

BID DOCUMENT

**Operation and Maintenance of
existing Reverse Osmosis (RO)
Plants 48 Nos. (Number may
increase or decrease) situated in
different wards of Bathinda city**



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**Issued By
Municipal Corporation, Bathinda**

Web site www.mcbathinda.com

Email cmcbathinda@gmail.com

MUNICIPAL CORPORATION, BATHINDA, LOCAL GOVT. DEPTT. PUNJAB**NOTICE INVITING E-TENDER**

eproc.punjab.gov.in

E-tender No MCB/2018-19/014

No. 2947

Dt. 15.11.2018

Corporation Engineer, Municipal Corporation, Bathinda invites bids in electronic tendering system for Re-outsourcing Operation and Maintenance of Reverse Osmosis (RO) Plants 48 Nos. (Number may increase or decrease) situated in different wards of Bathinda city for 5 years from reputed agencies who are engaged in & having experience of Operation & Maintenance of RO Plants. The bid document is available online and bids are to be submitted online through e-procurement portal <http://eproc.punjab.gov.in> only. Bids submitted manually will not be accepted.

Name of work


Sr. No	Name of work	Rate Per Plant Per Month	Earnest Money (In Rs.)	Time Period
1	Operation and Maintenance of Reverse Osmosis (RO) Plants 24 Nos. situated in different wards of Bathinda city (As per Annexure - I , Bid-1)	To be quoted by the Bidder.	Rs. 50,000/-	5 Year
2	Operation and Maintenance of Reverse Osmosis (RO) Plants 24 Nos. situated in different wards of Bathinda city (As per Annexure - I , Bid-2)	To be quoted by the Bidder.	Rs. 50,000/-	5 Year

Date and time schedule:-

Availability of bidding document on website https://eproc.punjab.gov.in	: From	Date 14.11.2018 time 15:00 hrs.
	: To	Date 4.12.2018 time 14:00 hrs.
Last date and time for receipt of bids online	:	Date 4.12.2018 time 14:00 hrs.
Time and date of opening of EMD & Technical bid online	:	Date 4.12.2018 time 15:00 hrs.
Time and date of opening of bids online	:	Date 5.12.2018 time 15:00 hrs. (Price Bid)

For participating in the above e-tendering process, the contractors shall have to get themselves registered with eproc.punjab.gov.in and get user ID and Password. Class -3 digital signature is mandatory to participate in the e-tendering. For any clarification/difficulty in e-tendering process flow, please contact on 0172-2970263, 0172-2970284.

1. Interested bidders can purchase the tender document online from website (eproc.punjab.gov.in) by making payment of Rs. 500/- only.
2. □□NIT, Scope of work, eligibility criteria and Terms and conditions are being uploaded at the website (eproc.punjab.gov.in) only for viewing or may be seen in the office of undersigned on any working day from 9.00 A.M to 5.00 P.M.
3. Rectifications / extension if any will be upload on website eproc.punjab.gov.in and will not be advertised in newspapers.


Corporation Engineer,
Municipal Corporation,
Bathinda.

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Section - I

BID DOCUMENT

TABLE

Package No.	Name of work	Approximate value of work (Rs.in lac)	Bid security (in Rs)	Period of completion
1	2	3	4	5
Bid No. 1	Operation and Maintenance of Reverse Osmosis (RO) Plants 24 Nos. situated in different wards of Bathinda city (As per Annexure – I , Bid-1)	To be quoted by the Bidder.	Rs. 50,000/-	5 Year
Bid No. 2	Operation and Maintenance of Reverse Osmosis (RO) Plants 24 Nos. situated in different wards of Bathinda city (As per Annexure – I , Bid-2)	To be quoted by the Bidder.	Rs. 50,000/-	5 Year

MUNICIPAL CORPORATION BATHINDA

E-tender No MCB/2018-19/014

(O&M of R.O. Plants)

Name of Work: Operation and Maintenance of Reverse Osmosis Plants 48 Nos. (Number may increase or decrease) situated in different wards of Bathinda city for 5 years

AVAILABILITY OF BIDDING DOCUMENT ON WEBSITE https://eproc.punjab.gov.in	:From : To	Date 14.11.2018 time 15:00 hrs. Date 4.12.2018 time 14:00 hrs.
LAST DATE AND TIME FOR RECEIPT OF BIDS ONLINE	:	Date 4.12.2018 time 14:00 hrs.
TIME AND DATE OF OPENING OF BIDS ONLINE (Technical)	:	Date 4.12.2018 time 15:00 hrs.

OFFICER INVITING BIDS


Corporation Engineer,
Municipal Corporation,
Bathinda

MUNICIPAL CORPORATION BATHINDA
INVITATION FOR BIDS THROUGH E-TENDERING
FOR
O&M OF REVERSE OSMOSIS PLANTS

Bid No.:

Date: /

Corporation Engineer, Municipal Corporation, Bathinda invites Bids for O&M of RO plants. Treated water shall be supplied by the successful bidder to beneficiaries who are registered users at 15 paise per liter at the RO kiosk and 25 paise per litre to the individual houses at their doorstep. The bidder shall specify the amount of VGF with (+) sign for seeking from MCB or (-) sign for contribution / depositing back to the department. No sign would be assumed as (+) sign and shall be evaluated accordingly. The successful bidder will be decided on the basis of most negative (-) bid otherwise least positive (+) bid, after arithmetically adding the VGF of 5 years. The contract agreement shall be for a period of 5 years after which the assets will be transferred to the Department in good working condition.

1. Bids are invited through Electronic Tendering System Bidders from India should, however, be registered with the other State Governments / Government of India, or State / Central Government Undertakings.

Bidders are advised to note the minimum qualification criteria specified in Clause 3 of the Instructions to Bidders (ITB) to qualify for the award of the contract.

It shall be mandatory for the bidders to provide their e-mail ID as well as mobile number in the bid.

2. Corporation Engineer, Municipal Corporation Bathinda invite bids in electronic tendering system for O&M of existing R.O. Plants detailed in the table at the end of this e-Procurement Notice/IFB. (Annexure-I)
3. The bid document is available online and bids are to be submitted online through the e-procurement portal <https://eproc.punjab.gov.in> only. Bids submitted manually will not be accepted. One can view the bid document published currently by logging on to the link <https://eproc.punjab.gov.in>.
- 3.1 For submission of the bids, the bidders are required to have Digital Signature Certificate (DSC) for signing and encryption, issued by the same Certifying Authority. The list of authorized Certifying Authorities is mentioned on the e-procurement portal <https://eproc.punjab.gov.in>.
- 3.2 Aspiring bidders who have not obtained the User ID and Password for participating in e-tendering may obtain the same by registering in the e-procurement portal (<https://eproc.punjab.gov.in>). The contractors once registered can participate in any of the department tenders of Govt. of Punjab.

The following are the prerequisites required to participate in tender:

- ❖ Procure Digital Signature Certificate (for signing and encryption, issued by same CA) from authorized Certifying Authorities

- ❖ Pan Card Number Required
- ❖ Bank Details like: Bank name, Bank a/c no., Bank Branch, IFSC and so on required.
- ❖ Two valid and active email Identities to receive the communication like User id, password and tenders published.

Note: (The bid processing fee details is available on the e-procurement website <https://eproc.punjab.gov.in>)

4. Bid Security:

- a) Interested bidders can purchase the tender documents online from website eproc.punjab.gov.in.
- b) Earnest money shall be paid in online mode only.
- c) Processing fee will only be accepted through Net Banking (Direct Debit) and IPG (Credit/Debit card).
- d) All the payments (EMD and Tender form cost) and related document will be accepted online only.

5.

- (a) Concerned document must be uploaded at the website only, no physical submission will be accepted.
- (b) In case of any discrepancy between the original document and the scanned copy of the document, the original shall be treated as final.

6. The site for the work is available.

7. Other details can be seen in the bidding documents. The Employer shall not be held liable for any delays due to system failure beyond its control. Even though the system will attempt to notify the bidders of any bid updates, The Employer shall not be liable for any information not received by the bidder. It is the bidders' responsibility to verify the website for the latest information related to the tender.

8. **Terms and Conditions** are given in section IV of bidding document.

9. **Eligibility Criteria:** As per clause 3, Section II, Instruction to Bidders (ITB).



SECTION- II

INSTRUCTIONS TO BIDDERS (ITB)

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SECTION I : INSTRUCTIONS TO BIDDERS (ITB)

COMPETITIVE BIDDING FOR O&M OF REVERSE OSMOSIS PLANTS

1. CONCEPT

Municipal Corporation Bathinda invites bids for O&M of existing RO Plants. Treated water shall be supplied by the successful bidder to beneficiaries who are registered users at 15 paisa per liter at the RO kiosk and 25 paisa per liter to the individual house their doorstep, which will not be revised for any reasons.

The contract agreement shall be for a period of 5 years and after which the infrastructure will be transferred to the Department in working condition

The total dissolved solids (TDS) of product water obtained from RO plant shall range between 100 to 250 mg per ltr in any case. The other chemical parameters of product water shall be within limits mentioned in **Annexure-II** of this document. The department can check the quality of water at any time.

2. ELIGIBLE BIDDERS

- a) For participating in above e-tendering process the bidder/Firm should have enrolled with eproc.punjab.gov.in.
- b) Firm /Bidders who have failed to execute already allotted work within the prescribed time are not eligible to participate in these tenders.

3. ELIGIBILITY CRITERIA FOR BIDDERS

The bidder shall be considered as qualified for this assignment if the following financial and technical criteria are satisfied.

3.1 FINANCIAL CRITERIA

Average annual turnover for last three financial years in similar works should be at least 40.00 Lacs (**Bidder to submit balance sheet certified by Chartered Accountant**). Provisional balance sheet will not be entertained.

3.2 TECHNICAL CRITERIA

The supplier has to produce a qualification data as per attached format (**Annexure III**) duly self authenticated along with factual supporting documents.

3.3 Experience Criteria (during the last 5 financial years) :

- a) Successfully completed three similar works, not less than 10 Nos. each.
Or
- b) Successfully completed two similar works, not less than 12 Nos. each.
Or
- c) Successfully completed one similar works, not less than 20 Nos. each.

Definition of Similar Work: Similar work means the installation & Operation & Maintenance of community based R.O plants or Operation and Maintenance of Community based RO plants.

Note:

- 1) Issuance of bid documents does not guarantee that the bidder is meeting the eligibility criteria.
 - 2) Contractors and firms of MOU's and sister concerns will not be considered towards eligibility criteria.
 - 3) Firm shall arrange operator, **preferably local**, for each of the site where plant is established.
 - 4) Department reserves the right to reject any or all the tenders without assigning any reason.
 - 5) The firm should not have been debarred or blacklisted by any Govt. or Semi Govt. Department.
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- 3.4a Even though the bidders meet the above qualifying criteria, they are subject to be disqualified if they have made misleading or false representations in the forms/statements.
- 3.4b If, attachments submitted in proof of the qualification requirements, and/ or record of poor performance such as abandoning the works, not properly competing the contract, inordinate delays in completion, litigation history, or financial failures etc. and /or participated in the previous bidding for the same work and had quoted unreasonably high bid prices and could not furnish rational justification to the employer, the bid will not be considered.
- 3.5 The contract duration work will be 5 years after the date of award of contract.
- 3.6 Earnest money amounting to **Rs. 50,000/-** must be furnished through e-payment in account of Commissioner, Municipal Corporation Bathinda. Payment through other means will not be accepted. Any bid not accompanied with requisite earnest money in acceptable form shall be rejected.
- 3.7 The offer shall remain valid for a period of **90 days** (ninety days) from the date of opening of the Tender. The earnest money shall be forfeited if the tenderer withdraws or modifies his offer within the validity period or fails to sign the (Formal Contract) agreement after acceptance of his offer or fails to commence the work within ten days of issue of acceptance letter. After the forfeiture of earnest money, the contract shall be immediately nullified.
- 3.8 The department does not bind itself to accept the lowest rate of any tender and reserves, the right of accepting the whole or part of the tender and tenderer shall be bound to perform the same at the quoted rates.
- 3.9 Sales tax or any other tax on the material or the turnover shall be payable by the contractor and the Government will not entertain any claim in this respect.
- 3.10 Before filling this tender, the contractor is advised to visit the site and satisfy himself as to the conditions prevalent there especially regarding RO plants & other infrastructure available at the site, nature and extent of the ground, working conditions, stacking of materials, installation of Tools and Plants etc., accommodation and movement of labour,

supply of water and power for satisfactory completion of the works contract. No claim, whatsoever on any account shall be entertained by the department in any circumstances.

