with the lowest quoted price (L1) shall be treated as the Successful bidder.
- **3.1.6** "CHECKLIST" (Eligibility Criteria), given hereunder is the Tentative for the bidder who has to complete the table referring page no. alongwith the technical bid.

"CHECKLIST"

S. No.	Description	Page Ref. no. of technical bid.
1	Letter of Proposal (Form-1 of Schedule-2)	
2	Bid Security/EMD through RTGS (Rs. 68,000/-) separately for each bid	
3	Tender Fee (Rs.1500/-) for each bid for each SE circle	
4	GST registration certificate	
	Copies of completed/ongoing works/awarded works as desired in	
5	Eligibility criteria. Relevant Assignments of the Applicant -(Form-5 of	
	Schedule-2)	

6	Proof of Positive net worth in each of last three years	
7	Power of attorney for appointing the lead member (if applicable)	
8	Power of attorney for appointing the authorized signatory (if applicable) -(Form-4 of Schedule-2)	
9	Affidavit on non-judicial stamp paper of Rs 100/- duly Notarised in original that the participating firms have not been blacklisted or debarred anywhere in India or abroad.	
10	Copy of the TIN/TAN/PAN as applicable	
11	Particulars of the Applicant – (Form-2 of Schedule-2)	
12	Statement of Legal Capacity-(Form-3 of Schedule-2)	
13	Particulars of Key Personnel-(Form-6 of Schedule-2)	
14	Joint Venture agreement or the letter of association or the MoUD as the case may be (if applicable)	
15	Abstract of Relevant Assignments of Key Personnel-(Form-7 of	
16	The CVs shall contain an undertaking from the respective Key Personnel about his/her availability for the duration specified in the RFP; -(Form-8 of Schedule-2) no alternative proposal for any Key Personnel is being made and only one CV for each position has been furnished; no Key Personnel should have attained the age of 65 years on the date of bid submission	

Submission of Financial Proposal

S.N.	Description	Check
1	Covering letter along with proposal as per Appendix – II Form A to C	

4. FRAUD AND CORRUPT PRACTICES

- 4.1 The Applicants and their respective officers, employees, agents and advisers shall observe the highest standard of ethics during the Selection Process. Notwithstanding anything to the contrary contained in this RFP, the Authority shall reject a Proposal without being liable in any manner whatsoever to the Applicant, if it determines that the Applicant has, directly or indirectly or through an agent, engaged in corrupt practice, fraudulent practice, coercive practice, undesirable practice or restrictive practice (collectively the "Prohibited Practices") in the Selection Process. In such an event, the Authority shall, without prejudice to its any other rights or remedies, forfeit and appropriate the Performance Security, if available, as mutually agreed genuine pre-estimated compensation and damages payable to the Authority for, *inter alia*, time, cost and effort of the Authority, in regard to the RFP, including consideration and evaluation of such Applicant's Proposal.
- 4.2 Without prejudice to the rights of the Authority under Clause 4.1 hereinabove and the rights and remedies which the Authority may have under the LOA or the Agreement, if an Applicant or Consultant, as the case may be, is found by the Authority to have directly or indirectly or through an agent, engaged or indulged in any corrupt practice, fraudulent practice, coercive practice, undesirable practice or restrictive practice during the Selection Process, or after the issue of the LOA or the execution of the Agreement, such Applicant or Consultant shall not be eligible to participate in any tender or RFP issued by the Authority during a period of 2 (two) years from the date such Applicant or Consultant, as the case may be, is found by the Authority to have directly or through an agent, engaged or indulged in any corrupt practice, fraudulent practice, coercive practice, undesirable practice or restrictive practice, as the case may be.
- **4.3** For the purposes of this Clause, the following terms shall have the meaning hereinafter respectively assigned to them:
- (A) "corrupt practice" means (i) the offering, giving, receiving, or soliciting, directly or indirectly, of anything of value to influence the action of any person connected with the Selection Process (for avoidance of doubt, offering of employment to or employing or engaging in any manner whatsoever, directly or indirectly, any official of the Authority who is or has been associated in any manner, directly or indirectly with the Selection Process or the LOA or has dealt with matters concerning the Agreement or arising there from, before or after the execution thereof, at any time prior to the expiry of one year from the date such official resigns or retires from or otherwise ceases to be in the service of the Authority, shall be deemed to constitute influencing the actions of a

person connected with the Selection Process; or (ii) save as provided herein, engaging in any manner whatsoever, whether during the Selection Process or after the issue of the LOA or after the execution of the Agreement, as the case may be, any person in respect of any matter relating to the Project or the LOA or the Agreement, who at any time has been or is a legal, financial or technical consultant/ adviser of the Authority in relation to any matter concerning the Project;

- (B) "**Fraudulent practice**" means a misrepresentation or omission of facts or disclosure of incomplete facts, in order to influence the Selection Process;
- (C) "Coercive practice" means impairing or harming or threatening to impair or harm, directly or indirectly, any persons or property to influence any person's participation or action in the Selection Process;
- (D) "Undesirable practice" means (i) establishing contact with any person connected with or employed or engaged by the Authority with the objective of canvassing, lobbying or in any manner influencing or attempting to influence the Selection Process; or (ii) having a Conflict of Interest; and
- (E) "**Restrictive practice**" means forming a cartel or arriving at any understanding or arrangement among Applicants with the objective of restricting or manipulating a full and fair competition in the Selection Process.

5. MISCELLANEOUS

- 5.1 The Selection Process shall be governed by, and construed in accordance with, the laws of India and the Courts at Delhi shall have exclusive jurisdiction over all disputes arising under, pursuant to and/or in connection with the Selection Process.
- **5.2** The Authority, in its sole discretion and without incurring any obligation or liability, reserves the right, at any time, to:
- (a) Suspend and/or cancel the Selection Process and/or amend and/or supplement the Selection Process or modify the dates or other terms and conditions relating thereto;
- (b) Consult with any Applicant in order to receive clarification or further information;
- (c) Retain any information and/or evidence submitted to the Authority by, on behalf of and/or in relation to any Applicant; and/or
- (d) Independently verify, disqualify, reject and/or accept any and all submissions or other information and/or evidence submitted by or on behalf of any Applicant.
- 5.3 It shall be deemed that by submitting the Proposal, the Applicant agrees and releases the Authority, its employees, agents and advisers, irrevocably, unconditionally, fully and finally from any and all liability for claims, losses, damages, costs, expenses or liabilities in any way related to or arising from the exercise of any rights and/or performance of any obligations hereunder, pursuant hereto and/or in connection herewith and waives any and all rights and/ or claims it may have in this respect, whether actual or contingent, whether present or future.
- **5.4** All documents and other information supplied by the Authority or submitted by an Applicant shall remain or become, as the case may be, the property of the Authority. The Authority will not return any submissions made hereunder. Applicants are required to treat all such documents and information as strictly confidential.
- 5.5 The Authority reserves the right to make inquiries with any of the clients listed by the Applicants in their previous experience record.
- **5.6** Key personnel are expected to attend all meetings.

SCHEDULE - 1

Terms of Reference (TOR)

1. Background

The DJB under the Govt. of NCT of Delhi was established for construction, operation and maintenance of the water supply and wastewater infrastructure facilities within the NCT of Delhi and intends to create and manage water infrastructure so as to provide equitable water supply and reduce water loss. As such, DJB intends to hire a consultant for the work of "Consultancy services for carrying out Hydraulic Modeling and Preparation of Detailed Project Report (DPR) for Creation of DMAs and ultimately reduction of NRW for improvement in consumer service level under the command area of primary Under Ground Reservoirs (UGRs) in Delhi".

2. Objectives

The main objectives of this project work is to assess present situation i.e. collection, collation and analysis of existing data, assessment of UGRs and pumping capacities, hydraulic modeling, proposing DMAs, field works as required to assess NRW at primary UGR command area level, preparation of estimates of capex works and develop a strategy for structured control and reduction of NRW to enable ultimate improvement in consumer service level under the command area of primary UGRs in Delhi, so as to bring down the NRW within the specified limit of maximum 15% as specified by CPHEEO.

Scope of Services and Timeline

Scope given below is the minimum output expected from the Consultant:

- 1. Study of existing data and reports, information from local DJB offices
- 2. Demand forecasting and setting up design basis
- 3. Establishment of Baseline Conditions, Review/updating of available peripheral & distribution system network GIS data.
- 4. UGR and Pumping Station Assessment
- 5. Survey and verification/updating of Peripheral & Distribution network's GIS maps.
- 6. Elevation Survey
- 7. DMA Boundary marking & Proposing DMAs as per ground feasibility
- 8. Draft Hydraulic Modeling Submission
- 9. Collection of the UGR wise volumetric consumption data from DJB

- 10. Temporary Flow and Pressure measurement at the outlet of the command area of Primary UGRs
- 11. Prepare Rehabilitation Estimates and Bill of Quantities (along with Rate analysis and Quotations wherever required etc.), DPR. Drawings and proposing suitable Technical & Financial Model
- 12. Acceptance of DPR and EOT (If any)

DETAILED SCOPE OF WORK

1 **Study of existing data and reports, information from local DJB offices**, past study reports and understanding present water supply system and proposed master plans including but not limited to:

- Study on Improvement of Water Supply System in Delhi; Japan International Cooperation Agency (JICA) September 2011;
- Master Plan for Delhi
- Study on Rationalization of Pattern of Distribution of Water for Delhi, March 2003; TCE
 Report
- Census of India 2011 with approximate interpolation/extrapolation up-to-date;
- All relevant Indian Standards.

