



अयोध्या विकास प्राधिकरण

AYODHYA DEVELOPMENT AUTHORITY

(E-Tender)

Re-Tender Request for Proposal for

Augmentation of Drainage Line at Cheer Sagar,

Ayodhya

December : 2023

Letter No.:DT......DT

Issued by:

AYODHYA DEVELOPMENT AUTHORITY

Civil Lines, Chaudah Kosi Parikrama Road, Ayodhya, Uttar Pradesh-224001 Phone: +91 9140494501



Disclaimer:-

This Request for Proposal (RFP / TENDER) document for Augmentation of Drainage Line at Different Location, at Ayodhya as the contains brief information about the scope of work and qualification process for the successful applicant /Agency/Bidder/Contractor. The purpose of the RFP / TENDER Document is to provide the applicants (hereinafter referred to as applicant /Agency/Bidder/Contractor with information to assist the formulation of their proposals (hereinafter referred to as the "Proposal/s").

While all efforts have been made to ensure the accuracy of information contained in this RFP / TENDER Document, this document does not purport to contain all the information required by the Applicants. The Applicants should conduct their own independent assessment, investigations and analysis and should check the reliability, accuracy, and completeness of the information at their end and obtain independent advice from relevant sources as required before submission of their Proposal. Ayodhya Development Authority (hereinafter referred to as "ADA", "Client" or the "Authority") or any of its employees or existing advisors shall incur no liability under any law, statute, rules, or regulations as to the accuracy or completeness of the RFP / TENDER Document. The Authority reserves full right to change the terms and conditions in the RFP / TENDER and scope herein and/or terminate the RFP / TENDER process at any stage without assigning any reasons and without any prior notice and no claim of any nature from anyone in this regard shall be entertained.

1 GENERAL INFORMATION :

The Government of Uttar Pradesh (GoUP) envisions to develop Ayodhya as a global religious and tourism epicenter. The Ayodhya Development Authority ("ADA", "Client" or the "Authority"), under guidance from GoUP, is the nodal agency responsible for planning and undertaking development works in the Ayodhya Development Authority Area (ADAA) of ~875 Sq. km. ADA has undertaken and have also planned to initiate multiple projects of civil work, streetscape work, landscape work, water conservation works etc. and is envisaging to engage an applicant /Agency/Bidder/Contractor for "Augmentation of Drainage Line at Cheer Sagar, Ayodhya.

The Request for Proposal (RFP / TENDER) document can be downloaded from e-procurement website.<u>http://etender.up.nic.in/</u>. Key dates for this RFP / TENDER are as below:

- Last date of submission of proposals:
- Date of opening of technical bid: Next working day.
- Date of opening of financial bid: To be communicated later

Contact details:

Ayodhya Development Authority Sh. Alok, Executive Engineer: +91 7388898909 E-mail: <u>vcafda@gmail.com</u> Address: Civil Lines, Chaudah Kosi Parikrama Road, Ayodhya, Uttar Pradesh





1	Name of the Bid	Augmentation of Drainage Line at Cheer Sagar Ayodhya.	
2	Time-period of contract	6 months implementation	
3	Method of selection	Lowest Cost method (after PQ)	
4	Bid Processing Fee	Non-refundable fee of ₹ 7080 .00 incl. tax/GST etc.	
	_		
		The payments to be made in the form of RTGS/NEFT	
5	Earnest Money Deposit (EMD)	Refundable amount of ₹ 65,68,000/-,	
		The payments to be made in the form of RTGS/NEFT/FDR in	
		favour of Secretary, Ayodhya Development Authority and	
		no BG is allowed at this stage.	
		Validity: EMD shall be valid for a period of 180 days from	
c	Security Manay, Danasit (SMD)*	Proposal Due Date	
ю	Security Money Deposit (SMD)	3 % of the contract value in form of Bank Guarantee (value for 12 months) (New Deposit required) however if the tender	
		10112 months). (New Deposit required) nowever if the tender	
		demanded/required as per department norms	
7	EMD and Tender Fee Exemption	Not allowed	
/ 8	Financial Bid and Technical Bid to be	Yes	
Ŭ	submittedtogether	103	
9	Name of the Authority's official for addressing	Sh. Alok, Executive Engineer: +91 7388898909	
	queries and clarifications	E-mail: vcafda@gmail.com	
10	Account details	For Bid Processing Fee & EMD	
		Beneficiary Name: Sachiv Ayodhya Vikas	
		Pradhikaran	
		A/c No : 029005501009	
		IFSC code : ICIC0000290	
		ICICI Bank, Branch – Niyawan, Faizabad	
11	Proposal Validity Period	90 days from Proposal Due Date	
12	Proposal Language	English	
13	Project Cost	The indicative project value is as below	
		₹ 3283.03 Lakh +GST extra as applicable	
14	Proposal Currency	INR	
15	Key Dates		
	Task	Key Dates	
	Bid Start Date		
	Bid End Date		
	Opening of Technical Bids	I o be communicated	
16	Opening of Financial Bid	To be communicated	
	Issuance of Letter of Award (LOA)	To be communicated	
17	Consortium to be allowed (yes/ no)	No	
18	JV to be allowed (yes/ no)	No	
19	Bid System	This is Two BID Documents :	
	(No. of Covers-2)	First will be Technical Bid	
		Second will be Financial Bid (Which will be accepted/opened	
		only after pre-gualifying bid)	

2- Data Sheet:

Note:

a) Bidders (authorized signatory) shall submit their offer Online only (both for technical and financial proposal) at e-tendering portal of <u>https://etender.up.nic.in</u> electronic format with Digital Signature.

b) No Clarification will be sought in case of non-submission of Cost of tender document or EMD of requisite amount. In such cases the bid shall be rejected out rightly without seeking any further clarification/document.



- 3- INSTRUCTIONS TO APPLICANTS:
- A. General instructions
- 1. Number of Proposals and respondents
- 1.1. No Applicant shall submit more than one (1) Proposal, in response to this RFP / TENDER.
- 1.2. Joint venture/Consortium is not allowed under this RFP / TENDER.
- 2. Proposal preparation cost
- 2.1. The Applicants shall bear all costs associated with the preparation and submission of the Proposal. Client will not be responsible and liable for any costs, regardless of the conduct or outcome of the Proposal/process.
- 2.2. All papers submitted with the Proposal are neither returnable nor claimable.

3. Right to accept and reject any or all the Proposals

- 3.1. Notwithstanding anything contained in this RFP / TENDER, Client reserves the right to accept or reject any Proposal and to annul the bidding process and reject all the Proposals, at any time without any liability or any obligation for such acceptance, rejection or annulment, without assigning any reason.
- 3.2. Client reserves the right to reject any Proposal if:
- 3.2.1. At any time, a material misrepresentation is made or discovered, or
- 3.2.2. The Applicant/s do/does not respond promptly and diligently to requests for supplemental information required for the evaluation of Proposals, or
- 3.2.3. The Applicant does not adhere to the formats provided in the Annexures to the RFP / TENDER while furnishing the required information/details.

4. Amendment of the RFP / TENDER

- 4.1. At any time prior to the Proposal Due Date, the Client, for any reason, whether at its own initiative or in response to a clarification requested by eligible Applicant/s, may modify the RFP / TENDER by issuance of an addendum. Such amendments shall be uploaded on the e-procurement website <u>http://etender.up.nic.in/</u> through a corrigendum and form an integral part of the e-bid/Proposal document. The relevant clauses of the e-bid/Proposal document shall be treated as amended accordingly. It shall be the sole responsibility of the prospective Applicant to check the above-mentioned website from time to time for any amendment in the RFP / TENDER document/s. In case of failure to get the amendments, if any, the Client shall not be responsible for it.
- 4.2. In order to provide the Applicants a reasonable time to examine the addendum, or for any other reason, Client may, at its own discretion, extend the Proposal Due Date.
- 5. Data identification and collection
- 5.1. It is desirable that the Applicants submit their Proposal/s after verifying the availability of the data, information and/or any other matter considered relevant.
- 5.2. It is deem/ed that Applicants have conducted their own assessment, research and analysis, including seeking clarifications, queries from nodal officer(s) identified in this document, as required before submission of their Proposal.
- 5.3. It would be deemed that by submitting the Proposal, the Applicant has:

5.3.1. Made a complete and careful examination and accepted the RFP / TENDER in totality.

5.3.2. Received all relevant information requested from Client. and;



- 5.3.3. Made a complete and careful examination of the various aspects of the Scope of Work.
- 5.4. Client shall not be liable for any mistake or error on the part of the Applicant in respect of the above.

B. Preparation and submission of Proposals

6. Language and currency

- 6.1. The Proposal and all related correspondence and documents should be written in the English language. Supporting documents and printed literature furnished by the Applicants with the Proposal may be in any other language provided that they are accompanied by appropriate translations of the pertinent passages in the English language. Supporting materials, which are not translated into English, may not be considered for evaluation. For the purpose of interpretation and evaluation of the Proposal, the English language translation shall prevail.
- 6.2. The currency for the purpose of the Proposal shall be Indian National Rupee (INR).

7. Proposal validity period and extension

- 7.1. Proposals shall remain valid for a period of Ninety (90) days from the Proposal Due Date ("Proposal Validity Period") and Client may solicit the Applicant's consent for extension of the period of validity, if required. Client reserves the right to reject any Proposal, which does not meet this requirement.
- 7.2. In exceptional circumstances, prior to expiry of the original Proposal Validity Period, Client may request Applicants to extend the validity period for specified additional period. Applicants, who may not extend the validity period, will deem to have withdrawn their Proposal at the expiry of validity period.

8. Format and signing of Proposals

- 8.1. The Applicants shall prepare electronic copies of the technical and financial ebid/Proposals separately.
- 8.2. Applicants should provide all the information as per the RFP / TENDER and in the specified formats. Client reserves the right to reject any Proposal that is not in the specified formats.
- 8.3. In case the Applicants intends to provide additional information for which specified space in the given format is not sufficient, it can be furnished in duly stamped and signed PDFs.

9. Site Visit

- 9.1. Bidders must visit the Project Site and ascertain themselves for the site conditions, topography, hydrological and climatic conditions, extent and nature of work, laws, procedures and labour practices, availability of labour, material, machineries, fuel, water, electricity etc. and such similar information that may be necessary for preparation of the bid and entering the contract. Such visit shall be carried out by the Bidders at their own cost, risk and responsibility. Authority shall not be liable for such costs, regardless of the outcome of the Bidding Process.
- 9.2. The bidder has the flexibility to develop Project concept/design in line with project requirements stated in this document and Project Site condition without violating sanctity of the Project Site.



10. Submission of e-bid/Proposal

- 10.1. The bid submission module of e-procurement website <u>http://etender.up.nic.in/</u> enables the Applicants to submit the Proposal online in response to this RFP / TENDER published by the Client. Submission can be done till the Proposal Due Date specified in the RFP / TENDER. Applicants should start the process well in advance so that they can submit their Proposal in time. The Applicant should submit their Proposal considering the server time displayed in the e- procurement website. This server time is the time by which the submission activity will be allowed on the Proposal Due Date indicated in the RFP / TENDER schedule. Once the submission date and time has passed, the Applicants cannot submit their Proposals. For delay in submission of Proposal due to any reasons, the Applicants shall onlybe held responsible.
- 10.2. The Applicants have to adhere to the following instructions for submission:
- 10.2.1. For participating through the e-tendering system, it is necessary for the Applicants to be the registered users of the e-procurement website <u>http://etender.up.nic.in/</u>. The Applicants must obtain a user login ID and password by registering themselves with U.P. Electronics Corporation Ltd. (UPLC), Lucknow if they have not done so previously.
- 10.2.2. In addition to the normal registration, the Applicant has to register with their Digital Signature Certificate (DSC) in the e-tendering system and subsequently he/she will be allowed to carry out his/her e-bid/Proposal submission activities. Registering the DSC is a one-time activity. Before proceeding to register his/her DSC, the Applicant should fist log on to the e-tendering system using the user login option on the home page with the login ID and password with which he/she has registered.
- 10.2.3. For successful registration of DSC on e-procurement website the Applicant must ensure that he/she should possess class-2/class-3 DSC issued by any Certifying Authorities approved by Controller of Certifying Authorities, Government of India, as the e-procurement website http://etender.up.nic.in/ is presently accepting DSC issued by these authorities only. The Applicant can obtain user login ID and perform DSC registration exercise above even before e-bid/Proposal submission date starts. The Client shall not be held responsible if the Applicant fails to submit his/her e-bid/Proposal before the Proposal Due Date due to DSC registration problem.
- 10.2.4. The Applicant can search for active tenders through "search active tenders" link, select a tender in which he/she is interested in and then move it to 'My Tenders' folder using the options available in the e-bid submission menu. After selecting the tender, for which the Applicant intends to e-bid/Proposal, from "My tenders" folder, the Applicant can place his/her e-bid/Proposal by clicking "pay offline" option available at the end of the view
- 10.2.5. tender details form. Before this, the Applicant should download the RFP / TENDER document including financial format and study them carefully. The Applicant should keep all the documents ready as per the requirements of RFP / TENDER document in the PDF format.
- 10.2.6. After clicking the 'pay offline' option, the Applicant will be redirected to terms and conditions page. The Applicant should read the terms & condition before proceeding to fill in the Bid Processing Fee offline payment details. After entering and saving the Bid Processing Fee details form so that "Bid document preparation and submission" window appears to upload the documents as per technical and financial schedules/packets given in the tender details. The details of the RTGS should tally with the details available in the scanned copy and the date entered



during e-bid/Proposal submission time otherwise the e- bid/Proposal submitted will not be accepted.

- 10.2.7. Before uploading, the Applicant has to select the relevant DSC. He may be prompted to enter the DSC password, if necessary. For uploading, the Applicant should click "browse" button against each document label in technical and financial schedules/packets and then upload the relevant PDF files already prepared and stored in the Applicant's computer.
- 10.2.8. If the price bid format is provided in a spread sheet file like BoQ_XXXX.xls, the rates offered should be entered in the allotted space only and uploaded after filling the relevant columns. The Priced-bid/BOQ template shall not be modified / replaced by the bidder; else the bid submitted is liable to be rejected for the tender.
- 10.2.9. The Applicant should click "Encrypt" next for successfully encrypting and uploading of required documents. During the above process, the e-bid/Proposal documents are digitally signed using the DSC of the Applicant and then the documents are encrypted/locked electronically with the DSC's of the bid openers to ensure that the e-bid/Proposal documents are protected, stored and opened by concerned bid openers only.
- 10.2.10. After successful submission of e-bid/Proposal document, a page giving the summary of e-bid submission will be displayed confirming end of e-bid/Proposal submission process. The Applicant can take a printout of the bid summary using the "print" option available in the window as an acknowledgement for future reference.
- 10.2.11. Client reserves the right to cancel any or all e-bids/Proposals without assigning any reason.

11. Submission of hard copy

11.1. Only the final selected bidder shall submit the hard copy of their bid submission.

12. Deadline for submission

12.1. E-bid/Proposal (technical and financial) must be submitted by the Applicant at eprocurement website <u>http://etender.up.nic.in/</u> no later than the time specified on the Proposal Due Date. The Client may, at its discretion, extend this deadline for submission of Proposal by amending the RFP / TENDER document, in which case all rights and obligations of the Client and Applicants previously subjected to the deadline will thereafter be subject to the deadline, as extended.

13. Late submission

13.1. The server time indicated in the bid management window on the e- procurement website http://etender.up.nic.in/ will be the time by which the e-bid/Proposal submission activity will be allowed till the permissible date and time scheduled in the e-tender. Once the e-bid/Proposal submission date and time is over, the Applicant cannot submit his/her e-bid/Proposal. Applicant has to start the bid submission well in advance so that the submission process passes off smoothly. The Applicant will only be held responsible if his/her e-bid/Proposal is not submitted in time due to any of his/her problems/faults, for whatsoever reason, during the e-bid/Proposal submission process.

14. Withdrawal and resubmission of Proposal

14.1. At any point of time, an Applicant can withdraw his/her Proposal submitted online before



the Proposal Due Date. For withdrawing, the Applicant should first log in using his/her login ID and password and subsequently by his/her DSC on the e-procurement website <u>http://etender.up.nic.in/.</u> The Applicant should then select "My bids" option in the bid submission menu. The page listing all the bids submitted by the Applicant will be displayed. Click "View" to see the details of the bid to be withdrawn. After selecting the "bid withdrawal" option, the Applicant has to click "Yes" to the message- "Do you want to withdraw this bid?" displayed in the bid information window for the selected bid. The Applicant also has to enter the bid withdrawing reasons and upload the letter giving the reasons for withdrawing before clicking the "Submit" button. The Applicant has to confirm again by pressing "OK" button before finally withdrawing his/her selected e-bid/Proposal.

- 14.2. No e-bid/Proposal may be withdrawn in the interval between the Proposal Due Date and the Proposal Validity Period. Withdrawal of an e-bid/Proposal during this interval may result in the Applicant's forfeited of his/her e- bid/Proposal security.
- 14.3. The Applicant can re-submit his/her e-bid/Proposal as when required till the e-bid submission end date and time. The e-bid/Proposal submitted earlier will be replaced by the new one. The payment made by the Applicant earlier will be used for revised e-bid and the new e-bid submission summary generated after the successful submission of the revised e-bid will considered for evaluation purposes. For resubmission, the Applicant should first log in using his/her login Id and password and subsequently by procurement signature certificate the ehis/her digital on website http://etender.up.nic.in/. The Applicant should then select "My bids" option in the bid submission menu. The page listing all the bids submitted by the Applicant will be displayed. Click "View" to see the detail of the e-bid to be resubmitted. After selecting the "bid resubmission" option, click "Encrypt & upload" to upload the revised e-bids documents.
- 14.4. The Applicant can submit their revised e-bids/Proposals as many times as possible by uploading their e-bid documents within the scheduled date & time for submission of e-bids/Proposals.
- 14.5. No e-bid can be resubmitted subsequently after the deadline for submission of e-bids.

15. Selection of the Agency

15.1. From the time the Proposals are opened to the time the contract is awarded, if any Applicant wishes to contact the Client, on any matter related to their Proposal it should do so in writing. Any effort by the Applicants to influence any officer or bearer of the Client in the Proposal evaluation or contract award decisions may result in the rejection of the Applicant's Proposal.

C. Proposal opening

16. Opening of Proposals

16.1. It is the responsibility of the bidders to quote for and provide all the H/w and S/w for meeting all the requirements of the RFP / TENDER. In case during evaluation, it is found that certain H/w or S/w which is critical for meeting the requirement of this RFP / TENDER and has not been quoted as part of Bill of Materials (BoM), the bid can be rejected as non-responsive. Additionally, if after the award of contract, it is felt that additional H/w or S/w are required for meeting the RFP / TENDER requirement and the same has not been quoted by the Successful Bidder, the Successful Bidder shall provide all such additional H/w or S/w at no additional cost to AYODHYA DEVELOPMENT AUTHORITY.



17. Confidentiality

- 17.1. Information relating to the examination, clarification, evaluation, and recommendation for the short-listed Agency shall not be disclosed to any person not officially concerned with the process.
- 17.2. After opening of the Proposals, no information relating to the examination, clarification, evaluation and comparison of Proposals and recommendations concerning the award of contract shall be disclosed to Applicants or their representatives, if any. Any effort by an Applicant to exert undue or unfair influence in the process of examination, clarification, evaluation, and comparison of Proposal/s shall result in outright rejection of the offer, made by the said Applicant.

18. Tests of responsiveness

- 18.1. Prior to evaluation of the Proposals, Client will determine whether each Proposal is responsive to the requirements of the RFP / TENDER. The Proposals shall be considered responsive if:
- 18.1.1. It is received or deemed to be received by the due date and time including any extension thereof pursuant to Clause 11.
- 18.1.2. It contains all information as desired in this RFP / TENDER.
- 18.1.3. Information is provided as per the formats specified in the RFP / TENDER.
- 18.1.4. It mentions the validity period as set out in Clause 7.
- 18.1.5. Bids are accompanied with Bid Processing Fee (non-refundable) and EMD in the form of RTGS/NEFT/FDR in favour **Secretary, Ayodhya Development Authority** of as specified in the Date Sheet of this RFP / TENDER.
- 18.1.6. The selected Applicant has furnished a Performance Guarantee as outlined in the Data Sheet of this document at the time of contract signing. The Performance Guarantee shall be returned or be extended after the expiry of the project period, as the case may be. The Bank Guarantee (submitted as a Performance Guarantee) can be from any Nationalized or Scheduled bank.
- 18.2. Client reserves the right to reject any Proposal which is non-responsive and no request for alteration, modification, substitution, or withdrawal shall be entertained by Client in respect of such Proposal.

19. Clarifications sought by Client

19.1. To assist in the process of evaluation of Proposals, Client may, at its sole discretion, ask any Applicant for clarification on its Proposal. The request for clarification and the response shall be in writing. No change in the substance of the Proposal would be permitted by way of such clarifications.

20. Proposal evaluation

- 20.1. Submissions from Applicants would first be checked for responsiveness as set out in Clause 16. All Proposals found to be substantially responsive shall be evaluated as per the Technical/Evaluation Criteria set out in this RFP / TENDER.
- 20.2. The envelopes / Submission containing the Technical Proposal / Financial proposal of the Applicant/s who do not meet the Technical Criteria shall not be considered for



further process. **21. Notifications** 21.1. Client will notify the successful Applicant by letter/email.

4- PROJECT BACKGROUND

4.1 About Ayodhya: Ayodhya

is a place of great antiquity. In ancient times the country round about Ayodhya was known as kosala and both find mention in ancient literature. The first three Vedas, however do not mention either kosala or its capital, Ayodhya; it is only in the Atharvaveda that the city has been described as having been built by the gods and being as prosperous as paradise itself. The Satapatha Brahamana speaks of kosala as one of the countries of the Vedic Aryans and the grammarian Panini mentions it in one of his sutras. Vivid descriptions of Avodhya are to be found in the Ramayana of Valmiki, and the Mahabharata gives it the epithet of 'Punyalakshana' (endowed with auspicious signs). The Kanauj kingdom arose in Ayodhya, then called Oudh, during the 11th and 12th centuries CE. The region was later included in the Delhi sultanate, the Jaunpur kingdom, and, in the 16th century, the Mughal Empire. Ouch gained a measure of independence early in the 18th century but became subordinate to the British East India Company in 1764. In 1856 it was annexed by the British; the annexation and subsequent loss of rights by the hereditary land revenue receivers provided one of the causes of the Indian Mutiny in 1857. Oudh was joined with the Agra Presidency in 1877 to form the North-Western Provinces and later the United Provinces of Agra and Oudh, now Uttar Pradesh state.



4.1 About ADA

The Ayodhya Development Authority (ADA) is one of the leading district level body in state of Uttar Pradesh, connecting people and communities of the region with reliable, planned, and sustainable development work of accessible public amenities including housing. The ADA plans to implement the vision of the Central Govt. of India and State Govt. of Uttar Pradesh of developing Ayodhya as the Global Spiritual Capital by 2047 with an aim to create the state-of-the-art infrastructure in Ayodhya making this city a vibrant mix of ancient and modern.

The ADA intends to play a pro-active role in the promotion of tourism in the city of Ayodhya and seeks do it via public private participation. ADA currently aims to set up Flood Pumping Station of International Standards using latest technology at Surya Kund in Ayodhya.



FLOOD HAZARD -

The flood prone areas are categorized into three types - Very Sensitive Districts, Sensitive Districts and Others. Districts of Ayodhya fall in the Very Highly Sensitive Districts category in terms of flood hazard. The Flood prone map is shown in Flood prone area for the Ayodhya identified by the State Disaster Management Authority is given in *Table 2-2.*

4.2 Flood Prone Area in Ayodhya :

> Cheer Sagar, Ayodhyalt may be noted that, the above specified flood prone areas are

outside Ayodhya, except the location Cheer Sagar. But, at this location recent

construction of bund road prevents the flooding of Ayodhya city, it acts as a boundary

wall and prevents flood to enter the city.

