

Dated: 16.02.2018

Memo.No:5307/WBTDC/IX-2113

# NOTICE INVITING e-TENDER

#### Notice Inviting e-Tender No. 90/WBTDCL OF 2016-17(Technical).

e-Tender is invited by the Executive Engineer, West Bengal Tourism Development Corporation Limited from the reputed bonafide financially sound contractor having sufficient experience in execution of the following works.

#### List of Schemes:

SI. No	Name of the work	Estimated Amount (Rs.)	Earnest Money (Rs.)	Period of Completion
1.	Construction of S.W. Treatment Plant (M.B.B.R Or Equivalent Technology 10KLD) at Baharampore Tourist Lodge.	32,62,700.00	65,254.00	45 Days

- 1) In the event of e-filling, intending bidder may download the tender documents from the website <a href="http://wbtenders.gov.in">http://wbtenders.gov.in</a> directly with the help of Digital Signature Certificate. Necessary Earnest Money has to be deposited by the bidder through the following payment mode as per Memorandum of Finance Department vide No. 3975- F (Y) dated 28<sup>th</sup> July, 2016.
- i. Net banking (any of the banks listed in the ICICI Bank Payment gateway) in case of payment through ICICI bank payment gateway.
- ii. RTGS/ NEFT in case of offline payment through bank account in any bank.
  - 2) Both **Technical Bid** and **Financial Bid** are to be submitted concurrently duly digitally signed in the website <a href="http://wbtenders.gov.in">http://wbtenders.gov.in</a>
  - 3) Tender documents may be downloaded from website and submission of Technical Bid and Financial Bid will be done as per Time Schedule stated in clause No. 14
  - 4) The **FINANCIAL OFFER** of the prospective tenderer will be considered only if the **TECHNICAL BID** of the tenderer is found qualified by the 'Tender Evaluation Committee' formed by the Managing Director, WBTDC Ltd. The decision of the 'Tender Evaluation Committee' will be final and absolute in this respect. The list of Qualified Bidders will be displayed in the website.



#### 5) Eligibility criteria for participation in the tender.

The prospective bidders shall have satisfactorily completed **as a prime agency** during the last 5 (*five*) years from the date of issue of this Notice at least one work of similar nature under authority of State / Central Government, State / Central Government undertaking / Statutory Bodies Constituted under the Statute of the Central / State Government at least in the magnitude of 40% (Forty *percent*) of the amount put to tender.

[Non-statutory documents]

- N.B.:- Estimated amount, Date of Completion of project and detail communicational address of client must be indicated in the Credential Certificate.
- Income Tax Acknowledgement Receipt for the latest Assessment year, P.T. Deposit Challan for the year 2017-2018, Pan Card, GST Registration Certificate, provident fund registration certificate are to be accompanied with the Technical Bid Documents.
- ii. The prospective bidders or any of their constituent partner shall neither have abandoned any work nor any of their contract have been rescinded during the last 5 (*five*) years. Such abandonment or rescission will be considered as disqualification towards eligibility. (A declaration in this respect through affidavit has to be furnished by the prospective bidders without which the Technical Bid shall be treated as non-responsive.)
- iii. The prospective bidders shall have in their full time engagement experienced technical personnel, the minimum being one civil engineering degree holder and one civil engineering diploma holder (Authenticated document shall be furnished).

[Non-statutory documents]

- iv. The Working Capital shall not be less than 15% (*fifteen percent*) of the amount put to tender out of which minimum 10% shall be of applicant's own resource.
- v. The available **Bid capacity** (*to be calculated on the basis of prescribed format*) of the prospective applicant shall not be less than the estimated amount put to tender.
- vi. In case of Proprietorship, Partnership Firms and Company, Tax Audit Report in 3CD Form are to be furnished along with the Balance Sheet and Profit and Loss Account, and all the documents along with schedules forming the part of Balance Sheet and Profit & Loss Account should be in favour of applicant. No other name alongwith applicant's name in such enclosure will be entertained.

[Non-statutory documents]

vii. The prospective bidders should own or arrange through lease hold registered agreement, the required plant and machineries. Conclusive proof of ownership in favour of owner or leaser of plant and machineries in working condition shall have to be submitted. (Ref. Section – B, Form – IV)

[Non-statutory documents]



viii. Registered Partnership Deed for Partnership Firm only along with Power of Attorney is to be submitted. The company shall furnish the Article of Association and Memorandum.

[Non-statutory documents]

ix. Registered Labour Co-operative Societies and unemployed Co-Operative societies are required to furnish valid Bye Law, last three years statutory Audit Report authenticated by A.R.C.S., Minutes of last A.G.M., valid certificate from A.R.C.S. along with other relevant supporting papers.

[Non-statutory documents]

- x. Joint Ventures will not be allowed.
- xi. A prospective bidder shall be allowed to participate in a particular job either in the capacity of individual or as a partner of a firm. If found to have applied severally in a single job, all his applications will be rejected for that job, without assigning any reason thereof.
- Running payment for work may be made to the executing agency as per availability of fund. The executing agency may not get a running payment unless the gross amount of running bill is 20% of the tendered amount.
- 7) No mobilisation advance and secured advance will be allowed.
- 8) Security Deposit:

Retention money towards performance Security amounting to 10% (ten percent) of the value of the work shall be deducted from the running account bill of the tenderer as per prevailing order. No interest will be paid on Security Deposit.

- 9) Agencies shall have to arrange land for erection of Plant & Machineries, storing of materials, labour shed, laboratory etc. at their own cost and responsibility.
- 10) All materials required for the proposed work including cement and steel shall be of specified grade and approved brand inconformity with relevant code of practice (latest revision) and manufactured accordingly and shall be procured and supplied by the agency at their own cost including all taxes. Authenticated evidence for purchase of cement and steel are to be submitted along with challan and test certificate. If required by the Engineer-in-Charge, further testing from any Government approved Testing Laboratory shall have to be conducted by the agency at their own cost.
- 11) Constructional Labour Welfare CESS @ 1% (*one percent*) of cost of construction will be deducted from every Bill of the selected agency.
- 12) There shall be no provision of Arbitration.
- 13) Bid shall remain valid for a period not less than 120 (*one hundred twenty*) days from the last date of submission of Financial Bid / Sealed Bid. If the bidder withdraws the bid during the



validity period of bid, the earnest money as deposited will be forfeited forthwith without assigning any reason thereof.

#### 14) Date and Time Schedule:

SI. No.	Particulars	Date & Time
1	Date of uploading of N.I.T. Documents (online) (Publishing	16.02.2018-16.30 Hrs,
	Date)	
2	Documents download/sell start date (Online)	16.02.2018-17.00 Hrs,
3	Documents download/sell end date (Online)	02.03.2018-17.30 Hrs,
4	Bid submission start date (On line)	16.02.2018-17.00 Hrs,
5	Bid Submission closing (On line)	02.03.2018-17.30 Hrs,
6	Bid opening date for Technical Proposals (Online)	05.03.2018-11.00 Hrs,

The Prospective Bidder shall have to execute the work in such a manner so that appropriate service level of the work is maintained during progress of work and a period of 3 (*three*) years to be made as per Order No.177-CRC/2M-57/2008 dt. 12.07.2012 of WBTDCL from the date of successful completion of the work to the entire satisfaction of the Engineer-in-Charge. If any defect / damage is found during the period as mentioned above, the contractor shall make the same good at his own cost to the specification at par with instant project work. On failure to do so, penal action against the contractor will be imposed by the Corporation as deem fit. The contractor may quote his rate considering the above aspect.

