



E-TENDER (Bid No. 2024_BMC_1030205_1)

FOR

Name of Work: Renovation of Powai Pumping Station along with allied works at Powai group of reservoirs under AE(M)WWES-II

Website : <https://mahatenders.gov.in>

Office of the _____

Deputy Hydraulic Engineer (Maint.),
Municipal water works yard,
Lal Bahadur Shastri Marg,
Ghatkopar (West), Mumbai -400086

Prepared By

Checked By

Recommended By

Sd/-

Sd/-

Sd/-

Sd/-

S.E.(P.P.)

A.E.(M.)W.W.E.S.II

E.E.(H.W.)W.W

Dy. H.E. (Maint.)

Approved By

Sd/-

H.E.

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SECTION 1

E-TENDER NOTICE

BRIHANMUMBAI MUNICIPAL CORPORATION

Hydraulic Engineer Deptt.

No. HE/ / AE.(Maint.)WWES dated .03.2024

E-TENDER NOTICE

Subject : Renovation of Powai Pumping Station along with allied works at Powai group of reservoirs under AE(M)WWES-II

The Brihanmumbai Municipal Corporation (BMC) invites e-tender on **Item Rate** / **Percentage Rate** Basis to appoint Contractor for the aforementioned work from **Manufacturers / Authorized dealers / Contractors who are dealing with similar type of works**. The contractors who are not registered with BMC will have to apply for registering their firm within three months time period from the award of contract, otherwise their Bid Security i.e. **E.M.D** (Earnest Money Deposit) **will be forfeited/recovered and an amount equal to Registration Fee of respective class will be recovered as penalty**.

Bidding Process will comprise of THREE stages.

The application form can be downloaded from Maha Govt.'s portal (<https://mahatenders.gov.in>) As per circular u/No.CA/FRG/03;Dtd.11.05.2023, scrutiny fee payment of Rs.17,700/- (15000+18% GST i.e.2700/-) is payable through Challan at CFC Counter after opening of Packet 'A' & 'B' and before opening of Packet 'C'.

The applicants not registered with BMC are mandated to get registered (Vendor Registration) with BMC for e-tendering process & obtain login credentials to participate in the online bidding process.

- i) To download the application form, for those applicants not having vendor registration, need to apply first for vendor registration at the office of Account Officer (FAR), 3rd floor, Municipal Headquarter.
- ii) For e-Tendering registration, please follow the instructions given on Maha Govt.'s portal (<https://mahatenders.gov.in>).

Name and location of work	Contract period	Estimated Cost of Project
Sub: Renovation of Powai Pumping Station along with allied works at Powai group of reservoirs under AE(M)WWES-II	15 Months (including monsoon)	Not applicable for item rate tender

In terms of the 3 stage system of e-tendering, a Bidder will be required to deposit, along with its Bid, an Earnest Money Deposit of Rs.9,88,000/- (Rupees Nine Lakh Eighty Eight Thousand to be paid online only before the due date & time of the tender, as per the circular u/no CA/ Finance/ Project/ 19 dated 04.03.2024) the "EMD", refundable in accordance to the relevant clause of bid document, from the Bid Due Date, except in the case of the selected Bidder whose Bid Security/EMD shall be retained. The Bidders will have to provide Earnest Money Deposit through the payment gateways while submitting the bids. The Bid shall be summarily rejected if it is not accompanied by the Earnest Money Deposit. The e-tender is available on Maha Govt.'s portal (<https://mahatenders.gov.in>) as mentioned in the Header Data of the tender.

As per THREE Packet systems, the document for Packet A & B is to be uploaded by the bidder in vendor's document online in Packet A, B. The Packet A, B & C shall be opened on dates as

mentioned in header data. All the responsive and eligible bidders if they so wish can be present at the time of opening of bids, in the office of Assistant Engineer (Maint.)WW.E/S. The Packet C shall be opened if bids submission in Packet A & B satisfies/includes all the requirements and same are found acceptable to the Authority.

The Municipal Commissioner reserves the right to reject all or any of the e- tender(s) without assigning any reasons at any stage.

The dates and time for submission and opening the bids are as shown in the Header Data. If there are any changes in the dates the same will be displayed on the Maha Govt.'s portal. (<https://mahatenders.gov.in>)

The Applicants interested for the above referred works may contact the **Assistant Engineer (Maint.)W.W.E.S.-II** at the following address on any working day during office hours.

Office of the - Assistant Engineer (Maint.)W.W.E.S., Municipal water works yard, Lal Bahadur Shastri Marg, Ghatkopar (West), Mumbai -400086

The BMC reserves the rights to accept any of the application or reject any or all the application received for above works, without assigning any reasons thereof. The information regarding above subject matter is available on Website of Maha Govt.'s portal. (<https://mahatenders.gov.in>)

Pre-Bid Meeting date & time & Venue details are as mentioned below:

Date – 19/03/2024 Time: 12:00 Hrs

Venue: Office of Hydraulic Engineer, 1st floor, Engineering Hub Building, Dr.E.Moses Road, Worli, Mumbai- 400018

**Sd/-
Dy. Hydraulic Engineer (Maintenance)**

BRIHANMUMBAI MUNICIPAL CORPORATION
(HYDRAULIC ENGINEERS DEPARTMENT)

e-Tender Notice

The Commissioner of BRIHANMUMBAI MUNICIPAL CORPORATION invites online tender from the firms dealing in the line on **Percentage** / Item Rate Basis in three packet system for the work detailed below –

Tender Document No.	Bid No 2024_BMC_1030205_1
Name of Organization	Brihanmumbai Municipal Corporation
Subject	Renovation of Powai Pumping Station along with allied works at Powai group of reservoirs under AE(M)WWES-II
Scrutiny Fee of Tender	Rs. 17700/- (Rs. 15000/- + 18% GST).
Cost of E-Tender(Estimated Cost)	Not applicable to item rate tender
Bid Security Deposit/ EMD	Rs.9,88,000/- (to be paid online only)
Date of issue and sale of tender	11/03/ 2024 from 13:00 Hrs
Date of Pre-Bid Meeting	19/03/2024 at 12:00 Hrs
Last date & time for sale of tender	27/03/2024 at 12:00 Hrs
Last date & time for receipt of EMD	27/03/2024 at 16:00 Hrs
Submission of Packet A, B & Packet C (Online)	27/03/2024 at 16:00 Hrs
Opening of Packet A	28/03/2024 at 16:05 Hrs
Opening of Packet B	28/03/2024 at 16:10Hrs
Opening of Packet C	16/04/2024 at 15:00 Hrs
Website	http://portal.mcgm.gov.in; https://mahatenders.gov.in
Contact Person	1.Shri S.V.Baviskar A.E.(M)W.W.E/S 9930264964 2. Shri S.A. Kate (SE) :- 9167923773
Address for communication	Office of – A.E. (Maint.)W.W.E.S., Municipal water works yard, Lal Bahadur Shastri Marg, Ghatkopar (West), Mumbai -400086.
Venue for opening of bid	On line in Office of - A.E. (Maint.)W.W.E.S., Municipal water works yard, Lal Bahadur Shastri Marg, Ghatkopar (West), Mumbai -400086.