Consultant shall review hydraulic boundaries, criteria for recent DJB projects, collect DJB UGRs/BPSs/OLBs operation records, groundwater tubewell usage details and all other relevant information, reports like walk-the-line data etc., documents, maps, policies, plans and records pertaining to scope of the Project in coordination with the Nodal Officer i.e. SE(Maintenance) Civil concerned.

- **2. Demand forecasting and setting up design basis:** The designs shall be in compliance with the relevant Indian Standards and CPHEEO manual. Wherever such standards are not available, appropriate standards shall be followed after discussions with the Delhi Jal Board. The consultant has to properly for-cast the demand for year 2031, 2041 & 2051 by using methods as given in CPHEEO manual/ established literature. The major design parameters to be considered for hydraulic design and modeling are as under;
- Design Period 30 Years (2021-2051) and intermediate years 2031 and 2041
- Residual Pressure Minimum 22 m of water head
- Water demand 150 LPCD + 15% NRW
- 3. Establishment of Baseline Conditions, Review/updating of available peripheral & distribution system network GIS data
- (A) Review of available GIS data provided, for site topographical survey, base map, consumer and network data. Carry out Survey within the command area and

- preparation/updation of base map and network plan. The consultants shall also look at aspects like optimal / effective utilization of the existing infrastructure with a view to minimize the project costs
- (B) In addition, the Consultant shall review existing design criteria, DJB booster stations operation records, groundwater usage records and all existing other relevant information, reports, data, documents, maps, policies, plans and records pertaining to scope of the Project.
- (C) The Consultant shall review the existing water supply transmission/peripheral and distribution plans available in hard copy with the DJB. Much of the information on these plans has already been transferred to a GIS platform (ArcGIS) by DJB and can be used as a starting point for developing a comprehensive GIS for the command areas of all the Primary UGRs. The consultant should necessarily undertake Network data collection work from respective SE office/Nodal Officer, DJB GIS Division, local offices and concerned O&M staff including sizes, material, depth, alignment, age, condition and known and unknown issues & site conditions.
- (D) The Consultant shall study the on-going DJB works in the area, available past GIS data with DJB and drawings available at site office to update the available command areawise GIS data. The GIS will include pipeline diameters, materials, age if available and other attributes to be agreed with the DJB. The GIS will be compatible with the water distribution system model.
- (E) The consultant has to verify/update the available drawings such that these shows complete and accurate positions of all the valves, flow meters, Flushing Valves, dia. of pipe, material, age of pipes, direction of flow etc. The network map's accuracy is the responsibility of the consulting agency, the pipes or other appurtenances need to be completely defined on network map and all the DMAs distribution network along with other details should be accurately put on GIS map.

4 UGR and Pumping Station Assessment:

a) Consultant will visit the sites of all DJB Water Supply Facilities like UGRs, booster stations and OLBs, preferably with DJB officers and examine the current status, undertake measurements to assess hydraulic and efficiency parameters of the pumps and capacities of UGRs. The same shall also be assessed in terms of future demand projections. The capacities, if found inadequate, the consultant shall prepare action plan

for rehabilitation or replacement or any other feasible solution like modifying zones or sub zoning options for Command Area improvement. Consultant shall also check structural strength of UGR by doing Non-Destructive Testing & submit its report for each of primary UGR & BPS along with other structural aspects.

b) Hydraulic Capacity and Efficiency check of Primary and local UGRs and estimation of required capacities of the clear water UGR and Pumping Stations, possibility of reducing number of local UGRs/BPSs/OLBs/tubewells. Planning of necessary Flow Meters and Pressure Loggers for continuous monitoring of flows and pressures at UGRs and Pumping Stations.

5. Random survey and verification/updating of Peripheral & Distribution network GIS maps:

The data available with the DJB field staff /mapping cell with respect to existing pipe network shall be provided. However, the consultant has to verify its accuracy at ground, to be extent of 100% of the same, so that the proposed hydraulic design may achieve the desired benefit to the consumer and ultimately NRW reduction.

6. Elevation Survey:

Available maps shall be provided. However, agencies have to carry out the complete contour maps survey for the pipe line network with an interval of one meter. This will help in accomplishing accurate hydraulic modeling for the present & future demand. RL of the ground survey shall be marked on GIS map & shall have to be updated in mapping cell.

7. DMA Boundary marking & Proposing formation of DMAs as per ground feasibility:

The agency shall have to divide whole of the command area of primary UGRs into DMAs, having approximately 2000 (1000 to 3500) water connections per DMAs in consultation with the concerned EEs and as per the ground feasibility by referring to the existing network. The position of the BPSs/OLBs, installed bulk meters, sluice valves, direction of flow, location of existing boundary valves etc. minimum number of valves should be needed to be closed to isolate the DMA have to mentioned in the report. Easily visible topographic features such as canals, drainage channels, rail roads, highways, districts roads etc. shall be used for forming

DMA boundaries The agency shall also identify the location for additional valves to be installed, identify the location where the pipes will be disconnected and capped, location and installation details of new valves to be installed to defined the boundary of DMA. No consumer connection pipe shall cross a district boundary. If there is any flow, outgoing or incoming from the DMA the bulk flow meter shall be proposed to be installed or it shall be isolated by suggesting isolation valve. This process may affect the system pressures both within the particular DMA and its surrounding areas. Therefore while designing a DMA it is necessary to insure that water supply to consumers is not compromised in terms of pressure and supply time. The agency shall suggest strategies for isolation and DMAs establishment.

8. Draft Hydraulic Modeling Report:

The Hydraulic Modeling design shall be carried out as per latest design criteria of DJB/CPHEEO manual as per the decision of the Engineer-in-charge. The methodology includes giving required attribute features of water networks collected or generated, population forecasting, demand projection and demand allocation in various stages as specified by DJB. Preparing the rehabilitation plan by proposing necessary replacement valves and pipes in the rehabilitation estimates. The agency shall design water supply distribution network on DMA basis to ensure equitable water supply at sufficient pressure at the Consumers end by using the hydraulic model and simulating both, future (2031,2041and ultimately for year 2051) i.e. 30 years design period conditions in three stages. Each DMA shall preferably have one inflow point and be isolated by installing valves / end plugs. DMA at entry point will be provided with a bulk flow meter.

The calculations of hydraulic modeling shall be checked as per existing availability of water and subsequent period for the years 2031, 2041 & 2051

- Some areas are fed through tapings instead of Primary UGR, consultant shall suggest improvement as per TCE report such that direct tapings can be transferred into Primary UGR
- In addition if some of the Primary UGRs are feeding beyond their boundary as per TCE report. Then consultant shall review and suggest changes such that supply is not disturbed during supply hours
- Local Tubewells have been installed to augment the supplies in various pockets/parts of
 Delhi. Agency shall map these tubewells on network plans & suggest measures for its
 phase out in phased manner. Present discharge from tubewells shall be assessed & added
 in working out NRW & improvement plans of areas. The firms shall have to obtain the

following data for hydraulic modeling.

- (i) GIS base map
- (ii) Pipeline materials dia., age, friction factor, elevation, lengths and valve details of the pipe
- (iii) Consumer data
- (iv) Flow & pressure measurement
- (v) Demand locations and LPCD values

9 Collection of UGR wise volumetric consumption data from DJB & and doing NRW Calculation:

The firm has to verify (only once) all the metering data which are reported by Revenue Wing of DJB in the second cycle of billing as (i) NRES- No Response (ii) NUW – No use of water (iii) PLOS – Premises Locked (iv) MLOC – Meter Locked (v) BJAM- Box Jammed (vi) NS – NO status (vii) DFMT- Defective metered (viii) STP- Stopped (ix)UNMT- Running unmetered. The firm has to provide the comparison statement to the Nodal officer (Revenue)/EE (DMA) in a sealed envelope confidentially. Further, agency have to carry out **Water Audit of whole of the command area of each of the primary UGR and calculate NRW** of Primary UGRs once during the whole Project work as per the decision of Engineer-Incharge i.e. SE(Maintenance) concerned with a copy to the DMA Cell. Agency shall be responsible to collect the data of consumption from the ZROs/Revenue Wing/Wipro or any other agency hired by DJB and make the NRW calculation.

10 Temporary Flow and Pressure measurement at the outlet of the command area of Primary UGRs:

To evaluate the quantity of water outflow from the study command area is to be identified by the consultant by installation of Temporary Flow and Pressure measurement instruments as per the requirements. Consultant will carry out all activities like excavation, fixing of flow and pressure meter, including restoration of pipe, back filling, etc. in coordination with concerned field staff of DJB. Consultant should provide necessary excavation location plan seven days in advance as and when required during the project.