Refund of Security Deposit will only be made after successful maintaining of appropriate service level of the work as mentioned above as per Order No.177-CRC/2M-57/2008 dt.12.07.2012 of WBTDCL. 3 (three) years from the date of completion of the work. Provision in Clause No. 17 of W.B. Form No. 2911(ii) shall be treated as substituted. The word 'work' means and includes road work, bridge work, building work, sanitary and plumbing work, electrical work and/ or any other work contemplated within the scope and ambit of this contract. The work may be of original or special repair in nature or a combination thereof, or of original or special repair in nature in combination with the work (s) or repair and /or maintenance in nature; Provided that in respect of the work of repair or maintenance in nature or a combination thereof, the words three years wherever appearing in this clause shall be deemed to be one year and in which case the security deposit of the contractor held with the Government under the provision of Clause 1 hereof shall be refundable to the contractor on expiry of one year after the issuance of certificate of completion of work by the Engineer-in-Charge.



- 16) In cases of Refunding and Releasing of 100% Security Deposit held with the Government, arising out from works contract, Security Deposit will be released after issuance of Completion Certificate on submission of unconditional by the Contractor for the Security
- 17) Site of work and necessary drawings may be handed over to the agency phase wise. No claim in this regards will be entertained.
- 18) The Bidder, at his own responsibility and risk is encouraged to visit and examine the site of works and its surroundings and obtain all information that may be necessary for preparing the Bid and entering into a contract for the work as mentioned in the Notice Inviting Tender, before submitting offer with full satisfaction, the cost of visiting the site shall be at his own expense.
- 19) The intending Bidders shall clearly understand that whatever may be the out come of the present invitation of Bids, no cost of Bidding shall be reimbursable by the WBTDCL. The Managing Director, WBTDC Ltd. reserves the right to accept or reject any offer without assigning any reason whatsoever and is not liable for any cost that might have been incurred by any Tenderer at the stage of Bidding.
- 20) Refund of EMD: The Earnest Money of all the unsuccessful tenderers deposited in favour of the WBTDCL will be refunded on receipt of application from tenderers.
- 21) Prospective applicants are advised to note carefully the minimum qualification criteria as mentioned in 'Instructions to Bidders' stated in Section 'A' before tendering the bids.
- 22) Conditional / Incomplete tender will not be accepted under any circumstances.
- 23) The intending tenderers are required to quote the rate *online*.
- 24) Contractor shall have to comply with the provisions of (a) the contract labour (Regulation Abolition) Act. 1970 (b) Apprentice Act. 1961 and (c) minimum wages Act. 1948 of the notification thereof or any other laws relating there to and the rules made and order issued there under from time to time.
- 25) Guiding Schedule of Rates: Rates have been taken from PWD (W.B.) Schedule of Rates for "Building Works" and "Sanitary & Plumbing Works" effective from 1<sup>st</sup> August 2014 along with upto date corrigenda & addenda and approved rates of the Managing Director Of W.B.T.D.C Ltd.
- During scrutiny, if it comes to the notice of the tender inviting authority that the credential or any other paper found incorrect / manufactured / fabricated, that bidder would not be allowed to participate in the tender and that application will be rejected without any prejudice.
- 27) The Managing Director Of W.B.T.D.C Ltd. reserves the right to cancel the N.I.T. at any stage before issuance of latter of acceptance due to unavoidable circumstances and no claim in this respect will be entertained.



- If there be any objection regarding prequalifying the Agency that should be lodged to the Chairman of Tender Evaluation Committee within 2 (*two*) days from the date of publication of list of qualified agencies and beyond that time schedule no objection will be entertained by the Tender Evaluation Committee. Before issuance of the WORK ORDER, the tender inviting authority may verify the credential and other documents of the lowest tenderer if found necessary. After verification if it is found that the documents submitted by the lowest tenderer is either manufactured or false in that case work order will not be issued in favour of the said Tenderer under any circumstances.
- 29) If any discrepancy arises between two similar clauses on different notification, the clause as stated in later notification will supersede former one in following sequence:
  - 1) N.I.Q.
  - 2) Special Terms & Conditions
  - 3) Technical Bid
  - 4) Financial Bid
  - 5) Qualification criteria
  - 6) Tender Form.
- 32. The tender inviting and Accepting Authority through a "Tender Evaluation Committee" will determine the eligibility of each bidder. The bidders shall have to meet all the minimum criteria regarding:
  - 1) Financial Capacity
  - 2) Technical Capability comprising of personnel & equipment capability
  - Experience / Credential

The eligibility of a bidder will be ascertained on the basis of the document(s) in support of the minimum criteria as mentioned above and the declaration executed through prescribed affidavit in non-judicial stamp paper of appropriate value duly notarized. If any document submitted by a bidder is either manufactured or false, in such cases the eligibility of the bidder / tenderer will be rejected at any stage without any prejudice

- 33. Escalation of Price on any ground and consequent cost over run shall not be entertained under any circumstances. Rates should be quoted accordingly.
  - 34. No price preference and other concession will be allowed.
  - **35.** "Where an individual person holds a digital certificate in his own name duly issued to him against the company or the firm of which he happens to be a director or partner, such individual person shall, while uploading any tender for and on behalf of such company or firm, invariably upload a copy of registered power of attorney showing clear authorization in his favour, by the rest of the directors of such company or the partners of such firm, to upload such tender.

The power of attorney shall have to be registered in accordance with the provisions of the **Registration Act, 1908.**"

36. Sealed Turn-key bids are invited in double cover system from the Registered Firm having expertise in the field of Sewerage Treatment Plant to be eventually drawn in P.W.D. FORM P-1 for the work: Construction of Sewerage Treatment plant at different Panthanivases of



OTDC. The experience in the respective field will be mandatory. Proof of experience along with certificate from the user agency must be attached duly certified by Pollution Control Board.

- 37. The Design construction and operation of Sewerage Treatment Plant must satisfy state Pollution Control Board guide lines. The payment only can be made after obtaining No objection certificate/Consent to Operate from state Pollution Control Board competent authority.
- 38. The intending bidder can inspect the existing civil construction used for sewerage line and can use the same.
- 39. Warranty must be for five years.

The generation of effluents has been considered from toilets, wash water from kitchen etc.

- 40. Design flow to be submitted for each location separately.
- 41. The tenderer shall quote rate for each locations separately in the financial bid i.e. BOQ. The Authority shall have right to award different work of different location to different agencies on the basis of financial bid.