This tender document is not transferable.

The BMC reserves the rights to accept any of the application or reject any or all the application received for above subject without assigning any reason thereof.

Sd/-

Dy. Hydraulic Engineer (Maintenance)

SECTION 2

ELIGIBILITY

(POST QUALIFICATION) CRITERIA

1.1 Technical Capacity

- (i) **The tenderer/bidder in their own name should have satisfactorily executed the work of SITC of electrical driven, coupled Horizontal splitcase / VT pump-sets having at least 150 HP or above capacity, along with HT/LT Panels & allied accessories in a single work order in BMC/Semi Government/ Government/ Public Sector Undertakings, during last seven (7) years ending last day of month previous to the one in which bids are invited, as stated below –**

Three similar completed works each of value not less than Rs. 2,51,04,605.06

OR

Two similar completed works each of value not less than Rs. 2,92,88,705.91

OR

One similar completed work of value equal and or not less than Rs. 4,18,41,008.44

The value of completed works shall be brought to current costing level by enhancing the actual value of work at compound rate of 10 % per annum; calculated from the date of completion to last date of receipt of applications for tenders.

- (ii) Documentary proof of Work Orders & performance certificates should be submitted for same, along with tender, failing which tenders bid shall be rejected out rightly. Past performance certificates in respect of above should be issued from the officer not below the rank of Executive Engineer or equivalent and shall be uploaded along with tender bid by the bidder while submitting the Bid. All the above experience shall be considered from the date of completion till due date of this tender.
- (iii) As pumpsets are major equipments of this work; the Bidder shall be either manufacturer OR authorized dealer/ distributor/ representative appointed by manufacturer of pumpset (i.e.KBL / (Wilo) Mather n Platt / Jyoti / KSB only) for the subject work, who will obtain manufacturer's service support letter in the format given in Annexure – E(i) at Pg. 162 duly filled, signed and sealed by authorized person of the pump manufacturer. All the said 'manufacturer's authorization/ permit/ support letters' and Copy of Power of Attorney of Authorized Signatory of the manufacturer must be accompanied with the tender failing which the bid/offer shall be out rightly rejected.
- (iv) To enhance the pump efficiency, coating should be applied on pump impeller and casing as specified in technical specifications. The contractor shall upload the undertaking in the format given in Annexure – E(ii) at Pg 163 duly filled, signed and sealed by authorized person of the pump manufacturer stating that they have the facility or any agency to apply the said coating on pump impeller & casing which will comply the tender requirements. Also, the certificate of competent authority (WRAS/ NSF/ CSIR) proving that the coating is food grade compliant/ suitable to potable water, must be attached along with undertaking in Annexure E(ii); failing which the bid/offer will be out-rightly rejected.
- (v) The tenderer shall submit the drawings showing cross section of the pump, mounting arrangement/ layout, list of the material and performance curve as well as family curves; duly signed and stamped by authorized representative of pump manufacturer, along with the bid; failing which bid/offer shall be out rightly rejected.
- (vi) The bidder shall visit the site along with their engineers and shall get acquainted with the scope of work to be carried out. The bidder shall submit the signed & stamped copy of the undertaking in the format attached as "Undertaking for site visit"(at Pg no. 172) while submitting the tender failing which, the bid/offer shall be out rightly rejected.
- (vii) The tenderer shall submit the Performance Certificate confirming that pumps of the make they have quoted are working in Government/ Semi Government/ Municipal Corporations in India in potable

water application for at least 3 years since commissioning with maximum 0.5% decrease in efficiency per annum, duly approved by officer/ Site-In charge Engineer in Government/Semi Government/Municipal Corporations in India. If bidder fails to submit this performance certificate, the bid/offer shall be out rightly rejected.

- (viii) It is statutory requirement to have PWD Maharashtra's electrical contractor's license to execute this work. However, if the bidder does not have PWD Maharashtra's electrical contractor's license, then such license issued by Central government shall suffice the tender requirement. Moreover, if the bidder possesses Electrical Contractor License Certificate issued by any state government other than Maharashtra, then while uploading the tender documents bidder should submit the copy of the same & the acknowledgment/ payment receipt towards the application seeking Electrical Contractor's license from PWD Maharashtra. If the bidder fails to upload both these documents, their bid/offer shall be outrightly rejected.
- (ix) The bidder shall be registered contractor in Mechanical / Electrical in A category in BMC OR equivalent category in Govt./Semi Govt. sector; which is valid till the due date of the tender.
- (x) The Bidder shall submit all the duly filled, sealed & signed technical datasheets in prescribed formats given in AppendixII- Technical Datasheets, failing which the bid/offer shall be out rightly rejected.

1.2 Financial Capacity

The bidder should have achieved an average annual financial turnover, as certified and/or audited by 'Chartered Accountant', of Rs. **2,51,04,605.06** or above, during the 03 (Three) Financial Year i.e. FY 2020-21, 2021-22, 2022-23.

1.3 Similar Experience:

For assessing the technical capacity of this work; Similar work shall mean, the completed works such as **"the work of SITC of electrical driven, coupled Horizontal splitcase / VT pump-sets having at least 150 HP or above capacity, along with HT/LT Panels & allied accessories in a single work order in BMC/Semi Government/ Government/ Public Sector Undertakings, during last seven (7) years ending last day of month previous to the one in which bids are invited"**.

1.4 Bid Capacity : Not Applicable for M & E works

~~The bid capacity of the prospective bidders will be calculated as under: Assessed Available Bid Capacity = (A * N * 2 - B)~~

~~Where,~~

~~A = Maximum value of Civil Engineering works executed in any one year (year means Financial year) during the last five years (updated to the price level of the Financial year in which bids are received at a rate of 10% per year) taking into account the completed as well as works in progress.~~

~~N = Number of years prescribed for completion of the Project/Works, Including monsoon period, for which these bids are being invited. (E.g. 7 months = 7/12 year) For every intervening monsoon 0.33 shall be added to N.~~

~~B = Value of existing commitments (only allotted works) on the last date of submission of bids as per bidding document and on going works to be completed during the period of completion of the Project/Works for which these bids are being invited.~~

~~Note: The statement showing the value of existing commitments and on-going works as well as the stipulated period of completion remaining for each of the works listed should be attached along with certificates duly signed by the Engineer in Charge, not below the rank of an Executive Engineer or equivalent.~~

Even though the bidders meet the above qualifying criteria, they are subject to be disqualified if they have:

- made misleading or false representation in the forms, statements and attachments submitted in proof of the qualification requirements; and/or
- Record for poor performance such as abandoning the works, not properly completing the contract, inordinate delays in completion, litigation history, or financial failures etc.