4.3 EXISTING SUBMERGENCE LOCATION IN AYODHYA CITY

The details of all the submergence locations have been collected from Ayodhya Municipal Corporation (AMC) and the same is presented in Details of submergence Locations shared by AMC *Figure 2-5* below.

Whither Gale dard ipur Saralya Manja warata un au alle for States a States a **CALWISK** AMANIGUNU CHAIL! nahpur mahatan nix haput Proje Jaroo Achari Ka Sagra (100 un Poliya Shanza



AS PER THE LETTER COLLECTED THE AYODHYA NAGAR NIGAM: -

Cheer Sagar, Ayodhya:-







Figure : Representation on Flood Area and its improvement proposals



Few Photos Showing the Presence of Existing Drain, Presence of Pond and Its Condition at Ayodhya Town Are Presented Below.

Cheer Sagar, Ayodhya:-





The tenderers are advised: -

- A. The Bidder is advised to visit the site and ensure the suitability of land for the proposed Flood Pumping Station site and examine the site conditions, traffic, location, surroundings, climate, availability of power, water and other utilities for construction, access to site, handling and storage of materials, weather and insolation data, applicable laws and regulations, and obtain for itself on its own responsibility all information, as per their understanding, as may be necessary for preparing the Bid and entering into the Contract Agreement.
- B. To quote the rates strictly as per the language of Schedule G and tenderers should not quote or write any condition which is not required in Schedule G or anywhere in the document.
- C. To read carefully the specifications, terms and conditions, scope of work, work out their own quantities and rates from the drawing and site conditions before quoting the rates.
- D. To well acquaint themselves with the nature of work, the underground water table, the existing water/ sewer lines/electrical lines or cable/telephone lines or cable/data cable, irrigation minors, road, rail crossing & felling of trees and incoming drainage water flows through the alignment/area and should include in their rates sufficient allowances to meet all expenses to divert the flow of existing arrangements cable etc., strengthen the existing surface and sub-surface utilities which may get open during execution or any damages to water supply, sewer lines cables or any other structure during execution of work, as no claim shall be entertained on this ground after wards.
- E. To quote the rates as in Schedule G including supply of all materials, labor, T&P required for proper completion of work, whether clearly mentioned herewith or not. No extra claims shall be entertained on this account.
- F. Tenders with absurd rates are liable for rejection.
- G. i) No payment will be made for making the layout, construction of level pillars and removal of debris from the alignment and grass etc. for the proper execution of work. The successful contractor has to make the site workable at his own expenses, so they are advised to be acquainted them with site and make sufficient allowances in their rates to meet out these required/unforeseen expenses

ii) Also, the contractor should include in his rates for diversion of drains, sewers, water lines, electrical/telephone/data cables/poles, minors, diversion of traffic, display of caution boards, arrangement of caution lights in the night, marking of level pillars etc. reinstatement of water pipe line, cleaning of side drain filled by excavated earth, reforestation etc., as mentioned elsewhere, for which no extra payment shall be made to the Contractor. The contractor should also make all arrangement for the safety of Public and Private Property for convenience of public at the time of execution of work. The contractor shall be responsible for damage done to any electrical/data/telephone cable, drains, sewer lines and water pipe line etc. and will pay to concerned department, the damage & repair charges for the same. If shifting of telephone, cable or water line etc. is necessary, he should inform the department well in advance. The contractor shall be issued by AYODHYA DEVELOPMENT AUTHORITY, but contractor shall be responsible for early & timely approval in writing from the concerned department /company. No fees shall be payable by AYODHYA DEVELOPMENT AUTHORITY. (not



the claims by department for damage done to their property during execution of works. No extension of time shall be admissible for unreasonable delay in seeking permission from the concerned department/company).

The contractor shall also hand over the works to client department or if required to local body (Ayodhya Development Authority) for which handing over note provided by the contractor shall be forwarded by the Ayodhya Development Authority and correspondence there to, on request of contractor, shall be made by Ayodhya Development Authority but the contractor shall be responsible for early & timely handing over of the works/scheme, as taking over certificate shall be issued by Engineer on receiving of appropriate handing over note.

- H. Alignment/route/plan of any part of proposed work may be changed as per direction of department during execution of work as per requirement of work. The department in this regard will entertain no extra claim.
- I. Execution of Ayodhya Development Authority /L.S.G.E. D/P.W.D./C.P.W.D. specifications, I.S. codes, CPHEEO Manual on Sewerage and Sewage treatment with latest amendment/ revisions shall be followed during execution of work/recording measurements and making payment.
- J. Stamp duty charge shall be borne by the tenderer as applicable at the time of award of the contract, presently as per notification of Government of Uttar Pradesh circulated vide notification no. 3636/Gyarah-2004-500(136)/2008 TC dated 3.7.2004.
- K. In case there is discrepancy among or any misinterpretation arises due to any clause/section/interpretation/meaning/technical specification/condition of contract/scope of work etc., then in this case decision of Department in favour of works for proper completion of works as required shall be final and binding to the bidders.

4.5 Background of the Project:

The Ayodhya has a warm humid subtropical climate with cool, dry winters from December to February and dry, hot summers from April to June. The rainy season is from mid-June to mid-September when Ayodhya gets an average rainfall of

896.2 millimeters from the south-west monsoon winds, and occasionally frontal rainfall will occur in January. In winter the maximum temperature is around 25 °C and the minimum is in the 7 to 9 degrees' Celsius range. Fog is quite common from late December to late January. Summers are extremely hot with temperatures rising to the 40 to 45-degree Celsius range, the average highs being in the high 30s.

This Flood Pumping Station is an important project of Government of Uttar Pradesh and was envisaged in order to use spare land at Cheer Sagar at Ayodhya and to create savings in electricity bill and to meet SDG-07 Goals.

The AYODHYA DEVELOPMENT AUTHORITY has taken up the proposed work.

4.6 Location of Flood Pumping Station:-

The proposed following site is to be executed in the premises of different site, Ayodhya. Land is Available for the same in campus.

- Cheer Sagar, Ayodhya.
- 4.7 BRIEF SCOPE OF WORK



The Contractor shall ensure the technical feasibility of his Offer submitted after visiting the Site. the Contractor shall design and execute every such Item(s) of Work(s) which are considered required or necessary for the satisfactory completion and functioning of the entire Plant including Operation & Maintenance of the plant even if such Item(s) of Work(s) are not specified in the Bid documents, but are essential to complete the works.

The Scope of Work includes but not limited to the following: (as per site requirement)

- 4.7.1 Design, Supply, Installation, Testing and Commissioning of Civil, E/M Works of Renovation/Upgrading of Storm water pumping station at Different location at Ayodhya THE selected bidder has to demonstrate assured performance of the station as specified in the bidding documents.
- 4.7.2 Land development to make the topography of the land generally flat & carrying out Geotechnical & Chemical study of soil for designing of foundation of Pumps.
- 4.7.3 All power conditioning systems including LT Panel, Sewage Pumps, Starters, Valves, circuit breaker(s) suitable to site conditions.
- 4.7.4 Design, Supply, Installation, Testing and Commissioning of Civil, E/M Works of Renovation/Upgrading of Storm water pumping station at Different location at Ayodhya with underground Cabling as per project requirement and associated switchgear equipment, transformer and metering equipment for connecting into 11/33 KV at designated Substation of Flood Pumping Station keeping one transformer as per technical specification and state regulations.
- 4.7.5 Transmission of 11 KV generated power through underground cable up to existing substation and metering.
- 4.7.6 LT/HT Panel with existing substation with supply of all necessary required equipment's.
- 4.7.7 All associated electrical works and equipment required for interfacing at 11 KV Electrical Substation (i.e. Transformer – power and auxiliary, breakers, isolators, lightning arrestor(s), LT/ HT/ other panels, protection system, cables, metering at 11 KV level, earthing of transformer etc., but not limited to) as per technical specifications.
- 4.7.8 All associated civil works, including design and Engineering, required for Flood Pumping Station.
- 4.7.9 Earthwork for Site grading, cutting, filling, levelling & compacting in requisite project land as required for development of this Flood Pumping Station.
- 4.7.10 Construction of foundations, transformers and other power equipment foundations, cable trenches for cable routing and earthing pits.
- 4.7.11 Construction of Equipment's Pump room, including Control room & Construction of Storm water drainage network.
- 4.7.12 4-month trial run of the Pumping Plant after successful commissioning, Trial Run and performance demonstration, as detailed in technical specification including supply and storage of all spare parts, consumables, repairs/ replacement of any defective equipment etc.



4.7.13

- The **detailed scope of work** is given in Section V: Technical specifications of this bidding documents.
- Arrangement of electricity for construction work will be provided by department limited to Suitable for Site only but all required material, safety and security is to be ensured by the bidder

The Bidders are to adopt the same nomenclature used for various units in their design report as used in the Tender documents.

Any other Items/units which have not been specifically mentioned in specifications but are necessary for construction of the Plant as per good engineering practice, safety norms and successful operation and guaranteed performance of the entire pumping station shall be deemed to be included within Scope of Work and shall be notify by the Contractor to department and shall be arrange separately.

The Bidders are advised to visit the Flood Pumping Station site before quoting for the proposed Augmentation of Drainage Line at Different Location, at Ayodhya as the land available for proposed site is in a Running Flood Pumping Station and the bidder must ensure that the Flood Pumping Station will remain functional under complete execution of a fore said work.

The above works shall be completed within 16 months from the commencement date excluding 04-month trial run period

GENERAL INSTRUCTIONS TO BIDDERS:-

4.7.14 <u>RATES:</u>

The quoted rate shall include supply of all materials, labor, T&P at the site of work, which are required for execution and proper completion of the item of works as mentioned in but not limited to Schedule-G as per design, drawings and specifications, and other terms and conditions mentioned in the tender documents and as required by Engineer In charge. The tenderers should include in his rates, cost of all labors, material, T&P, water, dewatering, fencing, lighting, traffic diversion, diversion and safety of existing system of campus, if required and reinstatement of all public amenities which are disturbed during execution of work, refilling with suitable earth, reforestation etc. which may become necessary for complete execution of the works to the satisfaction of the Engineer. No claims, whatsoever, will be entertained on this account later on.

- 4.8 The contractor should keep in view the fluctuation in market rates during the time of acceptance of tender and during the entire period of execution of contract, being a firm tender, no claims, whatsoever, will be entertained on this account.
- 4.9 Once the tenders have been opened, no request for consideration of any alteration in their offer shall be entertained.



5. ELIGIBILITY AND EVALUATION CRITERIA :

5.1 Pre-qualification criteria

The Bidders must carefully examine the below mentioned pre-qualification criteria. Prequalification proposals will not be considered further if the mentioned requirements as per RFP / TENDER are not fulfilled. Each of the Pre-Qualification condition mentioned in RFP / TENDER is mandatory. In case the Bidder does not meet any one of the conditions, the bidder will be disqualified. The Bidder must meet all the criteria set out in this Clause to be eligible for evaluation. The Bidder shall fulfil the conditions as mentioned below:

- 5.1.1 The Applicant shall be a Company registered under the Companies Act or Partnership firm registered under the Partnership Act of 1932 or registered (converted to) The legal status shall be demonstrated through a copy of registration certificate issued by registrar of companies/firms.
- 5.1.2 The bidder must have a valid Goods and Service Tax (GST) registration in India. The bidder is required to submit a true copy of its Good and Service Tax (GST) registration certificate
- 5.1.3 The bidder <u>must have experience</u> in providing similar services in India to the Government organizations/ departments/ Autonomous Bodies. <u>within Seven (07)</u>

<u>years</u>

- **5.1.4** The bidder must have a minimum average annual turnover of 30% of 3283.03 lakhs equal to INR 984.90 Lakh during each of the last Five (5) Years ending on 31st March 2023 (in case of non-availability of audited financial statements, a provisional statement certified by CA may be provided for FY 2022-23) from India operations. The Bidder shall enclose with its Application, certificate(s) from its Statutory Auditors stating its total revenues. The Statutory auditor also needs to certify that the Bidder has positive Net worth in Five (5) consecutive financial years in last five financial years from the Proposal Due date of bid.
- 5.1.5 The Bid document fee and EMD as specified in the Data Sheet must be submitted.
- 5.1.6 The Bidder should not have been barred by the Central Government, any State Government, a statutory authority or a public sector undertaking, as the case may be, from participating in any project, and the bar exists as on the date of the Proposal. (Undertaking as per Form 6)



Note: -

Similar work and value shall be conisdred only of Supply, Installation, Constrution, commisioing of pumping plant with tarsnformr and dleivery line with its sewage pumping station complete with Civil, E/M Works of Augmentation/ Renovation/Upgrade AYODHYA DEVELOPMENT AUTHORITY of Storm Water Pumping Station /Sewage Pumps/ with Civil and E/M work combine in Government / Government Public Sector will be considered

(If the bidder submits the certificate which has many works executed in one and in which the total value if coming from many component like building construction which is not pump house , ac work , internal wiring etc along with Sewage station work etc then the value of work only pertaining to BOQ asked for this tender shall be considered and those extra values shall subtracted like building construction which is not pump house , ac work , internal wiring and only net value shall be only taken for PQ and any other work which is not associated with the same work shall not be considered)

The "Technical & Financial Capacity Evaluation/Pre-Qualification bid" shall be evaluated on the basis of requirements given in NIT and in tender document. <u>The financial bid of only</u> <u>those bidders, whose Technical & Financial capacity Evaluation bids found</u> <u>responsive/ qualified.</u>

The evaluation and comparison of financial bid (however the department is/have free/right to make any decision in interest of work and can evaluate the bids on lowest rates basis of individual items / or in totality, as mentioned in schedule 'G' of project/ and reject any/ all bids without giving any explanation/reason what so ever) by Lowest Cost method (after PQ)

Definition of Contractor

- Here Contractor means under whose name tender fees is paid & EMD is deposited.
- Here in this bid all papers/licenses/ experience / authorizations /balance sheet(of minimum 5 years) etc. should be in the of name of Contractor only then shall be only considered.



6. ELIGIBILITY FOR THE BIDDERS:

Application for pre-qualification will be evaluated under the following heads. The details of minimum qualifying criteria in these heads is given below-

- i. Technical Experience
- ii. Financial Standing / Experience
- iii. Past work Experience
- iv. Personal Capability
- v. Manufacturer authorization
- vi. Class A Anumodit Electrical safety license issued by Directorate of Electrical safety, Uttar Pradesh should be in the name of prime bidder only
- vii. Litigation History
- viii. Other Requirements

Contractor are required to furnish necessary data, documents, drawing and other particulars along with the application for prequalification, in support of their competence under above heads. Data/documents furnished should be true in all respects. On verification, if it is found at any stage that such data/documents are not true or concerned Contractor has attempted to conceal any unfavorable data, his application for tender will be rejected and he may be debarred form tendering in AYODHYA DEVELOPMENT AUTHORITY.

7.1 Registration requirement of prime bidder must for any bidder (Must have) -

- Class A in our department / any housing Board of UP/ PWD/ and semi or government department
- Class A Anumodit Electrical safety license in the name of Contractor As the work involve substation/HT/transformer work so does having this certificate for prime bidder must.

7.2 Experience:

The Contractor should have financial soundness, sufficient technical know-how and have successful complete the same nature of works in Government / Public Sector only during the last 07 years ending last day of the month previous to the one in which application are invited, as per details given below.

(In this tender experience shall be considered where the Contractor has done work if similar nature of SITC in one work order only as here is the nature of tender is one).

- Sweage Pump
- HT panel
- Transofmer
- Sewer Pump line for discharge.

Civil work including of renovation/rehabilitation with E/M of sweage pumping station and work related to this and most important that all the above mention work should be done/competed in one work order (i.e. work competition certificate should be of one order) as the tender demands all this work to be done in tandem thus certificate if submitted with same exepericne but with different work order shall not be considered.

Defintion of Similar work

Here work and value shall be conisdred only of Supply, Installation, Constrution, commisioing of pumping plant with tarsnformr and dleivery line work alongwith its consturtcion of sewage pumping station complete with Civil, E/M Works of Augmentation/ Renovation/Upgrade of Storm Water Pumping Station /Sewage Pumps/ with Civil and E/M work combine in Government / Government Public Sector only will be considered

(If the bidder submits the certificate which has many works executed in one and in which the total value if coming from many components like Building construction (which is not pump house), Ac work, internal wiring etc along with Sewage station work etc then the value of work only pertaining to BOQ asked for this tender shall be considered and those extra values shall subtracted and any other work which is not associated with this work shall not be considered. Like for example value of Building construction (which is not pump house), Ac work, internal wiring, etc and only net value (i.e. of the work of this nature) shall be only taken for PQ

7.2.1 Financial Experience of Similar Completed Works is must for PQ

 One successful single order completed and commissioned works of flood augmentation / sewage / water pumping plant station with civil work and E& M work costing not less than the amount equal to 80% within 7 years.

(Or)

 Two successful single orders completed and commissioned works flood augmentation / sewage/ water pumping plant station with civil work and E& M work costing not less than the amount equal to 50% within 7 years.

(Or)

 Three successful single orders completed and commissioned works flood augmentation / sewage / water pumping plant station with civil work and E& M work costing not less than the amount equal to 40% within 7 years.



7.2.2 Physical Experience must include the works of minimum 2/3rd capacity of maximum capacity proposed in scope of work/BOQ. is must for PQ

- The experience must include at least one successful completed works of minimum of 2/3rd capacity of sewage / flood pumping plant i.e., 4500 LPM pump x 8 nos. each having capacity minimum 90 hp with required civil work and complete in all respect within 7 years.
- The experience must include at least one successful completed works of minimum of 1 No. Sub-station i.e., 250 KVA complete in all respect within 7 years .
- The experience must include at least one successful completed works of minimum of 1 No. Dg Set i.e., 250 KVA complete in all respect within 7 years .
- The experience must include at least one Successful completed works of minimum of 2/3rd Length & Dia both of rising main / pipeline for disposal laying i.e. (in this tender is) 150 mm Dia of the tendered capacity of 2200 Mtr with required civil work and complete in all respect within 7 years .
- The experience must include at least one successful completed works of minimum of HT Panel i.e. (in this 1. tender is) VCB x 1 nos required civil work and complete in all respect within 7 years .

<u>Note:-</u> As the tender of the all the work is one so work completed by tenderer should have experience of all the work in one certificate as the department has to judge the Contractor can do all the type of required work simultaneously thus no certificate with separate work shall be entertained.

7. PERSONNEL CAPABILITY:

The Contractor should furnish the list of all personnel employed in the company (both technical and non-technical). The Contractor shall provide suitably qualified personnel to fill up the senior positions required during the execution of the job as given under. For each position the Contractor shall supply the relevant information as given in the form No.5 provided with the document.

The Contractor shall supply the information for the following position with the details as specified below. The Contractor not supplying the information as given below shall be liable for disqualification. The selected Contractor will have to undertake an assurance to make available persons of following qualifications at site during construction.



S. No.	Position	Total years Experience	of Total years of experience in similar works	Minimum Qualification	Nos.
1.	General Manager	5	5	B.E. (Elec./Mech.)	1
2.	Graduate Engineer (E/M)	5	5	B.E. (E/M)	1
3.	Diploma Holder Engineer	5	5	Diploma (E/Mlh)	2
4.	Diploma Holder Engineer	5	5	Diploma (Civil)	2

8. EQUIPMENT CAPABILITY

- 8.1 The Contractor shall own, or have assured access to (through hire, lease, purchase agreement, availability of manufacturing equipment or other means) the key items of equipment in full working order and must demonstrate that base of known commitments. They shall be available for use in the design, supply, construction, installation, commissioning, 4 Months Trial- Run, the Contractor shall also list alternative equipment which the contracting agency shall propose to use for the contract work, together with an explanation / reasons and suitability of the said proposal. The information has to be supplied in the Form 6 for the construction of the plant within the stipulated period.
- 8.2 The list shall include equipment for heavy engineering works lifting, jacking, MS work, large excavation work and earth moving, well point equipment, pumping plants and other T&P required for completing the above contract in time. The Contractor shall insert the list of key equipment based on the need of the job and performance criteria. The performance criteria shall also be stated with the list of the equipment available for the work. The equipment essential for timely completion of works shall be made readily available during the time frame to complete the work.

8 . FINANCIAL POSITION:-

8.1 That Contractor has to Incorporation & registration which is of **minimum of more than 5 years old**.

8.2 Contractor has to submit all the financial papers like Balance sheet, P&L, turn over (with UDIn) of **last five year minimum**.

8.3 The Contractor shall demonstrate that it has access to and has available liquid Assets or unencumbered



real assets or Line of Credit Rehabilitation (LOC), and other financial means sufficient to handle cash flow for works to be executed under this bid. Contractor should be financially capable to make each flow on works for at least 20% cost of tendered cost.

8.4 Turn-over:

The Contractor should have average **minimum average annual turnover of 30% of 3283.03 lakhs equal to INR 984.90 Lakh** during <u>last 5 years</u> ending 31.03.2023.

8.5 Profit / Loss:

Net worth of Contractor should be positive on the date of bidding. And should be more than 30% of the bid value

8.6 Solvency Certificate:

The Contractor should a solvency of **Rs. 984.90 Lakhs** as certified by his banker valid only for six months from the date of issue or concerning valid only for six months from the date of issue. The Contractor shall submit the **Audited Balance Sheet** for **last 5 years** and shall demonstrate its stations position with long-term profitability. The AYODHYA DEVELOPMENT AUTHORITY shall have access to the Contractor's Banker to make inquiries as and when required by them. A certificate of stations financial standing should be provided from the main BANKER. The Prime contractor / Contractor shall furnish the following information as part of his pre-qualification bid, along with the supporting documents as on date

8.6.1 Affidavit circulated (Application Form)

8.6.2 **Bankers Certificate** regarding credit worthiness of the company from a Nationalized / Scheduled bank.

8.6.3 Profile of Company

(a) Constitution of Company and Article of Association.

(b) Nature of works being undertaken,

(c) Registration with Government / Public Sector Undertaking.

8.6.4 List of Works in Hand

- (a) Name and Addresses of the client
- (b) Brief Description of the works
- (c) Details of equipment deployed
- (d) Date of commencement of the works
- (e) Percentage of completion of work as on 31.10.2023
- (f) Value of works
- (g) Copies of work orders (Application Form)



8.6.5 List of works completed during last 5 years

- (a) Name and address of work
- (b) Details of equipment deployed
- (c) Brief description of the works
- (d) Schedule duration of the contract
- (e) Actual duration of completion of the work
- (f) Period during which the contract is executed
- (g) Value of the work as completed
- (h) Copies of the completion certificate (Application Form-3).

8.6.6 Contractor should have Class A Anumodit License from Director Electrical Safety U.P in its name only

8.6.7 Detailed description of equipment arranged by the Company along with date of purchase of equipment

(Application Form-6).

8.6.8 Details of Key Engineering / Management Personnel with the company (Application Form-5 A).

8.6.9 Minimum Income Tax return of company of last 5 years

- 8.6.10 Minimum Audited Balance Sheet for last 5 years.
- 8.6.11 Bank Statement of last financial year.
- 8.6.12 GST registration certificate
- 8.6.13 Incorporation certificate.
- 8.6.14 No Applicant shall submit more than one (1) Proposal, in response to this RFP / TENDER.
- 8.6.15 Joint venture/Consortium is not allowed under this RFP / TENDER.
- 8.6.16 No Applicant shall submit more than one (1) Proposal, in response to this RFP / TENDER.
- 8.6.17 Joint venture/Consortium is not allowed under this RFP / TENDER.

11.AUTHORIZATION OF MANUFACTURER Is must For Qualification in This Particular Tender In The Favor Of Contractor.