Executive Engineer, West Bengal Tourism Development Corporation Limited



# **SECTION - A**

# **INSTRUCTION TO BIDDERS**

#### General guidance for e-Tendering:

Instructions / Guidelines for electronic submission of the tenders have been annexed for assisting the contractors to participate in e-Tendering.

i. Registration of Contractor:

Any contractor willing to take part in the process of e-Tendering will have to be enrolled & registered with the Government e-Procurement System, through logging on to <a href="http://wbtenders.gov.in">http://wbtenders.gov.in</a> The contractor is to click on the link for e-Tendering site as given on the web portal.

ii. Digital Signature certificate (DSC):

Each contractor is required to obtain a Class-II or Class-III Digital Signature Certificate (DSC) for submission of tenders from the approved service provider of the National Informatics Centre (NIC) on payment of requisite amount. Details are available at the Web Site stated in Clause A.1. above. DSC is given as a USB e-Token.

- iii. The contractor can search & download N.I.T. & Tender Document(s) electronically from computer once he logs on to the website mentioned in Clause A.1. using the Digital Signature Certificate. This is the only mode of collection of Tender Documents.
- iv. Participation in more than one work:

A prospective bidder shall be allowed to participate in the job either in the capacity of individual or as a partner of a firm. If found to have applied severally in a single job all his applications will be rejected for that job.

v. Submission of Tenders:

Tenders are to be submitted through online to the website stated in Clause A.1. in two folders at a time for each work, one in Technical Proposal & the other is Financial Proposal before the prescribed date &time using the Digital Signature Certificate (DSC). The



documents are to be uploaded virus scanned copy duly Digitally Signed. The documents will get encrypted (transformed into non readable formats).

# **Technical Proposal:**

The Technical proposal should contain scanned copies of the following in two covers (folders).

# (a). Statutory Cover Containing the following documents:

- i. Prequalification Application (Sec-B, Form I)
  - Demand Draft / Bankers Cheque towards Earnest Money (EMD) as prescribed in the N.I.T. against each of the serial of work in favour of West Bengal Tourism Development Corporation Limited.
  - 2) Tender Form & N.I.Q. (download properly and upload the same Digitally Signed). The rate will be quoted in the B.O.Q. Quoted rate will be encrypted in the B.O.Q. under Financial Bid. In case quoting any rate in Tender Form, the tender is liable to be summarily rejected.
  - 3) NIT with Special terms & conditions and specification of works.

# (b). Non-statutory Cover Containing the following documents:

- i. Professional Tax (PT) deposit receipt challan for the financial year 2017-18, Pan Card, IT, Saral for the Assessment year 2017-18,GST No, P.F. registration certificate.
- ii. Registration Certificate under Company Act. (if any).
- iii. Registered Deed of partnership Firm / Article of Association & Memorandum.



- iv. Power of Attorney (For Partnership Firm / Private Limited Company, if any).
- v. Statutory audit report or Tax Audited Report in 3 CD/ 3 CA form along with Balance Sheet & Profit & Loss A/c. for the last 4 (*four*) years (year just preceding the current Financial Year will be considered as year I)
- vi. Clearance Certificate for the Current Year issued by the Assistant Register of Co-Operative Society (ARCS), bye laws are to be submitted by the Registered Labour Co-Operative Society / Engineers' Co-Operative Society.
- vii. List of machineries possessed by own / arranged through lease hold agreement along with authenticated copy of invoice, challan & waybill [Ref.:- SI. No. 5(viii) of this N.I.T. and (Section -B, Form IV)]
- viii. List of Technical staffs along with structure & organization (Section B, Form III).
- ix. Financial Statement (Section B, Form II).

The prospective bidders shall have satisfactorily completed **as a prime agency** during the last 5 (*five*) years from the date of issue of this Notice at least one work of similar nature under authority of State / Central Government, State / Central Government undertaking / Statutory Bodies Constituted under the Statute of the Central / State Government at least in the magnitude of 40% (Forty *percent*) of the amount put to tender.

[Ref. Sl. No. 5(i) of this NIT and (Section – B, Form – V)]. Scanned copy of Original Credential Certificate as stated in Sl. No. 5(i) of N.I.T. shall have to submit (on line).

- x. Affidavits (Ref:- format for general affidavit shown in "X" & "Y", Section B)
- xi. Certificate of revolving line of credit by the Bank (if required).
- N.B.: Failure of submission of any of the above mentioned documents as stated in SI. No. A.5.(a). and SI. No. A.5.(b). may render the tenderer liable to be rejected for both statutory & non statutory cover.



# THE ABOVE STATED NON-STATUTORY/TECHNICAL DOCUMENTS SHOULD BE ARRANGED IN THE FOLLOWING MANNER

Click the check boxes beside the necessary documents in the My Document list and then click the tab "Submit Non Statutory Documents' to send the selected documents to Non-Statutory folder.

Next Click the tab "Click to Encrypt and upload" and then clik the "Technical" Folder to upload the Technical Documents.

SI. No	Category Name	Sub-Category Description	Detail(s)	
Α.	Certificate(s)	Certificate(s)	GST Registration Certificate & Acknowledgement. PAN. P Tax (Challan) (2017-18). Latest IT Receipt. IT-Saral for Assessment year 2017-18.	
В.	Company Detail(s)	Company Detail	Proprietorship Firm ( <i>Trade License</i> ) Partnership Firm ( <i>Partnership Deed, Trade License</i> ) Ltd. Company( <i>Incorporation Certificate, Trade License</i> )Society ( <i>Society Registration Copy, Trade License, Audit report</i> ) Power of Attorney.	
C.	Credential	Credential – 1 Credential – 2	Prescribed type of work done & completion certificate from competent authority which is applicable for eligibility in this tender.	
F.	Man Power	Technical Personnel	List of Technical Staffs alongwith Structures & Organization (as per N.I.Q.)	

- i. Tender Evaluation Committee (TEC)
  - 1. Opening of Technical Proposal:

Technical proposals will be opened by The Executive Engineer, WBTDCL. and his authorized representative electronically from the website using their Digital Signature Certificate (DSC).

2. Intending tenderers may remain present if they so desire.



- 3. Cover (folder) for Statutory Documents will be opened first and if found in order, cover (folder) for Non-Statutory Documents will be opened. If there is any deficiency in the Statutory Documents the tender will summarily be rejected.
- 4. Decrypted (transformed into readable formats) documents of the non-statutory cover will be downloaded & handed over to the Tender Evaluation Committee.
- 5. Summary list of technically qualified tenderers will be uploaded online.
- 6. Pursuant to scrutiny & decision of the Tender Evaluation Committee the summary list of eligible tenderers & the serial number of work for which their proposal will be considered will be uploaded in the web portals.
- 7. During evaluation the committee may summon of the tenderers & seek clarification / information or additional documents or original hard copy of any of the documents already submitted & if these are not produced within the stipulated time frame, their proposals will be liable for rejection.