Sd/-
J.E.(P.P.)

Sd/-
S.E. (P.P.)

Sd/-
A.E.(M)WWE/S-II

Sd/-
E.E.(H.W.)W.W.

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SECTION 3

DISCLAIMER

DISCLAIMER

The information contained in this e-tender document or provided to Applicant(s), whether verbally or in documentary or any other form, by or on behalf of the Brihanmumbai Municipal Corporation (BMC), hereafter also referred as “The Authority “, or any of its employees or advisors, is provided to Applicant(s) on the terms and conditions set out in this e-tender and such other terms and conditions subject to which such information is provided.

This e-tender includes statements, which reflect various assumptions and assessments arrived at by the Brihanmumbai Municipal Corporation (BMC) in relation to the Project. Such assumptions, assessments and statements do not purport to contain all the information that each Applicant may require. This e-tender may not be appropriate for all persons, and it is not possible for the Brihanmumbai Municipal Corporation (BMC), its employees or advisors to consider the investment objectives, financial situation and particular needs of each party who reads or uses this e- tender. The assumptions, assessments, statements and information contained in this e-tender may not be complete, accurate, adequate or correct. Each Applicant should therefore, conduct its own investigations and analysis and should check the accuracy, adequacy, correctness, reliability and completeness of the assumptions, assessments, statements and information contained in this e-tender and obtain independent advice from appropriate sources.

Information provided in this e-tender to the Applicant(s) is on a wide range of matters, some of which may depend upon interpretation of law. The information given is not intended to be an exhaustive account of statutory requirements and should not be regarded as a complete or authoritative statement of law. The Brihanmumbai Municipal Corporation (BMC) accepts no responsibility for the accuracy or otherwise for any interpretation or opinion on law expressed here.

The Brihanmumbai Municipal Corporation (BMC), its employees and advisors make no representation or warranty and shall have no liability to any person, including any Applicant or Bidder, under any law, statute, rules or regulations or tort, principles of restitution or unjust enrichment or otherwise for any loss, damages, cost or expense which may arise from or be incurred or suffered on account of anything contained in this e-tender or otherwise, including the accuracy, adequacy, correctness, completeness or reliability of the e-tender and any assessment, assumption, statement or information contained therein or deemed to form part of this e-tender or arising in any way with pre-qualification of Applicants for participation in the Bidding Process. The Brihanmumbai Municipal Corporation (BMC) also accepts no liability of any nature whether resulting from negligence or otherwise howsoever caused arising from reliance of any Applicant upon the statements contained in this e-tender.

The Brihanmumbai Municipal Corporation (BMC) may, in its absolute discretion but without being under any obligation to do so, update, amend or supplement the information, assessment or assumptions contained in this e-tender.

The issue of this e-tender does not imply that the Brihanmumbai Municipal Corporation (BMC) is bound to select and short-list pre-qualified Applications for Bid Stage or to appoint the selected Bidder or Concessionaire, as the case may be, for the Project and the Brihanmumbai Municipal Corporation (BMC) reserves the right to reject all or any of the Applications or Bids without assigning any reasons whatsoever.

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

E- Tender Opening and Evaluation of Technical Bid

Information relating to the examination, clarification, evaluation and comparison of E-Tenders and recommendations for the Award of Contract shall not be disclosed to Tenderers or any other persons not officially concerned with such process until the award to the successful Tenderer has been announced. Any effort by a Tenderer to influence BMC's processing of E-Tenders or award decisions may result in the rejection of the E-Tender.

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SECTION 4

INTRODUCTION

INTRODUCTION

4.1 Background:

The Brihanmumbai Municipal Corporation (BMC) covers an area of 437.71sq.kms.with a population of **1.24 Crores as per census of 2011**. The metropolis accounts major portion of India's international trade and government's revenue, from being one of the foremost centers of education, science and technological research and advancement.

The Mumbai Metropolis has historic tradition of strong civic activism dedicated to the cause of a better life for all its citizens. And it's the Brihanmumbai Municipal Corporation (BMC), hereafter called the "corporation", the primary agency responsible for urban governance in Greater Mumbai.

BMC (The Authority) is one of the largest local self-governments in the Asian Continent. In observance of historic traditions of strong civic activism, with the change in time and living conditions to match with the urbanization, BMC has mainly focused in providing almost all kinds of engineering services viz., Hydraulics, storm water drain, sewerage, water supply projects, roads, bridges, solid waste management, and environmental services. Beside this, the BMC is also providing dedicated services in various segments such as Health, Primary Education as well as the construction and maintenance of Public Markets and Slaughter Houses.

BMC is an organization having different departments, right from engineering depts. to health depts. Moreover we have other dept. like education, market, fire brigade dept., Octroi and other such departments where quite a good number of staff members are working.

4.2 Scope of Work :

This particular tender comes under the category of "Regular, Routine and Maintenance works / ~~Original and New construction works/ For Other Special works~~".

Preamble : - Renovation of Powai Pumping Station along with allied works at Powai group of reservoirs under AE(M)WWES-II

Powai Pumping station is one of the important installations of water works running about 21 hrs daily throughout year. There are 4 Nos. of 300 H.P. & 2 Nos. of 150 H.P. Pumpsets installed for water supply activities. This pumping station is providing water supply to the sensitive areas of Kurla South (L ward); due to which it is essential to keep this pumping station in optimum efficiency.

There are six pumps of Mather & Platt make (pump no.1,2,3,4 of 300 H.P & pumps no 5, 6 of 150 H.P.) and five motors of Kirloskar make (for pump no 1,2,3,4 & 5) & one motor of Crompton Greaves Ltd (for pump no 6) at Powai Pumping Station. It is required to run 2 nos. of 300 H.P.& 1 no. of 150 H.P. pumpset to fill up Powai High Level reservoir no.2. daily for nearly 18 hrs. All these 300 H.P. pumpsets and 1 no. of 150 H.P. pumpset are commissioned in the year 1983. Thereafter, to meet the increased water demand, another Pump no.6 (150 H.P.) was installed in the year 2000. All the above pump sets are running continuously since their commissioning.

The performance testing of pump motor sets was carried out in the year 2007 by M/s Dinesh Rathi & Associates, when it was found that the efficiency of these pump sets was reduced by approximately 20% than the rated efficiency (i.e.80%). M/s Dinesh Rathi & Associates had suggested few measures to improve the efficiency of the pumpsets and thereby reduce the energy consumption. Accordingly, this section had carried out the feasible possible measures such as replacement of rotating assembly of pump set no 5 etc. The resin polymer coatings inside the pump casing, as suggested by M/s Dinesh Rathi & Associates, could not be carried out because for the polymer coating, the pumpsets were required to be transported to the manufacturer's place for couple of weeks and this would have hampered the day to day water supply, due to non-availability of stand-by pumpsets during the breakdown of any of the remaining pumpset.