- Sewage Pump Set.
 - Transformer
 - VCB Panel
 - Genset
 - Genset
 Cables

 - LT switchgearsChain Pulley Block



a) LITIGATION HISTORY

- i. The Contractor shall provide accurate and correct information on any running / current litigation(s) or the past litigation(s) or the arbitration(s) resulting from the completed and / or under execution contracts by the Contractor over a period of past five (5) years till 30/6/2023. A consistent history of litigation against the Contractor or sub-contractor shall result in failure of the Contractor to bid for the said contract.
- ii. If ever the Contractor have been debarred, blacklisted by any Govt. Department, then Contractor shall furnish the complete details giving the reasons of blacklisting and thereafter final out-come of the dispute. The application/bid of any Contractor shall not be considered, who still is blacklisted or debarred by any Govt. Department.
- iii. If in any case if any bidder is participating in individual capacity and its paper are used in any part of any sort of consortium / Partnership / Venture / S.P.V / L.L.P also then that bidder papers will be considered only in in one bid and will given benefit in one participation only subject to conditions which are as follows
- iv. Then bidder paper shall be considered only in the bid where the bidder has paid the tender fees and earnest money in individual / direct capacity and then same bidder papers if found attached attached/participated in some sort /form of/in second bid /consortium/L.L.P also, will become null and void there and shall not be considered / evaluated in any form in other/second bid for valuation where the bidder has participated in joint capacity.
- v. Then the second bid /bidder / consortium /L.L.P of any sort in the tender shall be evaluated without having any benefit of the papers of the bidder who has participated in individual capacity also and papers of that individual bidder will be becoming zero immediately in that consortium as that bidder paper will be only considered in the individual participating bid only and not in this consortium.
- vi. Then the second bid /bidder / consortium/L.L.P shall be not getting benefit/advantage/disadvantage of the individual bidder papers who has participated in individual capacity whether that individual bidder is getting qualified / dis qualified and result of that individual bidder wont effect the evaluation of consortium as they will judged /evaluated without consideration of that individual bidder papers and that qualification / disqualification of theirs will be evaluated on their papers minus that individual bidder papers

b) Language

English should be the working language of the letter of application and pre- qualification document. In case the letter of application and / or pre-qualification document is issued in local language other than the working language the working language shall be the ruling language. The tender document and other relevant and associated documents shall be written in the working language.



12. Must REQUIREMENTS FOR QUALLIFICATION

(Any Bidder Shall Be Considered only after PQ Only When He Does Have Papers For 7.2.1 And 7.2.2 12.1 and 12,2 Not Having These Papers Will Make Bidder Ineligible For Participating And Evaluation Process)

- 12.1 Valid Electrical Safety Certificate of **Anumodit Class** "**A**" issued by Director of up electrical safety department is must for Contractor.
- 12.2 Authorization of manufacturer is must for this particular tender in the favor Contractor for qualification
 - Sewage VT Pump
 - Transformer
 - VCB Panel
 - Genset
 - Cables
 - LT switchgears
 - Chain pulley block
- 13. EVALUATION OF TENDER(only after the PQ qualification) : As required in tender document at various stage and Lowest Cost method (after PQ)

shall be applied

14. PAYMENT TERMS AND SCHEDULE:-

The payment has to be done on the basis of record in the measurement book (M.B.) on the site

Deliverable and Payment Milestones

The overall period of the engagement of the agency shall be Six (6) months from the date of signing the contract (T), with the provision for extension based on requirement and mutual agreement (including duration, team-size, composition, etc.). The payments shall be made as per the following terms and conditions: where T is after handing over of sites

Sr. No.	Deliverable	Timeline	Payment %	Total
	Implementation Stage	6 Months		
1	Inspection report submission & survey drawing layout/architecture and structural drawing mentioned in for final approval from		5%	
2.A	Payment against Delivery of material on site for civil work	T + 1 Month	25%	100%
2.B	Payment against Delivery of material on site for E&M work and pipeline work	T + 2.5 Month	70%	
3	Completion of work	T + 1.5Months		
	Civil work		70%	
	E&M and pipeline work		30%	



The Implementing Agency shall submit consolidated running (R.A.) bills to AYODHYA DEVELOPMENT AUTHORITY for the work completed during implementation stage. The Engineer-In-Charge, AYODHYA DEVELOPMENT AUTHORITY will verify the bills against milestones set as per RFP and the certificate issued by the Engineer-In-Charge, shall be final and conclusive.

Payment of GST & Additional Equipment

- a) Payment of Goods & Service Tax GST shall be shown extra by the bidder in their invoices for the items applicable.
- b) Additional Equipment: For any new equipment(s) which are not included in the RFP / TENDER that might come up during the contract period AYODHYA DEVELOPMENT AUTHORITY will reserve the option to procure these equipment(s) on its own and supply to the Agency. The Agency would need to operate and maintain all such equipment installed in the Project locations and yearly AMC charges will be paid by AYODHYA DEVELOPMENT AUTHORITY to OEM/Supplier. Alternatively, AYODHYA DEVELOPMENT AUTHORITY may ask the bidder to procure the equipment. In such cases, the Agency may procure the equipment(s) at rates up mentioned in the BoM or as per rates agreed in NICSI/DGS&D/DSR Rate /UPPWD Rates/ Market Rate based rate analysis and raise invoice for upfront payment of the same. The Successful bidder shall maintain such equipment installed in the Project locations and Yearly AMC charges will be paid by AYODHYA DEVELOPMENT AUTHORITY to OEM/Supplier. In any case the liability of AYODHYA DEVELOPMENT AUTHORITY to OEM/Supplier.

5.1 Site level Standards/Requirement/Agreement:

a) Assignment

If Successful Bidder fails to render services in stipulated timeframe and as per schedule, AYODHYA DEVELOPMENT AUTHORITY, at its discretion and without any prior notice to Successful Bidder, may discontinue or minimize scope of work or procure/board any other similar Agency to render similar services to complete project in stipulated timeframe.

- b) Site level Agreement
 - The Site level to be established for the Services offered by the Successful Bidder to the AYODHYA DEVELOPMENT AUTHORITY. The Successful Bidder shall monitor and maintain the stated Site level to provide quality service to the AYODHYA DEVELOPMENT AUTHORITY.
 - ii. The SLA parameters shall be monitored on a monthly basis as per the



individual SLA parameter requirements. However, if the performance of the system/services is degraded significantly at any given point of time during the contract and if the immediate measures are not implemented and issues are not rectified to the complete satisfaction of the AYODHYA DEVELOPMENT AUTHORITY or an Agency designated by them, then the AYODHYA DEVELOPMENT AUTHORITY shall have the right to take appropriate punitive actions including termination of the contract.

- iii. Onsite comprehensive (including all Hardware, Software, network cabling for all types of defects and problems) maintenance services shall be provided by the OEM during the period of warranty and Comprehensive Annual Maintenance Contract (CAMC). In case the supplier fails to rectify the problem within SLA including holidays then OEM shall be required to provide second level support, service to rectify the problem or replace the faulty system or part thereof. The performance of the system shall be measured, and applicable penalties shall be calculated and imposed on the contractor, in case the performance is below the defined thresholds.
- c) Penalty for non-achievement of SLA Requirement (Implementation SLA) -

In case of failure / delay to complete the work/supply in time the penalty shall be levied@ 0.50% per week or part thereof of the total Contract Value subject to maximum of 5% of the total Contract Value.

d) Support Related SLA (Operational SLA)

i. Successful bidder will provide after spares service during the comprehensive warranty period from nearest place of service point to the location of installation in Ayodhya. The complaint should be attended within 24 hours failing which the following penalties shall be imposed. The complaint will be recorded in help desk constituted by successful bidder for this purpose by email or phone and a log will be maintained of the complaints by BIDDER and the AYODHYA DEVELOPMENT AUTHORITY.



Sr. No	Duration	Penalty
1.	Up to 48hours from the logging of the complaint with the	Nil
	bidder	
2.	Beyond 48 hours up to 15 days from the logging of	0.05% per week of the total
	the complaint	value of
	with the bidder.	the defective equipment
3.	Beyond 15 days of the logging of the complaint till	0.1% per week of the total
	rectification of	value of
	the fault	the defective equipment

- ii. Even after 30 days, if the rectification does not take place and the problem still persists, the AYODHYA DEVELOPMENT AUTHORITY personnel along-with Engineer of the service provider will check & verify the faulty component/ equipment/hardware and the successful bidder is liable to replace the component/ equipment/hardware of same or higher specifications & same brand, which should be compatible with the existing hardware/software. For the purpose a show-cause notice will be issued to rectify the system in next 7 days otherwise the contract will be terminated, and the security amount will be forfeited. During the period of show cause notice penalty @ Rs.2000 per day shall be imposed.
- e) Other Conditions
 - i. The Successful Bidder should comply with all applicable laws and rules of Government of India / Government of Uttar Pradesh/ Ayodhya Development Authority Guidelines.
 - ii. Support Executive/Supervisor deployed by the Successful Bidder shall not have right to demand for any type of permanent employment with AYODHYA DEVELOPMENT AUTHORITY or its allied Offices.
 - iii. AYODHYA DEVELOPMENT AUTHORITY reserves the right to withdraw / relax any of the terms and condition mentioned in the RFP / TENDER, so as to overcome the problem encountered at a later stage for the smooth and timely execution of the project.
- f) Reporting Procedures

Agency representative shall prepare and distribute Site level performance reports in a mutually agreed format by the 5th working day of subsequent month. The reports shall include "actual versus target" Site level Performance, a variance analysis and discussion of appropriate issues or significant events. Performance reports shall be distributed to Authority management personnel as directed by Authority.

g) Issue Management Procedures



This process provides an appropriate management structure for the orderly consideration and resolution of business and operational issues in the event that quick consensus is not reached between Authority and Agency. Implementing such a process at the beginning of the outsourcing engagement significantly improves the probability of successful issue resolution. It is expected that this pre-defined process shall only be used on an exception basis if issues are not resolved at lower management levels.

h) Site level Change Control i. General

It is acknowledged that this Site level may change as Authority's business needs evolve over the course of the contract period. As such, this document also defines the following management procedures:

- An issue management process for documenting and resolving particularly difficult issues.
- Authority and Bidder management escalation process to be used in the event that an issue is not being resolved in a timely manner by the lowest possible level of management.

Any changes to the levels of service provided during the term of this Agreement shall be requested, documented and negotiated in good faith by both parties. Either party can request a change.

ii. Site level Change Process

The parties may amend Site level by mutual agreement in accordance. Changes can be proposed by either party. Unresolved issues shall also be addressed. Agency's representative shall maintain and distribute current copies of the Site level document as directed by Authority. Additional copies of the current Site level shall be available at all times to authorized parties.

iii. Version Control / Release Management

All negotiated changes shall require changing the version control number. As appropriate, minor changes may be accumulated for periodic release or for release when a critical threshold of change has occurred



15.GENERAL CONDITIONS OF CONTRACT (GCC)

1 General Provisions

1.1 **Definitions**

Unless the context otherwise requires, the following terms whenever used in this Contract have the following meanings:

- a) "Agency/Bidder/Contractor" means any private or public entity that will provide the Services to the Client ("the Client") under the Contract.
- b) "Client" means the Authority with which the Agency signs the Contract for the Services i.e. Ayodhya Development Authority.
- c) "Contract" means and includes Tender Invitation, Instructions to Tenderers, Tender, Acceptance of Tender, General Conditions of Contract, Special Conditions of Contract, schedule of Requirements, Technical Specification and Annexure particulars and the other conditions specified in the acceptance of tender, and amendments.
- d) "Government" means the Government of the Client's country/state
- e) "Equipment" means the goods in the contract, which the AGENCY has agreed to supply under the contract;
- f) "Test" means such test as is prescribed by the particulars or considered necessary by the AYODHYA DEVELOPMENT AUTHORITY whether performed or made by the Inspecting Officer or any Agency acting under the direction of AYODHYA DEVELOPMENT AUTHORITY.
- g) "Party" means the Client or the Agency, as the case may be, and "Parties" means both
- h) "Personnel" means professionals and support staff provided by the Agency assigned to perform the Services or any part thereof
- i) "Services" means the work to be performed by the Agency pursuant to the Contract.

1.2 Law Governing Contract

This Contract, its meaning and interpretation, and the relation between the Parties shall be governed by the Applicable Law.

1.3 Language

This Contract has been executed in English language, which shall be the binding and controlling language for all matters relating to the meaning or interpretation of this Contract.

1.4 Notices

1.4.1 Any notice, request or consent required or permitted to be given or made pursuant to this Contract shall be in writing. Any such notice, request or consent shall be



deemed to have been given or made when delivered in person to an authorized representative of the Party to whom the communication is addressed.

1.4.2 A Party may change its address for notice hereunder by giving the other Party notice in writing of such change to the address.

1.5 Authorized Representatives

Any action required or permitted to be taken, and any document required or permitted to be executed under this Contract by the Client or the Agency may be taken or executed by the officials specified in the Contract.

1.6 Environmental Health & Safety Norms

Agency has to submit Project Specific Plan for Implementation of Environment, Health and Safety (EHS) norms of statutory bodies before start of execution of the Project and abide by/ comply/ implement all the provisions of the approved EHS Plan. Non-compliance of any provision in this regard would attract penalty and suitable amount for the same shall be recovered from their Running Account Bills.

The Agency shall provide a report on the Environmental, Health and Safety (EHS) metrics. The Agency shall also provide immediate notification to the Project In Charge of incidents in the following categories. Full details of such incidents shall be provided to the Engineer In Charge within the timeframe agreed with the Engineer In Charge.

- a) confirmed or likely violation of any law or international agreement;
- b) any fatality or serious (lost time) injury;
- c) significant adverse effects or damage to private property (e.g. vehicle accident, damage from fly rock, working beyond the boundary)
- d) major pollution of drinking water aquifer or damage or destruction of rare or endangered habitat (including protected areas) or species;
- e) any allegation of sexual harassment or sexual misbehavior, child abuse, defilement, or otherviolations involving children.

1.7 Packing & Marking

a) **Packing:** The Agency shall pack at his own cost the equipment sufficiently and properly for transit by rail/road, air and/or sea so as to ensure their being free from loss or damage on arrival at their destination locations as specified in the purchase order. He shall decide the packing for the stores by taking into account the fact that the stores will have to undergo arduous transportation before reaching the destination and will have to be stored and handled in tropical climatic conditions (Including Monsoons) before being put to actual use. Unless otherwise provided in the contract, all containers (including packing cases, boxes, tins, drums and wrappings) in which the stores are supplied by the Agency shall be considered as non-returnable and their cost as having been included in the contract price. Each package shall contain a packing note specifying the name and address of the



Agency, the number and date of the acceptance of tender and the Designation of the Purchase Officer issuing the supply orders, the description of the equipment and the quantity contained therein.

- b) Marking: The marking of all goods supplied shall comply with the requirement of the Indian Acts relating to merchandise marks or any amendment thereof and the rules made there under. The following marking of the material is required: - The following particulars should be stenciled with indelible paint on all the materials/packages:
 - Contract No:
 - AYODHYA DEVELOPMENT AUTHORITY Name & logo:
 - In addition to the marking as specified above, distinguish color marks should be given so as to distinguish the ultimate Consignees in India

1.8 Labour Law

All rules & regulations, PF Rules and Minimum Wages Act shall be applicable for this Contract. Minimum Wages as per Govt. Of India shall be applicable.

1.9 **Taxes and Duties**

- a) The Agency shall bear and pay all taxes, duties, levies and charges assessed on the Agency, its Subcontractors or their employees by all municipal, state or national government authorities in connection with the Facilities in and outside India.
- b) In the event of exemption or reduction of Custom Duties, Excise Duties, Sales Tax or any other Cess /Levy being granted by the Government in respect of the works, the benefit of the same shall be passed on to the AYODHYA DEVELOPMENT AUTHORITY.

1.10 Fraud and Corruption

- 1.10.1 Definitions: defines, for the purpose of this provision, the terms set forth below as follows:
 - a) "corrupt practice" means the offering, receiving, or soliciting, directly or indirectly, of anything of value to influence the action of a public official in the selection process or in contract execution;
 - b) "fraudulent practice" means a misrepresentation or omission of facts in order to influence a selection process or the execution of a contract;
 - c) "collusive practices" means a scheme or arrangement between two or more Applicants, with or without the knowledge of the Client, designed to establish prices at artificial, non-competitive levels;
 - d) "coercive practices" means harming or threatening to harm, directly or indirectly, persons or their property to influence their participation in a procurement process, or affect the


execution of a contract.

1.10.2 Measures to be taken

The Client will cancel the contract if representatives of the Agency are engaged in corrupt, fraudulent, collusive or coercive practices during the selection process or the execution of the contract;

The Client will sanction the Agency, including declaring the Agency ineligible, either indefinitely or for a stated period of time, to be awarded a contract if it at any time determines that the Agency has, directly or through an agent, engaged in corrupt, fraudulent, collusive or coercive practices in competing for, or in executing, the said contract.

1.11 Limitation of Liability

The Client (and any others for whom Services are provided) shall not recover from the Agency, in contract or tort, including indemnification obligations under this contract, under statute or otherwise, aggregate damages in excess of the fees actually paid for the Services that directly caused the loss in connection with claims arising out of this Agreement or otherwise relating to the Services.

The preceding limitation shall not apply to liability arising as a result of the Agency's fraud in performance of the services hereunder.

1. Commencement, Completion, Modification and Termination of Contract

1.1 Effectiveness of Contract

This Contract shall come into effect from the date the Contract is signed by both Parties. The date the Contract comes into effect is defined as the Effective Date.

1.2 Commencement of Services

The Agency shall begin carrying out the Services not later than 15 days after the Effective Date specified in the RFP / TENDER or the Contract.

1.3 Expiration of Contract

Unless terminated earlier pursuant to GC Clause 2.6 hereof, this Contract shall expire at the end of such time period after the Effective Date as specified in the RFP / TENDER or the Contract.

1.4 Modifications or Variations

Any modification or variation of the terms and conditions of this Contract, including any modification or variation of the scope of the Services, may only be made by written agreement between the Parties.

1.5 Force Majeure

1.5.1 Definition

For the purposes of this Contract, "Force Majeure" means an event which is beyond the reasonable control of a Party and which makes a Party's performance of its



obligations under the Contract impossible or so impractical as to be considered impossible under the circumstances.

1.5.2 No Breach of Contract

The failure of a Party to fulfil any of its obligations under the Contract shall not be considered to be a breach of, or default, under this Contract insofar as such inability arises from an event of Force Majeure, provided that the Party affected by such an event (a) has taken all reasonable precautions, due care and reasonable alternative measures in order to carry out the terms and conditions of this Contract, and (b) has informed the other Party as soon as possible about the occurrence of such an event.

To the extent that the provision of the Services is impacted by a pandemic (including COVID-19) and any reasonable concerns or measures taken to protect the health and safety interests of either Party's personnel, the Parties will work together to amend the Agreement to provide for the Services to be delivered in an appropriate manner, including any resulting modifications with respect to the timelines, location, or manner of the delivery of Services.

The Agency will use reasonable efforts to provide the Services on-site at the Client's offices, provided that, in flood the parties agree to cooperate to allow for remote working and/or an extended timeframe to the extent (i) any government or similar entity implements restrictions that may interfere with provision of onsite Services; (ii) either party implements voluntary limitations on travel or meetings that could interfere with provision of onsite Services, or (iii) any of the Agency's resource determines that he or she is unable or unwilling to travel in flood-related risk.

1.5.3 Extension of Time

Any period within which a Party shall, pursuant to this Contract, complete any action or task, shall be extended for a period equal to the time during which such Party was unable to perform such action as a result of Force Majeure.

1.5.4 Payments

During the period of their inability to perform the Services as a result of an event of Force Majeure, the Agency shall be entitled to continue to be paid under the terms of this Contract, as well as to be reimbursed for additional costs reasonably and necessarily incurred by them during such period for the purposes of the Services and in reactivating the Service after the end of such period.

1.6 Termination

Either Party may terminate this Agreement with immediate effect by serving prior written notice to the other party if services are not possible to be rendered as per applicable laws or professional obligations.

1.6.1 By the Client

The Client may terminate this Contract in case of the occurrence of any of the events specified in paragraphs



(a) through (f) of this GC Clause 2.6.1. In such an occurrence the Client shall give a not less than thirty (30) days' written notice of termination to the Agency, and sixty (60) days in the case of the event referred to in (e).

- a) If the Agency does not remedy a failure in the performance of their obligations under the Contract, within thirty (30) days after being notified or within any further period as the Client may have subsequently approved in writing.
- b) If the Agency becomes insolvent or bankrupt.
- c) If the Agency, in the judgment of the Client has engaged in corrupt or fraudulent practices in competing for or in executing the Contract.
- d) If, as the result of Force Majeure, the Agency are unable to perform a material portion of the Services for a period of not less than sixty (60) days.
- e) If the Client, in its sole discretion and for any reason whatsoever, decides to terminate this Contract.
- f) If the Agency fails to comply with any final decision reached as a result of arbitration proceedings pursuant to GC Clause 7 hereof.

1.6.2 By the Agency

The Agency may terminate this Contract, by not less than thirty (30) days' written notice to the Client, such notice to be given after the occurrence of any of the events specified in paragraphs (a) through (c) of this GC Clause 2.6.2:

- a) If the Client fails to pay any money due to the Agency pursuant to this Contract and not subject to dispute pursuant to GC Clause 6 hereof within forty-five (45) days after receiving written notice from the Agency that such payment is overdue.
- b) If, as the result of Force Majeure, the Agency is unable to perform a material portion of the Services for a period of not less than sixty (60) days.
- c) If the Client fails to comply with any final decision reached as a result of arbitration pursuant to GC Clause 7 hereof.

1.6.3 Payment upon Termination

Upon termination of this Contract pursuant to GC Clauses 2.6.1 or 2.6.2, the Client shall make the following payments to the Agency:

- a) payment pursuant to GC Clause 5 for Services satisfactorily performed prior to the effective date of termination;
- b) except in the case of termination pursuant to paragraphs (a) through (c), and (f) of GC Clause 2.6.1, reimbursement of any reasonable cost incident to the prompt and orderly termination of the Contract, including the cost of the return travel of the Personnel and their eligible dependents.

2. Obligations of the Agency



2.1 Standard of Performance

The Agency shall perform the Services and carry out their obligations hereunder with all due diligence, efficiency and economy, in accordance with generally accepted professional standards and practices, and shall observe Flood Pumping Station management practices, and employ appropriate technology and safe and effective equipment, machinery, materials and methods. The Agency shall always act, in respect of any matter relating to this Contract or to the Services, as faithful advisers to the Client, and shall at all times support and safeguard the Client's legitimate interests in any dealings with third Parties.

2.2 Confidentiality

Except with the prior written consent of the Client, the Agency and the Personnel shall not at any time communicate to any person or entity any confidential information acquired in the course of the Services, nor shall the Agency and the Personnel make public the recommendations formulated in the course of, or as a result of, the Services. Except as otherwise permitted by this Agreement, neither of the parties may disclose to third parties the contents of this Agreement or any information provided by or on behalf of the other that ought reasonably to be treated as confidential and/or proprietary. Parties may, however, disclose such confidential information to the extent that it: (a) is or becomes public other than through a breach of this Agreement, (b) is subsequently received by the receiving party from a third party who, to the receiving party's knowledge, owes no obligation of confidentiality to the disclosing party with respect to that information, (c) was known to the receiving party at the time of disclosure or is thereafter created independently, (d) is disclosed as necessary to enforce the receiving party's rights under this Agreement, or (e) must be disclosed under applicable law, legal process or professional regulations. These obligations shall be valid for a period of 3 years from the date of termination of this Agreement.

2.3 Documents prepared by the Agency

- a) All deliverable to be developed and submitted by the Agency under this Contract shall be in English language.
- b) The Agency may use data, software, designs, utilities, tools, models, systems and other methodologies and know-how ("Materials") that it owns in performing the Services. Notwithstanding the delivery of any Reports, the Agency retains all intellectual property rights in the Materials (including any improvements or knowledge developed while performing the Services), and in any working papers that the Agency compiles and retains in connection with the Services (but not Client Information reflected in them). Upon payment for the Services, Client may use any Materials included in the Reports, as well as the Reports themselves as permitted by this Agreement.
- c) All deliverables in the form of data, software, designs, utilities, tools, models, systems and other methodologies and know-how ("Materials") submitted by the



Agency under this Contract shall, not later than upon termination or expiration of this Contract, be delivered to the Client, together with a detailed inventory thereof.

d) Except as otherwise permitted by this Agreement, neither of the parties may disclose to third parties the contents of this Agreement or any information/report/advice provided by or on behalf of the other that ought reasonably to be treated as confidential and/or proprietary. Parties may, however, disclose such confidential information to the extent that it: (a) is or becomes public other than through a breach of this Agreement, (b) is subsequently received by the receiving party from a third party who, to the receiving party's knowledge, owes no obligation of confidentiality to the disclosing party with respect to that information, (c) was known to the receiving party at the time of disclosure or is thereafter created independently, (d) is disclosed as necessary to enforce the receiving party's rights under this Agreement, or (e) must be disclosed under applicable law, legal process or professional regulations. These obligations shall be valid for a period of 3 years from the date of termination of this Agreement.