- 3.11. The contractor shall comply with the provisions of the Apprentices Act 1961, minimum wages Act 1948, Workmen's compensation Act 1923, contract labor (Regulation and Abolition Act 1970), payment of wages Act 1936, Employer's liability Act 1938, Maternity Benefits Act 1961 E.P.F. and the Industrial disputes Act as applicable and the rules and regulations issued there under from time to time. Failure to do so shall amount to breach of the contract and the Engineer-in-Charge may at his discretion to terminate the contract. The contractor shall also be liable for any pecuniary liability arising on account of violation by him of the provisions of the Acts.
- 3.12 The tenderer shall bear all costs associated with the preparation and submission of its tender and the department shall in no case be liable for these costs.
- 3.13 Unless otherwise stated, the contract shall be for the whole work as described in the "Schedule of items of Works". The contractor shall be bound to operate and maintain the RO plants as described in the schedule of items of works including the additional items if any, as per instructions. The certificate of completion as issued by the Engineer-in-Charge shall be the conclusive proof of completion of work.
- 3.14 Conditional/ Incomplete tenders or tenders not fulfilling any of the conditions specified above are liable to be rejected without assigning any reason.

4. EVALUATION OF BIDS:

- a. **Stage 1** Technical bid along with tender processing fees (non refundable for those tenderer who has downloaded the tender document from the website), earnest money and documents such as PAN No., GST No. & EPF Code along with the application for pre qualification shall be opened first. The tenders without full amount of earnest money and required solvency certificate in the desired form (*refer clause 3.6*) shall be rejected and hence forth no further evaluation shall be done for such cases.
- b. The data provided by the bidder in support of his eligibility shall be scrutinized with respect to the eligibility criteria specified in the tender document. The bids which do not fulfill the eligibility criteria shall be rejected and financial bids shall not be opened /considered for such cases.
- c. **Stage 2** for the bidders who fulfill the criteria as above their financial bids shall be opened later in the presence of bidders or their representatives who choose to be present at the fixed date and time.

The contract shall be awarded to the Substantially Responsive Bid decided on the basis of most negative (-) value, or otherwise least positive (+) value, after arithmetically adding the Viability Gap Funding (VGF) of 5 years quoted by the bidder.

5. SCOPE OF WORK FOR BIDDER:-

The bidders will be responsible for:

- Assessing the existing condition of the RO plants and make repairs, replacements, if any required, to make it properly functional in all respects including UV treatment to provide treated water quality as per Annexure-II and sustaining the same for the duration of 5 years contract.
- Creating a network of service engineers, find and train the operator of the plant
- Plant operator will wear a uniform during the plant timings. Plant operator shall also be available at the plant 30 minutes prior to the time scheduled for water supply / distribution.
- Delivering potable water at plant site/at home (at agreed rates) that meets acceptable limits as per BIS norms & in case of Uranium WHO norms, at all times.
- Bidder will provide water in 20 liter jerry cans/any other utensils, the cost of which will be paid by registered users. The treated water shall be supplied @ Rs.0.15 per litre at the R.O. kiosk. Alternatively, Bidders shall provide water at the doorstep in the city @ Rs. 0.25 per litre, as chosen by beneficiaries.
- In case there is a change in rates of electricity by PSPCL, the rates of the treated water shall not be altered.

6. The main components of the RO plants under the scope of O&M work are as under:

RO System Components, Instrumentation & Controls.

(A) RO System Components	(B) Instrumentation & Controls
<ul style="list-style-type: none"> • Inlet Pump • Anti Scalant Dosing System • Fully Automatic Ultra filtration Unit • High Pressure Pump • Pressure Vessel • Membrane • pH correction system • Ultra Violet System • Cleaning in place system • Micron cartridge filter. • Activated carbon filter. • Raw Water Tank (minimum capacity as per Annexure-VI) • Product Water Tank (minimum storage as per Annexure-VI). • Piping from raw water tank to RO system • Piping from RO system to product water tank • Suitable enclosure for accommodating RO system and material storage 	<ul style="list-style-type: none"> • Pressure Gauges • Flow indicators • Timer for auto flush • High pressure switch and low pressure switch • Auto flushing system with solenoid valve • Electric control panel with "Am" meter, Voltmeter indicators, on off switch • Pressure control valve • Digital conductivity or TDS meter • Disposal of reject water from the RO Plant site to nearby pond after treating with Alum & Charcoal/ Carbon (Treatment Chamber). Subject to changes as per the new research & developments and decisions taken by the Department.

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7. RO System Requirements

- 7.1 The capacity of the plant shall remain as the capacities opening of RO product water given in **Annexure-I**. **However, the duration of the running of any RO plant may be increased on mutually agreed terms. However, no extra cost will be borne by MCB in that case.**
- 7.2 The technical specifications of each component of RO system for the capacity ranging 2000 LPH is given in **Section – IV**.
- 7.3 The bidder is advised to analyze the water samples on their own before quoting their rates. No extra claim will be entertained after the allotment of the work on this account.
- 7.4 The product water quality characteristics are given in Annexure-II. However, the total dissolved solids (TDS) of product water obtained from RO plant shall range between 100 to 250 mg per ltr in any case. The other chemical parameters including Uranium of product water shall be within limits mentioned in Annexure-II of this document.
- 7.5 The reject water should not exceed 25% at any time of the enforcement of contract. (It can be achieved by providing good quality of membrane as specified under clause 9.3 and through scientific recirculation of the reject water maintaining the quality standard of product water.)
- 7.6 The bidder has to operate and maintain the RO system for 5 years including the housing structure. He will also maintain the area around the RO site & landscape the same with plants.
- 7.7 This offer shall include all the possible expenses towards spares, replacement of membranes as required, consumables, repairing/ reconditioning if any required, repair of the tube well installed including its pump motor, electric panels etc., all accessories, office maintenance, Book keeping, cleanliness and sanitation at site and area around in 30 m distance. Agency have to submit NABL lab reports at own expenses. Electricity bills during the specified period of the 5 years. Engineer-in-charge shall be kept informed.
- 7.8 In addition to this, the bidder shall make available at plant site, all the times, a digital Pen type TDS meter for on the spot testing of product water. However, the product water quality will also be tested by the department in the Laboratories of the Municipal Corporation Bathinda or Department approved laboratories located at various places & the report of chemical examination from these laboratories shall be treated as final.
- 7.9 The water quality must confirm to acceptable limits as per BIS standards for Heavy metals and routine parameters and WHO standards for Uranium (read with clause 7.4 above).
- 7.10.1 The operation of tubewell / water source would be the responsibility of bidder inclusive of payment of electricity bills & repairs if any **during the period of 5 years**. The copy of receipt of payment of Electricity Bill shall be submitted to EIC within 10 days after the due date of payment.
- 7.10 a Where raw water is taken from existing tubewell and payment of electric bill will be made by the bidder for electricity consumed for running of RO Plants.

7.11 The RO membranes shall be cleaned every time when the flow rate of product water decreases by 15% of the capacity of the RO plant. For that purpose the bidder will maintain a Log Book at site in which daily flow rate of the product water shall be entered. The officer in charge from MCB may check the Log Book randomly. Otherwise in normal conditions of flow rate, RO Membranes shall be cleaned after every 3 months. Membrane Cleaning Sequence shall be as under:

1. Acid Cleaning
2. Flush
3. Alkaline Cleaning
4. Flush
5. Sanitizing
6. Flush

7.12 The bidder shall maintain the record of sale of treated water at RO plant site in which he will record that how much treated water has been sold to each and every card holder (consumer) on daily basis. MCB will occasionally check this record.

7.13 The system should ensure prevention of pollution of the downstream RO membranes caused by the presence of organic and microbiological pollutants in the raw water.

7.14 The system should ensure prevention of a majority of physical pollutants from entering into RO membranes so as to ensure clean RO membranes delivering consistent performance.

7.15 The system should generate minimal amount of effluents thus giving an environment-friendly solution.

7.16 A membrane integrity test must be conducted at define 90 days to check the integrity of the RO membrane to the satisfaction of Engineer-in-charge. Bidder shall maintain a record for this also. Bidder shall maintain the record of any kind of breakdown/repairs/replacements/washings/consumables etc. at his own cost.

7.17 The bidder shall run the plant regularly and supply the purified drinking water as per BIS 10500-2012/WHO norms (30 ppb in case of Uranium) without any breakdown of single day. Otherwise, penalty will be imposed by the concerned Executive Engineer as detailed below for the reasons other than departmental failures (source of raw water & electricity factor).

For 2000 LPH Capacity Plants	Rs. 5000/- Per day each
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Bidder shall maintain a record of breakdowns which will be checked by MCB and the committee formed in the clause 7.17

Penalty will be imposed maximum up to 90 days, performance security shall be forfeited thereafter and work shall be terminated.

7.18 If quality of treated water is not found as per the required standards mentioned in the Annexure-II by the department during routine/surprise checks, it will be considered as a breakdown of the RO Plant, and penalty as per clause 7.17 will be imposed on the bidder until the quality of treated water is restored as per the requirement.

- 7.19 In case of any dispute between Department & Agency, Commissioner will appoint a Superintending Engineer level officer to resolve such issues.
- 7.20 It will be the responsibility of the Department that there is no pending liability against electricity bills to be paid to PSPCL while handing over RO Plant to agency for 5 years O&M.
- 7.21 The bidder will maintain the existing technology of RO Plants which is a combination of Ultra filtration, RO and UV lamp.

8. **Making connection for raw water:** - Raw water sources are already existing at all the RO plants.

9. **Disposal of Reject Water:-**

The bidder shall be responsible to dispose off reject water into the nearby sewer after treating with Alum & Charcoal / Carbon (in Haudi/Treatment chamber wherever available) at its own cost in nearby sewerage system.

10. GENERAL REQUIRMENTS:

- 10.1 After completion of 5 years the bidder will hand over all the assets to the department in good working conditions.
- 10.2 The bidder shall perform all routine maintenance to ensure proper operation.
- 10.3 The bidder will employ the system operator on his own to operate the RO Plant. The requirement of the system operator shall be as under:
1. The system operator should have an Identity card and uniform.
 2. The bidder will provide training to the system operator.

The bidder shall ensure routine inspection of the equipment by the equipment supplier and the bidder will be solely responsible for the total efficiency of the RO Plants irrespective of the separate manufacturers of the various components of the RO Plants.

- 10.4 The product water shall be distributed daily between 7:00 am-10:00 am and 4:00 pm to 7:00 pm on all days from plant site (minimum for six hours) The agency may increase the working hours as per requirement of consumers, in order to provide adequate water to the consumers. The bidder shall have to provide all the services at the approved rates during the extended working hours.
- 10.5 The bidder will be responsible for maintaining the service levels regarding the response-time to access the log sheet information and provisions of water selling throughout the period of the contract.
- 10.6 The bidder shall provide trained manpower to maintain the equipment, change filters, and refill chemical storage tanks. Maintaining the required uptime of all the systems to ensure the provisions of quality services to the consumers are the main ingredients of the work.
- 10.7 The department would try to ensure 6 hours power supply from PSPCL. However, bidder is free to install any power backup at its own cost to increase the sale of water in power shortage/failure.

- 10.8 The bidder will be responsible for the supply of consumables and chemicals, and any other material required essentially to provide effective services.
- 10.9 The bidder will keep all the spare parts and consumables available with them for the entire O&M period of RO Plants.
- 10.10 The bidder shall provide and maintain the electrical and plumbing fittings of all types at the treatment plant in good working condition.
- 10.11 The bidder shall provide display boards giving general information and facilities available. These boards shall be of standard type.