In the meantime, the various spares such as sleeves, neck rings, wearing rings etc. of the various pump-motors have been replaced as and when required during the breakdowns. Over the years, as all the said pump-sets are in continuous operation; the wear & tear of pump sets has increased considerably resulting in frequent breakdowns. Recently, in the span of 15 days, breakdown of Pump no 4 and pump no 2 occurred Servicing & overhauling of pumpsets along with motor rewinding was carried out. In addition to this, major electrical fault occurred in the bus coupler of the cubical panels of the pumpsets. Recently, the replacement of shaft sleeves of 3 pumpsets has been carried out in phasewise manner to arrest the heavy leakage form these pumpsets. Due to these frequent breakdowns, the water supply to the designated areas gets hampered.

To address the above-mentioned issues, this section sought opinions of experts dealing in the field of pumping stations. After the site visits and thorough inspection of pump-motor sets, electrical panels etc., it was brought into the notice that due to continuous operations, ageing and wear & tear; all these pump-motor sets have served their useful life and the electrical accessories have also lost their electro-mechanical properties. LT panels linked with these pumpsets are also in operation continuously since the inception of this pumping station. IT has become difficult to get the associated spares, switchgears etc. from the market of this 40+ year LT panel. Hence it was advised to replace all the old pump-motor sets along with spares, switchgears etc. of LT panels and allied accessories.

Apart from this, during the regular security audits conducted by Mumbai Police at Powai group of reservoirs & Pumping Station; it has been instructed by the police department to install the CCTVs for surveillance purpose and to provide sufficient illumination system in the entire premises of Powai group of reservoirs to strengthen the safety & security of these critical/vital installations. Accordingly, it has been proposed to install the CCTV Surveillance & illumination (electrification) System at the entire premises of Powai group of reservoirs.

SCOPE OF WORK:-

In short the major activities in scope of work include:

1. Replacement of 6 nos of pumpsets (4 Nos of 300 HP + 2 Nos of 150 HP).
2. Replacement of Switchgears, spare parts etc. of Main LT panel, APFC panel of pumping station
3. Supply & Installation of various control valves, NRVs, piping, pressure gauges, drain lines etc.
4. Supply & installation of 5T EOT crane.
5. Supply & Installation of CCTV Surveillance System

6. Supply & Installation of illumination System

7. Providing pneumatic compressor, DG sets, submersible pumpsets and allied electromechanical equipments etc.

8. Buyback of existing pump-motor sets, NRV's, Crane girders & gearbox, remote panel of pumpsets and APFC isolator panel.

NOTE :

It is to be noted by all the potential bidders that the site at which the subject work is to be carried out, is very critical pumping station of BMC which operates for almost 18-20 hours a day to cater to the water supply needs of the designated area. Therefore, while executing the work, the priority will always be given to not to hamper daily water supply. Accordingly, upon request, water supply isolation will be provided by this section during non-supply hours. The successful contractor has to manage the time made available to them to carry out the work within stipulated time period. No claim shall be made by the contractor in this regard.

This is general scope of work required to be carried out at Powai Reservoirs & Pumping Station. The detailed scope of work is provided in section 7. Scope of work. The Bidder is requested to refer the specifications described in tender & visit the actual site to understand the scope of work and discuss their queries before filling of the tender document to avoid any discrepancies, misinterpretations, technical deviations etc., during the execution of contract work. No claim of any sort shall be entertained subsequently, after award of contract. The detailed technical specification of the complete work is specified in Section – 10 i.e. Specification. To understand the detailed schedule of quantity for the subject work, the bidders shall refer section 8. Bill of Quantities.

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SECTION 5

e-TENDERING ONLINE SUBMISSION PROCESS

E-TENDERING ONLINE SUBMISSION PROCESS

The terminology of e-Tendering is solely depending upon policies in existence, guidelines and methodology adopted by BMC as per policy. Thereafter as per circular u/No.Dir/IT/505038 of 19.12.2023, it is directed to use e-Procurement system of Govt. of Maharashtra (Mahatenders) for all tenders in BMC instead of SAP SRM system.

NOTE: This tendering process is covered under Information Technology ACT & Cyber Laws as applicable

(1) In e-tendering process some of the terms and its definitions are to be read as under wherever it reflects in online tendering process.

Start Date read as "Sale Date"

End Date read as "Submission Date"

Supplier read as "Contractor/bidder"

Vendor read as "Contractor/bidder"

Vendor Quotation read as "Contractors Bid/Offer"

Purchaser read as "Department/BMC"

I. Before entering in to online tendering process, the contractors should complete the registration process mentioned on Mahatender Mahaportal & same should be follows so as to get User ID for E-tendering links. There are two methods for this registration :(II and III)

~~II. Transfer from R3 (registered contractors with BMC) to SRM~~

~~a. Contractors already registered with BMC will approach to Vendor Transfer cell.~~

~~b. Submit his details such as (name, vendor code, address, registered Email ID, —Pan card etc.) to Vendor transfer cell.~~

~~c. BMC authority for Vendor Transfer, transfers the Vendor to SRM application from R3 system to SRM system.~~

~~d. Transferred Vendor receives User ID creation link on his supplied e-mail Id.~~

~~e. Vendor creates his User ID and Password for e-tendering applications by accessing link sent to his mail ID.~~

~~III. Online Self Registration (Temporary registration for applicant not registered with BMC)~~

~~a. Vendor fills up Self Registration form via accessing BMC portal.~~

~~b. Vendor Transfer cell (same as mentioned above) accesses Supplier Registration system and accepts the Vendor request.~~

~~c. Accepted Vendor receives User ID creation email with Link on his supplied mail Id.~~

~~d. Vendor creates his User ID and Password for e-tendering application.~~

IV. Contractor's Bidding: Applicant will Quote and Upload Tender Documents

1. Access e-tender link of Mahatenders Portal

2. Log in with User ID and Password

3. Selects desired Bid Invitation (he wants to bid)

4. The application form can be downloaded from Maha Govt.'s portal (<https://mahatenders.gov.in>). As per circular u/No.CA/FRG/03;Dtd.11.05.2023, scrutiny fee payment is payable through Challan at CFC Counter after opening of Packet 'A' & 'B' and before opening of Packet 'C'.