2.4 Accounting

The Agency shall keep accurate and systematic accounts and records in respect of the Services hereunder, in accordance with internationally accepted accounting principles and in such form and detail as will clearly identify all relevant time changes and costs, and the bases thereof.

3. Obligations of the Client

3.1 Assistance and Exemptions

The Client shall use its best efforts to ensure that the Government shall provide the Agency such assistance and exemptions as specified in the Contract.

3.2 Change in the Applicable Law Related to Taxes and Duties

If, after the date of this Contract, there is any change in the Applicable Law with respect to taxes and duties, then the remuneration and reimbursable expenses payable to the Agency under this Contract shall be increased or decreased accordingly under this Contract.

4. Payments to the Agency

4.1 **Professional fee and Payments**

The total payment due to the Agency shall be governed by the Contract Price (as determined by the financial quote in the RFP / TENDER stage).

4.2 Terms and Conditions of Payment

Payments will be made to the account of the Agency and according to the payment schedule stated in Section

3.4. The Professional Fee shall be exclusive of taxes or similar charges, as well as



customs, duties or tariffs imposed in respect of the Services, all of which the Client shall pay (other than taxes imposed on Agency's income generally). Unless otherwise set forth in the Contract, payment is due within thirty days following receipt of each invoice.

5. Good Faith and Indemnity

- 5.1 The Parties undertake to act in good faith with respect to each other's rights under this Contract and to adopt all reasonable measures to ensure the realization of the objectives of this Contract.
- 5.2 To the fullest extent permitted by applicable law and professional regulations, both the parties indemnify each other and their associates and employees against all claims by third parties (including each other's affiliates) and resulting liabilities, losses, damages, costs and expenses (including reasonable external and internal legal costs) arising out of the third party's use of or reliance on any report, deliverable, etc. disclosed to it by or through the parties as part of the regular interactions or for project/s purposes.

6. Settlement of Disputes

6.1 This Contract shall be governed by, and construed in accordance with, the laws of India.

6.2 Amicable Settlement

The Parties agree that the avoidance or early resolution of disputes is crucial for a smooth execution of the Contract and the success of the assignment. The Parties shall use their best efforts to settle amicably all disputes arising out of or in connection with this Contract or its interpretation.

In the event any dispute between the Parties arising out of or in connection with this Agreement, including the validity thereof, the Parties hereto shall endeavor to settle such dispute amicably in the first instance. The attempt to bring about an amicable settlement shall be treated as having failed as soon as one of the Parties hereto, after reasonable attempts, which shall continue for not less than 30 (thirty) days, gives a notice to this effect, to the other party in writing.

6.3 Arbitration

In case of such failure, the dispute shall be referred to a sole Arbitrator, who shall be appointed by the Parties by mutual consent, failing which each party shall appoint one Arbitrator each and together the two Arbitrators shall appoint an umpire. The Arbitration proceedings shall be governed by the (Indian) Arbitration and Conciliation Act, 1996 and shall be held in Ayodhya, India. The language of arbitration shall be English.

This Agreement and the rights and obligations of the Parties shall remain in full force and effect, pending the award in any arbitration proceedings hereunder.



6.4 Jurisdiction

Any dispute relating to this Contract or the Services shall be subject to the exclusive jurisdiction of the Indian courts, to which both the parties agree to submit for these purposes.

8 Exit Management

a. Preamble

- i. The word "parties" include the AYODHYA DEVELOPMENT AUTHORITY and the selected bidder.
- ii. This Schedule sets out the provisions, which will apply on expiry or termination of the Project Implementation and Management of SLA.
- iii. In the case of termination of the Project Implementation and/ or Operation and Management due to illegality, the Parties shall agree mutually at when and if the provisions of this Schedule shall apply.
- iv. The Parties shall ensure that their respective associated entities carry out their respective obligations set out in this Exit Management Schedule.

b. Transfer of Assets

- v. The selected bidder may continue work on the assets for the duration of the exit management period which may be a 30 days period from the date of expiry or termination of the agreement, if required by AYODHYA DEVELOPMENT AUTHORITY to do so. During this period, the selected bidder/ bidder will transfer all the assets in good working condition and as per the specifications of the bidding document including the ones being upgraded to the department/ designated Agency. The security deposit/ performance security submitted by selected bidder will only be returned after the successful transfer of the entire project including its infrastructure.
- vi. The selected bidder, if not already done, will transfer all the Software Licenses under the name of the AYODHYA DEVELOPMENT AUTHORITY during the exit management period.
- vii. AYODHYA DEVELOPMENT AUTHORITY during the project implementation phase and the operation and management phase shall be entitled to serve notice in writing to the selected bidder at any time during the exit management period requiring the selected bidder to provide AYODHYA DEVELOPMENT AUTHORITY or its nominated agencies with a complete and up-to-date list of the assets within 30 days of such notice.



- viii. Upon service of a notice, as mentioned above, the following provisions shall apply:
- All title of the assets to be transferred to AYODHYA DEVELOPMENT AUTHORITY or its nominated agencies pursuant to clause(s) above shall be transferred on the last day of the exit management period. All expenses occurred during transfer of assets shall be borne by the selected bidder.
- That on the expiry of this clause, the selected bidder and any individual assigned for the performance of the services under this clause shall handover or cause to be handed over all confidential information and all other related material in its possession, including the entire established infrastructure supplied by selected bidder to AYODHYA DEVELOPMENT AUTHORITY.
- That the products and technology delivered to AYODHYA DEVELOPMENT AUTHORITY during the contract term or on expiry of the contract duration should not be sold or re-used or copied or transferred by selected bidder to other locations apart from the locations mentioned in this bidding document without prior written notice and approval of AYODHYA DEVELOPMENT AUTHORITY. Supplied hardware, software & documents etc., used by selected bidder for AYODHYA DEVELOPMENT AUTHORITY shall be the legal properties of AYODHYA DEVELOPMENT AUTHORITY.

c. Cooperation & Provision of Information during Exit Management Period.

- The selected bidder/ bidder will allow AYODHYA DEVELOPMENT AUTHORITY or its nominated agencies access to the information reasonably required to define the current mode of operation associated with the provision of the services to enable AYODHYA DEVELOPMENT AUTHORITY or its nominated agencies to assess the existing services being delivered.
- The selected bidder/ bidder shall provide access to copies of all information held or controlled by them which they have prepared or maintained in accordance with the Project Implementation, the Management of SLA and SOWs relating to any material aspect of the services provided by the selected bidder. AYODHYA DEVELOPMENT AUTHORITY or its nominated agencies shall be entitled to copy all such information comprising of details pertaining to the services rendered and other performance data. The selected bidder shall permit AYODHYA DEVELOPMENT AUTHORITY or its nominated agencies and/ or any replacement operator to have reasonable access to its employees and facilities as reasonably required by AYODHYA



DEVELOPMENT AUTHORITY or its nominated agencies to understand the methods of delivery of the services employed by the selected bidder and to assist appropriate knowledge transfer.

d. Confidential Information, Security & Data

The selected bidder will promptly on the commencement of the exit management period supply to AYODHYA DEVELOPMENT AUTHORITY or its nominated agencies the following:

- Documentation relating to Intellectual Property Rights;
- Project related data and confidential information;
- All current and updated data as is reasonably required for purposes of AYODHYA DEVELOPMENT AUTHORITY or its nominated agencies transitioning the services to its replacement selected bidder in a readily available format nominated by AYODHYA DEVELOPMENT AUTHORITY or its nominated agencies; and
- All other information (including but not limited to documents, records and agreements) relating to the services reasonably necessary to enable AYODHYA DEVELOPMENT AUTHORITY or its nominated agencies, or its replacement operator to carry out due diligence in order to transition the provision of the services to AYODHYA DEVELOPMENT AUTHORITY or its nominated agencies, or its replacement operator (as the case may be).
- Before the expiry of the exit management period, the selected bidder shall deliver to AYODHYA DEVELOPMENT AUTHORITY or its nominated agencies all new or up-dated materials from the categories set out above and shall not retain any copies thereof, except that the selected bidder shall be permitted to retain one copy of such materials for archival purposes only.

e. Transfer of Certain Agreements

 On request by Procuring entity or its nominated agencies, the selected bidder shall effect such assignments, transfers, innovations, licenses and sub-licenses as Procuring entity or its nominated agencies may require in favor of procuring entity or its nominated agencies, or its replacement operator in relation to any equipment lease, maintenance or service provision agreement between selected bidder and third party leaders, operators, or operator, and which are related to the services and reasonably necessary for carrying out of the replacement services by AYODHYA DEVELOPMENT AUTHORITY or its nominated agencies, or its replacement operator.



 Right of Access to Premises: At any time during the exit management period and for such period of time following termination or expiry of the SLA, where assets are located at the selected bidder's premises, the selected bidder will be obliged to give reasonable rights of access to (or, in the case of assets located on a third party's premises, procure reasonable rights of access to AYODHYA DEVELOPMENT AUTHORITY or its nominated agencies, and/ or any replacement operator in order to inventory the assets.

f. General Obligations of the selected bidder

- The selected bidder shall provide all such information as may reasonably be necessary to effect as seamless during handover as practicable in the circumstances to AYODHYA DEVELOPMENT AUTHORITY or its nominated agencies or its replacement operator and which the operator has in its possession or control at any time during the exit management period.
- The selected bidder shall commit adequate resources to comply with its obligations under this Exit Management Clause.

g. Exit Management Plan

- The selected bidder shall provide AYODHYA DEVELOPMENT AUTHORITY or its nominated agencies with a recommended exit management plan ("Exit Management Plan") which shall deal with at least the following aspects of exit management in relation to the SLA as a whole and in relation to the Project Implementation, the Operation and Management SLA and SOWs.
- A detailed program of the transfer process that could be used in conjunction with a replacement operator including details of the means to be used to ensure continuing provision of the services throughout the transfer process or until the cessation of the services and of the management structure to be used during the transfer; and
- Plans for the communication with such of the selected bidder's, staff, suppliers, customers and any related third party as are necessary to avoid any material detrimental impact on AYODHYA DEVELOPMENT AUTHORITY operations as a result of undertaking the transfer; and
- If applicable, proposed arrangements and Plans for provision of contingent support in terms of business continuance and hand holding during the transition period, to AYODHYA DEVELOPMENT AUTHORITY or its nominated agencies, and Replacement Operator for a reasonable period, so that the services provided



continue and do not come to a halt.

- The bidder shall re-draft the Exit Management Plan annually after signing of contract to ensure that it is kept relevant and up to date.
- Each Exit Management Plan shall be presented by the selected bidder to and approved by AYODHYA DEVELOPMENT AUTHORITY or its nominated agencies.
- In the event of termination or expiry of SLA, Project Implementation, Operation and Management SLA or SOWs each party shall comply with the Exit Management Plan.
- During the exit management period, the selected bidder shall use its best efforts to deliver the services.
- Payments during the Exit Management period shall be made in accordance with the Terms of Payment Clause.
- It would be the responsibility of the selected bidder to support new operator during the transition period.

9 Site Specific Requirement

The Bidder shall take care of the following while installation of equipment's, hardware and other project components at the Project Site:

- a. Cabling should be made underground and properly concealed. Only minimum digging should be undertaken for laying cables. In any way no damage should be caused to any part of the Kund or surrounding area while laying cables.
- b. Location for any installations e.g. Flood Pumping Station, light fixtures, transformer, switch room, etc., should be planned in such a way that it should not have visual impact
- c. Flood Pumping Station should be suitably camouflaged by both design and vegetation, and in no way, it shall visually impact view of the temple and Kund and its aesthetic.
- d. Control room, switch room, etc. should be adjusted in existing control room or any structure provided by AYODHYA DEVELOPMENT AUTHORITY. No new construction is allowed.
- e. The work has to be executed in close coordination and supervision of AYODHYA DEVELOPMENT AUTHORITY officials.



16 TECHNICAL PROPOSAL - STANDARD FORMS

- TECH-1 Technical Proposal Submission Form
- TECH-2 Applicant's Organization and Experience
 - A: Applicant's Organization
 - B: Applicant's Experience

TECH-3 Description of the Approach, Methodology and Work Plan for performing the

Assignment

TECH-4 Curriculum Vitae (CV) for Proposed Professional Staff

TECH-5 Format for presentation

TECH-6 Self Declaration of Non-Blacklisting

TECH-7: Undertaking on Authenticity of Equipment TECH-8: Manufacturer's Authorization Form (MAF)

TECH 9: Experience relating to Operation, Maintenance and Management (O&M) of Similar Works

TECH 10:Component Offered – BoM



16.1 Form TECH-1: Technical Proposal Submission Form

[Location, Date]

To: [*Name and address of Client*]Dear Sirs:

We, the undersigned, offer to provide the consulting services for [*Insert title of assignment*] in accordance with your Request for Proposal dated [*Insert Date*] and our Proposal. We are hereby submitting our Proposal, which includes this a Technical Proposal, and a Financial Proposal.

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

If negotiations are held during the Proposal Validity Period, we undertake to negotiate on the basis of the proposed staff. Our Proposal is binding upon us and subject to the modifications resulting from Contract negotiations.

We undertake, if our Proposal is accepted, to initiate the consulting services related to the assignment at a date mutually agreed between us.

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

We remain, Yours sincerely,

Authorized Signature [In full and initials]: ------

Name and Title of Signatory:	
rame and rate of eignatery.	-
Name of Firm:	
Address:	
Phone:	



16.2 Form TECH-2: Applicant's Organization and Experience

16.2.1 A - Applicant's Organization

[Provide here a brief (two pages) description of the background and organization of your firm/entity]

16.2.2 B - Applicant's Experience

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

Assignment name:	
Country:	Duration of assignment (months):
Location within country:	
Name of Client:	Total No of person-months of the assignment:
Address:	Amount of consulting fee received by your firm (INR)
Start date (month/year):	Completion date (month/year):
Name of associated Agency's, if any:	No. of professional person-months provided by
	associated Agency's:
Narrative description of Project	
Description of actual services provided by yo	our staff within the assignment:

Firm's Name:

16.3 Form TECH-3: Financial Qualification of The Applicant

Sr. No.	Financial Year	Annual Turnover	Net profit
1	2017-18		
2	2018-19		
3	2019-20		
4	2020-21		
5	2021-22		

Name of the auditor issuing the certificate Name of the auditor's Firm: Seal of auditor's Firm:

Date: (Signature, name and designation of the authorized signatory for the Auditor's Firm



16.4 Form TECH-6: Self Declaration for Backlisting

(Non-blacklisted To be filled by the bidder On Rs. 100/- Non-judicial stamp paper)

Declaration for Bidder:

[Location, Date]

To: [Name and address of Client]

Subject: <u>Declaration of non-blacklisting for response to the RFP / TENDER for selection of Design, Supply, Installation, Testing & Commissioning of Augmentation of Drainage Line at Ayodhya.</u>

Ref: RFP / TENDER No. <<....>> dated <<>>

Dear Sir,

We confirm that our company (full registered name of company),__,is currently not blacklisted by any of the State or UT and or Central Government or any of its agencies in India on any ground including but not limited to indulgence in corrupt practice, fraudulent practice, coercive practice, undesirable practice or restrictive practice as on date of bid submission.

Authorized Signature [In full and initials]:

Name and Title of Signatory:

Name of Firm:

Address: _____



16.5 TECH-7: Undertaking on Authenticity of Equipment

(To be filled by the bidder (On Rs. 100/- Non-judicial stamp paper) To,

Secretary Ayodhya Development Authority Civil Lines, Kosi Parikrama Road, Ayodhya, Uttar Pradesh-224001

Reference: RFP / TENDER No.____: Dated:

This has reference to the items being supplied/ quoted to you vide bid ref.no.___dated .

We hereby undertake that all the components/ parts/ assembly/ software used in the equipment shall be genuine, original and new components /parts/ assembly/ software from respective OEMs of the products and that no refurbished/ duplicate/ secondhand components/ parts/ assembly/ software are being used or shall be used. In respect of licensed operating system, we undertake that the same shall be supplied along with the authorized license certificate with our name/logo. Also, that it shall be sourced from the authorized source for use in India.

In case, we are found not complying with above at the time of delivery or during installation, for the equipment already billed, we agree to take back the equipment already supplied at our cost and return any amount paid to us by you in this regard and that you will have the right to forfeit our Bid Security/ SD/ PSD for this bid or debar/ black list us or take suitable action against us.

Authorized Signatory Name: Designation:

Note: The signing authority should be no lower than Company Secretary of the OEM/bidder of equipment.



16.6 TECH 8: Manufacturer's Authorization Form (MAF)

(To be submitted in OEM Letterhead at the submission of Bid)

Letter No. Date.....

To,

Secretary Ayodhya Development Authority Civil Lines, Kosi Parikrama Road, Ayodhya, Uttar Pradesh-224001

RFP / TENDER Ref No:

Subject: Authorization Letter for supply of

Dear Sir,

We hereby confirm that we shall provide all the technical assistance to them during the execution of the contract.

Yours faithfully, (Name) Seal



16.7 TECH 9: Experience relating to Operation, Maintenance and Management (O&M) of Similar Works

(to be submitted separately for each O&M project of Similar Works by the bidder)

Sr. No.	Particulars	Details
1.	Name of Project (Similar Work) & Location	
2.	Project Description	
3.	Project Cost/ Value of O&M Works (Rs.)	
4.	Name of Client	
5.	Project Duration (for O&M Works)	Start Date:
		End Date:
6.	Status (Completed/ Ongoing)	
7.	Copy of Work Order	
8.	Copy of Completion Certificate issued by the Client	

a) Bidder shall submit details of experience relating to Operation, Maintenance & Management (O&M) of Similar Works strictly in the above formats along with supporting documents including work order/ purchase order, completion certificate from the client in support of its Technical Eligibility.

b) Authority reserves the right to contact the Bidder(s), their bankers, their consultants, their clients and other such sources to verify the information, references and data submitted by the Bidder(s) in the Bid including the supporting documents/ certificates submitted by Bidder in support of its Technical Eligibility, without further reference to the Bidder(s).



Augmentation of Storm Water Drainage System at Cheer Sagar Ayodhya

16.8 TECH 10: Component Offered - BoM

(To be filled by the bidder and submitted in Company Letter Head duly signed by Auth. Sign.)

Please fill the following table for all components as mentioned in the Bill of Material and as quoted/ proposed by the bidder as a part of the overall solution. Also, please include the Compliance/ Deviation Sheet as per the details mentioned in the Section 5.8 - Technical Specifications for all the components and for any other Item offered/ included as a part of the solution

Sr.	Product Details (Only one	Detailed Technical	OEM Details (Name,
No.	make and model)	Specification	Address, E-
		Reference**	Mail, Mobile Nos.)
1.		{Item No. xx}	
2.		{Item No. xx}	
3.		{Item No. xx}	
4.		{Item No. xx}	



17 FINANCIAL PROPOSAL: 17.1 FORM FIN-1: Financial Proposal Submission form

[Date]

To: [Name and address of Client]

Subject: Financial proposal *Reference: (Insert name of the consultancy)*

Dear Sir,

- 1. We, the undersigned bidder, having read & examined in detail, the Bidding Document, the receipt of which is hereby duly acknowledged, I/ we, the undersigned, offer to supply/work as mentioned in the Scope of the work, Bill of Material, Technical Specifications, Site level Standards & in conformity with the said bidding document for the same.
- 2. I / We undertake that the prices are in conformity with the specifications prescribed. The quote/ price are inclusive of all cost likely to be incurred for executing this work. The prices are inclusive of all type of govt. taxes/duties/GST as mentioned in the financial bid (BoQ). I / We undertake, if our bid is accepted, to deliver thegoods & services in accordance with the delivery schedule specified in the RFP / TENDER.
- 3. I/We undertake to successfully operationalize the entire solution as per scope of work mentioned in the RFP / TENDERdocument.
- I/ We have examined and have no reservations to the Bidding Documents, including any Corrigendum/addendums issued by AYODHYA DEVELOPMENT AUTHORITY;
- 5. I/We understand that any additional hardware and software required to make the entire solution operational shall have to be provided by us.
- 6. I/ We hereby declare that in case the contract is awarded to us, we shall submit the contract performance bankguarantee as prescribed in the RFP / TENDER.
- 7. I / We agree to abide by this bid for a period of 180 days from the date of bid submission and it shall remainbinding upon us and may be accepted at any time before the expiry of that period
- 8. Until a formal contract is prepared and executed, this bid, together with your written acceptance thereof and your notification of award shall constitute a binding Contract between us.
- 9. I/ We hereby declare that our bid is made in good faith, without collusion or fraud and the information contained in the bid is true and correct to the best of our knowledge and belief.
- 10. We understand that you are not bound to accept the lowest or any bid you may receive. We agree to all the terms & conditions as mentioned in the RFP / TENDER document and submit that we have not submitted any deviations in this regard.

In witness thereof, I/we submit this Bid under and in accordance with the terms of the RFP / TENDER document.

Yours sincerely,

Signature and Name of the Authorised Person

NAME OF THE APPLICANT AND SEAL



		APPLICATION FORM Structure & Organiz	- 11 ation		
1	The applicant is				
	an Individual				
	a proprietary firm				
	a partnership firms			111	
	a limited company or corpu	ration.		11 1	
	any other (please specify)			11 - 1	
2.	Attach the Organization Cha structure of the Organization name of the Owners / Direc the Officers.	rt showing the n including the tors and position of 			
3,	No. of years of experience as major responsibility.	firm shouldering			
4,	No. of years the organization business of similar work un and style areas if business w organization was establishe New areas of business adde and the year when added	n has been in dor its present name then the d. d. d to the organization			
5.	Name of the project wherein was required to suspend the or erection works for more continuously after commen- the reasons therefore and the	the organization construction and / than six months comont. Please state se present status.			
6.	Name of the projects where was required to suspend the maintenance works for mor continuously after commen- state the reasons therefore status.	in the organization e operation and e than six months cement. Please and the present			
7.	Name of the projects that th required to abandon after a reasons therefore.	e organization was ward and the			
8.	Areas of specialization and i engineering construction.	nterest in civil			
9,	Details of experience in moo technology for execution an	iern concrete d quality control.			
10,	Details of experience in usin earthmoving equipment.	g heavy			



APPLICATION FORM - 12 General Experience Record

Name of Applicant Firm:

The Applicant is requested to supply information regarding the annual turnover of the contractor, in terms of the amounts billed to clients for each year for last Five years of works in progress or completed.

Applicants are requested not to enclose Firm's publicity material with the applications as such material will not be taken into account for evaluation.

Annual turnover data (construction only)- Year	Annual turnover – In crores	Reference of support document
2021-22		
2020-21		
2019-20		
2018-19		
2017-18		
	Annual turnover data (construction only)- Year 2021-22 2020-21 2019-20 2019-19 2018-19 2017-18	Annual turnover data (construction only)- Year Annual turnover - In crores 2021-22 2020-21 2019-20 2019-19 2017-18 2017-18



Particular Experience Record

Name of Applicant Firm:

The Applicant is requested to list all contracts undertaken during the last 5 years that are of similar nature, complexity and value as the contract for which the Applicant wishes to qualify. The information is to be summarized, using the format shown below, ensuring that the amounts and periods of contracts mentioned are consistent with those specified in the qualifying requirements specified in the Pre-Qualification Document.

Use a separate sheet for each contract.

Please enclose copies of Work Orders / Letters of intent / Completion Certificates for all the contracts mentioned herein.