11 Prepare Rehabilitation Estimates and Bill of Quantities (along with Rate analysis and Quotations wherever required etc.), DPR, drawings and proposing suitable Technical & Financial Model:

Consultant shall prepare the Rehabilitation estimates of Civil & E&M works along with rate analysis and quotations for the non-scheduled items, wherever required in accordance with the Page 46 of 87

hydraulic modeling done by the Agency. Agency shall have to submit reports in the time frame as mentioned in the schedule of terms of payments, all civil & E&M estimates, BoQs, drawings of each DMA, DMA design report and the final DPR alongwith drawings/UGR-wise as well as DMA-wise (4 copies i.e. 1 for SE concerned, 1 for EE concerned, 1 for Zonal office and 1 for DMA Cell) suggesting ways to reduce NRW, DMA-wise and further strategies and its implementation plan alongwith financial implication. The DMA plan shall at-least provide following details for each of the DMA:

- a) Limit of the DMA
- b) Names of all the roads in which the mains are laid
- c) Dia & materials type for each transmission and distribution main
- d) Locations and sizes of inlet/outlet flow meters and other Isolation/sluice valves etc.
- e) Total No. of domestic and non-domestic consumers as on last billing cycle of the contract period of the firm duly mapped on network plan.

12 Acceptance of DPR & EOT (If any):

The aim of this consultancy is maintaining centralized updating of data base which have been collected from different sources of DJB by the agency and submitting it back to the DJB's Mapping Cell and GIS Division, command area-wise. The acceptance of the report will be processed only after getting the certificate from the respective Circles/Mapping Cell/GIS Division that all the records have been updated in DJB. DPR shall be accepted by Member (WS) which will be communicated by SE (Civil) Maintenance to the Consultant after approval of EOT also.

Special Terms and Conditions

- 1. No T & P would be supplied by the Department and agency will have to make his own arrangement.
- 2. The bidding agencies are advised to get acquitted with the proposed work including specifications & its site and additional conditions carefully before quoting. No claim of any sort shall be entertained or account of any site conditions and ignorance of specifications & additional conditions.
- 3. The rates quoted by the applicant/bidding agency shall be taken as net and nothing extra shall be paid on any account i.e Royalty, Cartage & stacking of material required at

places etc.

- 4. Any damage done by the applicant to any existing item / any part infrastructure during the course of execution of work shall be made good at his own cost.
- 5. The consultant shall submit a detailed programme of work within 15 days of the date of award of work. The Engineer in- Charge can modify the programme and the consultant has to work accordingly.
- 6. No payment shall be made to agency for any damage caused by the rain, snowfall or any other natural causes what so ever during the execution of work.
- 7. The agency shall be fully responsible for the safe custody of the material brought at site by him for doing the work.
- 8. Water & electricity have to be arranged by the agency
- 9. Agency has to take proper safety measures during the execution of work/comply with the safety requirements as per the directions of Engineer-in-Charge.
- 10. ESI & EPF requirements shall be complied with.
- 11. Access to DJB ArcGIS and WaterGEMS license may be provided by DJB

3.3 Duration: Total duration of the project is 15 months after award of work.

Team Composition & Qualification Requirements for the Key Experts

The Consultancy scope is based on Lump-sum contract hence consultant to estimate manmonths accordingly. The positions and qualifications for the key experts are presented in cl.2.3.2. The general scope of work given therein is intended to give an overall indication of the distribution of work between team members and is not an exhaustive detailed narrative, and in no way relieves the Consultant of any responsibility to fulfill the full Terms of Reference as detailed herein.

Deliverables and Payment Schedule

Deliverables and payment schedule is shown as below: All reports shall be submitted in four hard copy and PDF copy and editable soft copy (all drawings/documents and softwares files prepared during the project work).

Reports	Timeline	Payment %age	Deliverables & Contents		
Submission of	$2^{\text{nd}} - 3^{\text{rd}}$	10% on	The Consultant shall prepare an		
inception report	Month	acceptance of	inception report and design criteria		
		report by the	describing and Methodology, collection		
		Nodal Officer	of baseline data from DJB sources.		
Draft of existing	4 th - 6 th	15% on	The firm will carry out elevation		
peripheral and	Month	acceptance of	survey of water pipe line network and		
distribution		report by the	its 100% verification i.e. peripheral and		
network on GIS		Nodal Officer	distribution network.		
map including					
elevation survey					
Draft of DMA	6 th - 7 th	15% on	Firm will submit the draft of DMA		
boundaries and	Month	acceptance of	boundaries alongwith draft hydraulic		
hydraulic		report by the	modeling.		
modelling		Nodal Officer			
Report w.r.t	8 th - 9 th	10% on	The firm will submit the volumetric		
volumetric Month acceptance		acceptance of	consumption data UGR-wise alongwith		
consumption data		report by the	flow and pressure at the outlets of the		
of UGR and		Nodal Officer	command area and calculations of		

present NRW			present NRW
Detailed estimates,	10 th - 12 th	15% on	The firm has to submit estimates for
BOQ _N drawings	Month	acceptance of	rehabilitation/replacement/new
showing proposed		report by the	proposal alongwith BOQ supported by
DMAs		Nodal Officer	rate analysis/quotations etc. for whole
			project as well as DMA-wise.
Submission of	$13^{th}-15^{th}$	25% on	Acceptance of Final DPR (4 copies) by
final DPR	Month	submission of	the SE(Civil) Maintenance confirming
		certificate from	its approval from Member (WS),
		Nodal Officer.	updating in the mapping cell as well as
			circle office and approval of EOT

Note:

- 1. In case of delay in any activity, EOT shall be sanctioned on merits and nothing extra shall be paid for the extended period or scope of work being a Lump Sum fee tender.
- 2. After award of work SE (Maintenance) Civil concerned will be the Nodal Officer for successful completion of hydraulic modeling project & shall coordinate with SE (E&M), Revenue wing, Mapping Cell, Planning Cell or any other stake holder for complete fulfillment of Project objectives.

SCHEDULE-2

(See Clause 2.4.3)

Guidance Note on Conflict of Interest (For Consultant)

- 1. This Note further explains and illustrates the provisions of Clause 2.4 of the RFP and shall be read together therewith in dealing with specific cases.
- 2. Consultants should be deemed to be in a conflict of interest situation if it can be reasonably concluded that their position in a business or their personal interest could improperly influence their judgment in the exercise of their duties. The process for selection of consultants should avoid both actual and perceived conflict of interest.
- **3.** Conflict of interest may arise between the Authority and a consultant or between consultants and present or future contractors. Some of the situations that would involve conflict of interest are identified below:
- (a) Authority and consultants:
- (i) Potential consultant should not be privy to information from the Authority which is not available to others.
- (ii) Potential consultant should not have defined the project when earlier working for the Authority.
- (iii) Potential consultant should not have recently worked for the Authority overseeing the project.

The participation of companies that may be involved as investors or consumers and officials of the Authority who have current or recent connections to the companies involved, there- fore, needs to be avoided.

4. The normal way to identify conflicts of interest is through self-declaration by consultants. Where a conflict exists, which has not been declared, competing companies are likely to bring this to the notice of the Authority. All conflicts must be declared as and when the consultants become aware of them.

- 5. Another approach towards avoiding a conflict of interest is through the use of "Chinese walls" to avoid the flow of commercially sensitive information from one part of the consultant's company to another. This could help overcome the problem of availability of limited numbers of experts for the project. However, in reality effective operation of "Chinese walls" may be a difficult proposition. As a general rule, larger companies will be more capable of adopting Chinese walls approach than smaller companies. Although, "Chinese walls" have been relatively common for many years, they are an increasingly discredited means of avoiding conflicts of interest and should be considered with caution. As a rule, "Chinese walls" should be considered as unacceptable and may be accepted only in exceptional cases upon full disclosure by a consultant coupled with provision of safeguards to the satisfaction of the Authority.
- 6. Another way to avoid conflicts of interest is through the appropriate grouping of tasks. For example, conflicts may arise if consultants drawing up the terms of reference or the proposed documentation are also eligible for the consequent assignment or project.
- 7. Another form of conflict of interest called "scope-creep" arises when consultants advocate either an unnecessary broadening of the terms of reference or make recommendations which are not in the best interests of the Authority but which will generate further work for the consultants. Some forms of contractual arrangements are more likely to lead to scope-creep. For example, lump-sum contracts provide fewer incentives for this, while time and material contracts provide built in incentives for consultants to extend the length of their assignment.
- **8.** Every project contains potential conflicts of interest. Consultants should not only avoid any conflict of interest, they should report any present/ potential conflict of interest to the Authority at the earliest. Officials of the Authority involved in development of a project shall be responsible for identifying and resolving any conflicts of interest. It should be ensured that safeguards are in place to preserve fair and open competition and measures should be taken to eliminate any conflict of interest arising at any stage in the process.

Appendices

APPENDIX-I

(See Clause 2.1.3)

TECHNICAL PROPOSAL

Form-1

Letter of Proposal

(On Applicant's letter head)

(Date and Reference)

To,

Sub: Request for Proposal (RFP) for "Consultancy services for carrying out Hydraulic Modeling and Preparation of Detailed Project Report (DPR) for Creation of DMAs and ultimately reduction of NRW for improvement in consumer service level under the command area of primary Under Ground Reservoirs (UGRs) in Delhi".