#### ii. Financial Proposal

- I. The financial proposal should contain the following documents in one cover (folder) i.e. Bill of Quantities (BOQ). The contractor is to quote the rate (Presenting Above / Below / At per) online through computer in the space marked for quoting rate in the BOQ.
- II. Financial capacity of a bidder will be judged on the basis of working capital and available bid capacity as mentioned in the N.I.T. to be derived from the information furnished in **FORM I & II** (Section B) i.e., Application for Prequalification & Financial Statement. If an applicant feels that his / their Working Capital beyond own resource may be insufficient, he / they may include with the application a letter of guarantee issued by a nationalized bank / authorize bank of **RBI** to supplement the applicant. This letter of guarantee should be addressed to the Tender Inviting / Accepting Authority and should guarantee duly specifying the name of the project that in case of contract is awarded to the Bidder, the Bidder will be provided with a revolving line of credit. Such revolving line of credit should be maintained until the works are taken over by the Engineer-in-Charge / Employer.

The audited Balance sheet for the last 3(*three*) years, net worth, bid capacity, etc. are to be submitted which must demonstrate the soundness of Bidder's financial position, showing long term profitability including an estimated financial projection of the next two years.

- III. Only downloaded copies of the above documents are to be uploaded virus scanned & Digitally Signed by the contractor.
- IV. <u>Penalty for suppression / distortion of facts:</u>
  - a. If any tenderer fails to produce the original hard copies of the documents like Completion Certificates and any other documents on demand of the Tender Evaluation Committee within a specified time frame or if any deviation is detected in the hard copies from the uploaded soft copies, it may be treated as submission of false



documents by the tenderer and action may be referred to the appropriate authority for prosecution as per relevant IT Act.

#### V. <u>Rejection of Bid:</u>

a. Employer reserves the right to accept or reject any Bid and to cancel the Bidding processes and reject all Bids at any time prior to the award of Contract without thereby incurring any liability to the affected Bidder or Bidders or any obligation to inform the affected Bidder or Bidders of the ground for Employer's action.

#### VI. Award of Contract:

- a. The Bidder whose Bid has been accepted will be notified by the Tender Inviting & Accepting Authority through acceptance letter / Letter of Acceptance.
- b. The notification of award will constitute the formation of the Contract.

#### VII) Terms conditions:

The bidder is required to visit the site, prepare drawings of system and quote his rates accordingly. He should also up-load a schematic diagram along with the tender document in the technical bid

- VIII). **Prices**: The quoted amount has to be turn-key covering all materials, labour, taxes, transportation, erection, commissioning, testing etc. complete in all respect and inclusive of civil, electrical and mechanical items complete for each location separately.
- IX). **Guarantee & Maintenance**: The tenderer shall furnish a guarantee to the effect that all items of the work installed and supplied by him shall be free from any defect both in terms of materials and workmanship. The tenderer has to provide guarantee both for equipment and quality for a period of by the Engineer-in-charge to the satisfaction of the later.

The bidder has to submit his design of STP after making a detailed study of Baharampore T.L. along with sketch plan of the components to be provided by him and already available at site. He also should mention the maintenance schedule, training programme of the Baharampore T.L. personnel and guidelines of the future maintenance programme.



# SECTION - C

#### Special Terms and Conditions

#### 1) Definition of Engineer-in-Charge and commencement of work:

The word "Engineer-in-Charge" means the General Manager(Technical), WBTDC Ltd. The word "Department" appearing anywhere in the tender documents means WBTDCL. The word "approved" appearing anywhere in the documents means approved by the Managing Director, WBTDCL. The work shall have to be taken up within seven days of the receipt of the work order or otherwise mentioned therein. Failure to do so will constitute a violation of the contract stipulation as regards of proportionate progress and timely completion of work and the contractor will thereby make himself liable to pay compensation or other penal action as per stipulation of the printed tender form.

# 2) Terms & Conditions in extended period:

- a) The work should be completed in schedule time failing which penalty clauses will be imposed to the contractor 5% project cost per months.
  - b) As per Clause 9 of Tender Form if an extension of time for completion of the work is granted by the Engineer-in-Charge for cogent reasons for which the contractor have no control, it will be taken for granted by the working contractor that the validity of the contract is extended automatically upto the extended period with all terms and conditions, rates etc. remaining unaltered, i.e., the tender is revalidated upto the extended period.

#### 3) Co-operative with other agencies, damages and safety of road users:

All works are to be carried out in close co-operation with the WBTDCL and other contractor(s) that may be working in the area of work. The work should also be carried out with due regard to the convenience of the road users and occupants of the adjacent locality, if any. All arrangements and programme of work must be adjusted accordingly. All precautions must be taken to guard against chances of injury or accidents to workers, road users, occupants of the adjacent locality, etc. The contractor must see that all damages to any property which, in the opinion of the Engineer-in-Charge, are due to the negligence of the contractor are promptly rectified by the contractor at his own cost and expenses and according to the direction and satisfaction of the Engineer-in-Charge.



# 4) Transportation arrangement:

The contractor shall arrange for all means of transport required for carriage and supply of materials and also the materials required for the construction work. The contractor must consider this aspect while quoting rate.

#### 5) Contractor's Site Office:

The contractor shall have an office adjacent to the work as may be approved by the Engineer-in-Charge where all directions and notice of any kind whatsoever, which the Engineer-in-Charge or his representative may desire to give to the contractor in connection with the contract, may be left or sent by post to such office or delivered to the contractor's authorised agent or representative. For such intimation to the contractor's site office, it shall be deemed to be sufficient enough to be served upon the contractor.

# 6) Incidental and other charges:

The cost of all materials, hire charges to tools and plants, labour, Corporation / Municipal fees for water supply, royalty for materials (if any), electricity and other charges of Municipalities or statutory local bodies, ferry charges, toll charges, loading and unloading charges, handling chargers, overhead charges and other charges like Sales Tax (Central and/or State), Income Tax, Octroi Duty / Terminal Tax, Turnover Tax, GST, etc. will be deemed to have been covered by the rates quoted by the contractor. All other charges for the execution of the specified work, including supply of materials and related carriage, complete or finished in all respect upto the entire satisfaction of the Engineer-in-Charge of the work. No extra claim in this regard beyond the specified rate as per work schedule whatsoever in this respect will be entertained.

# 7) Authorised Representative of Contractor:

The contractor shall not assign the agreement or sublet any portion of the work. The contractor may however, appoint an authorised representative in respect of one or more of the following purpose only.

- 1) General day to day management of work.
- 2) To give requisition for departmental materials, Tools & Plants, etc. and to receive the same and sign hand receipts thereof.
- 3) To attend measurements when taken by the WBTDCL Officers and sign the records of such measurements which will be taken of acceptance by the contractor.



The selection of the authorised representative shall be subject to the prior approval of the Engineer-in-Charge concerned and the contractor shall in writing seek such approval of the Engineer-in-Charge giving therein the name of work, Tender No., the Name, Address and the specimen signature of the representative whom he wants to appoint and the specific purposes as specified here-in-above, for which the representative will be authorised. Even after first approval, the Engineer-in-Charge may issue at any subsequent date, revised directions about such authorised representative and the contractor shall be bound to abide by such directions. The Engineer-in-Charge shall not be bound to assign any reason for his revised directions. Any notice, correspondences, etc. issued to the authorised representative or left at his address, will be deemed to have been issued to the contractor.