1.	Name of Contract
2.	Name and Address of Employer
3.	Nature of work and special features relevant to the contract for which the Applicant firm wishes to pre-qualify.
4.	Details of Equipment deployed.
5.	Contract role (tick one) <> Sole Contractor <> Subcontractor
6.	Value of the total contract Value of portion allotted to Applicant Firm.
7.	Date of award
8,	Date of completion Scheduled Scheduled
9.	Contract duration (years and months) <> Schedule Years months <> Actual Years months
10.	Completion achieved as on or before 30.09.2016 <> Value
11.	Give details of annual record in respect of earthwork, hard rock excavation and concreting in water-retaining structures and specify name of work and year.
12.	Name and professional qualifications of Applicant's Executive Engineer, for the Works
13.	Details of penalties, fines, stop-notices, compensations, liquidated damages imposed, if



Current Contract Commitments / Works in Progress

Name of Applicant Firm:

The Applicant is requested to provide information on the Firm's current commitments under all contracts that have been awarded or for which a letter of intent and acceptance has been received, or for contracts approaching completion, but for which an unqualified, full completion certificates has yet to be issued.

Name of contract	Name & Address of the client	Brief Scope	Date of award / commence emend	Contract value	Stipulated completion date	Percent completion achieved as or 31.01.2018	Value of outstanding work	Estimated completion date
1,		1		-				
2.	1				-		-	
З.	-	-	-		<u> </u>			
4.	-	-	-					
5.	-	-	-	-			2	
ħ.		-	-				-	
7,	-	-	-	-	-			
8.	1	-	-					
9.		-	-				-	
10,	-	-	-					



Personnel Capability

The Applicant is requested to provide the names of at least two candidates qualifying the specific positions that according to the Applicant are essential to contract implementation and for positions mentioned in the Pre-Qualification Document.

Please supply the candidate data on separate sheets using the format of Form 5.

Name	of Applicant Firm:
1.	Title of position
	Name of prime candidate
	Name of alternate candidate
2.	Title of position
-	Name of prime candidate
-	Name of alternate candidate
3.	Title of position
-	Name of prime candidate
1	Name of alternate candidate
4	Title of position
-	Name of prime candidate
	Name of alternate candidate



Candidate Summary

(Managerial / Technical Positions Only)

Position		Candidate	
		<> Printe	<> Alternate
Candidate Information	1. Name of Candidate 3. Professional Qualifi	cations	2. Date of Birth
Present employment	4. Name of Employer		
	Address of Employer		
	Telephone / Mobile	Contact (m	anager / personnel officer
	Fax	E-mail	
	ob title of candidate	Years with	present Employer

Summarize professional experience over the last 20 years, in reverse chronological order. Indicate particular technical and managerial experience relevant to the Project.

From	To	Company / Project / Position / Relevant technical and management experience
	-	



Equipment Capability

Name of Applicant Firm:

The Applicant shall provide adequate information to demonstrate that the Firm has the capability to meet the requirements for all items of equipment required for timely completion of the Project.

Equipment Information	1. Name of manufacturer	2. Model and power rating			
	3. Capacity	4. Year of manufacture			
Current stat	tus S. Current location				
	6. Details of current commitments				
Source	7. Indicate source of the equipment				
	If Owned Date of purchase <> Rent	ed <> Leased <> Specially manufactured			

Omit the following information for equipment owned by the Applicant.

Owner	8. Name of owner 9. Address of owner		
	Fax	E-mail	
	Agreement	Details of rental / lease / manufacture agreements specific to the Project	



Financial Capability

Name of Applicant Firm:

The Applicant should provide financial information to demonstrate that the Firm meets the requirement stated in the Pre-Qualification Document. If necessary, use separate sheets to provide complete banker information. Please attach a copy of the audited balance sheets / financial statements / tax returns.

Banker	Name of Banker		
	Address of Banker		
	Telephone	Contact name and title	
_	Fax	E-mail	

Summarize actual assets and liabilities for the previous S years. Based upon known commitments, summarize projected assets and liabilities for the next two years.

Pinancial information	Actual: Previous 5 years				
	1.	2.	в.	4.	5.
1. Total assets	1			-	
2. Current assets	1		-		
3. Total habilities					
4. Current liabilities	-		-		-
5. Profit / Loss before taxes					-
6. Profit / Loss after taxes					

Please also specify proposed sources of financing to meet the cash flow demands of the project, net of current commitments specified in the Pre-qualification application.

Source of financing	Amount
1.	
2	



APPLICATION FORM - 21 (Sample)

CERTIFICATE OF PERFORMANCE REPORT Letter No. 1 1 Dated

This is to certify that M/s has successfully completed and commissioned the work as Prime Contractor. Details of works are as follows: -

L. Contract Bond No. ******************* 1.

2. Name of Work.

3. Date of Start of Contract. 1.....

4. Date of Completion of Contract.

5. Completion Cost of Work. I.....

5. Works executed (Manufacturer/Supplier Firm) (I) Construction of Solar Plant (Capacity) : -----

(ii) Operation and Maintenance (time Period) :.....

7. Other Works, : 1.00 ********** 8. Any other remark. :

(Authorized Signature) Client Department



Application form 22

Bid Capacity Calculation

The available bid Capacity of the bidder at the expected time of bidding shall be more than the total estimated cost of the work for which the tender is invited.

Available Bid Capacity: The available bid Capacity of the bidder at the expected time of bidding shall be more than the total estimated cost of the work for which the tender is invited.

The available Bid Capacity shall be assessed using following formula: - Assessed Available Bid Capacity

=2x AxN - B Where

A= Maximum turnover during the last five financial year (corrected to the current level of value) N= Stipulated period of execution of the work for which the tender is invited in years.

B= value of existing commitments to be completed during the execution period of bid.

The turnover shall be corrected to the current level of value by multiplying with the updation factor given below:

Sr. No.	Financial Year	Updation Factor
1	Year 1	1.00
2	Year 2	1.07
3	Year 3	1.14
4	Year 4	1.21
5	Year 5	1.28

The bid Capacity of Firm will be re-evaluated before issuing L.O.I to Lowest bidder and if bid capacity is found to be less than tendered cost of work, the firm will not be treated as eligible for award of work and tender will be treated as cancelled. In this Regard Successful lowest Bidder will have to provide affidavit for updated bid capacity and information of New works on 100 Rupees Non-judicial stamp Paper on prescribed format as annexed in the tender Document.



TECHNICAL DETAILS OF DEWATERING MOTOR DRIVEN PUMP & ITS ACCESSORIES FOR FLOOD PUMPING STATION

1. PUMP:-

SITC of Suitable pumps, specially designed to handle flood water due to special type impeller design depending upon water quality of catchment area. Pump must have easy flow and clear passage to storm water from its impeller vane, Supplied pumps should have proven suitability for water River / Raw water, Water, Sewage & waste water treatment, Dock Drainage, Flood Control and Dewatering.

Under this item you shall supply of reputed make approved make by UPJN Dewatering Motor Driven Pump as follows:

DESCRIPTIONUNITDETAILSLiquidStorm Water/Flood WaterSp. Gravity1.10Tempdeg CAmbViscositypoisePump TypeAxial Flow TypeNo. Of StagesNo's22Sync. SpeedrpmPump Efficiency Minimum%84.5RC Cooled Engine/VSS V1 Mounting MotorConstructional DetailsImpeller TypeImpeller TypeOpen Type ImpellerGland Packed/Mech SealGland PackedLine Shaft Bearing LubricationSelf Water LubricationSump DepthMM6MPump Setting Length (Strainer to sole plate)mmType of Column JointFlangedMATERIAL OF CONSTRUCTIONImpellerLine ShaftSS410Impeller ShaftSS410StrinerStellStaft SleeveSS410Shaft SleeveSS410Shaft SleeveMSColumn PipeMSSole PlateMSColumn PipeMSColumn PipeMSSole PlateMSColumn PipeMSColumn PipeMSCol	PUMPSET DATA SHEETS	As per Site Requirement			
Liquid Storm Water/Flood Water Sp. Gravity 1.10 Temp deg C Amb Viscosity poise water Pump Type Axial Flow Type No's 2 Sync. Speed rpm 1500 Pump Efficiency Minimum % 84.5 Driver Type RC Cooled Engine/VSS V1 Mounting Motor Constructional Details Impeller Type Open Type Impeller Gland Packed/Mech Seal Gland Packed Line Shaft Bearing Lubrication Self Water Lubrication Sump Depth M 6M M 6M Pump Setting Length(Strainer to sole plate) mm 5.80 M -Approximate Location of Delivery Branch Below floor Discharge Type of Column Joint Flanged MATERIAL OF CONSTRUCTION Type of Column Casing 1.5-2% NICI CI FG 260 Impeller Line Shaft SS410 SS410 Impeller Shaft SS410 SS410 Impeller Shaft SS410 SS410 Krainer SS410 SS410 Sole Plate MS Column Pipe Sole Plate MS <t< td=""><td>DESCRIPTION</td><td>UNIT</td><td>DETAILS</td></t<>	DESCRIPTION	UNIT	DETAILS		
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Tempdeg CAmbViscositypoisewaterPump TypeAxial Flow TypeNo. Of StagesNo's2Sync. Speedrpm1500Pump Efficiency Minimum%84.5Driver TypeRC Cooled Engine/VSS V1 Mounting MotorConstructional DetailsImpeller TypeImpeller TypeOpen Type ImpellerGland Packed/Mech SealGland PackedLine Shaft Bearing LubricationSelf Water LubricationSump DepthMGuard Packed/Isting Length(Strainer to sole plate)mmType of Column JointType of ColumnType of Column JointFlangedMATERIAL OF CONSTRUCTIONS410Line ShaftS5410Shaft SleeveS5410Shaft SleeveS5410Shaft SleeveS5410Neck RingsCF8Sole PlateMSColumn PipeMSColumn PipeMSPaintingMSColumn PipeS410SteelS5410Shaft SleeveS5410Shaft SleeveS5410Neck RingsCF8Sole PlateMSColumn PipeMSFlange DrillingMfg. Std.PAINTINGAS PER Mfg. Std.	Sp. Gravity		1.10		
Viscosity poise water Pump Type Axial Flow Type No. Of Stages No's 2 Sync. Speed rpm 1500 Pump Efficiency Minimum % 84.5 Driver Type RC Cooled Engine/VSS V1 Mounting Motor Constructional Details	Temp	deg C	Amb		
Pump Type Axial Flow Type No. Of Stages No's 2 Sync. Speed rpm 1500 Pump Efficiency Minimum % 84.5 Driver Type RC Cooled Engine/VSS V1 Mounting Motor Constructional Details	Viscosity	poise	water		
No. Of Stages No's 2 Sync. Speed rpm 1500 Pump Efficiency Minimum % 84.5 Driver Type RC Cooled Engine/VSS V1 Mounting Motor Constructional Details Impeller Type Impeller Type Open Type Impeller Gland Packed/Mech Seal Gland Packed Line Shaft Bearing Lubrication Self Water Lubrication Sump Depth M Pump Setting Length(Strainer to sole plate) mm Type of Column Joint Type of Column Type of Column Joint Flanged MATERIAL OF CONSTRUCTION Impeller Line Shaft SS410 Impeller Shaft SS410 Shaft Coupling SS410 Strainer Steel Shaft Sleeve SS410 Neck Rings CF8 Sole Plate MS Column Pipe MS Discharge Head MS	Pump Type		Axial Flow Type		
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Pump Efficiency Minimum % 84.5 Driver Type RC Cooled Engine/VSS V1 Mounting Motor Constructional Details Open Type Impeller Impeller Type Open Type Impeller Gland Packed/Mech Seal Gland Packed Line Shaft Bearing Lubrication Self Water Lubrication Sump Depth M 6M Pump Setting Length(Strainer to sole plate) mm 5.80 M - Approximate Location of Delivery Branch Below floor Discharge Type of Column Joint Flanged MATERIAL OF CONSTRUCTION Type of Column Casing 1.5-2% NICI CI FG 260 Impeller Impeller Line Shaft SS410 Impeller Shaft SS410 Impeller Shaft SS410 Shaft Coupling SS410 Shaft Sleeve SS410 Shaft Sleeve SS410 Neck Rings CF8 Sole Plate MS Column Pipe MS Discharge Head Flange Drilling Flange Drilling Mfg. Std.	Sync. Speed	rpm	1500		
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Impeller TypeOpen Type ImpellerGland Packed/Mech SealGland PackedLine Shaft Bearing LubricationSelf Water LubricationSump DepthMPump Setting Length(Strainer to sole plate)mmLocation of Delivery BranchBelow floor DischargeType of Column JointFlangedMATERIAL OF CONSTRUCTION1.5-2% NICI CI FG 260Casing1.5-2% NICI CI FG 260Impeller ShaftSS410Impeller ShaftSS410StrainerSS410StrainerSteelShaft SleeveSS410Neck RingsCF8Sole PlateMSColumn PipeMSColumn PipeMSFlange DrillingMfg. Std.PAINTINGAS PER Mfg. Std.	Constructional Details				
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Sump DepthM6MPump Setting Length(Strainer to sole plate)mm5.80 M - ApproximateLocation of Delivery BranchBelow floor DischargeType of ColumnType of Column JointFlangedMATERIAL OF CONSTRUCTIONCasing1.5-2% NICI CI FG 260ImpellerImpellerLine ShaftSS410Impeller ShaftSS410Shaft CouplingSS410StrainerSteelShaft SleeveSS410Neck RingsCF8Sole PlateMSColumn PipeMSDischarge HeadMfg. Std.Flange DrillingMfg. Std.	Line Shaft Bearing Lubrication		Self Water Lubrication		
Pump Setting Length(Strainer to sole plate)mm5.80 M -ApproximateLocation of Delivery BranchBelow floor DischargeType of ColumnType of Column JointFlangedMATERIAL OF CONSTRUCTIONInserverCasing1.5-2% NICI CI FG 260ImpellerLine ShaftSS410Impeller ShaftSS410Shaft CouplingSS410StrainerSteelShaft SleeveSS410Neck RingsCF8Sole PlateMSColumn PipeMSDischarge HeadMfg. Std.Flange DrillingMfg. Std.PAINTINGAS PER Mfg. Std.	Sump Depth	М	6M		
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Sole Plate MS Column Pipe MS Discharge Head Mfg. Std. Flange Drilling Mfg. Std. PAINTING AS PER Mfg. Std.	Neck Rings		CF8		
Column Pipe MS Discharge Head Flange Drilling PAINTING Mfg. Std.	Sole Plate		MS		
Discharge Head Flange Drilling Mfg. Std. PAINTING AS PER Mfg. Std.	Column Pipe		MS		
Flange Drilling Mfg. Std. PAINTING AS PER Mfg. Std.		Discha	arge Head		
PAINTING AS PER Mfg. Std.	Flange Drilling		Mfg. Std.		
	PAINTING		AS PER Mfg. Std.		
SCOPE OF SUPPLY	SCOPE OF SUPPLY				
Pump As per above	Pump	1	As per above		
Strainer As per above	Strainer		As per above		



CONTROL PANEL & STARTER:

Supply of LT panel with two incoming and 6 outgoing for pump, EOT crane, light & fan, for spare with individual of PPT. Suitable capacity of Fully Automatic Star Delta Starter Comprising of L&T/Schneider /GE Make which will be contain following item as per given below.

- a. Contactor of suitable ratings .
- b. TOR of suitable ratings .
- c. PB Switches
- d. Dual Amp & voltmeter
- e. Amp Meter Selector Switch
- f. Toggle switches
- g. Indicating Lamps Phase Failure
- h. Phase reversal relay
- i. Single phase preventer
- j. Capacitor of suitable ratings
- k. GSM

Note:

- These are vertical single or multistage propeller pumps for wet or dry pit installation with axial flow impellers.
- With high efficiency impellers are open or semi-open mounted on amply designed shaft and supported with adequate bearings.
- And any Metallurgy can be provided depending upon water quality and nature of water.
- Pull out / non-pull out designs are available to cope up with maintenance preferences.
- Self-water lubrication / oil / forced water lubrication for intermediate shaft designs can provided based on requirement.
- These pumps are suitable for vertical solid shaft as well as vertical hollow shaft motors.
- Flood water delivery is also optional depending upon space availability and design of pump house as above or below pump floor discharge.
- Depending upon power source pumps are provided with or without non reverse ratchet arrangement to prevent reverse rotation of pumps during shut down.
- These pumps are equipped with antifriction type thrust bearing to sustain various loads and longer life of bearings.
- In case of non availability of electricity these pumps can be installed as engine driven with gear box arrangement in remote location areas.
- Thordon type bearings are provided for long columns without pre-lubrication arrangement.
- For special services bowls / impellers with 350 BHN hardness can be given.
- Mechanical Seals can be given for zero leakage however Gland packing arrangements are recommended for such applications.



TECHNICAL DETAILS OF DEWATERING MOTOR DRIVEN PUMP & ITS ACCESSORIES FOR FLOOD PUMPING STATION

2. PUMP SET:-

SITC of Suitable pump set, specially designed to handle flood water with semi open or open type impeller design depending upon water quality of catchment area. Pump must have easy flow and clear passage to storm water from its impeller vane, Supplied pumps should have proven suitability for water River / Raw water, Water, Sewage & waste water treatment, Dock Drainage, Flood Control and Dewatering.

Under this item you shall supply of reputed make approved make by U.P. Jal Nigam/Nagar Nigam Dewatering Motor Driven Pump as follows: -

PUMPSET DATA SHEETS As per Site Requirement			
DESCRIPTION	UNIT	DETAILS	
Liquid	1	Storm Water/Flood Water	
Sp. Gravity		1.10	
Temp	deg C	Amb	
Viscosity	poise	water	
Pump Type	1	Mixed Flow Type	
No. Of Stages	No's	2	
Sync. Speed	rpm	1000	
Pump Efficiency Minimum	%	83	
Driver Type	1	RC Cooled Engine/VSS V1 Mounting Motor	
Constructional Details	1		
Impeller Type	1	Semi Open/Open Type Impeller	
Gland Packed/Mech Seal	1	Gland Packed	
Line Shaft Bearing Lubrication	1	Self-Water Lubrication	
Sump Depth	М	6M	
Pump Setting Length(Strainer to sole plate)	mm	5.80 M -Approximate	
Location of Delivery Branch	1	Below floor Discharge	
	Туре	of Column	
Type of Column Joint		Flanged	
MATERIAL OF CONSTRUCTION			
Casing	1	1.5-2% NICI CI FG 260	
	Im	peller	
Line Shaft		SS410	
Impeller Shaft		SS410	
Shaft Coupling		SS410	
Strainer		Steel	
Shaft Sleeve		SS410	
Neck Rings		CF8	
Sole Plate		MS	
Column Pipe		MS	
	Discha	arge Head	
Flange Drilling		Mfg. Std.	
PAINTING		AS PER Mfg. Std.	
SCOPE OF SUPPLY			
Pump	1	As per above	
Strainer	1	As per above	
		-	



CONTROL PANEL & STARTER:

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- p. Amp Meter Selector Switch
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- r. Indicating Lamps Phase Failure
- s. Phase reversal relay
- t. Single phase preventer
- u. Capacitor of suitable ratings
- v. GSM

Note: -

- These are vertical single or multistage propeller pumps for wet or dry pit installation with axial flow impellers.
- With high efficiency impellers are open or semi-open mounted on amply designed shaft and supported with adequate bearings.
- And any Metallurgy can be provided depending upon water quality and nature of water.
- Pull out / non-pull-out designs are available to cope up with maintenance preferences.
- Self-water lubrication / oil / forced water lubrication for intermediate shaft designs can provided based on requirement.
- These pumps are suitable for vertical solid shaft as well as vertical hollow shaft motors.
- Flood water delivery is also optional depending upon space availability and design of pump house as above or below pump floor discharge.
- Depending upon power source pumps are provided with or without non reverse ratchet arrangement to prevent reverse rotation of pumps during shut down.
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- Thordon type bearings are provided for long columns without pre-lubrication arrangement.
- For special services bowls / impellers with 350 BHN hardness can be given.
- Mechanical Seals can be given for zero leakage however Gland packing arrangements are recommended for such applications.



TECHNICAL SPECIFICATION FOR ELECETRIC CSS SUBSTATION FOR

FLOOD PUMPING STATION

1. ELECTRIC SUB STATION:-

(i) Conceptual design provided a step down substation of 11/0.433 KV consisting transformers, each of 630 KVA capacity of feeding power to LT. Switch gear panel board of pumping plants. Power cables from the terminal point of incoming 1 KV power line from UPPCL shall be connected to the incoming panel of 11 KV H.T. panel by suitable XLPE cable.

(ii) Transformers are of outdoor type and shall be installed on suitable foundation.

(iii) H.T. switch board shall be installed inside the suitable room and it consist ones incoming and 2 no. outgoing panels. Outgoing panels shall be electrically interlocked and only one panel shall be working at a time.

(iv) All power control special purpose cable etc. shall be in vendor's scope.

2. H.T. SWITCHGEAR PANEL BOARD:

- The general description of the electric equipment's are for 11 KV H.T. switch gear board are as follows: a) Incoming Panel: It is comprising with following:
- (i) 11 KV 630 K.V.A. V.C.B. indoor horizontal draw out type with motor charged mechanism.
- (ii) Voltmeter with selector switch.
- (iii) PTs draw out type 11 KV/24 V DC class 1 accuracy complete with H.T. & L.T. fuses.
- (iv) Ampere meter with selector switch (v) current transformers.
- (v) I.D.M.T, OIC & EIF Relays.
- (vi) Set of indicating pumps.
- (vii) Instantaneous OIC Relay.
- (viii) Under voltage Relay.
- (ix) Frequency meter
- (x) Power factor meter
- (xi) Rubber matting of suitable size and thickness as per relevant ISS/IER.
- b) Outgoing Panel
- 1 No nos, and each panel consist of all following items:
- (i) Voltmeter with selector switch.
- (ii) PTs
- (iii) Frequency meter
- (iv) Power factor meter

3. TRANSFORMERS: (CSS)

11/0. 433KV, 630 K.V.A. capacity transformers with all accessories and protection

devices complete in all respect with first filling of oil.

3.1 Transformers with all protection devices and connected accessories and having capacity of 11/0.433 KV and of 630 K.V.A.

3.2 Initial filing of oil, lubricants, greens etc for the equipment and excess quantity of 19% of the total in not returnable container.

3.3 Details of required spare parts for pumping plants and other equipment have to be specified for two years trouble free operation and maintenance of equipment. The unit rates of these spares should also be given by the bidder. The list of spare parts is attached with as annexure II for guidance.

3.4 One complete set of recommended special tools etc. for regular erection, operation and maintenance of the equipment's.

3.5 Service to be provided by the contractor.

3.6 The contractor shall take the responsibility for all the testing and inspection at manufacturers works to be conducted in manner as specified in this specification.

3.7 Transportation of all equipment, packing for transporting in the specified way from the manufactures works to the project site inclusive of all intermediate handling.

3.8 Unloading of equipment and other materials from truck at site. Transporting and proper stacking in covered store at site in the approved way under security.

3.9 Opening of packages, checking, travelling out and inspection of equipment received at the site and loading of insurance claims.

3.10 Drawings and data to be furnished with offer.

The tendered shall furnish the technical information as per the schedule of technical particulars annexed herewith. Following drawing and information shall be furnished separately along with the offer.

1. Cross sectional drawing of transforms.



2. A comprehensive write up covering proposal method of erection and dismantling of equipment.

- 3. Relevant Publications.
- 4. Any other drawings and information to elaborate the technical aspects of equipment

offered.