Dear Sir.

With reference to your RFP Document dated, I/We, having examined all relevant documents and understood their contents, hereby submit our Proposal for selection as Consultant for "Consultancy services for carrying out Hydraulic Modeling and Preparation of Detailed Project Report (DPR) for Creation of DMAs and ultimately reduction of NRW for improvement in consumer service level under the command area of primary Under Ground Reservoirs (UGRs) in Delhi".

- 1. The proposal is unconditional and unqualified.
- 2. I/We acknowledge that the Authority will be relying on the information provided in the Proposal and the documents accompanying the Proposal for selection of the Consultant, and we certify that all information provided in the Proposal and in the Appendices is true and correct, nothing has been omitted which renders such information misleading; and all documents accompanying such Proposal are true copies of their respective originals.
- 3. This statement is made for the express purpose of appointment as the Consultant for the aforesaid Project.
- 4. I/We shall make available to the Authority any additional information it may deem necessary or require for supplementing or authenticating the Proposal.

- 5. I/We acknowledge the right of the Authority to reject our application without assigning any reason or otherwise and hereby waive our right to challenge the same on any account whatsoever.
- 6. I/We certify that in the last three years, we or any of our Associates have neither failed to perform on any contract, as evidenced by imposition of a penalty by an arbitral or judicial authority or a judicial pronouncement or arbitration award against the Applicant, nor been expelled from any project or contract by any public authority nor have had any contract terminated by any public authority for breach on our part.

7. I/We declare that:

- a) I/We have examined and have no reservations to the RFP Documents, including any Addendum issued by the Authority;
- b) I/We do not have any conflict of interest in accordance with Clause 2.4 of the RFP Document;
- c) I/We have not directly or indirectly or through an agent engaged or indulged in any corrupt practice, fraudulent practice, coercive practice, undesirable practice or restrictive practice, as defined in Clause 4.3 of the RFP document, in respect of any tender or request for proposal issued by or any agreement entered into with the Authority or any other public sector enterprise or any government, Central or State; and
- d) I/We hereby certify that we have taken steps to ensure that in conformity with the provisions of Section 4 of the RFP, no person acting for us or on our behalf will engage in any corrupt practice, fraudulent practice, coercive practice, undesirable practice or restrictive practice.
- 8. I/We understand that you may cancel the Selection Process at any time and that you are neither bound to accept any Proposal that you may receive nor to select the Consultant, without incurring any liability to the Applicants in accordance with Clause 2.9 of the RFP document.
- 9. I/We declare that we are not a member of any other Consortium applying for Selection as a Consultant.
- 10. I/We certify that in regard to matters other than security and integrity of the country,

we or any of our Associates have not been convicted by a Court of Law or indicted or adverse orders passed by a regulatory authority which would cast a doubt on our ability to undertake the Consultancy for the Project or which relates to a grave offence that outrages the moral sense of the community.

- 11. I/We further certify that in regard to matters relating to security and integrity of the country, we have not been charge-sheeted by any agency of the Government or convicted by a Court of Law for any offence committed by us or by any of our Associates.
- 12. I/We further certify that no investigation by a regulatory authority is pending either against us or against our Associates or against our CEO or any of our Directors / Managers / employees.
- 13. I/We hereby irrevocably waive any right or remedy which we may have at any stage at law or howsoever otherwise arising to challenge or question any decision taken by the Authority [and/ or the Government of India] in connection with the selection of Consultant or in connection with the Selection Process itself in respect of the above mentioned Project.
- 14. I/We agree and understand that the proposal is subject to the provisions of the RFP document. In no case, shall I/we have any claim or right of whatsoever nature if the Consultancy for the Project is not awarded to me/us or our proposal is not opened or rejected.
- 15. I/We agree to keep this offer valid for 180 (One hundred and eighty) days from the PDD specified in the RFP.
- 16. A Power of Attorney in favour of the authorized signatory to sign and submit this Proposal and documents is attached herewith in Form 4.
- 17. In the event of my/our firm being selected as the Consultant, I/we agree to enter into an Agreement in accordance with the format Schedule–2 of the RFP. We agree not to seek any changes in the aforesaid form and agree to abide by the same.
- 18. In the event of my/our firm being selected as the Consultant, I/we agree and undertake to provide the services in accordance with the provisions of the RFP.
- 19. I/We have studied RFP and all other documents carefully. We understand that except to the extent as expressly set forth in the Agreement, we shall have no claim, right or title arising out of any documents or information provided to us by the Authority or in respect

of any matter arising out of or concerning or relating to the Selection Process including the award of Consultancy.

- 20. This Proposal shall constitute the Agreement which shall be binding on us.
- 21. I/We agree and undertake to abide by all the terms and conditions of the RFP Document.

 In witness thereof, I/we submit this Proposal under and in accordance with the terms of the RFP Document.

Yours faithfully,

(Signature, name and designation of the authorized signatory) (Name and seal of the Applicant/ Lead Member)

$\frac{Form-2}{\textbf{Particulars of the Applicant}}$

1.1	Title of Consultancy: Consultancy Services
1.2	Title of Project: Request for Proposal (RFP) for "Consultancy services for carrying out Hydraulic Modeling and Preparation of Detailed Project Report (DPR) for Creation of DMAs and ultimately reduction of NRW for improvement in consumer service level under the command area of primary Under Ground Reservoirs (UGRs) in Delhi".
1.3	State whether applying as Sole Firm or Lead Member of a consortium : Sole Firm or Lead Member of a consortium
1.4	State the following: Name of Firm: Legal status (e.g. sole proprietorship or partnership): Country of incorporation: Registered address: Year of Incorporation: Year of commencement of business: Principal place of business: Name, designation, address and phone numbers of authorized signatory of the Applicant: Name: Designation: Company: Address: Phone No.: FaxNo.:

	If the Applicant is Lead Member of a consortium, state the following for each of
	the other
	Member Firms:
1.5	(i) Name of Firm:
	(ii) Legal Status and country of incorporation
	(iii) Registered address and principal place of business.
	(Signature, name and designation of the authorised signatory) For and on behalf
	of

Form-3

Statement of Legal Capacity

(To be forwarded on the letter head of the Applicant)

Ref. Date:

Sub:

To,
Consultancy Services for the work of "Consultancy services for carrying out Hydraulic Modeling and Preparation of Detailed Project Report (DPR) for Creation of DMAs and ultimately reduction of NRW for improvement in consumer service level under the command area of primary Under Ground Reservoirs (UGRs) in Delhi".
Dear Sir,
I/We hereby confirm that we, the Applicant (along with other members in case of consortium,
Constitution of which has been described in the Proposal*), satisfy the terms and conditions laid
down in the RFP document.
I/We have agreed that (insert Applicant's name) will act as the Lead Member
of our consortium.
I/We have agreed that (insert individual's name) will act as our Authorised
Representative/ will act as the Authorised Representative of the consortium on our behalf and
has been duly authorized to submit our Proposal. Further, the authorised signatory is vested with
requisite powers to furnish such proposal and all other documents, information or
communication and authenticate the same.
Yours faithfully,
(Signature, name and designation of the authorised signatory For and on behalf of
*Please strike out whichever is not applicable
Page 59 of 87

Form-4

Power of Attorney

Know all men by these presents, We, (name of Firm and address of the
registered office) do hereby constitute, nominate, appoint and authorize
Mr/Ms son/daughter/wife and presently residing at,
who is presently employed with/ retained by us and holding the position of as our
true and lawful attorney (hereinafter referred to as the "Authorised Representative") to do in our
name and on our behalf, all such acts, deeds and things as are necessary or required in
connection with or incidental to submission of our Proposal for and selection as the Transaction
Advisor for Selection of Communication Consultant and Single Window Customer Care
proposed to be developed by Delhi Jal Board (the "Authority") including but not limited to
signing and submission of all applications, proposals and other documents and writings,
participating in pre- bid and other conferences and providing information/ responses to the
Authority, representing us in all matters before the Authority, signing and execution of all
contracts and undertakings consequent to acceptance of our proposal and generally dealing with
the Authority in all matters in connection with or relating to or arising out of our Proposal for the
said Project and/or upon award thereof to us till the entering into of the Agreement with the
Authority.
AND, we do hereby agree to ratify and confirm all acts, deeds and things lawfully done or caused to be done by our said Authorised Representative pursuant to and in exercise of the powers conferred by this Power of Attorney and that all acts, deeds and things done by our said Authorised Representative in exercise of the powers hereby conferred shall and shall always be deemed to have been done by us.
IN WITNESS WHEREOF WE,
For
(Signature, name, designation and address)
Witnesses:
1
2
Notarised Accepted
(Signature, name, designation and address of the Attorney)

Form-5

Relevant Assignments of the Applicant#

(Refer Clause 3.1)

S. No	Name of Project	Name of Client	No. of Water Connections	Consultancy services contract awarded cost	Attach copy of work Order and performance certificate of client
(1)	(2)	(3)	(4)	(5)	(6)
1					
2					
3					
4					
5					

The Applicant should provide details of only those assignments that have been undertaken by it under its own name.