~~5. Applicant will download Tender Documents from Information from purchaser tab by accessing Purchaser document folder through collaboration 'C' folder link.~~

~~6. Applicant will upload Packet A related and Packet B related Documents in Packet A and Packet B folder respectively by accessing these folders through "My Notes" Tab and collaboration folder link.~~

~~7. All the documents uploaded have to be digitally signed and saved. Contractors can procure there digital signature from any certified CA's in India.~~

~~8. Bid security deposit/EMD and ASD, if applicable, should be paid online as mentioned in tender.~~

~~9. For commercial details (in Packet C) contractors will fill data in Item Data tab in Service Line Item via details and quotes his “Percentage Variation” (i.e.% quoted) figure.(If entered ‘0’ it will be treated as at par. By default the value is zero only.~~

~~10. Applicants to check the bid, digitally signs & save and submit his Bid Invitation.~~

~~11. Applicants can also save his uploaded documents/commercial information~~

~~— Without submitting the BID for future editing through ‘HOLD’ option.~~

~~12. Please note that “Hold” action do not submit the Bid.~~

~~13. Applicants will receive confirmation once the Bid is submitted.~~

~~14. Bid creator (BMC) starts Bid Opening for Packet A after reaching End Date~~

~~— and Time and Bid Evaluation process starts.~~

~~As per Three Packet system, the document for Packet A & B is to be uploaded by the tenderer in 'Vendor's document' online in Packet A & B. Before purchasing/ downloading the tender copy, tenderer may refer to post-Qualification criteria mentioned in e Tender Notice.~~

~~The tenderer shall pay the EMD/Bid Security through payment gateways before submission of Bid and shall upload the screen shot of receipt of payment in Packet ‘A’ instead of paying the EMD at any of the CFC centers in BMC Ward Offices.~~

The e-tender is available on Mahaportal, <https://mahatenders.gov.in>, as mentioned in the Header Data of the tender. The tenders duly filled in should be uploaded and submitted online on or before the end date of submission. The Packet ‘I’, Packet ‘II’ & Packet ‘III’ of the tenderer will be opened as per the time-table shown in the Header Data in the office of Dy.H.E.(Maint.) Water Works Yard, LBS Marg, Ghatkopar (West).

The Brihanmumbai Municipal Commissioner reserves the right to reject all or any of the e-Tender(s) without assigning any reason at any stage. The dates and time for submission and opening the tenders are as shown in the Header Data. If there are any changes in the dates the same will be displayed on the Maha Portal (<https://mahatenders.gov.in>) as well as BMC Portal.

Note:- As per circular u/No.Dir/IT/505038 of 19.12.2023, the said e-Tender is published on Mahatenders Mahaportal (<https://mahatenders.gov.in>). Thus, it is necessary to strictly follow the instructions/ guidelines issued on the said Mahaportal website for the successful participation in the subject bid.

SECTION 6

INSTRUCTIONS TO APPLICANTS

INSTRUCTIONS TO APPLICANTS

Scope of Application

The Authority wishes to receive Applications for Qualification in order to select experienced and capable Applicants for the Bid Stage.

Eligibility of Applicants

The Brihanmumbai Municipal Corporation (BMC) invites e-tender to appoint Contractor for the aforementioned work from contractors of repute, multidisciplinary engineering organizations i.e. eminent firm, Proprietary/Partnership Firms/ Private Limited Companies / Public Limited Companies/Companies registered under the Indian companies' act 2013, the contractors registered with the Municipal Corporation of Greater Mumbai, (BMC) in M&E category from the contractors/firms equivalent and superior classes registered in Central or State Government/Semi Govt. Organization/Central or State Public Sector Undertakings, will be allowed subject to condition that, the contractors who are not registered with BMC will have to apply for registering their firm within three months' time period from the award of contract, otherwise their Bid Security i.e. E.M.D (Earnest Money Deposit) will be forfeited/recovered and an amount equal to Registration Fee of respective class will be recovered as penalty.

To be eligible for pre-qualification and short-listing, an Applicant shall fulfill the following conditions of eligibility:

1. For Regular, Routine and Maintenance works:

2.

Name of the Deptt.	Details of work
H.E.	Renovation of Powai Pumping Station along with allied works at Powai group of reservoirs under AE(M)WWES-II

1.1 Technical Capacity

- (i) **The tenderer/bidder in their own name should have satisfactorily executed the work of SITC of electrical driven, coupled Horizontal splitcase / VT pump-sets having at least 150 HP or above capacity, along with HT/LT Panels & allied accessories in a single work order in BMC/Semi Government/ Government/ Public Sector Undertakings, during last seven (7) years ending last day of month previous to the one in which bids are invited, as stated below –**

Three similar completed works each of value not less than Rs. 2,51,04,605.06

OR

Two similar completed works each of value not less than Rs. 2,92,88,705.91

OR

One similar completed work of value equal and or not less than Rs. 4,18,41,008.44

The value of completed works shall be brought to current costing level by enhancing the actual value of work at compound rate of 10 % per annum; calculated from the date of completion to last date of receipt of applications for tenders.

- (ii) Documentary proof of Work Orders & performance certificates should be submitted for same, along with tender, failing which tenders bid shall be rejected out rightly. Past performance certificates in respect of above should be issued from the officer not below the rank of Executive Engineer or equivalent and shall be uploaded along with tender bid by the bidder while submitting the Bid. All the above experience shall be considered from the date of completion till due date of this tender.
- (iii) As pumpsets are major equipments of this work; the Bidder shall be either manufacturer OR authorized dealer/ distributor/ representative appointed by manufacturer of pumpset (i.e.KBL / (Wilo) Mather n Platt / Jyoti / KSB only) for the subject work, who will obtain manufacturer's service support letter in the format given in Annexure – E(i) at Pg.162 duly filled, signed and sealed by authorized person of the pump manufacturer. All the said 'manufacturer's authorization/ permit/ support letters' and Copy of Power of Attorney of Authorized Signatory of the manufacturer must be accompanied with the tender failing which the bid/offer shall be out rightly rejected.
- (iv) To enhance the pump efficiency, coating should be applied on pump impeller and casing as specified in technical specifications. The contractor shall upload the undertaking in the format given in Annexure – E(ii) at Pg 163 duly filled, signed and sealed by authorized person of the pump manufacturer stating that they have the facility or any agency to apply the said coating on pump impeller & casing which will comply the tender requirements. Also, the certificate of competent authority (WRAS/ NSF/ CSIR) proving that the coating is food grade compliant/ suitable to potable water, must be attached along with undertaking in Annexure E(ii); failing which the bid/offer will be out-rightly rejected.
- (v) The tenderer shall submit the drawings showing cross section of the pump, mounting arrangement/ layout, list of the material and performance curve as well as family curves; duly signed and stamped by authorized representative of pump manufacturer, along with the bid; failing which bid/offer shall be out rightly rejected.
- (vi) The bidder shall visit the site along with their engineers and shall get acquainted with the scope of work to be carried out. The bidder shall submit the signed & stamped copy of the undertaking in the format attached as "Undertaking for site visit"(at Pg no.172) while submitting the tender failing which, the bid/offer shall be out rightly rejected.
- (vii) The tenderer shall submit the Performance Certificate confirming that pumps of the make they have quoted are working in Government/ Semi Government/ Municipal Corporations in India in potable water application for at least 3 years since commissioning with maximum 0.5% decrease in efficiency per annum, duly approved by officer/ Site-In charge Engineer in Government/Semi Government/Municipal Corporations in India. If bidder fails to submit this performance certificate, the bid/offer shall be out rightly rejected.
- (viii) It is statutory requirement to have PWD Maharashtra's electrical contractor's license to execute this work. However, if the bidder does not have PWD Maharashtra's electrical contractor's license, then such license issued by Central government shall suffice the tender requirement. Moreover, if the bidder possesses Electrical Contractor License Certificate issued by any state government other than Maharashtra, then while uploading the tender documents bidder should submit the copy of the same & the acknowledgment/ payment receipt towards the application seeking Electrical Contractor's license from PWD Maharashtra. If the bidder fails to upload both these documents, their bid/offer shall be outrightly rejected.
- (ix) The bidder shall be registered contractor in Mechanical / Electrical in A category in BMC OR equivalent category in Govt./Semi Govt. sector; which is valid till the due date of the tender.
- (x) The Bidder shall submit all the duly filled, sealed & signed technical datasheets in prescribed formats given in ApendixII- Technical Datasheets, failing which the bid/offer shall be out rightly rejected.