- 3.11 Technical data to be submitted by tenderer with the tender.
- Following data and information should be submitted by the tenderer as per Performa shown the tender.
- 1. Data sheet B and some data in data sheet A.
- 2. List of devotions.
- 3. List of recommended spare parts.
- 4. List of special tools and tackles.
- 5. Tenderer experience.
- 6. Declaration sheet
- 7. Drawings
 - 1. Overall dimensions of transformers.
 - 2. Cross section Drawings.
- 3.13 Distribution/Power Transformers.
- 3.14 Codes and Standard:

The design, manufacture and performance of transformers shall comply with all currently applicable statutes, regulations and safety codes where the equipment will be installed. The equipment shall conform to the latest Indian Standard. The relevant Indian Standards as:-

- (i) IS 2026 Power transformers.
- (ii) IS-1180 distribution transformers.
- (iii) IS-336 insulating oil for transformers.
- 3.15 Constructional features:

3.16 Tank

The transformer tank shall be made from high grade plate steel suitable reinforced by means of stiffeners made of structural steel sections. All seems, flanges lifting lugs. And other parts attached to the tank shall be welded. Adequately size manholes shall be provided for easy inspection and maintenance. All joint which may have to be opened from time to time in the course of operation shall be of a design to permit them to be made easily oil tight on reassembly. The transformer tank shall be suitable for oil filling under full vacuum. 3.17 Core:

The Transformer core shall be constructed from high grade managing, cold-rolled, gram oriented, silicon steel laminations coated with insulation varnish maximum flux density in the core with the core excited of)) 0% rated voltage shall not exceed 1.8 Wb/sqmm.

3.18 Winding

1. Winding shall be of suitable insulated copper wire or copper strip. Winding shall be insulated from the core. HV and LV windings shall also be insulated from each other. Windings

and insulation shall be so arranged that free circulation of oil is possible between coils. Between winding and between winding and core. The winding shall be fully shrunk under vacuum before assembly. High voltage winding shall be suitably braced to with stand short circuit stresses and stresses set up by surges. The core and oil assembly shall be dried out and cable testing without necessitating connection of the cable. Disconnection chamber shall have removable cover for providing access to the links mounted inside. A suitable permanent arrangement shall be

provided to suit the type of cable specified in the drawing.

- 2. Cable boxes for paper insulated cables for use oon systems with a voltage up to 11 KV shall be suitable for cold setting type of compound filling.
- 3. All auxiliary wiring from current transformers, Buchholz relays, winding temperature, indica tors, etc. shall be marshalled to a separate weather proof and vermin proof marshalling box

with an independent access cover.

- 4. The marshalling box shall be complete with necessary cable glands and cable lugs.
- 5. The marshalling box and components shall comply with the requirements specified for control cabinets indicated elsewhere in this specification.

3.19 Earthing:

Each transformer shall be provided with two main frame earthing terminals which shall be separate from the natural of a star connected winding.

3.20 Insulating Oil


Insulating oil for transformers and switch gear shall comply with the requirements otIS:335, transformers and oil filled switch gear equipment shall be supplied complete with insulating oil required for first filling plus 10% excess oil.

3.21 Fitting and Accessories

The list of required fittings and accessories has been mentioned in the Annexure I. The details are described in the following pares.

3.21.1 Inspection manhole in the cover. Lifting lugs for both the transformer and the core, Name Plate, rating plate and diagram plate as per IS. Detachable radiator tanks, complete with top and bottom shutoff valves, air release plug, drain valve and lifting lugs, fins fo the radiators shall not sharp edges but shall be rounded shape. 3.21.2 Conservator complete with fillings plug, sump and drain valve and a shot off valve on the pipe connection in the between transformer tank and conservator to permit removal of the conser vator. weatherproof dehydrating breather with activated aluminx or silica gel as the dehydrating agent. Magnetic type oil level gauge with low oil level alarm contact mounted on hte conservators. 3.21.3 Gas actuated relays (i.e. Buchholz relay) with separate alarm and trip contacts complete with shut off be provided for the transformers rated 1000 KVA and above. Separate drain valve,

top filter calve and oil sampling device shall be provided on the tank. Explosion vent with diaphragm for relieving pressure within the transformer. A micro switch form trip/alarm on each diaphragm shall be provided.

3.21.4 Adequate number of air vents for relieving trapped air during oil filling and during maintenance. The mometer pocket and sensing elements mounted on the transformer cover for measuring top oil temperature. Winding "temperature detecting equipment comprising heating coil, resistance coil and current Transformer responsive to the winding hot spot temperature, all wired and mounted inside the transformer tank.

3.21.5 Water proof and dust proof terminal boxes for magnetic oil level gauge. separately mounted, water prof and dust proof marshalling box housing the winding and oil temperature indicators & marshalling facilities for electrical device mounted inside the transformer tank.

3.21.6 Four jacking pads for lifting the transformer with jacks. pulling eyes, bidirectional wheels and skid for the movement of the transformer.

- 38. Type of oil
- 39. Maximum size of cable that can be tenanted at incoming box
- 40. Minimum size of cable that can be tenanted at exit box.
- 41. Other accessories if any
- 42. Literature
- 43. Approximate overall dimensions:
 - Package 1 Weight 3480.000 kg
 - Package 1 Height 2400.000 mm
 - Package 1 width 2600.000 mm
 - Package 1 Length 2650.000 mm

Electrical System Transformer

Installation Location

This specification covers design, manufacturing, testing and delivery of the oil immersed, outdoor type, three phase, 50 Hz Transformers with/Without On Load Tap Changer (OLTC) and Remote Tap Change Control (R.T.C.C.) panel.

The equipment offered shall be complete with all parts necessary for their effective and trouble-free operation. Such parts will be deemed to be within the scope of the supply irrespective of whether they are specifically indicated in the commercial order or not.

It is not the intent to specify herein complete details of design and construction. The equipment offered shall conform to the relevant standards and be of high quality, sturdy, robust and of good design and workmanship complete in all respects and capable to perform continuous and satisfactory operations in the actual service conditions at site an shall have sufficiently long life in service as per statutory requirements. The design and constructional aspects, including materials and dimensions, will be subject to good engineering practice in conformity with the required quality of the product, and to such tolerances, allowances and requirements for clearances etc. as are necessary by virtue of various stipulations in that respect in the relevant Indian Standards, IEC standards, I.E. Rules, I.E. Act and other statutory provisions.



Tolerances: Tolerances on all the dimensions shall be in accordance with provisions made in the relevant Indian/IEC standards and in these specifications. Otherwise the same will be governed by good engineering practice in conformity with required quality.

Bidder should have **minimum average annual turnover of 30% of 3283.03 lakhs equal to INR 984.90 Lakh** Consecutively in past Five years. Bidders needs to submit Balance sheet of past five years along with offer for evaluation.

The transformer shall be installed outdoors.

Standards Applicable

Indian Standards

- IS 1271 Transformer Classification of insulating materials
- IS 2026 (Part I) Power Transformer General
- IS 2026 (Part II) Power Transformer Temperature rise
- IS 2026 Power Transformer Insulation level and (Part III) dielectric tests
- IS 2099 High Voltage Porcelain bushing screen
- IS 2705 (Part I & III) Current Transformers
- IS 3202 Core of practice for climate proofing
- IS 3639 Power transformer fittings and accessories
- IS 6600 Guide for loading of oil immersed transformer
- CBIP low Guideline

Type of Insulating Oil

Natural Ester Oil Immersed Transformer

The Natural Ester Oil for first filling together with 10% extra shall be supplied with each transformer. The Oil shall conform to IEC 62770:2013/ IS 16659:2017 with latest amendment if any & all parameters specified below, while tested at supplier premises. The characteristics of the oil in respect of following shall not, however be inferior than the values specified below. The supplier shall furnish test certificate from the supplier against the acceptance norms as mentioned below, prior to dispatch of oil from refinery to site. Under no circumstances, poor quality oil shall be filled into the transformer and only thereafter be brought up to the specified parameter by circulation within transformer.

The type test certificates to conform the quality of the oil shall be submitted by the supplier. The purchaser at his discretion will depute his representative for witnessing the tests at the NABL laboratory. The purchaser's representative may recommend for testing of sample oil at CPRI/ERDA including ensuring the K Class in the offered oil. The cost for such testing shall be borne by the supplier. Each natural ester delivery shall be accompanied by a document from the supplier specifying at least; supplier's designation, liquid classification and quality certificate. Supplier shall declare generic types of all additives and their concentrations in a data sheet in accordance with the international and local regulations

Natural Esters being susceptible to oxidation and degrade with coming in contact with oxygen, adequate protection by means of sealing and avoiding leakage from any part of transformer. The values of IR, Tan delta, capacitance as recorded and accepted during factory test shall be committed to be met during site testing. Values achieved would be considered benchmark and shall be monitored on regular basis.

The temperature rise limits shall be same as specified in specification. Hence adequate radiators shall be provided. Due to higher viscosity of Natural Ester vegetable oil as compared to mineral oil, the recommendation is to fill under vacuum and to operate filter at higher temperature (up to 80°C).

During running condition, healthiness of the air cell and presence of no oil leakage shall be ensured. The conservator shall be provided with Air cell rapture protection relay (ACPR) to facilitate sounding of alarm in case air cell develops a leak or opening of joints. If by any means air comes in contact with Natural Ester vegetable oil, the viscosity may be affected. Therefore, oil properties i.e. Appearance, Viscosity, Water content, Dielectric break



down voltage (2.5 mm gap), Dielectric dissipation factor, Soluble acidity, Fire point, Flash Point including DGA shall be monitored for next one year from charging. In case of any adverse condition being found observed:

- 1. Before energising
- 2. After 90 days of energising
- 3. At the end of first year

Make of Natural Ester Oil : Savita Oil Technologies / Cargill Oil

Windings

LV winding up to 1000 Volt

Low voltage Winding up to 1000 volt, shall be made with 99.9% pure electrolytic grade copper / 99% pure Aluminium, insulated with high grade paper Insulation. Manufacturer shall provide preferably foil windings for LV coils so as to reduce the stray loss and overall surface area. The LV winding should be able withstand thermal and mechanical stress in the event of short circuit.

Core

Transformer shall be double wound core type with low loss, non-ageing, high permeability PRIME GRADE, CRGO with M4 Grade or Better, perfectly insulated and clamped to minimize noise and vibrations. Followings should be Mandatory for any Manufacturer: -

- 1. Transformer shall be of BOLTLESS core design.
- Core shall be purchased Directly from Manufacturer or from their accredited Marketing organization of Repute & not through any agent. Bidder has to submit manufacturer's name during bidding having sufficient credential & Core has to be purchased from the approved manufacturer.
- 3. Stage inspection of the core shall be done at manufacturer's premises & inspection call shall be given with following Documents:
 - o Invoice of the supplier
 - Mill's test certificate
 - Packing list
 - Bill of landing & Bill of Entry certificate by customs
- 4. Transformer manufacturer should have in-house core cutting facilities for proper control & monitoring of quality & to avoid mixing of Prime core with Second grade /defective core materials. Transformer Manufacturer should have in-house slitting Machine so as, core is cut to width & stacked with minimum air gap thus ensuring Burr level less than 10 Microns.
- 5. Core shall be procured from one of these reputed Manufacturers Posco/ Nippon/ Novex/ Ak Steels / NLMK / Vizsteel/ JFE.
- 6. The insulation structure for the core to bolts and core to clamp plates shall be such as to withstand a voltage of 2000V for one minute.

Power Rating

The power rating of the Distributing transformer shall be..... MVA as per IS 1180 standard.

Voltage Rating

Voltage ratio for the Distribution Transformer shall be 6.6/0.433 kV or 11/0.433 kV or 33/0.433 kV.

Cooling Method

Cooling shall be via Mineral Oil Naturally circulated and Air Naturally circulated.



Tap Changing Method

OFF CIRCUIT TAP CHANGING MECHANISM

The OCTC shall have following:

- 1. Operating handle or wheel, accessible from ground level.
- 2. Tap position indicator.
- 3. Pad locking arrangement.
- 4. The tap-changer connections and contacts shall be accessible through an excess hole having a bolted gasketted cover.

Loss Levels & Impedance

Transformer losses & impedance shall comply to IS 1180 for Distribution transformers of Energy Efficiency Level 2 or Level 3.

Tank

Conventional tank with Detachable radiators

The exterior of tank and other steel surfaces exposed to the weather shall be thoroughly cleaned and have a priming coat of zinc chromate applied. The second coat shall be of an oil and weather-resistant nature, preferably of distinct colour from the prime and finish coats. The final coat shall be of a flossy, oil and weather resisting non-fading paint of specified shade. The interior of the tank shall be cleaned by shot blasting and painting with two coats of heat resistant and oil insoluble paint.

Steel bolts and nuts exposed to the atmosphere shall be galvanized.

Unless otherwise stated, the tank together with radiators, conservator, bushings and other fittings shall be designed to withstand without permanent distortion the following conditions:

- 1. Vacuum withstand shall be as per CBIP Guideline.
- 2. Internal gas pressure of 0.35 Kg/cm2 (5 lbs/sq.in) with oil at operating level.

The tank cover shall be suitably sloped so that it does not retain rain water.

The material used for gaskets shall be cork neoprene or approved equivalent.

Fittings & Accessories

Conventional tank with Detachable radiators

For oil immersed type transformers, following fittings shall be provided:

- 1. Bushing Terminals complete with connectors for the Purchaser's external conductors or cable boxes, as specified in Specification.
- 2. Neutral bushing terminal complete with connector for earth conductor specified in Specification.
- 3. Inspection cover (for transformers 1000 KVA and above).
- 4. Rating and terminal marking plates.
- 5. Two Earthing terminals.
- 6. Lifting lugs for Lifting complete transformer with oil and for Lifting core and coils
- 7. Drain cum sampling valve with plug or cover plate.
- 8. Dehydrating breather (for transformers 25 KVA and above for rated voltage 11 KV and below and all ratings above 11 KV).
- 9. Oil level Indicator with minimum marking.
- 10. Thermometer pocket.



- 11. Oil filling hole with cap (for transformers without conservator)
- 12. Conservator (for transformers 50 KVA and above for rated voltage 11 KV and below, and all rating above 11 KV with oil filling hole with cap and a drain plug.)
- 13. Air cell in Conservator
- 14. Air Release Device (for all transformers fitted with conservators).
- 15. Jacking Lugs (Transformers weighing above 3000 Kg)
- 16. Filter Valve (for all transformers above 1000 KVA)
- 17. Pressure relief valve (for transformers 50 KVA and above). The device shall be rain-proof after operation. For transformers 500 KVA and above an equalizer pipe connecting the pressure relief device to the conservator shall be supplied.
- 18. The under base provided with channels for fixing on a platform or plinth.

Termination Options

Air insulated Cable Box or Bus duct arrangement

Testing

TESTS

The first seven tests listed below shall be carried out and shall be deemed to be included in the BIDDERS scope. Bidder shall quote extra unit prices for carrying out type tests as specified:

ROUTINE TESTS as per IS 2026 – The manufacturer should have NABL accredited test lab.

- 1. Measurement of winding resistance
- 2. Measurement of voltage ratio and check of voltage vector relationship
- 3. Measurement of impedance of voltage (principal tapping), short circuit impedance and load loss
- 4. Measurement of no load loss and current
- 5. Separate source voltage withstand test
- 6. Induced overvoltage withstand test
- 7. 2kV withstand test for all wiring
- 8. Magnetic Balance Test

TYPE TESTS:

Optional price shall be quoted by bidder for carrying our Type tests as per IS 2026. All the type tests shall be carried out in NABL accredited test lab.

- 1. Lightning impulse test Test certificate of similar design shall be furnished.
- 2. Temperature rise test To be done on the transformer at third party or NABL accredited lab.
- 3. Zero phase sequence impedance test Test certificate of similar design shall be furnished.
- 4. Pressure & vacuum Test as per CBIP guideline on tank.
- 5. Measurement of Acoustic Noise level of transformer.
- 6. Measurement of Capacitance & Tan Delta of winding.

REJECTION

PURCHASER may reject any transformer if during tests or service any of the following conditions arise:

- No load loss exceeds the guaranteed value by 20% or more
- Load loss exceeds the guaranteed value by 20% or more
- Impedance value differs the guaranteed value by + 10% or more
- Winding temperature rise exceeds the specified value by 5°C
- Transformer fails on impulse test
- Transformer fails on power frequency voltage withstand test
- Transformer is proved to have been manufactured not in accordance with the agreed specification.



• The PURCHASER reserves the right to retain the rejected transformer and take it into service until the SELLER replaces, at no extra cost to PURCHASE, the defective transformer by a new acceptable transformer.

Asset Connect

Asset Connect

The Transformer shall be equipped with the Wireless continuous Temperature monitoring sensors at bushing terminals of each phase & the wireless Humidity & ambient temperature monitoring sensor in the termination box. The sensors shall be provided inside the IP 55 class Terminal Ai insulated Cable Box or Bus Duct for voltage class up to & below 33 KV.

The Sensors shall be communicable in Zigbee protocell.

The Transformers shall also be equipped with the Oil & Winding Temperature indicators with 4-20 mA output analogue signals with remote temperature display (RTD's)

TECHNICAL SPECIFICATION FOR 10 TON CAPACITY ELECTRICALLY OPERATED OVER HEAD TRAVELLING (EOT) CRANE

ITEM:

DESIGN, FABRICATION, SUPPLY, TESTING, ERECTION ANDCOMMISSIONINGOF10TEOTCRANE AS PER IS 807/ IS 3177 CLASS M5.

1.0 TECHNICAL FEATURES

Design and Construction Features:

S.No.	Specification De	ption					
1.	Туре	Single Girder crane for indoor application					
2.	Type of application	The pump house.					
3.	Class of duty:	M5 as per IS 3177					
4.	Standards:	The crane to be Designed, Manufactured and tested in accordance					
		with the latest revisions & editions of IS 807, IS 3177 and other relevant					
		code and standards as indicated under Paragraph 5.0					
5.	Location	Indoor					
6.	Capacity SWL	10 Tons					
7.	Height of track rail	5.9mtrs, above floor level (refer sketch)					
8.	Span	9 mtrs					
9.	Bay length	31 meter approximately					
10.	Clearance	1100 mm					
	hei						
	ght above the						
	gantry rail						
11.	Cross travel of Crane	9 mtrs.					
12.	Speeds						
	Hoisting / lowering	2.66 m/min (approximately)					
	Cross travel	17.0 m /min(approximately)					
	Long Travel	20.0 m/min (approximately)					



13.	Bridge Girder	Bridge girder shall be RSJ type with rubber buffer Indian Standard hot rolled structural sections as per IS 808 – 1957, IS 1173 – 1957, IS 1864 – 1963, IS 800 – 1962, IS 816 – 1956. Girder should be strong and rugged to withstand the most severe combination of loads/stresses under different working conditions The Bridge Girder shall be designed to have maximum deflection of span/900 at SWL in order to have better structural integrity. Sufficient space shall be provided for ease of maintenance.
14.	End carriage	Fabricated out of MS Plate or C Channel of suitable size to form box except for essential openings which should be reinforced. End carriages to be fitted with substantial safety stops to prevent the crane from falling and should not Interfere with removal of wheel.
15	-	-
16.	Cross travel and Long travel wheels	0.75 KW x 2 drive for LT motor and 0.55 KW x 2 drive for CT motor. LT Wheels shall be Double Flanged and CT Wheels Single Flanged of EN 9 material. The item should be machined and hardened to required hardness. The wheels to be mounted on antifriction bearings and shall facilitate easy removal & replacement.
17.	Hook	Shall be Single shank "C" type forged steel conforming to IS 15560 with spring loaded safety latch and mounted on thrust bearing for freely swiveling.
18.	Wire rope	Fiber or Steel core, 6x36 or 6x37 construction as per IS-2266 of Usha Martin Make. Diameter to be specified by supplier.
19.	Quality of steel for wire rope	1960 KN as per IS-2266
20.	No. of rope falls supporting the load	6
21.	Factor of safety for the wire rope	Min 5
22.	Rope drum	Machined out of seamless pipe of adequate thickness with machined grooves for the wire rope. The length/Dia should be sufficient to wind the wire rope in one layer only when the drum is in the fully wound position. Drum shall be mounted on antifriction ball/ roller bearings. Rope Drum Dia to Wire Rope Dia Ratio of Min 22:1 shall be maintained while designing the Rope Drum. Rope should be guided by Heady Duty spring Loaded Cast Iron Wire Rope Guide
23.	Sheaves	Sheaves machined out of Cast Iron with adequate no of grooves to suit the no. of falls.
24.	Gear boxes	All gear boxes in the crane shall be rugged and totally enclosed in dustproof construction filled with oil. Straight or helical spur gear should be used for all motions (worm, bevel gears should not be used). All gears shall be of EN9 and pinions of EN-24 with suitable hardness, hardened with machine cut or hobbed teeth, metric module only. The long travel mechanism shall be driven by two separate gearboxes at both ends of the span. All the extended shaft and end covers on gear box shall be provided with good quality oil seal to prevent leakage. Hoist should be provided with Heavy Duty Planetary Gearbox and CT/ LT motion shall be provided with Helical Gearboxes. All Gearboxes should be brought out from reputed manufacturers. No self-assembled/ fabricated gearboxes to be used by crane supplier.
25.	Coupling	Gear couplings at all places, if required
26.	Bearings	Antifriction type Ball/roller bearings of SKF/ FAG/ URB/ NTN / TIMKEN/ RHP (NSK) make.



27.	Brakes	Electromagnetic Friction Disc Type Ball brake for all operations with safety interlock for automatic operation on power failure. 1 No Brake to be provided for each Motor. Torque Rating of Hoist Brake shall be Min 2x the Motor Torque and that of CT/ LT Brakes shall be Min 1.25x the Motor Torque
28.	Limit switch	 a. All the limit switches on crane make shall be Avon/ SIEMENS/ L&T/ BCH/ Giovenzana of Heavy-Duty type only. b. Hoist Limit Switches shall be actuated by actuator mounted on Wire Rope Guide c. Two way lever type limit switch for CT/ LT motions
29.	Wheels	Double/ Single flanged Taper/ straight tread type made of EN 9 material fitted with anti-friction type bearings. They shall be mounted on a suitable housing for easy removal and maintenance. No. of Wheels in a single side of rail: 2 Nos. LT wheel base Span / 5 Min,
30.	Hoisting Motor	Sq. cage type Motors shall be totally enclosed, energy efficient, 150 starts per hour, 40% CDF 3 phase squirrel cage induction motors confirming to IS 325 having Class F or better insulation. Duty cycle of the motors shall beS4 or better. Phase Loss/ Phase Sequence/ Undervoltage/ Over Voltage protection shall be provided for the motors. The motors shall be of KIRLOSKAR / ABB / CG / SIEMENS / BHARAT BIJLEE / ONLY. NO EQUIVALENT MAKE
31.	C.T. & L.T. Moto make, Type	Sq. Cage type, Motors shall be totally enclosed, energy efficient, 150 starts per hour, 40% CDF 3 phase squirrel cage induction motors confirming to IS 325 having Class F or better insulation. Duty cycle of the motors shall beS4 or better. Phase Loss/ Phase Sequence/ Undervoltage/ Over Voltage protection shall be provided for the motors The motors shall be of KIRLOSKAR / ABB / CG / SIEMENS / BHARAT BIJLEE / ANY OTHER REPUTED MAKE
33.	Crane operation	The crane shall be operated through pendent push button station moving independently and shall have mushroom type emergency push button. Pendent shall be suspended with Pendent Cable only (i.e., Cable with in belt wire ropes to support the weight of pendent)
34.	Power supply	Power supply to motors, control circuit, lighting, hand lamp brakes etc. shall be as per relevant standards through flexible PVC cables. Current Carrying Capacity of Cables shall be Min 2 times the rated current of the Motors fed by the Cable. Min Size of Power Cable shall be 2.5 Sq mm and Min Size of Control Cable shall be 1.5 sq mm.
35.	Painting	All part of the crane shall be 2 coats of Synthetic Enamel. Color Golden Yellow make Neroli or Equivalent.
38.	Rails	Only BRIGHT Bars shall be used as LT Rail or LBS Rail Sections with Clamps. Black Bars shall not be used as Rail
39.	DSL	T Track Festoon Trailing Cable System shall be supplied for Travel Lengths less than 10M and Shrouded GI DSL System shall be supplied for Travel Length more than 10M. No Taut Wire Arrangements to be supplied for power feeding to crane

Note:

- 1) All electrical switchgear shall be of L&T/Siemens/ Schneider make only.
- 2) Control Voltage shall not exceed 110V AC.
- 3) All the motors routine test certificates shall be submit along with supply of crane.