# 8) Power of Attorney:

The Provision of the power of attorney, if any, must be subject to the approval of the WBTDCL. Otherwise, WBTDCL shall not be bound to take cognizance of such power of attorney.

#### 9) Extension of time:

For cogent reasons over which the contractor will have no control and which will retard the progress, extension of time for the period lost will be granted on receipt of application from the contractor before the expiry date of contract. No claim whatsoever for idle labour, additional establishment, enhanced cost of materials and labour and hire charges of tools & plants, etc. would be entertained under any circumstances. The contractor should consider the above factor while quoting his rate. Applications for such extension of time should be submitted by the contractor in the manner indicated in Clause-5 of the printed Tender form.

# 10) Contractor's Godown:

The contractor must provide suitable godowns for cement and other materials at the site of work. The cement godown is to be sufficient in capacity and it must be water tight with either an elevated floor with proper ventilation arrangement underneath the floor or if solid raised floor is made, cement is to be stored on bamboo or timber dunnage to the satisfaction of the Engineer-in-Charge. No separate payment will be made for these godowns or for the store yard. Cement, which is found at the time of use to have been damaged, shall be rejected and must immediately be removed from the site by the contractor as per direction of the Engineer-in-Charge.

#### 11) Arrangement of Land:

The contractor will arrange land for installation of his Plants and Machineries, his godown, storeyard, labour camp etc. at his own cost for the execution of the work. WBTDCL land, if



available and if applied for, may be spared for the purpose on usual charges as fixed by the Competent Authority.

The contractor shall make his own arrangements for storage of tools, plant, equipments, materials, etc. of adequate capacity and shall clear and remove on completion of work, the shed, huts, etc. which he might have erected in WBTDCL land. If after such use, the contractor failed to clear the land, WBTDCL will arrange to remove those installation and adequate recovery will be made from the dues of the contractor.

#### 12) Clearing of Materials:

Before starting any work, work site, where necessary, must be properly dressed after cutting clearing all varieties of jungles, shrubs, bamboo clusters or any undesirable vegetation from the alignment or site of works. On completion of works all temporary structure or obstruction including pipes in underground work, if any, must also be removed. All scars of construction shall be obliterated and the whole site shall be left in a clear and neat manner to the satisfaction of the Engineer-in-Charge. No separate payment shall be made for all these works, the cost thereof being deemed to have been included in the rates of various items of works quoted by the contractor in the schedule of probable items of works.

# 13) Sundry Materials:

The contractor must erect temporary pillars, master pillars, etc. as may be required in suitable places as directed by the Engineer-in-Charge at his own cost before starting and during the work by which the WBTDCL staff will check levels, layout of different works and fix up alignment and the contractor shall have to maintain and protect the same till completion of the work. All machineries and equipments like Level Machine, Staff, Theodalite etc. and other sundry material like, pegs, strings, nails, flakes, instruments, etc. and also skilled labour required for setting out the levels, laying out different structures, etc. shall also be supplied by the contractor as per direction of Engineer-in-Charge at his own cost.

#### 14) Supplementary / Additional items of Works:

Notwithstanding the provisions made in the related printed tender form, any item of work which can legitimately be considered as not stipulated in the specific price schedule of probable items of work but has become necessary as a reasonable contingent item during actual execution of work will have to be done by the Contractor, if so directed by the Engineer-in-Charge and the rates will be fixed in the manner as stated below:-



- i) Rate of Supplementary items shall be at per with corresponding current PWD Schedule of rates / analyzed in the 1<sup>st</sup> instant extended possible from the rates of the allied items of work appearing in the tender schedule.
- ii) Rate of supplementary items shall be analysed to the maximum extent possible from rates of the allied items of work appearing in the P.W.D. schedule of rates of probable items of work as will be in force at the time of N.I.T.
- iii) If the rates of the supplementary items cannot be computed even after application of clauses stated above, the same shall be determined by analysis from market rates of material, labour and carriage cost prevailing at the time of execution of such items of work. Profit and overhead charges (both together) @ 10% (ten percent) will be allowed only. The contractual percentage will not be applicable.
- iv) Black market rates shall never be allowed.
- v) Contractual percentage shall only be applicable with regard to the portions of the analysis based on clauses C. 15 (i) and C. 15 (ii) stated above only.
- vi) It may be noted that the cases of supplementary items of claim shall not be entertained unless supported by entries in the Work Order Book or any written order from the tender accepting authority.

#### 15) Covered up works:

When one item of work is to be covered up by another item of work the latter item shall not be done before the former item has been measured up and has been inspected by the Engineer-in-Charge or the Sub-Assistant Engineer, as the authorized representatives of the Engineer-in-Charge and order given by him for proceeding with the latter item of work. If this is not possible for practical reasons, the PMC, if so authorized by WBTDCL, may do this inspection in respect of minor works and issue order regarding the latter item.

# 16) Approval of Sample:

Samples of all materials those to be supplied by the contractor and to be used in the work shall have to be approved by the Engineer-in-Charge.

#### 17) Water and Energy:

The contractor shall have to arrange at his own cost the energy required for operation of equipments and machineries, pumping set, illuminating work site, office, etc. that may be



necessary in different stages of execution of work. No facility of any sort will be provided for utilization of the WBTDCL sources of energy existing at site of work. Arrangement for obtaining water for the work should also be made by the contractor at his own cost. All cost for getting energy and / or for any purpose whatsoever will have to be borne by the contractor for which no claim will be entertained.

#### 18) Amenities for contractors:

All materials, tools and plants and all labour (skilled and unskilled) including their housing, water supply, sanitation, light, procurement of food for staff & crews, medical aids, etc. are to be arranged by the contractor at his own cost. The cost of transport of labour, materials and all other incidental items as required for work shall also have to be borne by the Contractor without any extra claim from WBTDCL.

# 19) Drawings:

All works shall be carried out in conformity with the drawings supplied by WBTDCL. The Contractor shall have to carry out all the works according to the Detail Working Drawings to be supplied by WBTDCL from time to time.

#### 20) Serviceable Materials:

The responsibility for stacking the serviceable materials (as per decision of the Engineer-in-Charge) obtained during dismantling of existing structures/roads and handing over the same to WBTDCL and nothing will be paid on this account. In case of any loss or damage of serviceable materials prior to handing over the same to WBTDCL, full value will be recover from the Contractor's bill at rates as will be assessed by the Engineer-in-Charge.

# 21) Unserviceable Materials:

The Contractor shall remove all unserviceable materials, obtained during execution at place as directed. The contractor shall dressed up and clear the work site after completion of work as per direction of the Engineer-in-Charge. No extra payment will be made on this account.

# 22) Contractor's risk for loss or damage:

All risk on account of railway or road carriage or carriage by boat including loss or damage of vehicles, boats, barges, materials or labour, if any, will have to be borne by the contractor without any extra claim towards department.