1.1 Financial Capacity

The bidder should have achieved an average annual financial turnover, as certified and/or audited by 'Chartered Accountant', of Rs. **2,51,04,605.06** or above, during the 03 (Three) Financial Year i.e. FY 2020-21, 2021-22, 2022-23.

1.3 Similar Experience:

For assessing the technical capacity of this work; Similar work shall mean, the completed works such as **“the work of SITC of electrical driven, coupled Horizontal splitcase / VT pump-sets having at least 150 HP or above capacity, along with HT/LT Panels & allied accessories in a single work order in BMC/Semi Government/ Government/ Public Sector Undertakings, during last seven (7) years ending last day of month previous to the one in which bids are invited”**.

2.1 ~~Technical Capacity (Project Experience):~~

~~The tenderer(s) in their own name should have satisfactorily executed the work of similar nature BMC /Semi Govt. /Govt. & Public Sector Organizations during last seven (7) years ending last day of month previous to the one in which bids are invited as a prime Contractor (or as a nominated sub Contractor, where the subcontract had involved similar nature of work as described in the scope of works in this bid document, provided further that all other qualification criteria are satisfied)~~

~~a) Three similar completed works or currently executing three works of similar nature each costing 20% of estimated cost.*~~

~~or~~

~~b) Two similar completed works or currently executing two works of similar nature each costing 25% of estimated cost.*~~

~~or~~

~~c) One completed work or currently executing one work of similar nature of aggregate 40% of estimated cost.*~~

~~The value of executed works shall be brought to current costing level by enhancing the actual value of work at compound rate of 10 % per annum; calculated from the date of completion to last date of receipt of applications for tenders.~~

~~***In case of ongoing works to be considered, the bidder must have received payment bills of 80% of the contract sum for the work/works executed last day of month previous to the one in which bids are invited.**~~

2.2 Financial Capacity

~~Achieved an average annual financial turnover as certified by 'Chartered Accountant'(in all classes of civil engineering construction works only) equal to **30%** of the estimated cost of work in **last three (3) financial years** immediately preceding the Financial Year in which bids are invited.~~

~~To ascertain this, tenderer(s) shall furnish /upload the financial statement (Audited balance~~

sheet) duly certified by Chartered Accountant. The turnover can be enhanced by 10% every year to bring the present level.

2.3 Similar experience is spelt in definite sense, such as-

For works related to M&E dept	For assessing the technical capacity of this work; Similar work shall mean, the completed works such as (a) The tenderer/bidder in their own name should have satisfactorily executed the work of SITC of electrical driven, coupled Horizontal splitcase / VT pump-sets having at least 150 HP or above capacity, along with HT/LT Panels & allied accessories in a single work order in BMC/Semi Government/ Government/ Public Sector Undertakings, during last seven (7) years ending last day of month previous to the one in which bids are invited.
--	--

C) Bid Capacity:

The bid capacity of the prospective bidders will be calculated as under: Assessed _____

Available Bid Capacity = (A* N* 2 --B)

Where,

~~A = Maximum value of Civil Engineering works executed in any one year (year means Financial year) during the last five years (updated to the price level of the Financial year in which bids are received at a rate of 10% per year) taking into account _____ - - the completed as well as works in progress. _____~~

~~N = Number of years prescribed for completion of the Project/Works, **excluding monsoon period**, for which these bids are being invited. (E.g. 7 months = 7/12 year) - - -~~
For every intervening monsoon 0.33 shall be added to N: - -

~~**B = Value of existing commitments (only allotted works) on the last date of submission of bids as per bidding document and on-going works to be completed during the period of completion of the Project/Works for which these bids are being invited.**~~

~~Note: The statement showing the value of existing commitments and on-going works as well as the stipulated period of completion remaining for each of the works listed should be attached along with certificates duly signed by the Engineer in Charge, not below the rank of an Executive Engineer or equivalent.~~

Even though the bidders meet the above qualifying criteria, they are subject to be disqualified if they have:

- made misleading or false representation in the forms, statements and attachments submitted in proof of the qualification requirements; and/or
- Record for poor performance such as abandoning the works, not properly completing the contract, inordinate delays in completion, litigation history, or financial failures etc.

D. Equipment Capabilities as required for this work

a) **Regular and Routine works:** The successful bidder will make the arrangements of the required equipment on the day of commencement or with respect to the progress of the work in phases, as per the instructions of site in charge. ~~The successful bidder and, to that effect he will ensure commitment on an undertaking on Rs.500 stamp paper to be submitted along with the Bid in Packet B. However, this condition in no way shall dilute the respective condition in Registration Rules of BMC.~~

b) ~~**New and Original Works:** The bidder should, undertake their own studies and furnish with their bid, a detailed construction planning and methodology supported with assessment study of requirements of equipment/plants & machineries to allow the employer to review their proposal. The bidder will ensure his commitment to make the arrangements of the required equipment on the day of commencement or with respect to the progress of the work in phases, as per the instructions of site in charge on an undertaking on Rs.500 stamp paper to be submitted along with the Bid in Packet B. However, this condition in no way shall dilute the respective condition in Registration Rules of BMC.~~

Note:

1. ~~Bidders shall submit the undertaking for equipment capability and other undertakings as such on a single Rs.500/- stamp paper.~~

E. Technical Personnel

General Guidelines for Fixing Requirement of Technical Staff

Cost of work (Rs. in Crore)	Qualification	Number	Minimum Experience (Year)	Designation
Above 4	Diploma Engineer	1	2	Representative Project/Site or Engineer Billing Engineer

Notes-

- ~~1. "Cost of work", in table above, shall mean the agreement amount of the work.~~
- ~~2. Rate of recovery in case of non-compliance of the clause is stipulated at following rates:-~~

Sr. No	Qualification	Experience (years)	Rate of Recovery
1	Diploma Engineer	2	Rs.25,000/ p.m.