TECHNICAL SPECIFICATION FOR FLOOD PUMPING PLANT & ITS ACCESSORIES

MATERIALS AND WORKMANSHIP (FLOOD)

1.0 Introduction

The part of the specification sets out the general standards of the materials, workmanship and plant design to be supplied by the contractor and mention of any specific materials plant does not necessarily imply that such is included in the works.

The engineer shall have power to reject defective parts or parts thereof which do not comply with the specification. Such part shall be replaced by the contractor at his cost.

1.1Compliance with Standards

Where reference is made in this specification to a standard or code of practice issued by the Bureau of Indian standards or the British Standard Institution or their equivalent, this shall be deemed to refer to any of the standard or organization referred to in this specification.

Only standard amended to till date shall be used for reference and where it is not specifically stated the works or equivalent shall apply.

1.2Materials (General)

All materials incorporated in the works shall be the most suitable for the duty concerned and shall be new and of first class commercial quality free from imperfection and selected for long life and minimum maintenance. All submerged moving parts of the plant shall be of corrosion resisting metals. All parts in direct contract with various chemical shall be completely resistant to corrosion or abrasion by these chemicals and shall also maintain their properties without aging due to the passage of time exposure to light or any other cause. Attention shall be paid to prevention of corrosion due to close proximity of dissimilar metals.

1.3Design Life

All materials and equipment shall be designed for long life and shall be suitable for continuous 24 hours per day operation for prolonged period with a minimum of maintenance and contractor may be called upon to demonstrate this for any component either by the service record of similar equipment elsewhere or by records of extensive type tests.

1.4Metal Works

All metals used in the works shall be most suitable for the purpose.

The equipment manufactured in shops shall be pre-painted or coated by the manufacturer to give a standard finish. All metal work assembled in the plant shall be thoroughly cleaned, degreased, dried before painting. All parts subjected to hydraulic pressure tests shall be painted after the tests are successfully carried out. Generally four coats of approved quality standard paint suitable for the concerned surface shall be applied. The coats shall be of different shades to distinguish them from each other.

1.5 Nuts, Bolts, Studs and Washers

Nuts, bolts, studs and washers for incorporation in the plant shall conform to the requirements of the appropriate Indian or other approved standard. Nuts and bolts for pressure parts shall be of the best quality bright steel, machined on the shank and under the head and nut. Bolts

shall be of sufficient length so that one thread shall show through the nut when in the fully tightened conditions. Fitted bolts shall be a light driving fit in the reamed holes to occupy & shall have the screwed portion of diameter such that it will not be damaged in driving and shall be marked in a conspicuous position to ensure correct assembly at site.

Washers, locking devices and anti-vibration arrangements shall be provided where necessary and shall be fitted where necessary to ensure that no bending stress is caused in the bolt.

Where there is a risk of corrosion, bolts and studs shall be designed so that the maximum stress in the bolt and nut does not exceed half the yield stress of the materials under all conditions.

All bolts, nuts and screws which are submerged in water shall be made of nickel-bearing stainless steel 1.6 Protection and Packing for Transportation

Before any plant is dispatched from the manufacturer's works it shall be properly prepared and packed and the contractor shall give the engineer at least fourteen days' notice that these preparations are to commence. Prior to dispatch, all plants shall be adequately protected by painting or by other approved means for the whole period of transit, storage and erection against corrosion and incidental damage, including the effects of vermin, sun-light- rain, high temperatures and humid atmospheres. The contractor shall be held responsible for the plant being so packed and/or protected as to ensure that it reaches the site intact and undamaged. The plant shall be



packed to withstand rough handling in transit and all packages shall be suitable to storage including possible delays in transit.

The contractor shall be deemed to have included in the schedule of prices for all materials and packing cases necessary for the safe package, conveyance and delivery of the plant.

The flanges of pipes, valves and fittings shall be protected by wooden disc attached by means of service bolts (which shall not be used at site) or by other approved means. The sleeves and flanges of flexible couplings shall be handled by wire. Cases containing rubber rings, bolts and other small items shall not normally weigh more than 500 kg. Gross.

No package or bundle shall contain items and plant intended for incorporation in more than one section of the works. All items of plant shall be clearly marked for identification against the packing list.

Every crate or package shall contain a packing list shall be sent by post to the engineer's representative at site/store.

All crates, packing etc. shall be clearly marked with a water proof material to show the wet and where the slings should be attached and shall also have an indelible identification mark relating them to the packing lists.

1.7 Pipes and Pipe Work

All pipe work and fittings etc. shall conform to the latest revision of the appropriate Indian Standards and shall be to a class in excess of the maximum pressure and shall be supplied by an approved manufacturer.

Proper indication colour code shall be provided as per the standard practice in consultation with the representative of the engineer

2.0 Specification for Valves, Pipes & CI Special & Fittings

2.1 Scope

This specification covers the design, performance, manufacture, construction, features, testing at manufacturer's works, packing and forwarding to site of following specialties :-

- i. Sluice valve (Rising spindle type)
- ii. Reflux valve
- iii. Pipes
- iv. C.I. Specials and

fittings. 2.2 Code & Standards

2.2.1 This design, manufacture and performance of valves and specials shall comply with all currently applicable statues, regulations and safety code in the locality where the equipment will be installed. The equipment shall also conform to the latest applicable Indian Standards/B.I.S.

i.	Sluice Valve up to 300 mm	:	IS:780
ii.	Sluice Valve 350mm to 1500mm	:	IS:2906
iii.	Reflux valves	:	IS:5312 (PtI)
iv.	Pipes	:	IS:1536
v.	C.I. specials and fittings	:	IS:1538

2.3 Features of Construction (Valves)

2.3.1 The features of construction shall generally conform to the above specifications.

2.3.2 The valves shall be suitable for installation with the valve shaft in any position.

2.3.3 Sluice valves shall be double flanged and shall have disc manufactured in 'MEHANTE' or

equal material unless otherwise specified in data sheet. The seat and faces shall be of gun metal, or of one specified in data sheet.

2.3.4 The reflux valves shall be suitable for smooth functioning under the maximum design pressure. The valves shall have no slam closing characteristics without external dampening arrangement.

2.3.5 Valves ends shall be flat faced flanged. Flanges shall be drilled to suit IS-1538 Part IV & VI or other relevant I.S.S.

2.3.6 The driving and sealing shall be preferably of gland and stuffing box type. Stuffing box shall be easily accessible for adjustment and replacement of packing without disturbing any other part of valve or operator



assembly. The depth of the stuffing box shall not be less than 50 mm or diameter of shaft whichever is lower. As an alternative ring type sealing may be provided at the driving end.

2.3.7 Valve shaft shall have a minimum shaft diameter extending through the valves bearings and in the valve disc as specified in Indian Specifications.

+ 3 mm

+ 2 mm

2.3.8 The tolerance of the valve dimensions shall be as per relevant standard code, but not

exceeding the following: -

i.

iii.

Face to face + 3 mm

ii. O.D. of flanges

Pitch Circle diameter

iv. Thickness of flange + 2 mm

Dimensional tolerance on casting shall be as indicated in IS:5519.

2.4 Floor stands & extension bonnets shall be provided: -

2.4.1 For sluice valves located below the floor, suitable floor stands or extension bonnets as required for the specification shall be provided. These shall be complete with proper extension stems, valve stem, valve stem couplings, hand wheels, gearing, local position indicators etc. The floor stand shall be bolted to the floor and height of the hand wheels above the floor shall be between 900mm and 1000 mm depending on the manufacturer's standard design.

2.5 Tests

2.5.1 All valves shall be tested hydrostatically for strength, tightness of seats and tightness of back seating at the pressures specified in relevant code.

2.5.2 The procedure for testing the tightness of seats of valves shall be as follows. The valves shall be subjected to water pressure of a minimum of 2.182 kgs/cm² and shall then be increased to the specified seat test pressure. Valves shall then be racked open at this pressure to determine the tightness of the seat ring in the body. Gate valves shall be tested on both sides of disc. The testing in general shall conform to the relevant I.S. Standard. Pressure test shall be carried out at the pressure indicated in the data sheet.

2.5.3 Vender shall furnish five (5) sets of the following certificate for all type of valves.

a. Certified physical and chemical analysis certificates, metallurgical test reports of all components of the valves and specials.

- b. Certified hydrostatic test reports for all body castings.
- 2.6 Paintings & Corrosion Protection

2.6.1 A shop coat of paint shall be applied to all steel and cast iron exposed surface as required to prevent corrosion, after release has been given for painting and before despatch. All parts shall be adequately protected for rust prevention. Grease shall not be used on machined surfaces

2.7 Drawing and Manuals

2.7.1 Tenderer shall furnish along with his bid the following drawings: -

- a. Dimensional outline drawing
- b. Cross section drawing.
- 2.7.2 Instruction manual shall be furnished by vender after award of the contract.

2.8 Name Plate

2.8.1 All valves and specialties shall have permanent name plate indicating the service for which these will be used and the primary temperature and pressure ratings.

2.9 Valves Data Sheet

2.9.1 Sluice Valves

Construction Features

1.	Spindle	:	Outside screw and yoke on rising type.
2.	Ends	:	Flanged flat face, drilling as per
			IS:1538 part IV & VI.
3.	Bonnet	:	Bolted.
4.	Disc.	:	Solid wedge.
5.	Operation	:	Hand wheel.



Materia	6. als of Co	Body and disc. se	eat : IS:290	6 Class	I & 780 Class I 2.10
	1.	Body	:	Cast Ir	on (IS:210, FG-200)
	2.	Disc.	:	Cast Ir	on (IS:210, FG-200)
	3.	Spindle	:	Steel A	AISI-410
	4.	Body seat	:	Stainle	ss Steel. A.I.S.I. 304
	5.	Disc. Seat	:	-do-	
	6.	Packing	:	Asbest	OS.
	7.	Nuts-Bolts	:	IS:136	7 Class 46/4
	Note:	Material for body sea	t & disc and	seat & b	oody ring shall be of S.S. ASTM 296 Grade
	CF-8 (A.I.S.I304).			
2.11	Testin	g			
	1.	Hydrostatic test pre	essure	:	Body - 20 Kg/cm ²
	2.	Seat		:	10 kg/cm ²
2.12	Reflux	Valve			
2.12.1	Consti	ruction Features			
	a.	Туре		:	Swing.
					20
	8.	End construction	****	dod flow	
	9.	velocity	recommen	aea nov	v
	10.	Weight & Shipping.			
	11.	Arrangement drawi	ng No.		
	12.	Specified in data sh	neet A.		
2.15	Reflux	Valve Data	- Kirlos	kar / IVC	2
	1.	Manufactured by			
	2.	Туре	:		Single door pattern swing
	3.	Size	:		150 mm/100 mm
	4.	Quantity			
	5.	Rating	:		P.N1
	6.	Material : Body Doo	or :		CIIS210 FG-200
		a. Seat body	:		Bronze
		b. Door/Disc.	:		CI IS:210
		c. Wing Pin	:		AISI 410
	7.	Test pressure body	v seat.		
	8. 9	Maximum velocity	ecommende	ed flow v	eiocity.
	3. 10.	Weight and shippin	g dimension	IS.	
	11.	Arrangement drawi	ng No.		

12. Details of dampening arrangement.

3.0 General Electrical Specifications

The following specification shall be applicable to all the electrical equipment furnished and erected under this contract. Item of works not specifically stated in the specification, but which are necessary for meeting the requirements of this specification shall be included in this scope. The equipment offered shall comply with the relevant Indian Standards or equivalent better standards. The electrical equipment/installation shall comply with the requirements of the Indian electricity rules, Indian Electricity Act Indian Electricity (supply) Act, and the Indian 'Factories Act. For the purpose of designing equipment an ambient temperature of 48°C should be considered.



The equipment's offered shall be suitable for installation and trouble free operation in the climatic conditions prevailing in Bareilly within the state of Utter Pradesh. The contractor shall design all the electrical equipment like switch boards, motor starters, controls, etc. and submit detailed drawings. All the equipment shall be designed as per the standard code of practice and in conformity with the specifications.

3.1 **GENERAL SPECIFICATIONS**

Installations

The electrical installation shall comply wherever applicable with current codes and IS-72-1963, or equivalent code of practice for electrical wiring installations and IS: 4648-1968 is guide for electrical layout in residential building".

3.1.1 Quality and Workmanship

All the materials, fittings, used in the electrical installation shall conform to Indian Standard specification wherever these exist. In the case of materials for which Indian standard specifications do not exist, samples shall be submitted for the engineer's approval. Switchgear

All the switchgear components shall be either Siemens/Larsen & Toubro/Cutler Hammer/EE make only. All switches shall be interlocked with the door such that door cannot be opened while the switch is on position. Terminals shall be of ELMEX make. Wiring

Inter panel wiring shall be done with 650/1100 B grade ALL TYPE I.E.DI ,AC ,HDPE insulated copper wire only. Minimum size of power wire shall be 4 sum and control wire 2.5 sum 20% spare feeders of starter, 1 no. feeder for lighting and I no. feeder for welding shall be provided.

3.1.2 Capacitors

Motor shall be provided with separate capacitors to 0.9 lagging or above. Unless otherwise specified all capacitors shall of the scale unit pattern comprise paper, foil or plastic firm impregnated with oil or p synthetic electrolyte. Capacitors shall comprise assembly of units mounted on frames with suitable trumping screening interconnections or shall be housed in ventilated sheet steel enclosures. In either cases capacitor shall be complete with all necessary interconnections, discharge devices, protective fuses and terminals for the connections of a 3 core-supply cable. A removable un-drilled cable land shall be provided.

3.1.3 Cable

All power and control cable for medium and low voltage shall be 650/1100 B grade ALL TYPE I.E.DI, AC, HDPE. Insulated round wire/flat wire armoured, ALL TYPE I.E.DI ,AC ,HDPE overall sheathed as per IS: 1555 Minimum size of conductor for power control cable shall be 2.5 sq. mm. Copper cables for motor rated above 7.5 hip shall be provided with 6 sq. min. Aluminium

.conductor. Contractor shall offer cables after considering operating factor like ambient temperature groping etc. Cable shall be of CCI/ICC/Fort Gloster/ Finolex make only.

3.1.4 Earthing

All equipment rated 220 volt above shall be earthed with copper wire/strips at minimum two places and equipment rated 220 volt and below shall be earthed at one place. An earthing loop shall be provided earthing shall be done as per IS :3034. All motors above 150/83 H.P. shall have independent earthing. Similarly earthing for lightening arrest shall be separately provided. General Specifications of flood Pumping Plant and other accessories for pumps.

1. Fully automatic Air Break Star Delta Pump Starter:-

Suitable Capacity of Fully Automatic Star Delta Starter Comprising of L&T Schneider

/GE Make which will be contain following item as per given below.

- Contactor of suitable ratings. a.
- TOR of suitable ratings. b.
- **PB** Switches c.
- d. Dual Amp & voltmeter
- Amp Meter Selector Switch e.
- Toggle switches f.
- Indicating Lamps Phase Failure g.
- Phase reversal relay h.
- Single phase preventer i.
- Capacitor of suitable ratings j.
- k. GSM



- 1. The Submersible motor shall be squirrel cage induction motor.
- 2. The windings shall be either wet or dry type.
- 3. The motors shall be suitable for operation on voltages and frequency conforming to IS:585-1962 Voltages and frequency for AC transmission and distribution system(revised)
- 4. The Earthing of the motor shall comply with IS: 3043-1966"Code of practices for Earthing.
- 5. The thrust bearing shall be of adequate size to with stand the weight of all rotating parts as well as the imposed hydraulic thrust these shall be lubricated suitably.
- 6. For wet/dry type motors the motor windings and the bearing bushes of the rotary shaft shall be cooled/lubricated by pure water or oil filled in the motor before erecting the pump sets.
- 7. The motor shall be protected by means of cable glands, rubber seals etc from ingress of bore well water, sand and other foreign matter.
- 8. The thrust bearing housing shall be provided with a drain plug to empty the oil/pure water filled into the thrust bearing housing /motor.
- 9. The rotor shaft shall be provided with shaft protecting sleeves having a surface finish of 0.75micron Ra Max (see IS: 3073-1967 Assessment of surface roughness). However for short length of shafts made of stainless steel, protecting sleeves may not be provided.
- 10. The motor shall be provided with a breathing attachment like bellows diaphragm etc. to compensate the volumetric variations due to changes in the temperature.
- 11. The motor shall be made of corrosion resisting materials or suitably treated materials to resist corrosion under normal conditions.
- 12. The motor shall have a name plate giving the following information:-
 - (i) Induction motor.
 - (ii) Name of manufacturer.
 - (iii) Manufacturer's number and frame reference.
 - (iv) Type of duty.
 - (v) Frequency in Hz.
 - (vi) Number of phases
 - (vii) Rated output in KW
 - (viii) Rated voltage and winding connections.
 - (ix) Current approximate in amperes at rated output and
 - (x) Speed in revolutions per minute at rated output.

There shall also be an indication to identify a motor with its pump. 2(i) Pump Assembly:-

- **1.** A standard hydrostatic test on all pressure containing parts shall be made at 1.5 times the maximum discharge pressure.
- 2. The bowls may be equipped with replaceable casing bearing.
- **3.** The bowl assembly shall bear a name plate giving the following information.
 - (i) Name of the manufacturer of trademark.
 - (ii) Serial number of the pump set
 - (iii) Pump type.
 - (iv) Number of stages.
 - (v) Total head and
 - (vi) Capacity
- 1. The impeller be of the enclosed or semi-enclosed type and shall be properly balance. Dynamic balancing is recommended

(Note. Balancing here does not mean the balancing of axial hydraulic thrust in impeller.)

- 2. Enclosed impellers may be equipped with seal rings on their hubs. Seal rings shall be provided either with impeller or in the bowl.
- 2 (iii) Pump Shaft:-

The pump shaft shall be guided by bearing provided in each bowl or above and below the impeller

shaft assembly. The shaft without protecting sleeves shall have a surface finish 0.75 micron Re Max.

- 2 (iv) Suction Case with Strainer:-
 - (i) The opening in the suction case for the entrance of the liquid shall be of proper size and shape to avoid currents.
 - (ii) The suction case shall be fitted with a strainer made of corrosion-resistant material.
 - (iii) Suitable sand guard shall be provided just above the suction case to prevent the entry of foreign matter int the suction case.



2 (v) Coupling: -

A suitable coupling arrangement shall be provided in case of directly coupled pump sets. 2 (vi) Non-Return Valve:-

Non-return valve may be provided above the pump discharge case.

- 2 (vii) Submersible Cable:-
 - (i) The cable used for submersible motors shall conform to IS:694(Part-1)-1964 and IS:694(Part-11)-1954 Specification for ALL TYPE I.E.DI ,AC ,HDPE insulated cables(for voltages up to 1-100V): Part1 with copper conductors Part-11 with aluminium of three conductors.
 - (ii) For pump sets requiring long cable lengths the manufacturer may supply cable leads having a minimum by the manufacturer.

2(viii) Cable Clamps:-

The submersible cables shall be fixed to the rising main pipes by suitable cable clamps supplied by the manufacturer.

Note: Pump set model should be so selected that at low head, the discharge may not increase more than 10%.

j)

TOOLS: (As per Site)

Under this item you will supply as follow:

- a) Complete Tool Kit box
- b) Pipe wrench 300, 250 & 200 mm
- c) Hammer 1 Kg & 2 Kg
- d) D Spanner Set 6mm to 50 mm
- e) Ring Spanner Set 6mm to 50 mm
- f) Insulated Pliers.
- g) Screw Driver.
- h) Tonge tester Digital.
- i) Line tester.

Adjustable Screw Wrench.

- k) Megger.
- I) Crimpling tool.
- m) Calliper (inside & outside)



Technical Specification of 400 kVA Three Phase Silent DG Set: -

A.C. Generator:-

Stamford make Brushless type, Synchronous, A.C. Generators continuously rated for 415 Volts, 3 Phase, 2 Wire, 50 HZ, 0.8 power factor (lagging) at 1500 RPM, 4 Pole, screen protected, drip proof, horizontal footmounted type, self-excited, self-regulated with static excitation system, Class 'H' insulation. The Alternator is capable of developing rated output & able to take 10% overload for one hour at every 12 hrs of operation.

ACCESSORIES:

Base Frame

The Diesel Engine and the A. C. Generator will be mounted on a suitable base frame of sturdy to minimize vibration and ensure easy maintenance.

Fuel Tank

Daily service fuel tank of sheet metal of suitable capacity complete with drain valve, air vent inlet and outlet connection.

Batteries

Battery (Dry and charged) of suitable AH capacity along with leads for connection.

Technical Specification of Acoustic Enclosure

Salient Features:-

□ Approved by ARAI/NAL, the nodal agency of CPCB

□ Compact, modular construction and sleek design with low noise level 75dBA, at a distance of 1 Meter from Canopy in free field conditions.

□ Soundproof, weather-proof and environment friendly silent set.

- □ Ready-to-use silent DG Set, which eliminates need of foundation or grouting.
- □ Single bearing generator with Anti vibration mounting ensures minimal vibration.
- □ Steel outer construction with 1.6mm CRCA sheet with heavy-duty fabricated base frame and inbuilt fuel tank.
- $\hfill\square$ Residential type exhaust silencer is mounted on the enclosure.
- □ Illumination arrangement inside the canopy.