Exchange rate should be taken as Rs. 69 per US \$ for conversion to Rupees.

Certificate from the Statutory Auditor

This is to certify that the information contained in Column 5 above is correct as per the accounts of the Applicant and/ or the clients.

(Signature, name and designation of the authorised	signatory)
--	-----------	---

Date: Name and seal of the audit firm:

^{\$} In case the Applicant does not have a statutory auditor, it shall provide the certificate from its chartered accountant that ordinarily audits the annual accounts of the Applicant.

Form-6

Particulars of Key Personnel

S. No.	Designation of Key	_	Educational Qualification	Length of Professional Experience			No. Of Eligible Assignments#
110.	Personnel		Quanication		Name of Firm	Employed Since	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
1							
2							
3							

^{*}Refer Form 7 of Appendix I

Form-7

Abstract of Relevant Assignments of Key Personnel

Name of Key Personnel: Designation:

S.No	Name of Project*	Name of Client	Estimated capital cost of project (in Rs.cr./US \$ million)	Name of firm for which the Key Personnel worked	Designation of the Key Personnel on the assignment	Date of completion of the assignment
(1)	(2)	(3)	(4)	(5)	(6)	(7)
1						
2						
3						
4						
5						

[@] Use separate Form for each Key Personnel.

Form-8

Curriculum Vitae (CV) of Professional / Key Personnel

1.	Proposed Position:
2.	Name of Personnel:
3.	Date of Birth:
4.	Nationality:
5.	Educational Qualifications:
6.	Employment Record:
(Star	ting with present position, list in reverse order every employment held.)
7.	List of projects on which the Personnel has worked
Nam	ne of Project Description of responsibilities
Cert	ification:
1	I am willing to work on the Project and I will be available for entire duration of the Project assignment as required.
2	I, the undersigned, certify that to the best of my knowledge and belief, this CV correctly describes my qualifications, my experience and me.
Place	e(Signature and name of the Professional Personnel)
(Sign	nature and name of the authorised signatory of the Applicant)
Note	es:
1	Use separate form for each Key Personnel and Professional Personnel.
2	The names and chronology of assignments included here should conform to the

- project- wise details submitted at any other place in this RFP.
- Each page of the CV shall be signed in ink by both the Personnel concerned and 3. by the Authorised Representative of the Applicant firm along with the seal of the firm. Photocopies will not be considered for evaluation.

Form-A

Financial Proposal Submission Form

To: Location and Date	
EXECUTIVE ENGINEER (PROJECT) WATER-I DELHI JAL BOARD 5th Floor, Varunalaya, Phase-I,	
Thandewalan, New Delhi-110055. Phone No. 011 23510242	
E-mail: dmacelldjb@gmail.com	
Dear Sir:	
We, the undersigned, offer to provide the consulting Services to Delhi Jal Board	for
*Consultancy services for carrying out Hydraulic Modeling and Preparation of Deta	iled
Project Report (DPR) for Creation of DMAs and ultimately reduction of NRW	for
mprovement in consumer service level under the command area of primary Un	der
Ground Reservoirs (UGRs) in Delhi" in accordance with your Request for Proposal da	ated
insert Date] and our Technical Proposal. Our attached Financial Proposal is for the sum	ı of
insert amount(s) in words and figures].	
Our Financial Proposal shall be binding upon us subject to the modifications resulting from	
Contract negotiations, up to expiration of the validity period of the Proposal.	
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-B

Summary of Costs

S.No.	Name of Project	Costs	Amounts (In Ind	ian Rupees)
			In Figures	In Words
1	All activities including			
	Taxes if any but			
	excluding GST			

Important:- The consultant shall quote the lump-sum rates for the whole project without considering GST. Presently GST is not to be paid for works of hydraulic design & Modeling, however if applicable the same shall be reimbursed as per actual

(Name and signature of authorised signatory) Note: Separate sheet if required may be attached.

APPENDIX-II

Form-C

Breakdown of Price bid

Project:	
•	

S.No.	Price Component	Amount(s) (Indian Rupees)
1	Remuneration	
2	Equipment Expenses	
3	Field Investigation	
4	Survey Works	
5	Computer Peripherals (Excluding WaterGem and ArcGIS	
6	Vehicle and accommodation	
7	Misc Expenses	
	TOTAL COST	

Total:

(Name and signature of authorised signatory)

ANNEXURE-III (A)(SE (East)) Package-1

(A) Detail of scope of work/Physical Infrastructure

			Total Length	km)				
S.No.	Name of Primary UGR	Division	C.I. Pipe	D.I. Pipe	MS Pipe	AC/PV C/ PSC	Total Length (Km)	Total tentative Water Connections (Nos.)
1	F Block Dilshad Colony	EE(East)-II	3.71	0.41	0.00	0.00	4.12	4300
2	Old Seema Puri	EE(East)-II	5.69	0.63	0.00	0.00	6.32	3780
3	Pocket J&K and I, Dilshad Garden	EE(East)-II	5.20	0.61	0.00	0.20	6.01	2120
4	A,B,C,II, Dilshad Garden	EE(East)-II	2.38	0.28	0.00	0.00	2.66	825
5	M,N,O, Dilshad Garden	EE(East)-II	4.72	0.25	0.00	0.00	4.97	694
6	Pocket-E, Dilshad Garden	EE(East)-II	1.49	0.00	0.00	0.00	1.49	985
7	Pocket -F, Dilshad Garden	EE(East)-II	0.63	0.00	0.00	0.00	0.63	963
8	Pocket-L&H, Dilshad Garden	EE(East)-II	2.65	0.14	0.00	0.00	2.79	788
9	Block-R, Dilshad Garden	EE(East)-II	2.69	0.26	0.00	0.00	2.94	626
10	Vishkarma Park	EE(East)-I & II	112.00	68.8 9	0.00	8.20	189.09	27557
11	Mandawali-I	EE(East)-I	1.50	2.50	1.00	0.00	5.00	8575
12	124 LIG Mayur Vihar PH-I	EE(East)-I	1.51	0.00	0.00	0.00	1.51	264
13	176 LIG Mayur Vihar PhI	EE(East)-I	1.00	0.00	0.00	0.00	1.00	176
14	Pocket -4 Mayur Vihar PhI	EE(East)-I	0.00	3.08	0.00	0.00	3.08	1386
15	Pocket V Mayur Vihar PhI	EE(East)-I	1.15	2.10	0.00	1.25	4.50	599
16	BD Block, Mayur Vihar PhII	EE(East)-I	15.22	2.50	0.00	0.00	17.72	3274
17	Pocket E, Mayur Vihar PhII	EE(East)-I	4.20	3.00	0.00	0.00	7.20	1506

18	OHT Tank, Mayur Vihar PhI	EE(East)-I	5.00	7.50	0.00	0.00	12.50	3623	
19	Shallimar Park	EE(East)-II	37.09	1.33	0.00	2.07	40.49	12274	
20	23 Block, Trilokpuri	EE(East)-I	25.40	31.30	0.00	3.50	60.20	28859	
21	AGCR, Jagatpuri	EE(East)-II	4.50	1.20	0.00	0.00	5.70	9785	
22	Surajmal Vihar	EE(East)-II	30.77	1.46	0.00	0.26	32.49	17507	
23	B Block, Vivek Vihar	EE(East)-II	9.77	0.45	0.00	0.00	10.22	3060	
24	A Block, Vivek Vihar	EE(East)-II	9.11	0.43	0.00	0.00	10.22	3000	
25	Laxmi Nagar	EE(East)-I	0.00	9.67	0.00	4.30	13.97	6731	
26	Chitra Vihar	EE(East)-I & II	3.20	5.80	0.00	0.00	9.00	651	
27	Gazipur	EE(East)-I & II	18.56	10.40	1.70	1.50	32.16	2357	
28	Mandwali-II	EE(East)-I	24.00	41.00	0.00	0.00	65.00	31915	
29	New Kondli	EE(East)-I	12.28	19.73	0.40	3.00	35.41	6223	
30	Dallupura	EE(East)-I	25.60	30.10	0.00	1.50	57.20	4855	
31	A-2 LIG flat	EE(East)-I	4.80	1.16	0.00	0.00	5.96	5000	
32	B-8 Janata Flat	EE(East)-I	4.90	6.00	0.00	0.00	10.90	3269	
33	LIG Jhilmil	EE(East)-II	1.80	0.00	0.00	0.00	1.80	800	
34	Miscellaneous / left out areas under jurisdiction of circle	It will be treated as part of study				Total	654.02	194364	
						Total	034.04	174304	

- 1. Illustration for Eligibility Criteria (Cl. 1.2 of RFP): While referring to above table, Mandawali –II, Primary UGR at S No. 28 has maximum No. of water connections in its command area i.e. 31915 Nos. Therefore to be eligible firm has to either have one, two or three works (as per Cl. 1.2 of RFP) of 60%, 40% or 30% respectively, of 31915 water connections.
- 2. Total No. of water connections -194364. The details are indicative only and the firm has to work on all the unauthorized water connections also within the complete jurisdiction of SE (East) as per actual site conditions.
- 3. The details given above are all approximate for bidding purpose only & as per actual site conditions which the firms have to assess 100% on the ground levels.