F. TIME PERIOD OF THE PROJECT :

Entire work should be completed and delivered within 15 months of time from the date of award of contract that includes/excludes monsoon.

~~The time allowed for carrying out the work as entered in the Tender shall be strictly observed by the Contractor and shall be reckoned from the date on which the Letter of Acceptance is given to the Contractor. The work shall throughout the stipulated period of the Contract be proceeded with all due diligence as time being deemed to be the essence of the contract on the part of the Contractor. On failing to do so, the Contractor shall pay as compensation an amount which shall be governed as per Clause – 8(e) of Standard General Conditions of Contract.~~

~~The Contractor should complete the work as per phase given below :~~

1/4 of the work in	::	1/4 of the time (1.5 Months)
1/2 of the work in	::	1/2 of the time (3 Months)
3/4 of the work in	::	3/4 of the time (4.5 Months)
Full of the work in	::	Full of the time (6 Months)

~~Full work will be completed in 06 Months including monsoon.~~

~~The programme for completion of work shall be a part of the Contract Document in the form of Bar Chart / GANTT Chart. The Contractor is supposed to carry out the work and keep the progress as per Bar Chart/GANTT Chart. The Contractor shall complete the work as per the Schedule given in the Contract and the programme submitted by the Contractor.~~

G. Contract Execution

All required documents for execution of the contract shall be submitted within 30 days from the date of issue of letter of acceptance. If the documents are not submitted within the stipulated time a penalty of Rs 5000/- per day will be applicable to the contractor. All contract documents need to be duly affixed with stamp duty properly signed along with evidence/proof of payment of security/contract deposit/ within 30 days from the date of letter of acceptance received by him.

H. If the amount of the Contract Deposit to be paid above is not paid within 30 days from the date of issue of Letter of Acceptance, the Tender / Contractor already accepted shall be considered as cancelled and legal steps be taken against the contractor for recovery of the amounts.

I. The amount of Security Deposit retained by the BMC shall be released after expiry of period up to which the contractor has agreed to maintain the work in good order is over. In the event of the

contractor failing or neglecting to complete the rectification work within the period up to which the contractor has agreed to maintain the work in good order, the amount of security deposit retained by BMC shall be adjusted towards the excess cost incurred by the Department on rectification work.

J Action when whole of security deposit is forfeited:

In any case in which under any Clause of this contract, the contractor shall have rendered himself liable to pay compensation amounting to the whole of this security deposit whether paid in one sum or deducted by installments or in the case of abandonment of the work owing to serious illness or death of the contractor or any other cause, the Engineer on behalf of the Municipal Commissioner shall have power to adopt any of the following process, as he may deem best suited to the interest of BMC

(a) To rescind the contract (for which recession notice in writing to the contractor under the head of Executive Engineer shall be conclusive evidence) and in that case, the security deposit of the contract shall stand forfeited and be absolutely at the disposal of BMC.

(b) To carry out the work or any part of the work departmentally debiting the contractor with the cost of the work, expenditure incurred on tools and plant, and charges on additional supervisory staff including the cost of work- charged establishment employed for getting the un-executed part of the work completed and crediting him with the value of the work done departmentally in all respects in the same manner and at the same rates as if it had been carried out by the contractor under the terms of his contract. The certificate of the Executive Engineer as to the costs and other allied expenses so incurred and as to the value of the work so done departmentally shall be final and conclusive against the contractor.

(c) To order that the work of the contractor be measured up and to take such part thereof as shall be un-executed out of his hands, and to give it to another contractor to complete, in which case all expenses incurred on advertisement for fixing a new contracting agency, additional supervisory staff including the cost of work charged establishment and the cost of the work executed by the new contract agency will be debited to the contractor and the value of the work done or executed through the new contractor shall be credited to the contractor in all respects and in the same manner and at the same rates as if it had been carried out by the contractor under the terms of his contract. The certificate of the Executive Engineer as to all the cost of the work and other expenses incurred as aforesaid for or in getting the un-executed work done by the new contractor and as to the value of the work so done shall be final and conclusive against the contractor.

In case the contract shall be rescinded under Clause (a) above, the contractor shall not be entitled to recover or be paid any sum for any work thereof actually performed by him under this contract unless and until the Executive Engineer shall have certified in writing the performance of

such work and the amount payable to him in respect thereof and he shall only be entitled to be paid the amount so certified. In the event of either of the courses referred to in Clause (b) or (c) being adopted and the cost of the work executed departmentally or through a new contractor and other allied expenses exceeding the value of such work credited to the contractors amount of excess shall be deducted from any money due to the contractor, by BMC under the contract or otherwise, howsoever, or from his security deposit or the sale proceeds thereof provided, however, the contractor shall have no claim against BMC even if the certified value of the work done departmentally or through a new contractor exceeds the certified cost of such work and allied expenses, provided always that whichever of the three courses mentioned in clauses (a), (b) or (c) is adopted by the Executive Engineer, the contractor shall have no claim to compensation for any loss sustained by him by reason of his having purchase or procured any materials or entered in to any engagements or made any advance on account of or with a view to the execution of the work or the performance of the contract.

K. Contract may be rescinded and security deposit forfeited for bribing a public officer or if contractor becomes insolvent

If the contractor assigns or sublets his contracts or attempt so to do, or become insolvent or commence any proceeding to get himself adjudicated and insolvent or make any composition with his creditors, or attempt so to do or if bribe, gratuity, gift, loan, perquisite, reward or advantage, pecuniary or otherwise, shall either directly or indirectly be given promised or offered by the contractor or any of his servants or agents through any public officer, or person in the employ of BMC/Govt. in any way relating to his office or employment, or if any such officer or person shall become in any way directly or indirectly interested in the contract the Engineer In-charge may thereupon, by notice in writing rescind the contract and the Security Deposit of the Contractor shall thereupon stand forfeited and be absolutely at the disposal of BMC and the same consequences shall ensure as if the contract had been rescinded under above clause J hereof; and in addition the contractor shall not be entitled to recover or be paid for any work therefore actually performed under the contract.