# 23) Idle labour & additional cost:

Whatever may be the reason for claim on idle labour, enhancement of labour rate, additional establishment cost, cost of Toll and hire and labour charges of tools and plants, railway freight, etc. would not be entertained under any circumstances.

#### 24) Charges and fees payable by contractor:

- 1) The contractor shall received all notices and pay all fees required to be given or payable to by any statute or any regulation or by-law of any local or other statutory authority which may be applicable to the works and shall keep WBTDCL free against all penalties and liabilities of every kind for breach of such statute regulation or law.
- 2) The Contractor shall indemnify WBTDCL from and against all claims, demands, suit and proceedings for or on account of infringement of any patent rights, design, trade mark of name or other protected right in respect of any constructional plant, machine, work, materials, thing or process used for or in connection with works or temporary works or any of them.

# 25) Realization of Departmental claims:

Any sum of money due and payable to the contractor (including security deposit returnable to him) under this contract may be appropriated by the WBTDCL and set off against any claim of WBTDCL for the payment of sum of money arising out of this contract or under any other contract made by the contractor with the WBTDCL.

# 26) Compliance of different Acts:

The contractor shall comply with the provisions of the Apprentices Act, 1961, Minimum Wages Act, 1848. Contract Labour (Regulation and Abolition) Act 1970 and the rules and orders issued hereunder from time to time. If he fails to do so, Engineer-in-Charge of the work may at his discretion, take necessary measure over the contract.

The Contractor shall also make himself liable for any pecuniary liabilities arising out on account of any violation of the provision of the said Act(s). The Contractor must obtain necessary certificate and license from the concerned Registering Office under the Contract Labour (Regulation & Abolition) Act, 1970.



The contractor shall be bound to furnish the Engineer-in-Charge all the returns, particulars or date as are called for from time to time in connection with implementation of the provisions of the above Acts and Rules and timely submission of the same, failing which the contractor will be liable for breach of contract and the Engineer-in-Charge may at his discretion take necessary measures over the contract.

#### 27) Safety, Security and Protection of the Environment:

The Contractor shall, throughout the execution and completion of the Works and the remedying of any defects therein:

- 1) have full regard for the safety of all persons and the Works (so far as the same are not completed or occupied by the department),
- 2) provide and maintain at his own cost all lights, guards, fencing, warning signs and watching, when and where necessary or required by the Engineer-in-Charge for the protection of the Works or for the safety and convenience of the public or others,
- 3) take all reasonable steps to protect the environment on and off the Site and to avoid damage or nuisance to persons or to property of the public or others resulting from pollution, noise or other causes arising as a consequence of his methods of operation,
- 4) ensure that all lights provided by the Contractor shall be screened so as not to interfere with any signal light of the railways or with any traffic or signal lights of any local or other authority.

#### 28) Commencement of work:

The work must be taken up within the date as stipulated in the work order and completed in all respects within the period specified in Notice Inviting Tender.

# 29) Programme of work:

Before actual commencement of work the contractor shall submit a programme of construction of work with methodology clearly showing the required materials, men and equipment. The contractor will submit a programme of construction in the pattern of Bar Chart or Critical Path Method and a time table divided into four equal periods of progress of work to complete the work within the specific period for approval of the Engineer-in-Charge who reserves the right to make addition, alterations and substitutions to such programme in consultation with the contractor and such approved programme shall be adhered to by the contractor unless the same is subsequently found impracticable in part or full in the opinion of the Engineer-in-Charge and is modified by him. The contractor must pray in writing,



showing sufficient reasons therein for modification of programme. The conditions laid down in clause 2 of the printed tender form regarding the division of total period and progress to work and the time table there for as provided in the said clause shall be deemed to have been sufficiently complied with the actual progress of work and does not fall short of the progress laid down in the approved time table for one fourth, half and three fourth of time allowed for the work.

# 30) Setting out of the work:

The contractor shall be responsible for the true and perfect setting out of the work and for the correctness of the position, levels, dimensions and alignments of all parts of work. If any rectification or adjustment becomes necessary the contractor shall have to do the same at his own cost according to the direction of the Engineer-in-Charge. During progress of works, if any, error appears or arises in respect of position, level, dimensions or alignment of any part of the work contractor shall at his own cost rectify such defects to the satisfaction of the Engineer-in-Charge. Any setting out that may be done or checked by either of them shall not in any way relieve the contractor of his responsibility for correctness and rectification thereof.

#### 31) Precautions during works:

The contractor shall carefully execute the work without disturbing or damaging underground or overhead service utilities viz. Electricity, Telephones, Gas, Water pipes, Sewers etc. In case disturbances of service utilities is found unavoidable the matter should immediately be brought to the notice of the Engineer-in-Charge and necessary precautionary measures as would be directed by the Engineer-in-Charge shall be carried out at the cost and expenses of the contractor. If the service utilities are damaged or disturbed in any way by the contractor during execution of the work, the cost of rectification or restoration of damages as would be fixed by the Engineer-in-Charge concerned will be recovered from the contractor.

# 32) Testing of qualities of materials & workmanship:

All materials and workmanship shall be in accordance with the specifications laid down in the contract and also as per M.O.R.T. & H's specification for Road and Bridge Works (Latest Revision) and relevant IS codes and the Engineer-in-Charge reserves the right to test, examine and measure the materials/workmanship direct at the place of manufacture, fabrication or at the site of works or any suitable place. The contractor shall provide such assistance, instrument, machine, labour and materials as the Engineer-in-Charge may require for examining, measuring and testing the works and quality, weight or quantity of materials used and shall supply samples for testing as may be selected and required by the Engineer-in-Charge without any extra cost. Besides this, he will carry out tests from outside Laboratory as per instruction of Engineer-in-Charge. The cost of all such tests shall be borne by the agency and that must be considered during quoting rate



# 33) Timely completion of work:

All the supply and the work must have to be completed in all respects within the time specified in Notice Inviting Tender from the date of commencement as mentioned in work order. Time for completion as specified in the tender shall be deemed to be the essence of the contract.

# 34) Procurement of materials:

All materials including cement and steel required to complete the execution of the work shall be supplied by the contractor after procurement from authorised and approved source.

# 35) Rejection of materials:

Materials brought to the site must be approved by the Engineer-in-Charge. Rejected materials must be removed by the Contractor from the site within 24 hours of the issue of order to that effect. In case of non-compliance of such order, the Engineer-in-Charge shall have the authority to cause such removal at the cost and expense of the contractor and the contractor shall not be entitled to any claim for any loss or damage on that account.

# 36) Implied elements of work in items:

Except such items as are included in the Specific Priced Schedule of probable items and approximate quantities, no separate charges shall be paid for traffic control measures, shoring, shuttering, dewatering, curing etc. and the rates of respective items of works are to be deemed as inclusive of the same.

# 37) Force Closure:

In case of force closure or abandonment of the works by the WBTDCL the contractor will be eligible to be paid for the finished work and reimbursement of expenses actually incurred thereof by him but not for any losses.