PART-A

DETAILED MEASUREMENTS OF PROPOSED INTAKE CHANEL BILL OF QUANTITY INTAKE CHANEL AT AYODHYA Per mtr. Cost

S.N.	DESCRIPTION OF ITEM	Qty.	Rate	Amount
	Intake Channel 4.0 M x 3.30 M (In R.C.C. M-20 1.5% Rei	n For cemen	t)	
1	Earth work excavation soil mixture with material etc with different depth.			
(a)		8.850	87.50	774.38
(b)		8.850	97.50	862.88
(C)		8.850	107.50	951.38
(d)		0.295		
		0.180		
		24.225	117.50	2,846.44
2	100 MM THICK C.C. IN 1:4:8 cont. sand and 40 mm brick blast	30.090	2,550.00	76,729.50
	Construction of R.c.c. work with cement approved coarse			
	sand and 2 cm. (3/4") gauge approved stone ballast in	0.135		
	the proportion 1:1.5:3,(1) reinforcement and its fixing and	0.900		
3	binding the same with 24 B WG binding wire and	0.276		
Ŭ	including necessary cantering and shuttering etc. And	0.293		
	also including supply of all materials, labour and tools	2.933		
	and plants etc, required for proper completion of the works. strength of the concrete shall not belles than M-20.	231.336	6,100.00	14,11,149.60
4	mild steel or iron work for reinforcement including cutting matching and biding of all retaining wall			
		322.83	4,900.00	15,81,867.00
5	Back Filling of Earth.			
		281.775	35.00	9,862.13
6	Cartage of earth work up to 5 km distance			
	Quantities as per Items No. 1 (a+b+c+d)	27.025		
	Less Items No. 5	281.775		
		-254.75	103.90	-26,468.53
			TOTAL	30,58,574.76



PART-B

DETAILED MEASUREMENTS OF PROPOSED UNDER GROUND										
WATER STORAGE TANK & PUMP ROOM										
BILL O	F QUANTITY (UNDER GROUND 1	TANK) FOR 53	7 KL AT CHE	R SAG	R, AYODHYA	<u> </u>				
S.N.	DESCRIPTION OF ITEM	SCH. NO.	QUANTITY		QUANTITY	UNIT	RATES	AMOUNT		
1	Earth work in excavation by mechanical means (Hydraulic excavator) / manual means over areas (exceeding 30cm in depth. 1.5m in width as well as 10 sqm on plan) including disposal of excavated earth, lead up to 50m and lift up to 1.5m, disposed earth to be									
	levelled and neatly dressed.									
(a)	0.0 TO 1.50 Mtr	(PWD-251)	3520.463	13.97 0	7501.939	CUM	120.00	9,00,232.68		
(b)	1.50 TO 3.0 Mtr	(PWD- 251+254)	3520.463	13.97 0	7501.939	CUM	140.00	10,50,271.46		
(c)	3.0 TO 4.50 Mtr	(PWD- 251+254*2)	3520.463	13.97 0	7501.939	CUM	160.00	12,00,310.24		
(d)	4.50 TO 6.00 Mtr	(PWD- 251+254*3)	3755.160	14.90 1	7748.743	CUM	180.00	13,94,773.71		
					0.000					
	roviding and laying in cement concrete 1:4:8 (1 cement :4 coarse sand :8 graded stone aggregate 40 mm nominal size) and curing complete, including cost of form- work, in foundation and floors.	(PWD-281)	234.698	0.931	500.130	СИМ	6340.00	31,70,825.86		
		(1112 201)	2011000	0.001	0.000	00111	0010.00	01,10,020.000		
3	Providing and laying in position ready mixed or site batched design mix cement concrete for reinforced cement concrete work; using coarse aggregate and fine aggregate derived from natural sources, Portland Pozzolana / Ordinary Portland /Portland Slag cement, admixtures in recommended proportions as per IS: 9103 to accelerate / retard setting of concrete, to improve durability and workability without impairing strength; including pumping of concrete to site of laying, curing, carriage for all leads; but excluding the cost of centering, shuttering, finishing and reinforcement as per direction of the engineer-in- charge; for the following grades of concrete. Note: Extra cement up to 10% of the minimum specified cement content in design				0.000					
	cement content in design mix shall be payable separately. In case the cement content in design mix is more than 110% of the specified minimum cement	D.S.R								
	content, the contractor shall	5.33.2.2+48	4.000	0.047	0.007	0.04	014745	02 244 05		
	nave discretion to either re-	0.00	4.209	0.017	9.097	COM	9147.15	03,211.95		



	design the mix or bear the cost of extra cement. Concrete of M30 grade with minimum cement content of 350 kg /cum (For R.C.C. Lintel) For 398 kg/Cum							
					0.000			
4	Providing and laying in position ready mixed or site batched design mix cement concrete for reinforced cement concrete work; using coarse aggregate and fine aggregate derived from natural sources, Portland Pozzolana / Ordinary Portland /Portland Slag cement, admixtures in recommended proportions as per IS: 9103 to accelerate / retard setting of concrete, to improve durability and workability without impairing strength; including pumping of concrete to site of laying, curing, carriage for all leads; but excluding the cost of centering, shuttering, finishing and reinforcement as per direction of the engineer-in- charge; for the following grades of concrete.				0.000			
	Note: Extra cement up to 10% of the minimum specified cement content in design mix shall be payable separately. In case the cement content in design mix is more than 110% of the specified minimum cement content, the contractor shall have discretion to either re- design the mix or bear the cost of extra cement. Concrete of M30 grade (For R.C.C. Beam) For 398 kg/Cum	D.S.R 5.33.2.2+48 *6.00	2.187	0.009	4.660	СЛЖ	9147.15	42,629.31
5	Providing and laying in position ready mixed or site batched design mix cement concrete for reinforced cement concrete work; using coarse aggregate and fine aggregate derived from natural sources, Portland Pozzolana / Ordinary Portland /Portland Slag cement, admixtures in recommended proportions as per IS: 9103 to accelerate / retard setting of concrete, to improve durability and workability without impairing strength; including pumping of concrete to site of laying, curing, carriage for all leads; but excluding the cost of centering, shuttering, finishing and reinforcement as per direction of the engineer-in- charge; for the following grades of concrete.			0.000	0.000			



	Note: Extra cement up to 10% of the minimum specified cement content in design mix shall be payable separately. In case the cement content in design mix is more than 110% of the specified minimum cement content, the contractor shall have discretion to either re- design the mix or bear the cost of extra cement. Concrete of M25 grade with minimum cement content of 350 kg /cum (For R.C.C. Slab) For 398 kg/Cum	D.S.R 5.33.2.2+48 *6.00	32.119	0.127	68.444	CUM	9147.15	6,26,068.08
6	Providing and laying in position ready mixed or site batched design mix cement concrete for reinforced cement concrete work; using coarse aggregate and fine aggregate derived from natural sources, Portland Pozzolana / Ordinary Portland /Portland Slag cement, admixtures in recommended proportions as per IS: 9103 to accelerate / retard setting of concrete, to improve durability and workability without impairing strength; including pumping of concrete to site of laying, curing, carriage for all leads; but excluding the cost of centering, shuttering, finishing and reinforcement as per direction of the engineer-in- charge; for the following grades of concrete.				0.000			
	Note: Extra cement up to 10% of the minimum specified cement content in design mix shall be payable separately. In case the cement content in design mix is more than 110% of the specified minimum cement content, the contractor shall have discretion to either re- design the mix or bear the cost of extra cement. All work up to plinth level. Concrete of M25 grade with minimum cement content of 350 kg /cum (For R.C.C. Footing or Raft) For 398 kg/Cum	D.S.R 5.33.1.2+48 *6.00	43.605	0.173	92.920	CUM	7741.06	7,19,300.68
7	Providing and laying in position ready mixed or site batched design mix cement concrete for reinforced cement concrete work; using coarse aggregate and fine aggregate derived from natural sources, Portland Pozzolana / Ordinary Portland /Portland Slag cement, admixtures in recommended proportions as				0.000			

	AND			Aug	mentation of System at Cl	Storm ieer Sag	Water Drain ar Ayodhya	lage
	The set of			8				
	per IS: 9103 to accelerate / retard setting of concrete, to improve durability and workability without impairing strength; including pumping of concrete to site of laying, curing, carriage for all leads; but excluding the cost of centering, shuttering, finishing and reinforcement as per direction of the engineer-in- charge; for the following grades of concrete. Note: Extra cement up to 10% of the minimum specified cement content in design mix shall be payable separately. In case the cement content in design mix is more than 110% of the specified minimum cement content, the contractor shall have discretion to either re-design the mix or bear the cost of extra cement. Concrete of M30 grade with minimum cement content of 350 kg							
	/cum Note: Extra cement up to 10% of the minimum specified cement content in design mix shall be payable separately. In case the cement content in design mix is more than 110% of the specified minimum cement content, the contractor shall have discretion to either re- design the mix or bear the cost of extra cement. Concrete of M30 grade with minimum cement content of 350 kg /cum (For R.C.C. Column) For 398 kg/Cum	D.S.R 5.33.2.2+48 *6.00	68.310	0.271	145.565	сим	9147.15	13,31,508.10
7a.	Boring with hydraulic piling rigs with power units, providing and installing cast in situ single under reamed piles of specified diameter and length below pile cap in M-25 cement concrete, to carry a safe working load not less than specified, excluding the cost of steel reinforcement but including the cost of boring with bentonite solution and the length of the pile to be embedded in pile cap etc. all complete. (Length of pile for payment shall be measured up to the bottom of pile cap) :300 mm Dia	D.S.R 20.3.1*0.86 67	75.600	0.300	0.000	RM	2219.53	3,57,566.28
8	P/F Mild steel or iron in plain work such as reinforced concrete or reinforced, brick work (when not included in	(PWD-			0.000			
	overall rates) wrought to	504)	508.175	2.017	1082.897	QTL	7100.00	76,88,566.7



	required shape as necessary including bending for proper completion of the work and including supply of steel its wastage bend hooks and authorised over lapping shall be measured up to floor two level.							
					0.000			
9	Brick work in super-structure above plinth level including necessary cutting and moulding of brick work as required and also including honeycombed brick work in thickness of wall more than 12cms. (1:6 cement & coarse sand 1 cement : 6 coarse sand)	(PWD- 303+305b- 305a+309+ 310)	12.306	0.049	26.224	CUM	5403.00	1,41,685.57
					0.000			
10	12 mm cement plaster of mix :1:6 (1 cement: 6 coarse sand)	(PWD- 586+583- 582)	46.575	0.185	99.249	SQM	167.00	16,574.60
					0.000			
11	12 mm cement plaster on the fair side of single or half brick wall of mix :1:6 (1 cement: 6 coarse sand)	(PWD- 586+583- 582)	85.008	0 227	191 149	SOM	167.00	30 251 72
			85.008	0.337	0.000	SQIVI	107.00	30,231.72
12	Cement plaster 1:3 (1 cement: 3				0.000			
	coarse sand) finished with a floating coat of neat cement.20 mm cement plaster	PWD- 583+587	341.940	1.357	728.658	SQM	210.00	1,53,018.15
13	Supply & fixing of flush doors commercial quality conforming to IS : 2202 Part I (1983) including fixing of wooden cleats and stoppers and including fixing and adjustment of hinges bolts locks handles springs fitting with necessary screws to be supplied departmentally. (a) 35mm thick	(PWD- 470b)	2.520	0.010	5.370	SQM	1800.00	9,666.00
4.4	Mild staal or iron work of				0.000			
(2)	wind steer of from Work of small sizes and sections such as holding down bolts, hold fast tierods,gratings etc. (when not included in an overall rates) wrought to required from including supply of steel and its wastage including cost of bolts, nuts if required for and welding, grinding and making holes as required completion of work fabrication of holes doors, chaukhats nosing.				0.000			
(a)	chaukhats of doors and windows.	PWD-502	8.400	0.033	17.900	KG	76.80	1,374.72
(b)	Providing & fixing of door /	PW/D-502			0.000			
(0)	windows grill.	1 10-302	57.600	0.229	122.743 0.000	KG	76.80	9,426.65
(c)	Z-Section steel windows	PWD-502	63.360	0.251	135.017	KG	76.80	10,369.32
					0.000			



(d)	Angle iron door chaukhat	PWD-502						
	40*40*5		16.200	0.064	34.521	KG	76.80	2,651.25
					0.000			
15	Fixing of Door, windows/ventilators chaukhats in	M.R.			0.000			
	Door		4.000	0.004	0.000	NO	00.00	470.40
	Window		1.000	0.004	2.131	NO.	80.00	170.48
	Window .		2.000	0.008	4.262	NO.	70.00	298.33
16	Distempering (Two coat) with oil bound distemper of approved brand and manufacture & of required shade on undecorated wall surface to give an even shade over & including a priming coat with cement primer of approved brand & manufacture such as Berger,J&N, Shalimar, Asian paints after thoroughly brushing the surface free from mortar droppings & other foreign matters & also including preparing the surface even with plaster of paris or approved synthetic material & sand papered smooth including cost ofall materials. (For Internal wall	(PWD-						
	surface)	(FWD- 649+650)	46.575	0.185	99.249	SQM	91.00	9.031.67
					0.000			
17	Finishing walls with water- proofing on cement paint of approved make such as super snowcem, durrocem, robiacem, guttucem, supercem quality and of required shade on undecorated wall surfaces (two coat) overone and including one coat white cement primer to give an even shade after thoroughly brushing the surface to powdered materials including curing and cost of all materials.	(PWD - 660 +661)	85.008	0.337	<u>181.148</u> 0.000	SQM	89.00	16,122.17
18	Distempering (Two coat) with oil bound distemper of approved brand and manufacture & of required shade on undecorated wall surface to give an even shade over & including a priming coat with cement primer of approved brand & manufacture such as Berger,J&N, Shalimar, Asian paints after thoroughly brushing the surface free from mortar droppings & other foreign matters & also including preparing the surface even with plaster of paris or approved synthetic material & sand papered smooth including cost ofall materials. (For Ceiling)	(PWD 649+650)	35.418	0.141	75.474	SQM	91.00	6,868.14



19	Providing and fixing ISI marked oxidised M.S. tower bolt black finish, (Barrel type) with necessary screws etc. complete :	(200			0.000			
	(a) 250 mm x 10mm	(DSR - 9.63.1 *0.8667)	1.000	0.004	2.131	NOS	64.70	137.87
	(a) 200 mm x 10mm	(DSR - 9.63.2 *0.8667)	1.000	0.004	2.131	NOS	52.91	112.75
					0.000			
20	Providing and fixing ISI marked oxidised M.S. handles conforming to IS:4992 with necessary screws etc. complete : 125 mm	(DSR- 9.66.1 *0.8667)	2.000	0.008	4.262	NOS	30.51	130.03
					0.000			
21	Painting two coat over priming coat (but including cost of priming coat) on steel and other metal surfaces up to 10 cm. width or girth or small articles not exceeding 0.10sqm in area white superior synthetic enamel such as LUXOL3,Hi- gloss apcolite superlac, DULUX specified brushing to give an even shade and including cleaning the surface of all dirt,dust and other foreign matter sand papering and stoping including cost of all materials, labour tools and plants etc. required for proper	(PWD-						
	completion of the work.	641+642)	7.272	0.029	15.496	SQM	108.50	1,681.35
22	Same as item 21 above but on	(PWD-			0.000			
22	new wood surface.	641+642)	5.040	0.020	10.740	SQM	108.50	1,165.29
23	cement based water proofing treatment including preparation of surface as required for treatment of roofs, balconies, terraces etc consisting of following operations: a) Applying a slurry coat of neat cement using 2.75 kg/sqm of cement admixed with water proofing compound conforming to IS. 2645 and approved by Engineer-in- charge over the RCC slab including adjoining walls up to 300 mm height including cleaning the surface before treatment. b) Laying brick bats with mortar using broken bricks/brick bats 25 mm to 115 mm size with 50% of cement mortar 1:5 (1 cement : 5 coarse sand) admixed with water proofing compound conforming to IS : 2645 and approved by Engineer-in- charge over 20 mm thick layer of cement mortar of mix 1:5 (1 cement :5 coarse sand				0.000			



) admixed with water proofing							
	compound conforming to							
	Engineer-in-charge to required							
	slope and treating similarly							
	the adjoining walls up to 300							
	mm height including rounding							
	of junctions of walls and slabs							
	c) After two days of proper							
	curing applying a second coat							
	of cement slurry using 2.75 kg/							
	sqm of cement admixed with							
	water proofing compound							
	approved by Engineer-in-							
	charge, d) Finishing the							
	surface with 20 mm thick				0.000			
	jointless cement mortar of mix							
	1:4 (1 cement :4 coarse sand)							
	admixed with water	CH -11						
	proofing compound	ITEM NO.						
	conforming to IS : 2645 and	11)						
	approved by Engineer-in-	,	7 294	0.020	15 500	SOM	000.00	15 266 64
			7.204	0.029	15.522	SQIVI	990.00	15,300.04
24	Providing and laying water				0.000			
	proofing treatment to vertical							
	and horizontal surfaces of							
	depressed portions of W.C.,							
	of i i) let course of applying							
	cement slurry @ 4.4 Ka/sam							
	mixed with water proofing							
	compound conforming to IS							
	2645 in recommended							
	proportions including rounding							
	off junction of vertical and							
	horizontal surface. II) IInd							
	course of 20mm cement							
	coarse sand) mixed with water							
	proofing compound in							
	recommended proportion							
	including rounding off							
	junction of vertical and							
	horizontal surface.				0.000			
	iii) IIIrd course of applying blown							
	or residual bitumen applied hot							
	at 1.7 Kg. per sqm of area. IV)							
	PVC sheet (Overlans at jointe	(USK- 22.3*						
	of PVC sheet should be 100	0.8667)						
	mm wide and pasted to each	,						
	other with bitumen @ 1.7							
	Kg/sqm.)		265.650	1.054	566.088	SQM	671.04	3,79,867.36
25	Providing and mixing integral							
	crystalline admixture for water							
	proofing treatment to RCC							
	suuciures like basement raft,							
	seware & water treatment							
	plant, tunnels / subway and							
	bridge deck etc. at the time							
	of transporting of concrete							
	into the drum of the ready-							
	mix truck, using integral							
	crystalline admixture @	(505						
	U.80% (minimum) to the	(DSK -						
	weight of concrete) or	22.22 *0.8667)	467 907	1 857	997 088	KG	288 09	2 87 250 95
		0.0007	101.301	1.007	557.000		200.03	2,01,200.30

	Although the state of the state			Augmentation of Storm Water Drainage System at Cheer Sagar Ayodhya					
	higher as recommended by the manufacturer's specification in reinforced cement concrete at site of work. The material shall meet the requirements as specified in ACI-212-3R- 2010 i.e. by reducing permeability of concrete by more than 90%, compared with control concrete as per DIN 1048 and resistant to 16 bar hydrostatic pressure. The crystalline admixture shall be capable of self-healing of cracks up to a width of 0.50mm. The work shall be carried out all complete as per specification and the direction of the Engineer- in-charge. The product performance shall carry guarantee for 10 years against any leakage.								
					0.000			<u> </u>	
	glazed floor tiles of size 300x300 mm (thickness to be specified by the manufacturer) of 1st quality conforming to IS : 15622 of approved make in colours such as White, Ivory, Grey, Fume Red Brown, laid on 20 mm thick cement mortar 1:4 (1 Cement : 4 Coarse sand), Jointing with grey cement slurry @ 3.3 kg/sqm includingpointing the joints with white cement and matching pigment etc., complete	(DSR- 11.37*0.866 7)	127.050	0.504	270.738	SQM	810.88	2,19,535.6	
27	Cement concrete flooring 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate) finished with a floating coat of neat cement, including cement slurry, but excluding the cost of nosing of steps etc. complete40 mm thick with 20 mm nominal size stone	(PWD-	32 400	0.120	0.000	SOM	500.00	34 521 43	
	aggregate,	605)	32.400	0.129	0 000	SQIVI	500.00	34,321.43	
28	Centering and shuttering including strutting, propping etc. and removal of form for:				0.000				
(a)	Suspended floors, roofs, landings, balconies and access platform.	(DSR- 5.9.3 *0.8667)	64.800	0.257	138.086	Sqm	664.37	91,740.01	
(b)	Lintels, beams, plinth beams, girders, bressumers and cantilevers.	(DSR- 5.9.5 *0.8667)	21.600	0.086	46.029	Sqm	527.26	24,269.02	
(c)	Columns, Pillars, Piers, Abutments, Posts and Struts.	(DSR- 5.9.6 *0.8667)	290.550	1.153	619.148	Sqm	697.04	4,31,571.0	
					TOTAL		2 04 60	122 22	



Details Bill of Quantity for Augmentation of Drainage Line at Ayodhya City.

	Name of Site :- CHEER SAGAR, AYODHYA							
Sr. No.	Description	Qty	y.	Rate	Amount			
	PART-A							
1	Construction intake Chanel in RCC 4*3.3 mtr	51.00	Mtr.	60,000.00	30,60,000.00			
	PART-B	<u>اا</u>						
2	Construction of rectangular sump well in RCC	<u> </u>						
	with 1.50% Reinforcement of following depth up		1		!			
	to platform level pump house in B/W 1:4 in Super	537.00	KL	38,000.00	2,04,06,000.00			
	Structure above platform level with roof height of		1					
	SMTR with RCC roof.	!						
	PART-C	<u> </u>						
3	Supply, Installation Testing & Commissioning of	I						
	diesel driven /Electric sewage VT Pumping plant		1					
	including column assembly Suction Saner Tee		1					
	Reducer, coupling with all connected Equipment		1		!			
	etc all Complete (Kirloskar, Flowmore or	6.00	Nos.	42,75,000.00	2,56,50,000.00			
	Equivalent make and should be relevant to IS/BS		1					
	standard 10000 LPM 3pase, VT Set 12 M Head		1					
	suitable HP with required civil work and complete		1					
	in all respect.		1					
4	Supply, Installation Testing & Commissioning of	, ,	 		1			
	Starter suitable for Above pump with required civil	5.00	Nos.	57,000.00	2,85,000.00			
	work and complete in all respect.		1					
5	Supply, Installation Testing & Commissioning of	<u>г</u>		1				
	NR Valve 300 valve special design for sewage	6.00	Nos.	85,500.00	5,13,000.00			
	purpose.		1					
6	Supply, Installation Testing & Commissioning of	, ,	 	1	1			
	NR Valve 600 valve special design for sewage	2.00	Nos.	2,94,500.00	5,89,000.00			
	purpose.		1					
7	Supply, Installation Testing & Commissioning	, ,	 	1	1			
	Traveling crane supply of 10 Ton Capacity 6 Mtr.		1					
	Mt 12 Mtr. Span traveling crane standard make		1					
	capacity block extra with required material	1.00	Set	15,96,000.00	15,96,000.00			
	(Indent/Mints or Equivalent make and should be		1					
	relevant to IS/BS standard) with required civil		1					
	work and complete in all respect		1					
8	Supply, Installation Testing & Commissioning.	· · · · ·		<u> </u>	1			
	300 mm Dia MS rising mains of 6 mm wall		1					
	thickness including coupling and laying for		1					
	discharge of the storm of the pumping plant	00.00	N 44 m	10.050.00				
	including excavation laying of the pipe etc. 1.0 to	80.00	Mtr.	18,050.00	14,44,000.00			
	1.50 Mtr. deep into the underground trench		1					
	excavated in the existing road etc all comp. with		1					
	required civil work and complete in all respect.		1					
9	Supply, Installation Testing & Commissioning.	i	t	<u> </u>	1			
-	600 mm Dia MS rising mains of 6 mm wall	6,500.00	Mtr.	37,050.00	24,08,25,000.00			
	thickness including coupling and laying for		1		, , .			
		<u>ـــــــ</u>	L	<u> </u>	1			



	discharge of the storm of the pumping plant	'	1		
	including excavation laying of the pipe etc. 1.0 to	1	1		
	1.50 Mtr. Deep into the underground trench	1	1	1	
	excavated in the existing road etc all comp. with president in all respect	1	1		
40	required civil work and complete in all respect	└────┘	└─── ′	 '	
10	Supply, Installation resting & Commissioning or	1.00	No	22 80 000 00	22 80 000 00
ĺ	Gensel 400 kva with required civil work and p	1.00	INU.	22,00,000.00	22,00,000.00
11	Complete in all respect	───	·'	ł'	
	Geneet 630 KV/A CSS transformer complete in all	1 00	No.	27 55 000.00	27 55 000.00
	respect	1.00		21,00,000.00	21,00,000.00
12	Supply. Installation Testing & Commissioning of		′	<u> </u>	
	panel with VCB and LT with required civil work	1.00	No.	32,30,000.00	32,30,000.00
	and complete in all respect	1	ľ		
13	Supply, Installation Testing & Commissioning of	0,000,00	Ka	07 02	7 02 640 00
	MS work specially as per site requirement	8,000.00	r.y.	07.03	7,02,040.00
14	Making and restoration of road for above pipe line	۱ <u> </u>			
	work via dammar and interlocking with required	3,200.00	Mtr.	7,600.00	2,43,20,000.00
	civil work and complete in all respect	<u> </u>	<u> </u>		
15	UNDER GROUND CABLES	<u>[</u> '	'	-	-
a)	240 Sq mm	100.00	Mtr.	1,896.00	1,89,600.00
b)	120 Sq mm	100.00	Mtr.	1,110.00	1,11,000.00
C)	120 Sq mm HT	100.00	Mtr.	2,070.00	2,07,000.00
16	Supply and burring of safe Earthing electrode pf	1	1		
	T-39 Cu Copper coated, Length up to 3000mm,	1	1		
	outer pipe 76.03 x 3.2 inner pipe 42.4 mm x 2.6 i	1	1		
	mm, terminal Dia 12mm, coating 80-100 micro	1 1	i '		
	filled with crystalline conductive mixture (CCM)	1	1		
	having anti corrosive & conductive property with	6.00	Nos.	23.239.00	1,39,434.00
	50 kgs active soil (BFC) capable of reducing the		1		
	soil restively with good mixture or retaining	1 1	ľ		
	capacity along with 30 Civi square Ci Frame with j	1	1		
	hinged cover & masonry nousing. (from electrode p	1	1		
	terminal to switch board cost of 25x5 copper strip	1	1		
		<u>نـــــــا</u>	. <u> </u>	<u> '</u>	32 83 02 674.00
	52,00,02,01 -100				
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Ayodhya Development Authority Civil Lines, Kosi Parikrama Road, Ayodhya, Uttar Pradesh



DRAWINGS



General Arrangement DRG. for Vertical Propeller Pumps (Driven Engine)

















Augmentation of Storm Water Drainage System at Cheer Sagar Ayodhya

Site layout



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