10.12 Non- Discriminatory and Transparent Bidding Procedure

The Department shall ensure that the rules for the bidding process shall apply in a non-discriminatory and transparent manner. No confidential information relating to the project or the bidding process that has the potential to restrict competition or give any bidder any advantage shall be divulged anytime.

10.13 Prohibition against collusion with other prospective bidders.

Each bidder warrants by the bid that the contents of the bid and the bid amount have been arrived at independently. Any bid that is found to have been arrived at through consultation or collusion or any sort of understanding with any other prospective bidder for the purpose of restricting competition shall be deemed to be invalid and the bidder shall lose his security deposit/earnest money deposit.

10.14 Inducement

Any effort by a bidder to influence processing of bids or award of bid by the Department or any officer/agent/advisor thereof may result in the rejection of such bidder's bid. In such a situation involving the rejection of bid the bidder shall lose the bid security/ Earnest money deposit and would be potentially disqualified from bidding in all departments of the Govt. of Punjab.

11. OTHER REQUIRMENTS:

- 11.1 The record of treated water supplied to the city shall be maintained by the bidder. The record should always be updated, legible and be produced for inspection as and when asked for.
- 11.2 The preferable guaranteed period of membrane should be at least one year i.e it should be replaced after one year after taking over and further again after two and a half year i.e. 5 years after taking over and at the time of handing over to the Deptt. However if need be it may be replaced any time during the enforcement of the contract to achieve the prescribed quality standards. The preferred makes of spiral wound TFC-poly amide membrane to achieve 25% of reject water shall be General Electric hydronautics or equivalent.

12. SCOPE OF DEPARTMENT

- 3 phase power supply at one point i.e. up to Electric Meter installed by PSPCL for RO Plant.

- Department will make effort for availability of around 6 hours per day of power supply. However, same shall be operated by the bidder. The power consumption charges for raw water tubewell and RO plant shall also be borne by the bidder. However, the bidder is free to install power backup at his own cost.
- Before the commencement of the contract, department will pay all the pending liabilities like pending electricity bills etc.

13. PAYMENTS

13.1 The bidder will be responsible for the initial repair/replacements required at all of the RO plants and thereafter Operating and Maintaining the RO plants at its own cost.

The bidder will be responsible for the following items:

Sr. No.	Description
1	O&M of RO Plants arrangements including chemicals, materials and testing charges for water before and after treatment as BIS code for drinking water complete. The work envisaged under this contract are as follows a) Cleaning the unit of plant and tanks regularly and dosing of chemicals. b) O&M of plant by employing qualified operator. c) Regular Maintenance of pumps and replacement of minor parts of machinery.
2	Supply of spare parts and accessories as and when required for RO plant the replacement and re-fixing of defective spare parts is part of O&M. No separate payment will be paid.

Note: The bidders, before quoting the price for the tender, can conduct survey and inspect of the RO plants to assess their existing conditions so as to quote the correct price for the bid.

Under no circumstances, department will entertain any claim for replacement of any part / membrane/consumables / existing condition and will not pay for its cost.

14.2 PERFORMANCE GUARANTEE FOR FIVE YEARS OF OPERATION & MAINTAINANCE PERIOD:

The bidder shall provide contract performance guarantee in the shape of Bank Guarantee equivalent to 5% of the awarded cost or Rs.10, 00,000/- whichever is higher, valid up to 60 days beyond the date of completion period of O&M, within 10 days from the date of allotment which will be released after 60 days from the date of completion of the work of O&M.

Further, in case of (-) VGF, the Bidder shall provide additional Performance Bank Guarantee equivalent to (-)VGF amount for 5 years valid upto 60 days beyond date of completion.

14.3 The payments to the bidder or to the department as per the (+) or (-) VGF as quoted in the financial bid will be made as under:

For (+) VGF (to be paid to the bidder by the department as applicable)

- 30% of the (+) VGF quoted for the respective year at the end of 6 months from the date of starting of the respective year.
- 30% of the (+) VGF quoted for the respective year at the end of 9 months from the date of starting of the respective year.
- 40% of the (+) VGF quoted for the respective at the end of the respective year.

For (-) VGF (to be paid to the department by the bidder as applicable)

- 30% of the (-) VGF quoted for the respective year at the end of 6 months from the date of starting of the respective year.
- 30% of the (-) VGF quoted for the respective year at the end of 9 months from the date of starting of the respective year.
- 40% of the (-) VGF quoted for the respective at the end of the respective year.

14.4 A penalty on the bidder will be imposed @ 1½ % per month of the due amount, in case, the bidder fails to deposit (-) VGF to MCB, even after 30 days (grace period) of due date. Penalty will be calculated for the whole month and not on the pro rata basis. The Performance Bank Guarantee as per condition No.14.2 will be encashed in case the bidder fails to pay (-) VGF.

15*. Termination

15.1 The Employer or the Contractor may terminate the Contract if the other party causes a fundamental breach of the Contract.

15.2 Fundamental breaches of Contract include, but shall not be limited to the following:

- The Contractor stops work for 15 days when no stoppage of work is shown on the current program and the stoppage has not been authorized by the Engineer;
- The Engineer instructs the Contractor to delay the progress of the Works and the instruction is not withdrawn within 28 days;
- The Employer or the Contractor is made bankrupt or goes into liquidation other than for a reconstruction or amalgamation;
- A payment certified by the Engineer is not paid by the Employer to the Contractor within 56 days of the date of the Engineer's certificate;
- The Engineer gives Notice that failure to correct a particular Defect is a fundamental breach of Contract and the Contractor fails to correct it within a reasonable period of time determined by the Engineer;
- The Contractor does not maintain a security which is required;
- The Contractor has delayed the completion of works by the number of days for which the maximum amount of liquidated damages can be paid as defined in the Contract data; and
- If the Contractor, in the judgment of the Purchaser has engaged in fraud and corruption, as defined in GCC Clause 14*, in competing for or in executing the Contract.

- (i) Test reports of treated water samples are not provided to the employer as specified in this document.
- (j) If contractor removed any of the existing infrastructure from any of the RO plant site without prior approval of Engineer-in-charge.

15.3 When either party to the Contract gives notice of a breach of contract to the Engineer for a cause other than those listed under Sub Clause 15.2 above, the Engineer shall decide whether the breach is fundamental or not.

15.4 Notwithstanding the above, the Employer may terminate the Contract for convenience.

15.5 If the Contract is terminated the Contractor shall stop work immediately, make the Site safe and secure and leave the Site as soon as reasonably possible.

16. Payment upon Termination**

16.1 If the Contract is terminated because of a fundamental breach of Contract by the Contractor, the Engineer shall issue a certificate for the value of the work done less advance payments received up to the date of the issue of the certificate, less other recoveries due in terms of the contract, less taxes due to be deducted at source as per applicable law and less the percentage to apply to the work not completed as indicated in the Contract Data. Additional Liquidated Damages shall not apply. If the total amount due to the Employer exceeds any payment due to the Contractor the difference shall be a debt payable to the Employer.

16.2 If the Contract is terminated at the Employer's convenience or because of a fundamental breach of Contract by the Employer, the Engineer shall issue a certificate for the value of the work done, the reasonable cost of removal of Equipment, repatriation of the Contractor's personnel employed solely on the Works, and the Contractor's costs of protecting and securing the Works and less advance payments received up to the date of the certificate, less other recoveries due in terms of the contract and less taxes due to be deducted at source as per applicable law.

17. Corrupt or Fraudulent Practices

17.1 If the Employer determines that the Contractor has engaged in corrupt, fraudulent, collusive, coercive or obstructive practices, in competing for or in executing the Contract, then the Employer may, after giving 14 days notice to the Contractor, terminate the Contractor's employment under the Contract and expel him from the Site, and the provisions of Clause 15.5 shall apply.

17.2 If any employee of the Contractor be determined to have engaged in corrupt, fraudulent, collusive, coercive, or obstructive practice during the execution of the Works, then that employee shall be removed in accordance with Clause 18* [Personnel].

17.3 For the purposes of this Sub-Clause:

- (i) "corrupt practice"¹ is the offering, giving, receiving or soliciting, directly or indirectly, of anything of value to influence improperly the actions of another party;
- (ii) "fraudulent practice"² is any act or omission, including a misrepresentation, that knowingly or recklessly misleads, or attempts to mislead, a party to obtain a financial or other benefit or to avoid an obligation;
- (iii) "collusive practice"³ is an arrangement between two or more parties designed to achieve an improper purpose, including to influence improperly the actions of another party;
- (iv) "coercive practice"⁴ is impairing or harming, or threatening to impair or harm, directly or indirectly, any party or the property of the party to influence improperly the actions of a party;
- (v) "obstructive practice" is
 - (aa) deliberately destroying, falsifying, altering or concealing of evidence material to the investigation or making false statements to investigators in order to materially impede a Bank investigation into allegations of a corrupt, fraudulent, coercive or collusive practice; and/or threatening, harassing or intimidating any party to prevent it from disclosing its knowledge of matters relevant to the investigation or from pursuing the investigation; or
 - (bb) acts intended to materially impede the exercise of the Bank's inspection and audit rights provided for under Clause 19**
[Instructions, Inspections and Audits].

18. Personnel

- 18.1 The Contractor shall employ the key personnel named in the Schedule of Key Personnel as referred to in the Contract Data to carry out the functions stated in the Schedule or other personnel approved by the Engineer. The Engineer will approve any proposed replacement of key personnel only if their qualifications, abilities, and relevant experience are substantially equal to or better than those of the personnel listed in the Schedule.
- 18.2 If the Engineer asks the Contractor to remove a person who is a member of the Contractor's staff or his work force stating the reasons the Contractor shall ensure that the person leaves the Site within seven days and has no further connection with the work in the Contract.

19. Instructions

- 19.1 The Contractor shall carry out all instructions of the Engineer which comply with the applicable laws where the Site is located.

- 19.2 The Contractor shall permit the bank to inspect the Contractor's accounts and records relating to the performance of the Contractor and to have them audited by auditors appointed by the Bank, if so required by the Bank.

* GCC clause 18 from World Bank document GCC clause 9.1 (Personnel)

** GCC clause 19 from World Bank document GCC clause 23 (Instruction)

Annexure - I

Functional RO's with no liability which can be tendered for O&M purpose

Bid-1

Sr. No	Location	Capacity (LPH)
1.	Amarpura kothe, Jogga Nand Road	2000
2.	Thermal Colony, Gate no-2	2000
3.	Hazura Kapura Colony, gali no-6	2000
4.	in Park , Balla Ram Nagar, Guru gobind singh Nagar, Bti	2000
5.	Patel Nagar, Back Side , Bti	2000
6.	Jujhar Singh Nagar , Near Police Post,	2000
7.	Guru Argun Nagar, Power house Road,	2000
8.	Model Town Ph -2, near St Xavier school,	2000
9.	model Town Durga Mandir	2000
10.	Bhagu Road Near Puda office	2000
11.	Ajit Road, Gali no9	2000
12.	In Park Tikona enclave, Biwibala,	2000
13.	Monocha colony, in park	2000
14.	In Park ,Basant Vihar	2000
15.	Namdev Road, In Park , G. No-8	2000
16.	G.No-8A, Ganesh Nagar	2000
17.	In Park , Nai Basti Gali no -4	2000
18.	Mehina Chowk	2000
19.	Court Complex, Near Oriental Bank of Commerce	2000
20.	Des Raj School , Pujja Wala Mohalla	2000
21.	Guru Nanak Pura	2000
22.	Hazi Rattan ,Opp-gali no-10	2000
23.	Bangi Nagar, Near Sirsa Rly. Line	2000
24.	Guru Ki Nagri	2000