ANNEXURE-III (B) ((SE (East)) Package-1

(B) Minimum Number of key experts and non-key experts proposed shall be as under:

S No.	Key/Non-key Experts	Quantity	Duration	Qualification & Experience
	Experts			
1	Team Leader	1	15 months	As per amended RFP
2	Civil/Hydraulic Design Engineer/Water Supply Engineer	1	15 months	As per amended RFP
3	Hydraulic Modeler & Network Engineer (Hydraulic Specialist)	1	03 months	As per amended RFP
4	Structural Engineer	1	02 months	As per amended RFP
5	Electrical/Mechanical Engineer	1	02 months	As per amended RFP
6	CAD/GIS Specialist	1	04 months	As per amended RFP
7	Civil Engineer Diploma Engineer (Survey and Site Data Manager)	4	15 months	Civil Engineering Diploma. Survey and Site Data Manager with minimum 5 years overall experience of survey and data collection of which 1 year should be in water network project as a Manager for Water Network Survey using pipe/ cable detectors.
8	IT Engineer	1	02 months	IT Engineering Graduate
9	Computer Operator/System Analyst	4	15 months	Graduate & above. Data entry, speed min. 30wpm, experience of data entry using hand held instruments
10	Office Assistant	4	15 months	Minimum 21 years age
11.	Surveyors for Survey & verification/ updating of peripheral and distribution network	20	03 months	Graduate & above. Experience of field instruments for capturing GIS based survey of water pipe lines using pipe locators or by any other suitable means and updating of same on GIS maps
12	CAD/GIS Operator	2	06 months	Graduate & Above. Minimum 3 years of experience of working on ArcGIS, Water

				Gems, AutoCAD etc.		
13	Civil Engineer Diploma	2	08 months	Civil Engineering Diploma.		
	Engineer (Survey and			Experience of 3 years in		
	Site Data Manager)			DMA/NRW assessment		
				works and knowledge of GIS		
				maps		
14	Computer Operator	2	04 months	Experience of minimum		
				30wpm speed and data entry		
				experience of minimum 3		
				years		
15	Fitter	02	12 months	Metric. Five years experience		
				Of working with licensed		
				plumber.		
16	Beldar	02	12 months	Minimum 21 years of age		

Note: List above is for minimum number of staff to be deployed by the agency; however agency shall deploy the staff over and above to perform his obligations as specified under this contract.

ANNEXURE-IV (A) (SE (North East)) Package-2

(A) Details of scope of work/ Physical Infrastructure

			,	Total Lengtl	ı of Wate	er Supply Ne	twork		
S. No.	Name of Primary UGR	Division	C.I. Pipe	D.I. Pipe	MS Pipe	AC/PVC/ PSC	Total Length (Km)	Command Area in Sq. Kms	Total tentative Water Connection s (Nos.)
1	Sonia Vihar	EE (NE)-II	13.00	208.00	0.50	0.00	221.50		29510
2	Yamuna Vihar	EE (NE)-I EE(NE)-II EE(NE)-III	113.94	98.35	2.75	0.30	215.34		43895
3	Pocket R Dilshad Garden	EE (NE)-I	1.00	0.00	0.00	0.00	1.00		800
4	Pocket Q Dilshad Garden	EE (NE)-I	1.32	0.00	0.00	0.00	1.32		603
5	Pocket D Dilshad Garden	EE (NE)-I	2.76	0.00	0.00	0.15	2.91		615
6	Shastri Park-I	EE(NE)-I EE (NE)-III	16.14	65.52	0.00	4.52	86.18		14509
7	Usman Pur/Shastri Park-II	EE(NE)-II & EE (NE)-III	70.87	25.03	0.00	0.06	95.96		17053
8	Bhagirathi	EE (NE)-I EE(NE)-III	140.06	90.13	13.29	8.82	252.30		51045
9	Kanti Nagar	EE (NE)-III	34.30	0.00	0.00	0.00	34.30		8389
10	G.T. Road, Shahdra	EE (NE)-I	37.22	6.64	0.66	5.74	50.26		15891
11	East Azad Nagar	EE (NE)-III	5.10	0.00	0.00	0.00	5.10		4496
12	Kailash Nagar	EE (NE)-III	11.42	0.00	0.00	0.00	11.42		2986
13	Zafrabad, DDA Flat	EE (NE)-III	3.40	0.13	0.00	0.00	3.53		304
1	Tahir Pur	EE(NE)-I EE (NE)-III EE (East)-II	169.83	116.62	0.98	8.19	295.62		41376
2	A&B Pocket Dilshad Gardan	EE(NE)-I EE(East)-II	3.13	1.65	0.00	0.00	3.13		585
3	A,B,C,I, Dilshad Garden	EE(NE)-I EE(East)-II	4.21	0.28	0.00	0.00	4.49		950
4	Geeta Colony	EE(East)-II EE (NE)-III	87.95	1.60	0.30	1.50	91.35		18895

5	Miscellaneous / left out areas under jurisdiction of circle	It will be treated as part of study				
				Total	1307.40	251902

- 1. Illustration for Eligibility Criteria (Cl. 1.2 of RFP): While referring to above table, Bhagirathi, Primary UGR at S No. 8 has maximum No. of water connections in its command area i.e. 51045 Nos. Therefore to be eligible firm has to either have one, two or three works (as per Cl. 1.2 of RFP) of 60%, 40% or 30% respectively, of 51045 water connections.
- 2. Total No. of water connections -251902. The details are indicative only and the firm has to work on all the unauthorized water connections also within the complete jurisdiction of SE (North-East) as per actual site conditions.
- 3. The details given above are all approximate for bidding purpose only & as per actual site conditions which the firms have to assess 100% on the ground levels.

ANNEXURE-IV(B) (SE(North East)) Package-2

S	Key/Non-key Experts	Quantity	Duration	Qualification & Experience
No.	Experts			
1	Team Leader	1	15 months	As per amended RFP
2	Civil/Hydraulic Design Engineer/Water Supply Engineer	1	15 months	As per amended RFP
3	Hydraulic Modeler & Network Engineer (Hydraulic Specialist)	1	03 months	As per amended RFP
4	Structural Engineer	1	02 months	As per amended RFP
5	Electrical/Mechanical Engineer	1	02 months	As per amended RFP
6	CAD/GIS Specialist	2	04 months	As per amended RFP
7	Civil Engineer Diploma Engineer (Survey and Site Data Manager)	5	15 months	Civil Engineering Diploma. Survey and Site Data Manager with minimum 5 years overall experience of survey and data collection of which 1 year should be in water network project as a Manager for Water Network Survey using pipe/ cable detectors.
8	IT Engineer	1	02	IT Engineering Graduate
9	Computer Operator/System Analyst	5	15 months	Graduate & above. Data entry, speed min. 30wpm, experience of data entry using hand held instruments
10	Office Assistant	2	15 months	Minimum 21 years age
11.	Surveyors for Survey & verification/ updating of peripheral and distribution network		03 months	Graduate & above. Experience of field instruments for capturing GIS based survey of water pipe lines using pipe locators or by any other suitable means and updating of same on GIS maps
12	CAD/GIS Operator	2	06 months	Graduate & Above. Minimum 3 years of experience of working on ArcGIS, Water Gems,

				AutoCAD etc.
13	Civil Engineer Diploma	2	08 months	Civil Engineering Diploma.
	Engineer (Survey and			Experience of 3 years in
	Site Data Manager)			DMA/NRW assessment works
				and knowledge of GIS maps
14	Computer Operator	2	04 months	Experience of minimum
				30wpm speed and data entry
				experience of minimum 3
				years
15	Fitter	02	12 months	Metric. Five years experience
				Of working with licensed
				plumber.
16	Beldar	02	12 months	Minimum 21 years of age

ANNEXURE-V(A) (SE(South)) Package-3

(A) Details of scope of work/ Physical Infrastructure

S.N	Name of Primary UGR	Division		Total Length	of Water Su	nnly Netwo	rk		
0.	Name of Filmary OGK	Division	C.I.Pipe	D.I.Pipe	MS Pipe	AC/PV	Total		Total
0.			Cold the	Dill ipe	MISTIPE	C/ PSC	Length (Km)	Command Area in Sq. Kms	tentative Water Connectio ns (Nos.)
1	Apollo	EE (South) IV	6.00 km	215.60 km	3.60 KM	_	225.20 KM	33	(11001)
2	Sarita Vihar Water Gailary	EE (South) IV	31.47 Km	0.30 KM	0.27 KM	_	32.34 KM	3.60	
3	ESI, Okhla Phase-II	EE (South) IV	3.25 KM	69.70 KM	1.45 KM	_	74.40 KM	21	
4	C.Lal Chowk, Okhla Phase-II	EE (South) IV	18.35 KM	31.20 KM	0.25 KM	_	49.80 KM	17	
5	Giri Nagar	(12.11.1)							
6	Sarai Jullena								
7	Sukh Dev Vihar								
8	G.K. (South)								
9	G.K. (North)	EE(South) I	45137 Mtr	23640 Mtr	1709 Mtr	3250 Mtr	73736 Mtr		19564
10	MBR (G.K)	EE(South) I	53768 Mtr	200635 Mtr		7957 Mtr	262360 Mtr		24413
11	Jal Vihar (New)								
12	Jal Vihar (Old)								
13	Sarai Kale Khan								
14	Deer Park	EE(South)-I	21098Mtr	17436Mtr	3000Mtr	2819 Mtr	44353 Mtr		11976
	ESI	EE(South)-I	10151 Mtr	18745 Mtr	792 Mtr	194 Mtr	29882 Mtr		5956
	Miscellaneous / left out areas under jurisdiction of circle	It will be treated as part of study							
						Total	410712.74	74.6	61909
	alongwith Dia. And no. of water connections. (A) Apollo = Nil (B) Sarita Vihar Water Gailary = Nil (C) ESI, Okhla Phase- II =100 mm dia 1 No. (D) C.Lal Chowk, Okhla Phase-II = 1) NSIC Okhla Phase-III 200 mm dia 1 no. 2) IIIT near Chandwala = 50 mm dia 1 no. 3) KalKaji Depot = 25 mm dia 1 no. 4) Red light Rajeev Gandhi Camp = 100 mm dia 1 no. 5) Dakshinpuri								
	water main-2 no(150mm dia),1 no(300mm dia)								