# 38) Tender Rate:

The contractor should note that the tender is strictly based on the rates quoted by the Contractor on the priced schedule of probable item of work. The quantities for various other items of works as shown in the priced schedule of probable items of works are based on the drawing and design prepared by WBTDCL. If variations become necessary due to design consideration and as per actual site conditions, those have to be done by the contractor at the time of execution at the rate prescribed in the tender clause. **No conditional rate will be allowed in any case.** 



# 39) Delay due to modification of drawing and design:

The contractor shall not be entitled for any compensation to any loss due to delays arising out of modification of the drawing, addition & alterations of specifications.

#### 40) Additional Conditions:

A few additional conditions under special terms and conditions:

- 1) Rate quoted shall be inclusive of clearing site as per direction of the Engineer-in-Charge.
- 2) Rate quoted shall be inclusive of West Bengal Sales Tax, Income Tax, Octroi and all other duties, if any.
- 3) Display board (Informatory) of size 150 cm X 90 cm is to be provided at the work-site with aluminum plate hoisted on steel tubular pipe / angle post to a height of 1.5 Metre at the cost of the contractor including fitting, fixing, painting, lettering, etc. complete as per direction of Engineer-in-Charge.
- 4) The Contractor is to display caution board at his own cost as per direction of Engineer-in-Charge.
- 5) Deep excavation of trenches and left out for days shall be avoided.
- 6) Labour welfare CESS will be deducted @ 1% (one percent) of gross bill value as per rule.
- 7) The whole work will have to be executed as per drawings supplied in this connection at the tender rate.
- 8) Income Tax will be deducted from each bill of the contractor as per applicable rate and rules in force.
- 9) In accordance with the West Bengal Taxation Laws (amendment) Ordinance, 1993 amending the West Bengal Finance (Sales Tax) Act, 1994 necessary S.T / GST will be deducted as per rate in force from the bill in addition to other deduction as per extent rules.
- 10) The rate should be inclusive of all taxes and Five (5) Years annual maintenance contract.



#### SECTION - D

#### Specification of Works

# 1) General:

The information given hereafter is without any prejudice. The intending bidders should satisfy themselves regarding the latest conditions of the site and its surroundings by personal check and investigation.

# 2) Name of Work:

As mentioned in N.I.Q.

#### 3) Scope of Work:

The Work shall, interalia, broadly consist of:-

1) Works as mentioned in specific Priced Schedule of probable items of work.

# 2) Location of Work site:

As mentioned in N.I.O.

#### 3) Working condition:

During execution of work, contractor will remain responsible for providing unhindered passage to traffic on road adjacent to site, providing lighting and guarding arrangement during night for safety and no extra cost will be paid on this account.

It is to be noted that there will not be any electrical facility at work site. Bidder should make his own arrangement for water, necessary power of lighting, welding, running of pumps etc. and the cost for such arrangement shall be deemed to have been included in the rates quoted by the bidder.

Work shall have to be executed in accordance with the rules and regulations in vogue of Government of West Bengal and local authorities.

# 4) Specifications:

Details of Specifications to be followed in the Proposed Construction are given here-in-after, in the Price Schedule.



N.B. Specifications of any item of works not covered here in above shall be guided by the PWD Schedule of Rates inforce at the time of N.I.T. and latest edition of relevant Indian Standard Specifications and Codes of Practice.

In case of inadvertent typographical mistake found in specific price schedule of rates / NIT / Terms & Condition, the same will be treated to be so corrected as to conform to the relevant PWD (WB) schedule of rates of building / S&P and or Technical sanction or WBF:2911\_ii as the case may be.

# **TECHNICAL SPECIFICATIONS & SCOPE OF WORK**

- 1. Technology: An Sewerage treatment plant in line with present day development based on latest MBBR technology.
- 2. The STP to be in packaged unit / compact pre-fabricated system should be fully automatic, which can be relocated as per site convenience.
- 3. **Treatment** Treatment needs to be totally **biological**.

#### **Electro- Mechanical Scope-**

- Supply of PVC module arrangement to lift sewage from buffer tank to reaction tank, reaction
   Tank to CCT and to lift the sludge from reaction to pre-treatment tank through air lift
   Technology.
- 2. Supply of disc type diffuser in Reaction tank complete with piping and diffusers.
- 3. Supply of Twin lobe rotary Air Blower complete with suitable motor, base, controller frame & Coupling.
- 4. Supply of C.I centrifugal pump set for pumping treated effluent from collection tank to Filters complete with motor, base frame and coupling.
- 5. Instrumentation consisting of all required level controllers.
- 6. Chlorine Dosing Pump.
- 7. Complete Erection & commissioning

# NB: All the pumps should be of reputed make like Kriloskar or equivalent

#### **Electrical**

8. PLC based electrical control panel with solenoid valves.



# Civil and Piping-

- 11.All types of civil works foundations, drains sumps, treated water storage tank etc.
- 12.All type of piping and valves up to inlet and outlet of the STP.
  - 13. All regenerate chemicals required for the initial start-up and normal operation of the nt.
- 14.All types of electrical work and power cabling to the pump, motor etc.

#### **WASTE WATER CHARACTERSTICS**

As per the details furnished, the characteristics and the flow is as below which will form the basis for designing the treatment plant:

# **Characteristic of Waste Water**

BOD 5, 20oC	mg/l	250
COD	mg/l	450
TSS	mg/l	350
PH		6.5-7.5
Oil & Grease	mg/1	10-12

# **Characteristic of Treated Water**

BOD	mg/lit	< 30
COD	mg/lit	< 100
TSS	mg/lit	< 10
СС		
PH		6-9
Oil & Grease	mg/lit	< 10

#### 1. ONE BID PER BIDDER:

1.1. Each bidder shall submit only one bid for one package. A bid is said to be responsive if accompanied by cost of bid document and appropriate bid security. The system shall consider only the last bid submitted through the E-Procurement portal.

#### 2. COST OF BIDDING:

- 2.1. The bidder shall bear all costs associated with the preparation and submission of his bid, and the Engineer-in-Charge will in no case be responsible and liable for those costs.
- 2.2. All the rates and prices in the bid shall cover all taxes, viz. Central or State Sales Tax, Octroi, Value Added Tax or any other local taxes, ferry, tollage charges and royalties and any other charges.
- 2.3. The rate of royalties and taxes prevailing on the date of measurement shall be considered while making deductions in the bills.



2.4. The successful bidder shall make his own arrangement for all materials unless otherwise specified in the conditions of contract.

#### 3. SITE VISIT:

3.1. Bidders are advised to inspect and examine the site and its surroundings and satisfy themselves before submitting their tenders as to the nature of the ground and sub-soil (so far as practicable), the form and nature of the site, the means of access to the site, the accommodation they may require and in general shall themselves obtain all necessary information as to risks, contingencies and other circumstances which may

influence or affect their bid. A Bidder shall be deemed to have full knowledge of the site whether he inspects it or not and no extra charges consequent on any misunderstanding or otherwise shall be allowed. The Bidder shall be responsible for arranging and maintaining at his own cost all materials, tools & plants, water, electricity access, facilities for workers and all other services required for executing the work unless otherwise specifically provided for in the contract documents. Submission of a bid by a bidder implies that he has read this notice and all other contract documents and has made himself aware of the scope and specifications of the work to be done and of conditions and rates at which tools and plant, etc. will be issued to him by the Government and local conditions and other factors having a bearing on the execution of work.