Corporation Engineer,
Municipal Corporation,
Bathinda

Bid-2

Sr. No	Location	Capacity (LPH)
1.	Bhai Mati Dass Nagar	2000
2.	Harbans Nagar	2000
3.	Naruana Road Gali no-7	2000
4.	Amarpura Basti Gali no-5	2000
5.	Balraj Nagar , Gali no-10	2000
6.	Purana Thana , Near Multania Pul	2000
7.	Quila Road near HW	2000
8.	Partap Nagar, Gali no-5, near school	2000
9.	Hans Nagar, gali no-1A	2000
10.	Paras Ram Nagar Chowk ,near Disposal,	2000
11.	Paras Ram Nagar, gali no-29	2000
12.	Janta Nagar, gali no-8 Near Canal	2000
13.	Sikandpura	2000
14.	Near Disposal, Amrik Singh Road, Veer colony	2000
15.	Vishal Nagar, In Park , Phase-1, Gali no-2	2000
16.	Guru Nanak nagar , Adjoining Gurudwara	2000
17.	Police Colony	2000
18.	Dharmshala, Lal Singh Basti.	2000
19.	Partap Nagar, Bachitra Guruduwara	2000
20.	Near OHSR, Parap Nagar	2000
21.	Joggi Nagar BK Colony, Gali no-1	2000
22.	Opp. Arjun Colony, Imp. Trust Colony, near Canal	2000
23.	Dhobhiana Basti , near Gurduwara	2000
24.	Dhobiana Basti , gali no-2	2000

Corporation Engineer,
Municipal Corporation,
Bathinda

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**PRODUCT WATER QUALITY AS PER BIS 10500-2012
WITH LATEST AMENDMENTS, IF ANY**

Sr. No.	Characteristic	Requirement (Acceptable Limit)	Remarks
1.	Colour, Hazen Units, <i>Max.</i>	5	Quarterly
2.	Odour	Agreeable	Quarterly
3.	Taste	Agreeable	Quarterly
4.	Turbidity NTU, <i>Max.</i>	1	Quarterly
5.	pH value	6.5 – 8.5	Quarterly
6.	Total Dissolved Solids, mg/l, <i>Max.</i>	500 mg/l	Quarterly
7.	Total Hardness (as CaCO ₃), mg/l, <i>Max.</i>	200 mg/l	Quarterly
8.	Total Alkalinity as Calcium Carbonate, mg/l, <i>Max.</i>	200 mg/l	Quarterly
9.	Iron (as Fe), mg/l, <i>Max.</i>	1.0 mg/l	Quarterly
10.	Chloride (as Cl), mg/l, <i>Max.</i>	250 mg/l	Quarterly
11.	Free Residual Chlorine, mg/l, <i>Min.</i>	0.2 mg/l	Daily
12.	Sulphate (as SO ₄), mg/l, <i>Max.</i>	200 mg/l	Quarterly
13.	Sulphide (as H ₂ S), mg/l, <i>Max.</i>	0.05 mg/l	Quarterly
14.	Nitrate (as NO ₃), mg/l, <i>Max.</i>	45 mg/l	Quarterly
15.	Fluoride (as F), mg/l, <i>Max.</i>	1.0 mg/l	Quarterly
16.	Calcium (as Ca), mg/l, <i>Max.</i>	75 mg/l	Quarterly
17.	Copper (as Cu), mg/l, <i>Max.</i>	0.05 mg/l	Quarterly
18.	Magnesium (as Mg), mg/l, <i>Max.</i>	30 mg/l	Quarterly
19.	Manganese (as Mn), mg/l, <i>Max.</i>	0.1 mg/l	Quarterly
20.	Mercury (as Hg), mg/l, <i>Max.</i>	0.001 mg/l	Quarterly
21.	Cadmium (as Cd), mg/l, <i>Max.</i>	0.003 mg/l	Quarterly
22.	Selenium (as Se), mg/l, <i>Max.</i>	0.01 mg/l	Quarterly
23.	Total Arsenic (as As), mg/l, <i>Max.</i>	0.01 mg/l	Quarterly
24.	Cyanide (as CN), mg/l, <i>Max.</i>	0.05 mg/l	Quarterly
25.	Lead (as Pb), mg/l, <i>Max.</i>	0.01 mg/l	Quarterly
26.	Zinc (as Zn), mg/l, <i>Max.</i>	5 mg/l	Quarterly
27.	Total Chromium (as Cr), mg/l, <i>Max.</i>	0.05 mg/l	Quarterly
28.	Aluminum (as Al), mg/l, <i>Max.</i>	0.03 mg/l	Quarterly
29.	Boron (as B), mg/l, <i>Max.</i>	0.5 mg/l	Quarterly
30.	Ammonia (as total Ammonia-N), mg/l, <i>Max.</i>	0.5 mg/l	Quarterly
31.	Barium (as Ba), mg/l, <i>Max.</i>	0.7 mg/l	Quarterly
32.	Silver (as Ag), mg/l, <i>Max.</i>	0.1 mg/l	Quarterly
33.	Molybdenum (as Mo), mg/l, <i>Max.</i>	0.07 mg/l	Quarterly
34.	Nickel (as Ni), mg/l, <i>Max.</i>	0.02 mg/l	Quarterly
35.	Phenolic Compound (as C ₆ H ₅ OH), mg/l, <i>Max.</i>	0.001 mg/l	Quarterly
36.	Polychlorinated biphenyls, mg/l, <i>Max.</i>	0.0005 mg/l	Quarterly
37.	Polynuclear aromatic Hydrocarbons (as PAH), mg/l, <i>Max.</i>	0.0001 mg/l	Quarterly
38.	Anionic Detergents (as MBAS), mg/l, <i>Max.</i>	0.2 mg/l	Quarterly
39.	Chloramines (as Cl ₂), mg/l, <i>Max.</i>	4.0 mg/l	Quarterly
40.	Trihalomethanes :		Quarterly
	(a) Bromoform, mg/l, <i>Max.</i>	0.1 mg/l	Quarterly
	(b) Dibromochloromethane, mg/l, <i>Max.</i>	0.1 mg/l	Quarterly
	(c) Bromodichloromethane, mg/l, <i>Max.</i>	0.06 mg/l	Quarterly
	(d) Chloroform, mg/l, <i>Max.</i>	0.2 mg/l	Quarterly
41.	Radioactive Materials :		Quarterly
	(a) Alpha emitters, Bq/l, <i>Max.</i>	0.1 Bq/l	Quarterly
	(b) Beta emitters, Bq/l, <i>Max.</i>	1.0 Bq/l	Quarterly
	(c) Uranium, µg/l or ppb (As per AERB)	60 µg/l or ppb	Quarterly
42.	Bacteriological :		Quarterly
	(a) E. Coli or thermo tolerant coliform bacteria	Shall not be	Quarterly

		detectable in any 100 ml sample	
	(b) Total Coliform bacteria	Shall not be detectable in any 100 ml sample	Quarterly
43.	Mineral Oil, mg/l, Max.	0.5 mg/l	Quarterly
44.	Pesticides	As per IS-10500 :2012	Quarterly

Note:- These tests shall be performed for each RO at given frequency. If any one test is not performed Rs. 1.00 lac each test each time penalty shall be imposed. This penalty may be recovered from Performance Bank Guarantee (PBG).





ANNEXURE-III

**BIDDER/SUPPLIER QUALIFICATION DATA
FOR
O&M OF REVERSE OSMOSIS (RO) PLANTS IN DIFFERENT WARDS IN BATHINDA CITY
(TO BE SUBMITTED ALONG WITH PRE-BID COMPLIANCE UNDERTAKING)**

1. Name of the firm:-
2. Address Head Office:-
3. Address of Bidder as mentioned in 3.2 (Technical Criteria) :-
4. Telephone Nos.
5. Fax No.
6. E-mail:-
7. Status of bidder as mentioned in 3.3 (Technical criteria) (Attach documentation)
8. Date of company's Incorporation:-
9. Date of starting business
10. Fields of professional expertise
11. Total Experience in implementing projects in the required project related fields i.e.
Operation and maintenance of RO Plants/Water supply schemes:-
12. Total Nos. of Project completed in the related field in last five years:-
13. Total Nos. of projects in hand:-
14. Total No. of Key personnel:-
15. Annual Financial Turnover (Rs. In lacs)
 - 1) 2015-16
 - 2) 2016-17
 - 3) 2017-18
16. Net worth (Average of last 5 years) :-
17. Value of one similar single work completed – Rs.....
18. Annual capacity –
Whether the bidder agency is currently possessing ISO-9001-2000 certificate - Y/N?
if yes, Certificate No. _____

Company Rubber Seal and Sign

Date:

Specifications of RO Plant Enclosure (room) & Technical Specification of RO Plant for the knowledge of the Bidders

- Specifications of RO plant enclosure (room).
- Covered area of RO Plant enclosure provided for fixing the R.O. Plant along with the required product water tanks:

Sr. No	Capacity of Plant	Min. Covered area
4	2000 LPH	38.00 m ²

TECHNICAL SPECIFICATION FOR EXISTING RO PLANTS

1.0	Bore well Pump	Function – for pumping out raw water from tubewell.
	Type	Submersible
	Number	1 No.
	Make	Grundfos/KSB/Crompton/Kirloskar
2.0	Raw Water Storage Tank	Function – for storage of raw water
	Type/MOC	Two/Three Layered PE tanks white / transparent in color made from virgin material of Food Grade Quality, suitable for the purpose of providing / storage of drinking / potable water.
	Control	Provision of Low Level and High Level Switch. The function of High Level switch is to stop the borewell pump when raw water tanks is full and function of low level switch is to prevent the inlet pump from running dry.
	Capacity	As given in Annexure
	Make	Sintex/Diplast/Aquaplast/Poly Plast/Frontier/Ganga
3.0	Inlet pump	Function – to feed water from storage tank to UF
	Type	Horizontal Centrifugal
	Number	1 no.
	MOC	SS 304
	Make	Grundfos/Ebara/DP/ITT Lowara/TES/KSB/Krloskar/Crompton Greaves
	Capacity	As per plant requirement
	Pressure and power	As per plant requirement
4.0	Granular Activated Carbon Block	Function – to remove pesticide, insecticide and biological impurities from water.
	Flow Rate	As per plant requirement
	MOC	FRP/Engineering grade plastic
	No. Of Cartridge Housing	As per plant requirement
	Make	Filtrex/Parker/Raxor/Gopani
5.0	Micron Cartridge Filter	Function – fine filtration of water for removal of suspended solids up to 5 micron size to prevent choking/blockage on UF Membrane

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	Flow Rate	As per plant requirement
	MOC	FRP/Engineering grade plastic
	No. Of Cartridge housing	Minimum 1 No. per plant
	Micro Rating	5 Micron
	Flow velocity	2.5 Mtr/Sec
	MOC of cartridge	PP
	Make	Zephyr/Ametak-USA/Gopani/Raxor/Purtex/Osmotic /PALL/Genpure/MMP/Parker
6.0	Ultra Filtration Membrane	Function – To remove Suspended/Bacterial/Fungal Impurities and enhance overall recovery of the system/overall life of RO membrane
	Flow Rate	As per Plant requirement
	Filtration Mode	Outside0In
	Membrane Material	PVDF (PVDF is preferred over PS since PVDF has more tensile strength and tolerance to chlorine thus enhancing the life of membrane)
	Normalized Filtration Pore Size	0.075 micron
	Material of Housing	PVC/ABS
	Operation Mode	Dead-end or cross flow, Interval or continues air scrubbing. The system shall be fully automatic so as to ensure hourly backwash for about 60 secs or as per operational requirements of membrane provider/input water quality whichever is earlier.
	Make	Dow/ Norrit/ Oltermare/ Mann and Hummel (Germany)/ Hydranautics/ Koch/ Inge
7.0	Antiscalant Dosing System	Function-to inhibit scaling of hardness salt and silica on RO Membranes
	Pump	1 set
	Make	ASIA LMI/ Sonder/ Prominent/ E-Dose/ Injecta/ Pentair/ Tacmina
	Quantity	1 No
	Type	Electronic Diaphragm Type
	Capacity	0-5 LPH
	Quantity of tank	1 No.
	Capacity of tank	100 ltr.
	MOC of tank	PE/FRP/MSRL/SS
8.0	High pressure pump	Function-to develop required pressure for reverse Osmosis on RO Membranes
	Type	Vertical Centrifugal Mustistage
	MOC	SS316
	Number	One No.
	Make	Grundfos/Ebara/ITT lowara/TES/Kirloskar/KSB/SUMO Japan/Germany) Crompton Greaves
	Capacity	As per Plant requirement
	Pressure and power	As per plant requirement
9.0	Pressure Vessel	Function - to house RO Membranes under pressure
	Item	RO Module consisting of membrane housing with RO membrane mounted on skid