Details of tube wells and				
no. water connections				
(E) Apollo = 294				
(F) Sarita Vihar				
Water Gailary =				
Nil				
(G) ESI, Okhla Phase-				
II = 160				
(H) C.Lal Chowk,				
Okhla Phase-II =				
150				
(I) GK (north)- 70				
nos/19564 wc				
(J) $ESI - 90 nos /$				
5956 wc				
(K) M.B.R- 551				
nos/24413 wc				
(L) Deer Park-				
63nos/11976 wc				

- 1. Illustration for Eligibility Criteria (Cl. 1.2 of RFP): While referring to above table, MBR(G.K), Primary UGR at S No. 10 has maximum No. of water connections in its command area i.e. 24413 Nos. Therefore to be eligible firm has to either have one, two or three works (as per Cl. 1.2 of RFP) of 60%, 40% or 30% respectively, of 24413 water connections.
- 2. Total No. of water connections -234340. The details are indicative only and the firm has to work on all the unauthorized water connections also within the complete jurisdiction of SE (South) as per actual site conditions.
- 3. The details given above are all approximate for bidding purpose only & as per actual site conditions which the firms have to assess 100% on the ground levels.

ANNEXURE-V(B) (SE(South)) Package-3

S	Key/Non-key Experts	Quantity	Duration	Qualification & Experience
No.	Experts			
1	Team Leader	1	15 months	As per amended RFP
2	Civil/Hydraulic Design Engineer/Water Supply Engineer	1	15 months	As per amended RFP
3	Hydraulic Modeler & Network Engineer (Hydraulic Specialist)	1	03 months	As per amended RFP
4	Structural Engineer	1	02 months	As per amended RFP
5	Electrical/Mechanical Engineer	1	02 months	As per amended RFP
6	CAD/GIS Specialist	2	04 months	As per amended RFP
7	Civil Engineer Diploma Engineer (Survey and Site Data Manager)	5	15 months	Civil Engineering Diploma. Survey and Site Data Manager with minimum 5 years overall experience of survey and data collection of which 1 year should be in water network project as a Manager for Water Network Survey using pipe/ cable detectors.
8	IT Engineer	1	02	IT Engineering Graduate
9	Computer Operator/System Analyst	5	15 months	Graduate & above. Data entry, speed min. 30wpm, experience of data entry using hand held instruments
10	Office Assistant	2	15 months	Minimum 21 years age
11.	Surveyors for Survey & verification/ updating of peripheral and distribution network	25	03 months	Graduate & above. Experience of field instruments for capturing GIS based survey of water pipe lines using pipe locators or by any other suitable means and updating of same on GIS maps
12	CAD/GIS Operator	1	06 months	Graduate & Above. Minimum 3 years of experience of working on ArcGIS, Water Gems, AutoCAD etc.

13	Civil Engineer Diploma	2	08 months	Civil Engineering Diploma.
	Engineer (Survey and			Experience of 3 years in
	Site Data Manager)			DMA/NRW assessment works
				and knowledge of GIS maps
14	Computer Operator	2	04 months	Experience of minimum 30wpm
				speed and data entry experience
				of minimum 3
				years
15	Fitter	02	12 months	Metric. Five years experience
				Of working with licensed
				plumber.
16	Beldar	02	12 months	Minimum 21 years of age

ANNEXURE-VI(A) (SE (South West)) Package-4

(A) Detail of scope of work/ Physical Infrastructure

S.No.	Name of	Division	CI Pipe	DI pipe	MS	PSC/AC	Total	Comm	Total
	UGR		(KM)	(KM)	pipe	/PVC	Length	and	tentative
					(KM)	(KM)	(Km)	Area in	Water
								Sq.	Connections
								Kms	(Nos.)
1	Command	EE(SW)	202.605	76.538			279.143	28.930	50817
	Tank-1								
2	Command	EE(SW)	96.161	26.712			122.873	33.55	28663
	Tank-2								
3	Command	EE(SW)	83.058	43.677			126.735	15.36	19952
	Tank-3								
4	Command	EE(SW)	61.158	12.459			73.617	14.830	5435
	Tank-4								
5	Command	EE(SW)	38.288	12.543			50.831	10.670	11244
	Tank-5								
6	Ujwa	EE(SW)	1.958	47.429			49.387	90.620	5362
7	Daulatpur	EE(SW)	0.000	74.657			74.657	61.870	5430
8	Deer Park	EE(SW)	21.09	17.43			44.35		17631
9	Miscellaneo	It will be							
	us / left out	treated as							
	areas under	part of							
	jurisdiction	study							
	of circle								
						Total	821.593	255.83	144534

- 1. Illustration for Eligibility Criteria (Cl. 1.2 of RFP): While referring to above table, Command Tank-1, Primary UGR at S No. 1 has maximum No. of water connections in its command area i.e. 50817 Nos. Therefore to be eligible firm has to either have one, two or three works (as per Cl. 1.2 of RFP) of 60%, 40% or 30% respectively, of 50817 water connections
- 2. Total No. of water connections -144534. The details are indicative only and the firm has to work on all the unauthorized water connections also within the complete jurisdiction of SE (South-West) as per actual site conditions.
- 3. The details given above are all approximate for bidding purpose only & as per actual site conditions which the firms have to assess 100% on the ground levels.

ANNEXURE-VI(B) (SE(South West)) Package-4

S	Key/Non-key Experts	Quantity	Duration	Qualification & Experience
No.	Experts			
1	Team Leader	1	15 months	As per amended RFP
2	Civil/Hydraulic Design Engineer/Water Supply Engineer	1	15 months	As per amended RFP
3	Hydraulic Modeler & Network Engineer (Hydraulic Specialist)	1	03 months	As per amended RFP
4	Structural Engineer	1	02 months	As per amended RFP
5	Electrical/Mechanical Engineer	1	02 months	As per amended RFP
6	CAD/GIS Specialist	1	04 months	As per amended RFP
8	Civil Engineer Diploma Engineer (Survey and Site Data Manager) IT Engineer	3	15 months 02 months	Civil Engineering Diploma. Survey and Site Data Manager with minimum 5 years overall experience of survey and data collection of which 1 year should be in water network project as a Manager for Water Network Survey using pipe/cable detectors. IT Engineering Graduate
9	Computer	3	15 months	Graduate & above. Data entry,
	Operator/Syst em Analyst			speed min. 30wpm, experience of data entry using hand held instruments
10	Office Assistant	2	15 months	Minimum 21 years age
11.	Surveyors for Survey & verification/ updating of peripheral and distribution network	15	03 months	Graduate & above. Experience of field instruments for capturing GIS based survey of water pipe lines using pipe locators or by any other suitable means and updating of same on GIS maps
12	CAD/GIS Operator	1	04 months	Graduate & Above. Minimum 3 years of experience of working on ArcGIS, Water Gems, AutoCAD etc.