- 3.2. The bidder, in preparing the bid, shall rely on site Investigation Reports referred to in the Contract Data, supplemented by any information available to the bidder.
- 3.3. The Officer inviting the bid / Engineer-in-Charge will clarify queries on the Contract Data on requisition by the intending Bidder. The bidder may ask question in the e-procurement portal using his DSC; provided the questions are raised before the date mentioned in the home page under critical dates.

3.4 Package Sewage Treatment Plant of **10,000 liters per day** capacity consisting of series of Fiber glass reinforced Plastic (FRP) tank made by 100% FRP suitable polyester resin and glass fiber to make tank suitable for underground application having diameter of 2.50 mtr. and a length of 7 mtr. Tank to be created by partition process variation. The tank to have three zones – first zone to work as anaerobic septic zone , second zone is aeration zone of FRP with advanced, polymeric media with a surface area to volume ratio of minimum of 400 Sq. Mtr / Cubic meter to allow free movement of the media the third zone housed in third tank to work as sedimentation zone in the remainder area of the tank. Two Stage Aerobic zone to have 2no Twin Lobe Air Blowers installed for providing air flow by coarse aeration in the zone for speedy reduction of BOD. Sedimentation zone to have submersible pump of the size of 1 hp for pumping the activated sludge back to the anaerobic zone by way of PVC pipes on a regular basis and an additional centrifuges will be applied sludge recirculation line. The whole plant to be controlled by automatic control panel, consisting of other accessories such as PVC Pipe Fittings,

FRP tank of 10,000 liters capacity having inner diameter of 2.5 mtr and a length of 6 mtr. with an internal partition of 1:2 ratio out of which 1/3 will be for tertiary feed water storage & 2/3 for treated water storage application after tertiary treatment.

For Sludge handling 1 no centrifuge 2 m<sup>3</sup>hr,

Filter Feed Pumps (01 working & 01 Standby) to be provided of adequate capacity as per design requirement followed by two stage filtration consisting of Pressure Sand Filter and Activated Carbon Filter with all necessary pipeline and valves. Tertiary Online Chlorine dosing system & 1no ozonetor, to be provided for proper disinfection before discharge to drain or provision to reuse as per Central Pollution Board Norms.



Necessary civil work like EXCAVATION & BACKFILLING, R.C.C, P.C.C, B.F.S, & SAND FILLING for underground FRP STP & FRP Tank foundation as per site condition.

Design parameters:

Inlet-

BOD- 250-350 mg/l

COD- 400-600 mg/l

TSS- 200 mg/l

O&G- 30mg/l pH- 6.5 - 8.9

Outlet-

BOD- less than 20 mg/l

COD- less than 120 mg/l

TSS- less than 10 mg/l

O&G- less than nil pH- 6.9 – 8.0

Sr. No.	Item with quantity offered	Item detail specification
1	Coarse Bar Screen : 1 No.	Dimension- As per site layout in Mild Steel Epoxy Gap: 6-8mm
2	Sewage Pumping Sump in FRP - 1 No.	Dimension: 2.0 m(Dia.) x 1.8m (HOS)  Make-Approved make.
3	Raw Sewage Transfer Pump with Level Control: 2 Nos. (1 Working + 1 Standby)	Type: Dry Motor Submersible Pump; Capacity- 5 m3/hr. Make- Kirloskar/Wilo/Equivalent
4	Packaged FRP STP Unit with suitable fixing supports & accessories for underground installation The FRP tank should be made by 100% FRP suitable polyester resin and glass fiber to make tank suitable for underground application manufactured from Isothelic polyester resin and glass fibre and should be of min wall thickness of 16mm: 1 No.	Dimension: 2.5m(Dia.) x 6.0m (L)  Make- Approved make.
5	FRP Intermediate Storage cum Treated Water Storage Tank with suitable fixing supports & accessories for underground installation The FRP tank should be made by 100% FRP suitable polyester resin and glass fiber to make tank suitable for underground application manufactured from Isothelic polyester resin and glass fibre and should be of min wall thickness of 16mm 1 no	Dimension: 2.5m(Dia.) x 4.0m (L)  Make- Approved make.



6	raw sewage transfer pump with Level Controler	Type: Dry Motor Submersible Pump;
	automatic control panel : septic tank to stp connecting pipeline 2 Nos. (1 Working + 1 Standby)	Capacity- 5 m3/hr. Make- Kirloskar/Wilo/Equivalent
7	Excavation and Backfilling with Stone Aggregate and Earthwork	As per site condition for suitable size of FRP Tanks. Dimension:8m (L) 3.5 M(D) 3,5 M(W)
8	Sand filling, P.C.C & B.F.S in STP foundation	Dimension: 8m (L) x 3.5m (W) and thickness 150 MM for sand, 100mm for p.c.c & 75mm for b.f.s
9	Top Manhole	Dimension: 900mm x 900mm 5nos, and height as per site FGL. Brick works.
10	Sludge Recirculation Pump with Level Control: 1No.	Type: Dry Motor Submersible Pump Make- Kirloskar/Wilo/Equivalent Capacity- 2.5 m3/hr.
11	Air Blowers: 2 Nos. (1Working + 1 Standby)	Type: Twin Lobe Roots Blowers Blower Make- KAY/Airvak/Equivalent Working pressure- 0.4 kg/cm2
12	FAB Media: As per requirement	Surface area: 400 m2 / m3
13	Control panel fully atomatic with loto Arregment : 1 No.	As per required Feeder
14	Filter Feed Pump with Level Control: 2 Nos. (1W + 1SB)	Type: Non Clog Centrifugal Pump Capacity- 2.5 m3/hr Make: Kirloskar/CG/Equivalent
15	Pressure Sand Filter (PSF) with Quartz Sand, Gravels and Pebbles : 1 No.`	Capacity- 2.5 m3/hr Make: JESS Composite/Equivalent Material of Construction- FRP
16	Activated Carbon Filter (ACF) with Granular Activated Carbon(900IV) and supporting Media Bed: 1 No.	Capacity- 2.5 m3/hr Make: Approved make. Material of Construction- FRP
17	Hypochlorite Dosing System: 1 No.	Dosing Pump- Electronic Metering Type Make: JESS Dose/Equivalent Capacity: 0-6 LPH HDPE Dosing Tank- 100ltrs
18	Basket Type Centrifuge for Sludge Handling : 1 No.	Material of Construction-MSEP Capacity: 2 cum/hr
19	Ozonator: 1 No.	Online Dosing System 5gm /HR



20 Flowmeter with Totalizer Capacity- 0-8cum/hr