	MOC	FRP
	Diameter	As per plant requirement
	Length	As per plant requirement
	Make	Codeline/Phoenix/Aqueous/Protec/Maxima/Advance
10.0	Membrane	Function – to remove dissolved salt, all kind of Heavy Metals from water by Reverse Osmosis to produce potable water having less dissolved salts/parameters confirming to BIS 10500:2012 Rev 2 (as per acceptable limit) and reject water having highly concentrated salt.
	Type	TFC, Polyamide
	Size	As per plant requirement
	Average Flux	<18 GFD
	Make	DOW Filmtec-USA,/Hydranautics/Mann and Hummel (Germany)/Oltremare/Toray-Japan
	Operating water Temperature	Ambient temperature
11.0	pH Correction system	Function – to enhance PH of RO permeate from 5.5-6 to 7-7.5 as per WHO guideline
	Pump	1 set
	Make	ASIA LMI/Sonder/Prominenet/E-Dose/Injecta/Pentair/Tacmina
	Quantity	1 No.
	Type	Electronic Diaphragm type
	Capacity	0-5 LPH
	Quantity	1 No.
	Capacity of tank	100 ltrs.
	MOC tank	PE/FRP/MSRL/SS
12.0	Ultra violate system	Function – to disinfect water, will kill bacteria and micro-organisms
	Capacity	As per plant requirement to serve potable water simultaneously to all the battery tap.
	Make	Alfa/Phillips/ACE Hygiene
13.0	Cleaning in place (CIP) System	Function – used for chemical cleaning of RO membranes over a period of time
	Quantity of tank	1 No.
	Capacity of tank	As per plant requirement
	MOC to tank	FRP/MSRL/SS
	Micron Cartridge Filter	
	Flow rate	As per plant requirement
	MOC	FRP/Engineering Grade Plastic
	No. Of Cartridge housing	As per plant requirement
	Micron Rating	5 Micron
	Flow velocity	2.5 Mtr/Sec
	MOC of cartridge	PP
14.0	Product water storage tank	Function – for storage of Product water from RO Plant
	Type/MOC	Two/Three Layered PE tanks white/transparent in

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		colour made from virgin material of Food Grade Quality, suitable for the purpose of providing/storage of drinking/potable water.
	Control	Provision of Low Level and High Level Switch. The function of High level switch is to stop the RO Plant when the product water tank is full and the function of low level switch is to start the RO Plant when the product water tank is empty.
	Capacity	As given in Annexure.
	Make	Sintex/Diplast/Aquaplast/Poly Plast/Frontier/Ganga
Instrumentation & Controls		
A	Pressure Gauges	Function – to measure pressure
	Quantity	Total 4 Nos at location and range as mentioned below
	Location	Pump outlet, UF outlet, High Pressure pump Discharge and RO Reject
A1	Range	0-7 Kg/cm ²
	Location	Pump outlet/UF outlet
	Quantity	2 Nos.
A2	Location	High pressure pump discharge and RO reject
	Range	0-20 kg/cm ²
	Make	Forbes Marshal/Waree/Inflo/Fiebig
	Quantity	2 Nos.
	MOC	SS
B	Flow Indicator	Function – to measure flow rate at location
	Quantity	3 No.
	Location	RO feed, RO product, Reject
	Type	Float type, panel mounted
	Max, operating emperature	40 degree centigrade
	Measuring points	RO Feed, RO Product, Reject
	Make	Flow Max/Blue & white/FIP/Aster/Eureka/GF

Section- III

Financial Bid

Financial bid

Municipal Corporation, Bathinda

Item Rate BoQ

Tender Inviting Authority: Corporation Engineer, Municipal Corporation, Bathinda

Name of Work: Operation and Maintenance of Reverse Osmosis (RO) Plants 24 Nos. situated in different wards of Bathinda city (As per Annexure – I, Bid-1)

Contract No:

Contract No.:						
Name of the Bidder/ Bidding Firm / Company :						
PRICE SCHEDULE						
(This BOQ template must not be modified/replaced by the bidder and the same should be uploaded after filling the relevent columns, else the bidder is liable to be rejected for this tender. Bidders are allowed to enter the Bidder Name and Values only)						
NUMBER #	TEXT #	NUMBER #	TEXT #	NUMBER #	NUMBER #	TEXT #
Sl. No.	Item Description	Quantity	Units	RATE in Figures To be entered by the Bidder including all taxes (Rate Per RO Per Annum) Rs. P	TOTAL AMOUNT Rs. P	TOTAL AMOUNT In Words
1	2	4	5	13	53	55
1	Operation and Maintenance of Reverse Osmosis (RO) Plants 24 Nos. situated in different wards of Bathinda city (As per Annexure – I , Bid-1) (Positive Rate)	24	Nos		0.00	INR Zero Only
2	Operation and Maintenance of Reverse Osmosis (RO) Plants 24 Nos. situated in different wards of Bathinda city (As per Annexure – I , Bid-1) (Negative Rate)	24	Nos		0.00	INR Zero Only
Total in Figures					0.00	INR Zero Only
Quoted Rate in Words		INR Zero Only				

Item Rate BoQ


Tender Inviting Authority: Corporation Engineer, Municipal Corporation, Bathinda

Name of Work: Operation and Maintenance of Reverse Osmosis (RO) Plants 24 Nos. situated in different wards of Bathinda city (As per Annexure – I, Bid-2)

Contract No:

Contract No:						
Name of the Bidder/ Bidding Firm / Company :						
PRICE SCHEDULE						
(This BOQ template must not be modified/replaced by the bidder and the same should be uploaded after filling the relevant columns, else the bidder is liable to be rejected for this tender. Bidders are allowed to enter the Bidder Name and Values only)						
NUMBER #	TEXT #	NUMBER #	TEXT #	NUMBER #	NUMBER #	TEXT #
Sl. No.	Item Description	Quantity	Units	RATE In Figures To be entered by the Bidder including all taxes (Rate Per RO Per Annum Rs. P	TOTAL AMOUNT Rs. P	TOTAL AMOUNT In Words
1	2	4	5	13	53	55
1	Operation and Maintenance of Reverse Osmosis (RO) Plants 24 Nos. situated in different wards of Bathinda city (As per Annexure – I , Bid-2) (Positive Rate)	24	Nos		0.00	INR Zero Only
2	Operation and Maintenance of Reverse Osmosis (RO) Plants 24 Nos. situated in different wards of Bathinda city (As per Annexure – I , Bid-2) (Negative Rate)	24	Nos		0.00	INR Zero Only
Total in Figures					0.00	INR Zero Only
Quoted Rate in Words		INR Zero Only				

Section – IV Contract Document & Conditions of Contract

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Section – V

Name of Contractor _____

Name of Work: - **Operation and Maintenance of Reverse Osmosis Plants 48 Nos. (Number may increase or decrease) situated in different wards of Bathinda city for the contract period of 5 years.**

Municipal Corporation Bathinda, Punjab

Superintendent

Corporation Engineer,
Municipal Corporation,
Bathinda

(FROM R-1)
LUMP SUM RATE TENDER

AND

Div.Acctt.

CONTRACT FOR WORKS.

This agreement made this.....day of between

.....
(hereinafter called the "Contractor") of the one part and Municipal Corporation, Bathinda through Commissioner (Hereinafter called "Corporation Engineer") of the other part:

Where as the contractor has offered to execute the Const. of and the Government has accepted his tendered offer for the execution of afore mentioned works.

NOW THIS AGREEMENT WITNESSETH AS FOLLOWS:-

1. In this agreement, words and expression shall have the same meanings as are respectively assigned to them as per the general conditions of contract hereinafter referred to:
2. The following documents shall be deemed to form and be construed as part of this Agreement:-
 - (i) The "Notice Inviting Tender" & "instructions to tenderers" as at Annexure 'A' to this agreement.
 - (ii) "Item/Percentage Rate tender for works" at annexure 'B' to this agreement.
 - (iii) "Conditions of contract" as at annexure 'C' to this agreement.

3. The work will be executed strictly according to specifications and drawings relating to the work as indicated in the "Notice Inviting Tender". The schedule of items of work to be carried out will be as per approved "Notice Inviting Tender". The material to be issued from Departmental Stores for use on work will be as shown in the approved "Notice Inviting Tender".
 4. All correspondence and modifications of tendered offer and acceptance letter will form part of this Agreement.
 5. In considerations of the payments to be made by the Government to the contractor in respect of completed work, or item of work, the contractor hereby covenants with the government to execute the work in conformity in all respects with the provisions of this Agreement.
 6. The Government hereby covenants to pay the contractor, in consideration of execution of works, the price in the manner as specified in this Agreement.
- In witness thereof the parties hereto set their respective hands and seals on the, day and year first above written.

In the presence of

Signature of Contractor

1. NAME & ADDRESS

2. _____

Signed sealed & delivered by _____ in
the capacity of _____

In presence of _____ Corporation Engineer

NAME & ADDRESS

1. _____

For & on behalf of Commissioner, Municipal Corporation, Bathinda.

CONDITIONS OF CONTRACT

Definations:

1. The "Contract" means the documents forming the tendered offer and acceptance thereof constituting a binding contract between the Commissioner, Municipal Corporation, Bathinda and the contractor. The tender documents including the conditions, the drawings, design, the specifications supplemented with instructions issued from time to time by the Engineer in-Charge shall be binding on the parties in the stated order of precedence. All these/documents taken together with the tendered offer and its acceptance shall be deemed to form the contract and shall be complementary to one another.
2. "Completed Works" shall mean, the work completed in all respects as per laid down specifications, drawings, approved N.I.T. and to the entire satisfaction of Engineer-in-Charge.
3. The "Contractor" shall mean the individual or firm or company whether incorporated or not, under taking the work and shall include the legal personal representative or the persons comprising such firm or company or the successors of such firm or company as well as the assignees of such individual or firm or company whose tendered offer has been accepted.
4. The "Completion date" is the date when the Engineer-in-Charge certifies that the work can be put to use, after receipt of intimation from the contractor regarding its completion.
5. "Communication" between parties are the written a signed letter, notices, reminders, memoranda and instructions recorded in the instructions book or books kept at site.
6. "Days & months" are calendar days and calendar months.
7. The "Engineer-in-Charge" means The Corporation Engineer, who shall supervise the work and administers the contract with the assistance of his authorised subordinates, who shall be inCharge of the work and who shall sign the contract on behalf of the Governor of Punjab
8. The "Site" shall mean the land and or other places in, on, into or through which work is to be executed under the contract or any a adjacent land, path or street, which may be allowed to be used for the purpose of carrying out the contract.
9. "Schedule of material" shall mean the list of materials which are to be issued from the Deptt. store to the contractor for genuine use on the work as per Annexure – "E".
10. The "Start date" is the date when contract came into existence upon the issue of "letter of acceptance" by the Engineer-in-Charge.
11. "Schedule of items of work" shall mean the items of work to be executed at site of work pertaining to work allotted to the contractor.
12. The "Works or work" shall unless the context otherwise requires mean what the contractor is required to execute and hand over to the Municipal Corporation, Bathinda.

Note: In interpreting these "conditions of contract" singular also means plural, male means female and vice versa.

USES OF CONTRACT

Clause-1 Performance Guarantee and Security:

The earnest money deposited by the bidder shall be treated as the performance guarantee for operation & maintenance period of the plant. In addition bidder has to provide contract performance guarantee in the shape of Bank Guarantee with the amounts before signing the agreement.