13	Civil Engineer	2	06 months	Civil Engineering Diploma.
	Diploma			Experience of 3 years in
	Engineer (Survey			DMA/NRW assessment works
	and Site Data			and knowledge of GIS maps
	Manager)			
14	Computer Operator	2	03 months	Experience of minimum 30wpm
				speed and data entry experience
				of minimum 3
				years
15	Fitter	02	12 months	Metric. Five years experience
				Of working with licensed
				plumber.
16	Beldar	02	12 months	Minimum 21 years of age

ANNEXURE-VII(A) (SE(West)) Package-5

(A) Details of scope of work/ Physical Infrastructure

S.	Name of UGR	Division	CI	DI pipe	MS	PSC/AC/	Total	Comm	Total
No			Pipe	(KM)	pipe	PVC	Length	and	tentative
•			(KM)		(KM)	(KM)	(Km)	Area in	Water
								Sq.	Connections
								Kms	(Nos.)
1	Kirti Nagar	EE(West)I	165.41	26.75	5.93	2.66	200.75	9.5	48,430
2	Subhash Nagar	EE(West)I	52.85	12.55	1.30	1.01	67.71	2.37	13,571
3	Janakpuri B2	EE(West)I	61.43	2.00	0.00	5.00	68.43	3.62	20,644
4	Janakpuri A2	EE(West)I	82.2	8.00	0.00	8.00	98.20	4	23,198
5	Bodela	EE(West)I	80.41	9.14	0.02	3.84	93.41	4.75	17,390
6	Karala	EE(West)I	46.30	200.1	4.50	43.00	293.90	64.00	89,150
7	Miscellaneous /	It will be							
	left out areas	treated as							
	under	part of study							
	jurisdiction of								
	circle								
						Total	822.40	88.24	2,12,383

- 1. Illustration for Eligibility Criteria (Cl. 1.2 of RFP): While referring to above table, Karala, Primary UGR at S No. 6 has maximum No. of water connections in its command area i.e. 89150 Nos. Therefore to be eligible firm has to either have one, two or three works (as per Cl. 1.2 of RFP) of 60%, 40% or 30% respectively, of 89150 water connections.
- 2. Total No. of water connections -212383. The details are indicative only and the firm has to work on all the unauthorized water connections also within the complete jurisdiction of SE (West) as per actual site conditions.
- **3.** The details given above are all approximate for bidding purpose only & as per actual site conditions which the firms have to assess 100% on the ground levels.

ANNEXURE-VII(B) (SE(West)) Package-5

S	Key/Non-key Experts	Quantity	Duration	Qualification & Experience
N	Experts			
0.				
1	Team Leader	1	15 months	As per amended RFP
2	Civil/Hydraulic Design Engineer/Water Supply Engineer	1	15 months	As per amended RFP
3	Hydraulic Modeler & Network Engineer (Hydraulic Specialist)	1	03 months	As per amended RFP
4	Structural Engineer	1	02 months	As per amended RFP
5	Electrical/Mechanical Engineer	1	02 months	As per amended RFP
6	CAD/GIS Specialist	1	04 months	As per amended RFP
7	Civil Engineer Diploma Engineer (Survey and Site Data Manager)	4	15 months	Civil Engineering Diploma. Survey and Site Data Manager with minimum 5 years overall experience of survey and data collection of which 1 year should be in water network project as a Manager for Water Network Survey using pipe/ cable detectors.
8	IT Engineer	1	02	IT Engineering Graduate
9	Computer Operator/System Analyst	4	15 months	Graduate & above. Data entry, speed min. 30wpm, experience of data entry using hand held instruments
10	Office Assistant	4	15 months	Minimum 21 years age
11.	Surveyors for Survey & verification/ updating of peripheral and distribution network		03 months	Graduate & above. Experience of field instruments for capturing GIS based survey of water pipe lines using pipe locators or by any other suitable means and updating of same on GIS maps
12	CAD/GIS Operator	2	06 months	Graduate & Above. Minimum 3 years of experience of working on ArcGIS, Water Gems,

				AutoCAD etc.
13	Civil Engineer Diploma Engineer (Survey and Site Data Manager)	2	06 months	Civil Engineering Diploma. Experience of 3 years in DMA/NRW assessment works and knowledge of GIS maps
14	Computer Operator	2	03 months	Experience of minimum 30wpm speed and data entry experience of minimum 3 years
15	Fitter	02	12 months	Metric. Five years experience Of working with licensed plumber.
16	Beldar	02	12 months	Minimum 21 years of age

ANNEXURE-VIII(A) (SE(North-West)) Package-6

(A) Broad detail of scope of work/Physical Infrastructure

S.No.	Name of Primary UGR	Circle	Division	Total Length of Water Supply Network			Comman d Area in	Total tentative Water	Update d Map receive
5.NO.				C.I. Pipe	D.I. Pipe	Total Length (Km)	Sq. Kms	Connections (Nos.)	d in DMA
1	Kirari	SE(NW)	EE(NW)-I	74	236.4	310.4	13.56	56607	No
2	Y Block Mangolpuri	SE(NW)	EE(NW)-I	65	42	107	2.1	19993	No
3	E Block Sultanpuri	SE(NW)	EE(NW)-I	11	7	18	0.7	2404	No
4	Avantika	SE(NW)	EE(NW)-I	160.87	26.8	187.67	5.46	41722	No
5	Mangolpur Kalan	SE(NW)	EE(NW)-I	7.44	4.34	11.78	0.4	1291	No
6	Sector-7, Rohini	SE(NW)	EE (NW)-II	124.46	10.84	135.3	4.65	25393	No
7	Sector-19, Rohini	SE(NW)	EE (NW)-II	24	3.35	27.35	3.22	4473	No
8	Sector-11, Rohini	SE(NW)	EE (NW)-II	55	7.4	62.4	4.95	20793	No
9	New Avantika	SE(NW)	EE (NW)-II	35	27	62	5.86	9488	No
10	Holambi Kalan	SE(NW)	EE (NW)-II	86.5	76	162.5	45.29	12337	No
11	Bawana	SE(NW)	EE (NW)-II	42.5	58	100.5	27.88	7950	No
12	Narela	SE(NW)	EE (NW)-II	17.2	34	51.2	14.56	3087	No
13	Qutubgarh	SE(NW)	EE (NW)-II	29.96	14	43.96	54.21	4026	No
14	Sultan pur Dabas	SE(NW)	EE (NW)-II	44	7.7	51.7	17.65	15055	No
15	Sector-23, Rohini	SE(NW)	EE (NW)-II	79	102	181	24.24	7515	No
16	Sector-29, Rohini	SE(NW)	EE (NW)-II	101.86	-	101.86	13.6	3685	No
17	Areas of Direct tapping under EE(NW)II	SE(NW)	EE (NW)-II	193.84	111.73	305.57	195.23	54307	No
18	MU block Pitampura A.C14	SE(NW)	EE(NW)-III	132.37	39.32	171.69	9.28	40463	Yes
19	Lawrence Road UGR	SE(NW)	EE(NW)-III	130.73	35.97	166.70	9.65	41685	Yes
20	Peera Garhi UGR	SE(NW)	EE(NW)-III	94.15	25.40	119.56	4.66	26809	Yes
21	Areas of Direct tapping under EE(NW)III	SE(NW)	EE(NW)-III	128.38	62.8	191.18	11.13	41706	Yes
22	Miscellaneous / left out areas under jurisdiction of circle	It will be treated as part of study	Total	1627.27	022.05	2540.22	160 20	440700	
			Total	1637.27	932.05	2569.32	468.28	440789	

- 1. Illustration for Eligibility Criteria (Cl. 1.2 of RFP): While referring to above table, Kirari, Primary UGR at S No. 1 has maximum No. of water connections in its command area i.e. 56607 Nos. Therefore to be eligible firm has to either have one, two or three works (as per Cl. 1.2 of RFP) of 60%, 40% or 30% respectively, of 56607 water connections
- 2. Total No. of water connections -440789. The details are indicative only and the firm has to work on all the unauthorized water connections also within the complete jurisdiction of SE (North-West) as per actual site conditions.
- **3.** The details given above are all approximate for bidding purpose only & as per actual site conditions which the firms have to assess 100% on the ground levels.

ANNEXURE-VIII(B) (SE(North-West)) Package-6

S N	Key/Non-key Experts Experts	Quantity	Duration	Qualification & Experience
0.	P - · ·			
1	Team Leader	1	15 months	As per amended RFP
2	Civil/Hydraulic Design Engineer/Water Supply Engineer	1	15 months	As per amended RFP
3	Hydraulic Modeler & Network Engineer (Hydraulic Specialist)	1	03 months	As per amended RFP
4	Structural Engineer	1	02 months	As per amended RFP
5	Electrical/Mechanical Engineer	1	02 months	As per amended RFP
6	CAD/GIS Specialist	1	04 months	As per amended RFP
7	Civil Engineer Diploma Engineer (Survey and Site Data Manager)	8	12 months	Civil Engineering Diploma. Survey and Site Data Manager with minimum 5 years overall experience of survey and data collection of which 1 year should be in water network project as a Manager for Water Network Survey using pipe/ cable detectors.
8	IT Engineer	1	02	IT Engineering Graduate
9	Computer Operator/System Analyst	8	12 months	Graduate & above. Data entry, speed min. 30wpm, experience of data entry using hand held instruments
10	Office Assistant	4	15 months	Minimum 21 years age
11.	Surveyors for Survey & verification/ updating of peripheral and distribution network	40	03 months	Graduate & above. Experience of field instruments for capturing GIS based survey of water pipe lines using pipe locators or by any other suitable means and updating of same on GIS maps
12	CAD/GIS Operator	2	06 months	Graduate & Above. Minimum 3 years of experience of working

				on ArcGIS, Water Gems, AutoCAD etc.
13	Civil Engineer Diploma Engineer (Survey and Site Data Manager)	2	08 months	Civil Engineering Diploma. Experience of 3 years in DMA/NRW assessment works and knowledge of GIS maps
14	Computer Operator	2	04 months	Experience of minimum 30wpm speed and data entry experience of minimum 3 years
15	Fitter	02	12 months	Metric. Five years experience Of working with licensed plumber.
16	Beldar	02	12 months	Minimum 21 years of age