Clause-2 COMPENSATION FOR DELAY

The time allowed for carrying out the work shall be the essence of the contract and shall be strictly observed. It shall be reckoned from the date on which the order to commence the work is given to the contractor who shall ensure all due diligence to achieve progress of work not less than indicated below:-

- (i) On lapse of 25% contractual time: 20%
- (ii) On lapse of 50% contractual time: 50%
- (iii) On lapse of 75% contractual time: 80%
- (iv) On lapse of full contractual time : 100%

In case of default, the contractor shall notwithstanding issuance of a prior notice in this regard pay prospectively as liquidated damages, an amount upto 1% of the amount of contract or such lesser amount that the Engineer-in-Charge may levy, for every week that the work remains uncommenced after 10 days of the issue of acceptance letter or the minimum progress of work stated above is not achieved or the work remains unfinished after the completion date. In case of continued default or shortfall in progress, the Engineer-in-Charge may go on enhancing the levy of liquidated damages prospectively, each time limited to 1% of the total estimated amount of work per week of further default subject to maximum limit of five percent of the amount of the contract. The Superintending Engineer-in-Charge of the work on representation from contractor, after hearing both the parties i.e. Engineer-in-Charge and contractor may reduce the amount of liquidated damages and his decision in writing shall be final.

Clause-3 BREACH OF CONTRACT-LEVY OF DAMAGES

The Engineer-in-Charge may, without prejudice to other right and remedies, under the provisions of the contract or otherwise after issuing a notice in writing and getting the final bill prepared absolutely determine the contract after levying compensation for damages of five percent of the amount of the contract, if the contractor, commits breach of contract under any clause of the contract or in any of the following cases:

- i. If the contractor suspends the execution of the work and inspite of having been given a notice in writing by the Engineer-in-Charge fails to resume the work within ten days of the issue of the said notice.
- ii. If the contractor, having been given a notice in writing by the Engineer-in-Charge, fails to rectify, reconstruct or replace any defective work or continues the execution of work in an inefficient, improper, unworkman-like manner or not in accordance with sound Engineering practices or without complying with the directions and requirements within a period of 10 days of the issue of said notice.
- iii. If the contractor being a company shall pass a resolution or a court shall make an order to the effect that the company shall be wound up or if a receiver or a manager on behalf of the creditor shall be appointed or if circumstances shall arise which entitle the court of creditor to appoint a receiver or manager or to make a winding up order.
- iv. If the contractor commits any of acts or defaults mentioned in clause 19 and 23 thereof Provided further, that in case action under clause 2 as aforesaid levy of liquidated damages is also taken, total amount of liquidated damages and compensation for

breach of contract under both the clauses shall be limited to 7.5 percent of the amount of the contract or the amount available with the Deptt. including Bank Guarantee which ever is less. The requisite amount for which the contractor may become liable shall be realized by encashing the Bank Guarantee furnished by the contractor as specified in clause 1 above and/or from other amounts due to the contractor/in respect of this work or any other work, undertaken for the Government.

After the termination of the contract under this clause, the department shall be at liberty to (i) get the balance work executed through some other contractual agency or through departmental means or to (ii) abandon the balance work altogether or to (iii) modify the design and scope of the work in any manner. The contractor shall have no claim against the department for treating the work in any manner deemed fit.

Clause-4 LIABILITY OF CONTRACTOR AND POWERS TO TAKE OVER AND DISPOSE OFF CONTRACTOR PLANT.

In any case, in which any of the powers conferred upon the Engineer-in-Charge by Clause-3 hereof shall have become exerciseable and the shall not be exercised, the non exercise thereof shall not constitute a waiver of any of the conditions hereof and such powers shall, notwithstanding, be exerciseable in the event of any future case or default on the part of the contractor, for which by any clause or clauses, hereof, he is declared liable to pay compensation and the liability of the contractor for past and future compensation shall remain unaffected.

In the event of the Engineer-in-Charge putting in force all or any of the powers vested in him under the preceding clauses, he may, if he so desires, after giving a notice-in writing to the contractor take possession of any or all tools, plant, materials and stores in or upon the works or the site thereof belonging to the contractor or produced by him and intended to be used for execution of the work on any part hereof, paying or allowing for the same in account at the contract rates or in case of these not being applicable, at current market rates to be certified by the Engineer-in-Charge, whose certificates thereof shall be final. Otherwise the Engineer-in-Charge may, by giving a notice in writing to the contractor or his agent at the site of work, require him to remove such tools, plants, materials or stores from the premises within the time specified in notice. In the event of the contractor failing to comply with any such requisition, the Engineer-in-Charge may get them removed at the contractor's expense or sell them by auction or private sale on account of the contractor and at his risk in all respects. The certificate of the Engineer-in-Charge as to the expense of any such removal and the amount of proceeds and expense of any such sale shall be final & conclusive against the contractor.

Clause-5 EXTENSION OF TIME

If the contractor shall desire an extension of the time for completion of the work on the ground of his having been unavoidably hindered in its execution or any other ground, he shall apply in writing to the Engineer-in-Charge (with corresponding time extension in Performance Bank Guarantee) within thirty days of the date of hindrance (but before the expiry of time limit) on account of which he desires such extension as aforesaid and the Superintending Engineer shall, if in his opinion (which shall be final) reasonable grounds be shown therefore, authorise such extension of time, as may in his opinion be necessary or proper. No application for extension of time received late or addressed to the Sub-Divisional Engineer or any officer other than the Engineer-in-Charge shall be considered valid. If the contractor fails to apply for extension as aforesaid and the work is not completed within the time limit, the contract shall be determined absolutely after action under clauses 2 and 3 above.

Clause-6 COMPLETION CERTIFICATE

Within ten days of the completion of work, the contractor shall give notice of such completion to the Engineer-in-Charge & within 30 days of the receipt of such notice, the Engineer-in-Charge shall inspect the work and if there is no defect in the work, shall furnish the contractor with a certificate of completion, otherwise a provisional certificate of completion indicating the defects (a) to be rectified by the contractor and/or (b) for which payment will be made at reduced rates shall be issued.

However no certificate provisional or otherwise shall be issued, nor shall the work be considered to be complete until the contractor shall have removed, from the premises on which the work shall be executed, all scaffolding, surplus materials, rubbish and all huts and sanitary arrangements set up for his labour on the site and cleaned off the dirt from all wood-work, doors and windows, walls, floor or other parts of the building, in upon or about which the work is to be executed or of which he may have had possession for the purpose of execution thereof and not until the works shall have been measured by the Engineer-in-Charge. If the contractor shall fail to comply with the requirements of this clause as to the removal of scaffolding, surplus material and rubbish, all huts and sanitary arrangements and cleaning off as aforesaid before the date fixed for the completion of work, the Engineer-in-Charge may at the expense of the contractor get cleared off such dirt as aforesaid and contractor shall forthwith pay the amount of all expenses so incurred and shall have no claim in respect of any such scaffolding or surplus materials as aforesaid except for any sum actually realized by the sale proceed thereof.

Clause-6A WINDING UP OF THE CONTRACT

On completion & commissioning of the plant, the contractor shall ensure to remove all defects, shortcomings or imperfections. He shall clear the site of all temporary works, pits, godowns, offices, sanitary, scaffolding, debris, waste material and installations. However on completion of contract period of 7 years after commissioning of the plant, the contractor shall handover the same to Engineer-in-charge or his authorised representative in good running conditions.

Clause-7 Substituted (refer clause 9)

Clause-8 WORK TO BE EXECUTED IN ACCORDANCE WITH SPECIFICATIONS, DRAWINGS ORDER ETC.

The contractor shall execute the whole and every part of the work in the most substantial and workman like manner both as regards, materials and labour and otherwise in every respect in strict accordance with the Punjab PWD specifications latest Editions. The contractor shall also confirm exactly, fully and faithfully to the designs, drawings and instructions in writing relating to the work signed by the Engineer-in-Charge and lodged in his office and to which the contractor shall be entitled to have access during the office hours or on the site of work. The contractor shall be furnished free of charge one copy of all such drawings and such specifications as are not included in the printed Punjab P.W.D. specifications. He shall, if he so requires, be entitle at his own expenses to make or cause to be made copies of the drawings, designs, specifications and instructions as aforesaid.

For ensuring the requisite quality of construction, the material used in works shall be subjected to quality control tests for material and workmanship tests as laid down in Punjab P.W.D. Specification as amended from time to time or the relevant standards laid down by the Bureau of India Standards/Hand Book of Quality Controls for construction of roads and run way I.R.C. Latest Edition or Instructions issued under the order of the Chief Engineer, Punjab P.W.D. (B&R), by the Engineerin-Charge and/or in conjunction with the quality control cell of Punjab P.W.D. (B&R)/Pb W/S & Sanitation Deptt./Irrigation Deptt. The contractor shall provide all help and assistance in proceeding with required tests. The contractor shall set up a quality control

field laboratory equipped at least with the test equipment indicated into these "Condition of Contract". Annexure-I and employ trained staff to carry out periodical tests as per directions and procedures laid down by the quality control cell of the Chief Engineer's Office. The records shall be maintained in the prescribed formats and copies there of covering the work done in each month shall be submitted with the bills.

Clause 9 REMOVAL OF EMPLOYEES / WORKMEN

The Engineer-in-Charge shall have full powers at all times to object to the employment of any workmen, foremen or other employees on the work by contractor, and if the contractor shall receive notice in writing from the Engineer-in-Charge requiring the removal of any such person from the work, the contractor shall comply with the order forthwith. No such workmen/foremen or other employees, after his removal from the work by order of the Engineer-in-Charge shall be re-employed or reinstated on the work by the contractor at any time except with the previous approval in writing of the Engineer-in-Charge. The contractor shall not be entitled to demand the reason from the Engineer-in-Charge for requiring the removal of any such workman/foreman or any other employees.

Clause- 10 ALTERNATION IN SPECIFICATION AND DESIGNS

The Engineer-in-charge shall have power to make any alternations, omissions from, additions to or substitutions for the original specifications, drawings, design and instructions that may appear to be necessary advisable during the progress of work, and the contractor shall be bound to carry out the work in accordance with any instruction which may be to him in writing, signed by the Engineer-in-charge. Such alternations / additions or substitutions shall not invalidate the contract and any altered, addition or substitute or work shall be carried out by the contractor on the same conditions in all respects on which he agreed to do the main work and at the same rates as are specified in tender for the main work. the time of completion of the work shall be extended on the proportion that the altered, addition or substituted works bears to the original contract work and the certificate of Engineer-in-charge shall be conclusive as to such proportion. The rates of such additional, altered or substituted work shall be determined in accordance with following provisions in their respective order.

- i. If the rates for the additional, altered or substituted work are specified in the contract for the work, the contractor is bound to carry out the additional, altered or substituted work at the same rates as are specified in the contract for the work.
- ii. If the rates for the additional, altered or substituted work are not specifically provided in the contract for the work, the rates will be derived from the rates for a similar class of work as are specified in the contract for the work.
- iii. If the rates cannot be determine as provided in (i) and (ii) above, then such work shall be paid or at the rate entered in common schedule of the rates minus/plus the percentage rate at which the bid has been accepted.
- iv. If the rate for the altered, addition or substituted work cannot be determined in the manner specified in clauses (i) (ii) (iii) above, then the contractor shall within 7 days of the date of his receipt of the order to carry out the work inform the Engineer-in-charge of the rates or rates which he intends to charge for such class of work supported by analysis of the rate in support of rates / claimed. The Engineer-in-charge shall determined the rate or rates on the basis of prevalent market rates and pay the contractor accordingly.

However, the Engineer-in-charge, by notice in writing will be at liberty to cancel the order given to contractor to carry out such class of work and arrange to carry out in such manner as he may consider advisable, provided always that if the contractor shall have

commences work or incurred any expenditure regard there to before the rates shall have been so determined then in such case he shall be entitled to be paid in respect of the work carried out or expenditure incurred by him prior to the date of determination of the rates as aforesaid according to such rates or rates as shall be fixed by Engineer-in-charge. In the event of dispute, the decision of the Superintending Engineer of the circle shall be final.

Clause – 11 NO COMPENSATION FOR ALTERATION IN OR RESTRICTION IN WORKS

If at any time, after the commencement of the work the Government shall for any reason what-so-ever not require the whole or part thereof as specified in the contract to be carried out, the Engineer-in-Charge shall give notice in writing of the fact to the Contractor, he shall have no claim to any payment or compensation what-so-ever on account of any profit or advantage which he might have derived from the execution of the work in full, but which he did not derive in consequence of the full amount of the work not having been carried out, neither shall he have any claim for compensation by reason of any alternation having been made in the original specifications, drawings, designs and instructions, which shall involve any curtailment of the work originally contemplated.

Clause-12 ACTION AND COMPENSATION PAYABLE IN CASE OF BAD WORK

If it shall appear to the Engineer-in-Charge, or his subordinate in-Charge of the work that any work has been executed with unsound, Imperfect, unskillful workmanship or with materials of any inferior description or that any articles or materials provided by the contractor for the execution of work are unsound or of a quality inferior to that contracted for or otherwise not in accordance with the contract, the contractor shall, on demand in writing by the Engineer-in-Charge specifying the work, materials or articles complained or not withstanding that the same have been inadvertently passed, certified and paid for, forthwith rectify or remove and reconstruct the work so specified in whole or in part, as the case may require or as the case may be, remove the materials or articles so specified and provide other proper and suitable materials or articles at his own proper charge and cost. In the event of his failing to do so, within a period to be specified by the Engineer-in-Charge in his demand

aforesaid, the contractor shall be liable to pay compensation at the rate of one percent of the estimated amount for every week not exceeding ten weeks, while his failure to do so shall continue and in the case of such failure, the Engineer-in-Charge may rectify or remove and re-execute the work or remove and replace with others, the materials or articles complained of as the case may be at the risk and expense in all respects of the contractor.

Clause-13 WORKS TO BE OPEN TO INSPECTION

All work under or in course of execution or executed in pursuance of the contract shall at all times be open to the inspection and supervision of the Engineer-in-Charge and his senior/subordinates and the contractor shall at all times during the usual working hours and at all other times at which reasonable notice of the intention of the Engineer-in-Charge or his senior/subordinates to visit the works shall have been given to the contractor, either himself be present to receive orders and instructions or have a responsible agent, duly accredited in writing, present for that purpose. Orders given to a Contractor's agent shall be considered to have the same force as if they had been given to the contractor himself.

Clause 14 NOTICE TO BE GIVEN BEFORE WORK IS COVERED UP

The contractor shall give not less than 10 days notice in writing to the Engineer-in-Charge or his subordinate in-Charge of the work before covering up or otherwise placing

beyond the reach of measurement any work in order that the same may be measured and correct dimensions thereof may be taken before the same is so covered up or placed beyond the reach of measurement and shall not cover up or place beyond the reach of measurement any work without the consent in writing of the Engineer-in-Charge or his subordinate in Charge of the work and if any work shall be covered up or, placed beyond the reach of measurement, without such notice having been given or consent obtained, the same shall be uncovered at contractor's expense or in default thereof no payment or allowance shall be made for such work or of the material with which the same was executed.

Clause-15 LIABILITY FOR DAMAGE AND IMPERFECTION FOR THREE MONTHS AFTER CERTIFICATE

If the Contractor or his workmen shall break, deface, injure or destroy any part of a building in which he may be working or any building, road, fence enclosure or green grass land, water pipes, cables, drains, electric or telephone posts or wires, trees or cultivated ground contiguous to the premises on which the work or any part of it is being executed or if any damages shall happen to the work, while in progress from any cause what-so-ever or any defect. Imperfection or other faults appear in the work within three months after a certificate, final or other of its completion shall have been given by the Engineer-in-Charge the contractor shall make the same good at his own expense or default, the Engineer-in-Charge may cause, the same to be made good by other workmen and deduct the expenses incurred both on Labour and Material (for which the certificate of the Engineer-in-Charge shall be final) from any sums that may be then due or at any, thereafter may become due to the contractor from his security deposit.

Clause-16 CONTRACTORS TO SUPPLY MATERIALS, PLANT, SCAFFOLDINGS

The contractor shall arrange and supply at his own cost all materials (except such specific materials as may be issued from the stores of the Engineer-in-Charge) Plant, tools, appliances, implements, ladders, cordage, tackle, scaffoldings, water and power supply and temporary works requisite or proper for effective execution of the work, Whether original, altered or substituted and whether included in the specification or other documents forming part of the contract or referred to these conditions or not all which may be necessary for the purpose of satisfying or complying with the requirements of the Engineer-in-Charge as to any matter which under these conditions he is entitled to be satisfied or which he is entitled to require to together with the carriage thereof to and from the work. The contractor shall also supply free of Charge the requisite number of persons with the means and materials necessary for the purpose of setting out works on counting, weighing and assistance in the measurements or examination at any time or from time to time of the work or materials. Failing his so doing the same may be provided by the Engineer-in-Charge at the expense of the contractor and this expense may be deducted from any amount due to the contractor under the contractor from his security deposit. The contractor shall also provide necessary fencing and lights required to protect the public from accident and shall be bound to bear the expenses of defence of every suit, action or other proceeding at law that may be brought by any person for injury sustained owing to neglect of the above precautions and to pay any damages and cost which may be awarded in any such suit, action or proceedings to any such person or which may, with the consent of the contractor be paid to compromise any claim by any such person.

Clause-17 LABOUR LAWS

The contractor shall comply with all the provisions of minimum wages Act 1948, Workman's Compensation Act 1923, Contract labour (Regulation and Abolition) Act 1970 and the rules framed there under, the payment of wages Act 1936, Employees liability Act 1938, Maternity Benefits Act 1961. The apprentices Act 1961 and rules framed there under and the Industrial Disputes 1947. He shall also make satisfactory arrangements for labour huts, protection of health and sanitary arrangement for the workmen employed on the work.

In every case in which by virtue of provisions of the Contract Labour (Regulation and Abolition) Act 1970 and of the contract labour Rules, Government is obliged to pay any amount of wages to a workman employed by the contractor in execution of works or to incur any expenditure in providing welfare and health amenities required to be provided under the above said act and the rules under the PWD Contractor's Labour Regulations or under the rules framed by the Government from time to time for the protection of health and sanitary arrangements for workers employed by PWD Contractor. The Government will recover from the contractor the amount of wages so paid or the expenditure so incurred under without prejudice to the rights of the Government under section 20 Sub-section (2) and section 21 Sub-section (4) of the Contractor Labour (Regulation and Abolition) Act 1970. Government shall be at liberty to recover such amount or part thereof by deducting it from the security deposit or from any sum due by Government to the contractor whether under this contract or otherwise. Government shall not be bound to contest any claim made against it under section 20 sub section(1) and section 21 Sub section (4) of the said Act except on the written request of the contractor and upon his giving to the Government full security for all costs for which the Government might become liable in contesting such claim.

Clause-18 CONTRACTOR LIABLE FOR PAYMENT OF COMPENSATION TO INJURED WORKMAN OR IN CASE OF DEATH

In every case in which by virtue of the provision of the section 12, Sub-section (1) of the workman's compensation Act 1922, The Government is obliged to pay compensation to a workman employed by the contractor in execution of work, the Government will recover from the contractor the amount of compensation so paid and without prejudice to the rights of Government under section 12, subsection(ii) of the said Act. The Government shall be at liberty to recover such amount of any part thereof by deducting if from the security deposit or from any sums due by the Govt. to the contractor whether under this contract or otherwise Government shall not be bound to contest any claim made against it under section 12, Sub-section (1) of the said Act except on the written request of the contractor and upon his giving to Government full security for all costs for which the Government might become liable in consequence of contesting such claim.

Clause-19 WORK NOT BE SUB-LET

The contract shall not be assigned or sub-let without the written approval of the Engineer-in-Charge Employment of labour on piece rate basis shall not however be deemed sub-letting if the contractor shall assign or sublet his contract or attempts to do so without the approval as aforesaid or become insolvent or commence any on solvency proceedings or make any composition with his creditors or attempts to do so or if any bribe, gratuity, gift, loan, perquisite, reward or advantage, pecuniary or otherwise, shall either directly or indirectly be given, promised or offered by the contractor or any of his servants or agents to any public officer or person in the employ of the Government in any way relating to his office or employment or if any such officer or person shall become in any way directly or indirectly interested in the contract, the Engineer-in-Charge may absolutely there-upon terminate the contract as specified in clause 3 and in the event the said course being adopted, the consequences specified in the said clause 3 shall ensure.

Clause-20 COMPENSATION CONSIDERED REASONABLE WITHOUT REFERENCE TO ACTUAL LOSS

All sum payable by way of compensation under any of these clauses shall be considered as reasonable compensation to be applied to the use of Government without reference to the actual loss or damage sustained and whether or not any damage shall have been sustained.

Clause-21 DEDUCTIONS OF GOVT. DUES ON ANY ACCOUNT WHATESOEVER TO BE PERMISSIBLE

Any excess payment made to the contractor inadvertently or otherwise under this contract or on any account what-so-ever and any other sum found to be due to the Government by the contractor in respect of this contract or any other contract or work-order or on any account what-so-ever may be deducted from any sum payable by the Government to the contractor either in respect of this contract or any work order or contract or on any other account by any other department of the Government.

Clause-22 CHANGE IN CONSTITUTION

Where the contractor is a partnership firm, the previous approval in writing of Engineer-in-Charge, shall be obtained before any change is made in the constitution of the firm where the contractor is an individual or a Hindu-Undivided Family business concern, such approval as aforesaid shall likewise be obtained before the contractor enters into any partnership agreement, where-under the partnership firm would have the right to carry out the work hereby undertaken by the contractor. If previous approval as aforesaid is not obtained, the contract shall be deemed to have been assigned in contravention of clause 19 hereof and the same action may be taken and the same consequences shall ensure as provided in the said clause-19.

Clause-23 DIRECTIONS OF THE SUPERINTENDING ENGINEER

All works to be executed under the contract shall be executed under the direction and subject to the approval in all respects of the Superintending Engineer of the circle who shall be entitled to direct at what point or points and in what manner they are to be commenced and from time to time carried out.

Clause-24A EXTRA - ORDINARY CLAIMS

No claim for payment of an extra-ordinary nature, such as claims for bonus, for extra labour employed in completing the work before the expiry of the contractual period at the request of Engineer-in-Charge or claims for compensation where work has been temporarily brought to a standstill though no fault of the contractor, shall be allowed unless and to the extent that the same shall have been expressly sanctioned by the Government under the signature of one of its Secretaries.

Clause-25 DISPUTES AND ARBITRATION

- i. If any dispute or difference of any kind what-so-ever shall arise between the Government/its authorised representative and the contractor in connection with or arising out of this contract or the execution of work there under.
- ii. Whether before its commencement or during the progress of work or after the termination, abandonment or breach of the contract, it shall, in the first instance, be referred for settlement to the Engineer-in-Charge of the work and he shall, within a period of sixty days after being requested in writing by the contractor to do so, convey his decision to the contractor. Such decision in respect of every matter so referred shall, subject to arbitration as hereinafter provided, be final and binding upon the contractor. In case the work is already in progress, the contractor shall proceed with the execution of the work on receipt of the decision of the Engineer-in-Charge as aforesaid with all due diligence, whether any of the parties requires arbitration as herein-after provided or not.
- iii. If the Engineer-in-Charge has conveyed his decision to the contractor and no claim for arbitration has been filed by the contractor within a period of sixty days from the receipt

of the letter communicating the decision, the said decision shall be final and binding upon the contractor and will not be a subject matter of arbitration at all.

- iv. If the Engineer-in-Charge fails to convey his decision within a period of sixty days after being requested as aforesaid the contractor may within further sixty days of the expiry of the final sixty days from the date on which the said request was made by the contractor refer the dispute for arbitration as herein-after provided.
- v. All disputes or differences in respect of which the decision is not final and conclusive shall, at the request of either party made in a communication sent through registered A.D. post, be referred to the sole arbitration of the Corporation Engineer, Municipal Corporation, Bathinda acting as such at the time of reference unless debarred from acting as an Arbitrator by an order of the Commissioner, in which event the Engineer in charge shall appoint any other technical officer to act as an arbitrator on receipt of a request from either party.
- vi. Chief Engineer-in-Charge of works shall have the authority to change of arbitrator on an application by either the contractor or the Engineer-in-Charge requesting change of arbitrator giving reasons there of, either before the start of the arbitration proceedings or during the course of such proceedings. The arbitration proceedings would stand suspended as soon as an application for change of Arbitrator is filed before the Chief Engineer and a notice thereof is given by the applicant to the Arbitrator. The Chief Engineer after hearing-both the parties may pass a speaking order rejecting the application or accepting to change the Arbitrator simultaneously, appointing a technical officer not below the rank of a Superintending Engineer as Arbitrator under the contract. The new Arbitrator so appointed may enter upon the reference a fresh or he may continue the hearings from the point these were suspended before the previous Arbitrator.
- vii. The reference to the Arbitrator shall be made by the claimant party within one hundred twenty days from the date of dispute of claim arise during the execution of work. If the claim pertains to rates or recoveries introduced in the final bill, the reference to the Arbitrator shall be made within six calendar months from the date of payment of the final bill to the contractor or from the date a registered notice is sent to the contractor to the effect that his final bill is ready by the Engineer-in-Charge (Whose decision in this respect shall be final and binding) which-ever is earlier.
- viii. It shall be an essential term of this contract that in order to avoid frivolous claims the party invoking arbitrator shall specify the disputes based on facts and calculations stating the amount claimed under each claim and shall furnish a "deposit-at-call" for ten percent of the amount claimed, on a scheduled bank in the name of the Arbitrator, by his official designation who shall keep the amount in deposit till the announcement of the award. In the event of an award in favour of the claimant, the deposit shall be refunded to him in proportion to the amount awarded with respect to the amount claimed and the balance if any, shall be forfeited and paid to the other party.
- ix. The provisions of the Indian Arbitration Act 1996 or any other statutory enactment there under or modification there of end for the time being in force shall apply to the arbitration proceedings under this clause (x) The Arbitration shall award separately giving his award against each claim & dispute & counter claim raised by either party giving reasons for his award. Any lump sum award shall not be legally enforceable.
- x. The independent claims of the party other than the one seeking arbitration as also the counter claims of any party shall be entertained by the Arbitrator.

- xi. The venue of arbitration shall be such place or places as may be fixed by the Arbitrator in his sole discretion. The work under the contract shall continue during the arbitration proceedings.
 - xii. The stamp fee due on the award shall be payable by the party as desired by the Arbitrator and in the even of such party's default, the stamp fee shall be recoverable from any other sum due to such party under this or any other contract.
 - xiii. Neither party shall be entitled to bring a claim for arbitration, if it is not filed as per the time period already specified or within six months of the following:-
 - a) Of the date of completion of the completion of the work as certified by the Engineer-in-Charge, Or
 - b) Of the date of abandonment of the work or breach of contract under any of its clauses, Or
 - c) Of its non-commencement or no resumption of work within 10 days of written notice for commencement or resumption as applicable. Or
 - d) Of the cancellation, termination or withdrawal of the work from the contractor in whole or in part and/or revision or foreclosure of the contract, Or
 - e) Of receiving an intimation from the Engineer-in-Charge that the final payment due or recovery from the contractor had been determined for the purpose of payment/adjustment whichever is the latest.
- If the matter is not referred to arbitration within the period prescribed above, all the rights and claims of either party under the contract shall be deemed to have been forfeited and absolutely barred by time for arbitration and even for civil litigation.
- xv) No question relating to this contract shall be brought before any civil court without first invoking and completing the arbitration proceedings, if the issue is covered by the scopes of arbitration under this contract. The pending of arbitration proceedings shall not disentitle the Engineer-in-Charge to terminate the contract and to make alternate arrangement for completion of the works.
 - xvi) The arbitrator shall be deemed to have entered on the reference on the day, he issues notices to the parties fixing the first date of hearing. The arbitrator may, from time to time, with the consent of the parties enlarge the initial time for marking and publishing the award.
 - xvii) The ex-party of the contractual time limit, whether originally fixed or extended, shall not invalidate the provisions of this clause.

Clause – 26 SPECIFICATIONS

In the case of any class of work for which there is no specification as mentioned in clause 4, the work shall be carried out in accordance with the specification laid down by the Bureau of Indian standard and in the event of there being no such specification, the work shall be carried out in all respects in accordance with the instruction and requirement of the Engineer-in-Charge.

(a) CONCRETE WORK

All the concrete work shall have to be done with mechanical mixture unless permitted otherwise by the Engineer-in-Charge. All R.C.C. work shall be compacted with a mechanical vibrator.

driven by petrol diesel or electricity. All R.C.C. work and plain cement concrete of mix 1:3:6 (M-10) and richer mixes only Ghaggar sand or Pathankot sand having a fineness modulus between 2.5 to 3.5 shall be used. Test sample shall be taken during the execution of work as per stipulations of the Bureau of Indian Standards. The compressive strength of test samples shall meet the requirements of relevant standards laid down by the B.I.S. The contractor shall set up a field testing laboratory with necessary equipment and appoint suitable staff for carrying out the test at his cost.

(b) CURING OF CEMENT WORK

The contractor shall ensure proper curing of all work involving use of cement strictly as per stipulations of Punjab P.W.D. specification. Since proper curing during the critical period has a direct bearing on the strength and safety of cement work, the Engineer-in-Charge shall in case of any default on the part of contractor, take prompt action to arrange adequate curing at the cost of the contractor without issuing any prior notice in this respect, to avoid lapse of critical period of curing. The certificate of the Engineer-in-Charge could be final and binding in this respect and the cost incurred shall be recovered from the contractor.

(c) PITS AT SITE PROHIBITED

No pits shall be dug by the contractor at or near the site of work for taking out earth for use in the work in case of default, the pits so dug shall be got filled by the department at the cost of the contractor, charging additional amount of fourteen percent towards departmental Charge.

(d) CO-ORDINATION WITH OTHER AGENCIES

The contractor shall maintain close-co-ordination and afford necessary facilities to other agencies executing other works like Electrification, Horticulture, Water Supply, Sewerage and external services etc. No claim for additional payment on this account shall be entertained.

Clause-29 (a) STATUTORY LEVIES

The rates as offered and accepted in this contract are inclusive of all taxes and statutory levies such as Income Tax, Octroi / terminal tax, Sales tax/turn-over tax, royalty contribution under Employee's State-insurance and local taxes payable under there respective statutes (ESI contribution etc.)

(b) INCOME TAX

Income tax shall be deducted at source as per provisions of the Income tax Act and a certificate of such deduction made in each financial year shall be furnished to the contractor by the disbursing officer.

(c) SALES AND OTHER TAXES

Sales tax, turnover tax or any other tax shall also be deducted from the bills of the contractor if so directed by the authorities concerned.

(d) LOCAL LAWS AND LEVIES

The contractor shall comply with the proper byelaws and legal orders of the local body or public authority shall under the jurisdiction of which the work is executed and pay all fees and Charges for which he may be liable. Nothing extra shall be payable on this account.

(e) DAILY PAYMENT IN EMERGENCY

In case of emergency, the contractor shall be required to pay his labour every day and in case of default the requisite payment shall be made by the Government and the amount shall be recovered from the contractor.

Clause-30 TECHNICAL STAFF

The contractor shall employ the following technical construction staff on whole time basis during the execution of work and shall submit names of the employee to the department.

- (i) One graduate Engineer having relevant experience of not less than three years for work amounting to more than Rs. 50.00 lacs.
- (ii) One graduate Engineer or qualified diploma holder having relevant experience of not less than three years for works amounting upto Rs. 50.00 lacs.

The technical staff shall be available at site at all times.

In case the contractor fails to employ the above minimum technical staff or fails to submit the names of the staff to the department, recovery shall be made from his bills at the rate of twice the average pay of the corresponding staff working with the Public Works Department.

Clause-31 CONSULTANTS FOR QUALITY CONTROL

It is expected that every contractor will have proper quality control staff and procedure in order to insure quality. They are also expected to improve their procedure in line with ISO 9000 and get certification. For all works amounting to more than Rs. 2.00 crores, the contractor shall engage a competent and independent quality control consultant as approved by Superintending Engineer-in-Charge of work to exercise effective control over the construction operation in the field so as to produce quality works. The fully equipped laboratory shall be set up at site of work and trained staff shall be employed by the said consultant. The contractor shall supply to the Engineer-in-Charge a copy of his agreement and fee for quality control should generally be between 0.5% and 1.5% of the contract value. The payment to quality control consultant shall be made by the Engineer-in-Charge

direct as per the copy of the agreement supplied by contractor. This payment will be recoverable from the contractor. The consultant will guide the contractor for production of quality works at all stages and shall maintain records, reports and test results so as to indicate the extent of quality achieved the consultant will also supply a copy of all these reports, test and check to Engineer-in-Charge regularly. The contractor shall also attach a copy of these report, test and check with his bill without which no payment shall be made. The Engineer-in-Charge can also order the change of consultant if in his opinion they are not performing competently. The Engineer-in-Charge will be free to conduct surprise, random or in-situ checks so as to have cross check on quality. In case the contractor fail to employ for the whole or part of the period of execution a quality control consultant, Engineer-in-Charge may order employment of a consultant at the cost of the contractor or may order the departmental staff to carry out the quality control checks and a deduction at the rate of 1.5% of the total cost of the work shall be deducted from the bill of contractor even if the actual expenditure include in private consultant or departmental quality control is less, Nothing in this clause shall reduce the overall responsibility of the contractor regarding quality and he shall remain liable for any defect in the execution.

Clause-32 PERFORMANCE TEST

The contractor shall give a satisfactory performance test of the entire installation as per standard as per specifications before the work is finally accepted and nothing extra whatsoever shall be payable to contractor for this test.

Clause-33 ACTS OF GOD

No claim what so ever shall be entertained for any loss or damages caused by rain, floods or any others natural causes or other acts of God.

Clause-34 JURISDICTION

The jurisdiction of civil court for matters under dispute shall be on the basis of the location of the office of the Engineer-in-Charge.

Clause-35

The terms and conditions of the agreement have been explain to me/us and I/we certify that I/we clearly understand the same.

Contractor

Witness

**Corporation Engineer,
Municipal Corporation
Bathinda**

Section V

SPECIMEN

FORM OF PERFORMANCE BANK GUARANTEE

To
Name of Employer.....
Address of Employer.....
WHEREAS (Name and Address of contractor)

(hereinafter called "the contractor") has undertaken, in Pursuance of contract
No..... datedto execute (Name of contract and Brief
description of works)called "the contract" ; AND
WHEREAS it has been stipulated by you in the said contract that the contractor shall furnish
you with a Bank Guarantee by a recognized bank for the sum specified therein as security for
compliance with his obligations in accordance with the contract ;

AND WHEREAS we have agreed to give the Contractor such a Bank Guarantee:

NOW THEREFORE we hereby affirm that we are the Guarantor and responsible to you, on
behalf of the Contractor, upto a total of amount of
Guarantee.....In Words)

.....we undertake to pay you, upon your first written demand and
without cavil or argument, any sum or sums within the limits of amount of Guarantee
..... as aforesaid without your needing to prove or to
show grounds or reasons for your demand for the sum specified therein. We hereby waive the
necessity of your demanding the said debt from the contractor before presenting us with the
demand.

We further agree that no change or addition to or other modifications of the terms of the
contract or of the works to be performed there under or any of the contract documents which
may be made between you and the contractor shall in any way release us from any liability
under this guarantee, and we hereby waive notice of any such change, addition or modification.

This guarantee is valid until the date months
after the issuing of the maintenance certificate.

SIGNATURE AND SEAL OF THE GUARANTOR.....

Name of Bank.....

Address.....

Date.....