Submission of Tenders

PACKET – A

The Packet 'A' shall contain scanned certified copies of the following documents. Scrutiny of this packet will be done strictly with reference to only the scanned copies of Documents uploaded online in packet 'A'

- a. Valid Registration Certificate.
- b. Valid Bank Solvency Certificate of Minimum Solvency amount as governed by Registration Rules in force for respective Class of Contractor for Civil and M&E works.
- c. A document in support of Registration under Maharashtra 'VAT' Act 2002. Sales Tax Registration Certificate in Maharashtra (or equivalent requirement under VAT). Those not registered in Maharashtra shall submit an undertaking to the effect that if they are successful tenderer, they shall submit Sales Tax Registration Certificate in Maharashtra within 15 days of issue of work order, failing which payment for the work executed will not be released.
- d. Certified copies of valid 'PAN' documents and photographs of the individuals, owners, Karta of Hindu undivided Family, firms, private limited companies, registered co-operative societies, partners of partnership firms and at least two Directors, if number of Directors are more than two in case of Private Limited Companies, as the case may be. However, in case of Public Limited companies, Semi Government Undertakings, Government Undertakings, no 'PAN' documents will be insisted.
- e. Latest Partnership Deed in case of Partnership firm duly registered with Chief Accountant (Treasury) of BMC.

The bidders shall categorically provide their Email-ID in packet 'A'.

If the tenderer(s) withdraw tender offer during the tender validity period, his entire E.M.D shall be forfeited.

If it is found that the tenderer has not submitted required documents in Packet "A" then, the shortfalls will be communicated to the tenderer through e-mail only and compliance required to be made within a time period of **three working days** otherwise they will be treated as non-responsive

NOTE:

- ☐ **If the Bidder withdraws tender offer during the tender validity period, his entire E.M.D shall be forfeited.**
- ☐ **If it is found that the Bidder has not submitted required curable documents in Packet "A" then, the shortfalls will be communicated to the Bidder through e-mail only and compliance required to be made within a time period of three working days otherwise they will be treated as non-responsive.**

PACKET – B

The Packet ‘B’ shall contain scanned certified copies of the following documents-

- a) The list of similar type of works as stated in para ‘A’ of Post qualification successfully completed during the last seven years in prescribed proforma, in the role of prime contractor. Information furnished in the prescribed proforma (Proforma – I) shall be supported by the certificate duly self-attested. Documents stating that it has successfully completed during the last seven years at least one contract of similar works as stated in para ‘A’ of Post qualification.
- b) Annual financial turnover for **preceding three financial years as certified by Chartered Accountant** preceding the Financial Year in which bids are invited. **Copies of Applicants duly audited balance sheet and profit and loss account for the preceding three financial years preceding the Financial Year in which bids are invited.** (Proforma – II)
- c) Documents stating that, it has access to or has available liquid assets, unencumbered assets, lines of credit and other financial means (independent of any contractual advance payment) sufficient to meet the construction cash flow requirements for the subject contract in the event of stoppage, start-up, or other delay in payment, of the minimum 15% of the cost of the work tendered for, net of the tenderer's commitment of other contracts (Certificate from Bankers/C.A./Financial Institution shall be accepted as a evidence).
- d) The bidder shall give undertaking on Rs 500/- stamp paper that it is his/their sole responsibility to arrange the required machineries either owned/on lease or hire basis, at site before start of the work.
- i) **Regular and Routine works:** The successful bidder shall make the arrangements of the required equipment on the day of commencement or with respect to the progress of the work in phases, as per the instructions of site in charge. ~~The successful bidder and, to that effect he will ensure commitment on an undertaking on Rs.500 stamp paper to be submitted along with the Bid in Packet B. However, this condition in no way shall dilute the respective condition in Registration Rules of BMC.~~
- ii) ~~**New and Original Works:** The bidder should, undertake their own studies and furnish with their bid, a detailed construction planning and methodology supported with assessment study of requirements of equipment/plants & machineries to allow the employer to review their proposal. The bidder shall ensure his commitment to make the arrangements of the required equipment on the day of commencement or with respect to the progress of the work in phases, as per the instructions of site in charge on an undertaking on Rs.500 stamp paper to be submitted along with the Bid in Packet B. However, this condition in no way shall dilute the respective condition in Registration Rules of BMC.~~
- iii) Details of works in hand (Proforma VI-A & VI-B) (original), along with copies of work orders & attested copies of percentage of works completed or part thereof.
- iv) ~~Statement showing assessed available Bid Capacity.~~
- v) The undertaking of Rs.500/- stamp paper as per the proforma annexed in ‘Annexure B & C’

Note: Bidders shall submit the undertaking for equipment capability and other undertakings as such on a single Rs.500/- stamp paper.

vi) The tenderers shall upload work plan as per the following outline: (Not applicable to this tender)

1. ~~GANTT chart/ PERT/ CPM chart showing the completion of work within prescribed time period, considering major activities.~~
2. Organizational set up envisaged by the contractors.
3. Plant & equipment proposed to be deployed for this work.
4. Site Offices and Laboratories proposed to be set up.
5. A note on how the whole work will be carried out (work plan including methodology).
6. Quality management plan.
7. All the activities included in the Scope of Work shall be covered in the work plan.

Note:

~~i. The Electrical / Mechanical work shall be got carried out by the civil contractors through the contractors registered with BMC, in Electrical Category. Information about the registered contractors shall be obtained from the office of the Ch.E. (M&E)/ E.E. (Monitoring & Registration Cell). Attested scanned copy of the valid registration certificate in Electrical Category shall be uploaded with the tender along with the undertaking from the registered Electrical Contractor stating his willingness to carry out the tender work.~~

ii. The successful bidder shall submit valid registration certificate under E.S.I.C., Act 1948, if the tenderer has more than 10 employees /persons on his establishment (in case of production by use of energy) and 20 employees/persons on his establishment (in case of production without use of energy) to BMC as and when demanded. In case of less employees/persons mentioned above then the successful bidder has to submit an undertaking to that effect on Rs. 200 stamp paper as per circular u/no. CA/FRD/I/65 of 30.03.2013.

iii. The successful bidder shall submit valid registration certificate under E.P.F. & M.P., Act 1952, if tenderer has more than 20 employees/persons on his establishment, to BMC as and when demanded. In case if the successful bidder has less employees/persons mentioned above then the successful bidder has to submit an undertaking to that effect on Rs. 200 stamp paper as per circular u/no. CA/FRD/I/44 of 04.01.2013.

Note: 1. If it is found that the tenderer has not submitted required curable documents in Packet “B” then, the shortfalls will be communicated to the tenderer through e-mail only and compliance required to be made within a time period of three working days otherwise they will be treated as non-responsive.

2. If it is found that the tenderer has not submitted required non curable documents in Packet “B” then, no communication to the bidder will be made and their bid will be treated as non responsive.

PACKET – C

a. ~~Online tender filled in either percentage plus or minus (above or below), or at par. (There is no separate provision to quote % in physical form, this is a part in Header Data of online Tendering). For Packet ‘C’ tenderer(s) will fill data in ‘Item Data Tab’ in Service Line Item via Details and quotes his percentage variation figures.~~

~~(If entered ‘0’ it will be treated as ‘at par’. By default the value is zero only).——~~

Note: In case of rebate/premium of 15% and above as quoted by the tenderer, the rate analysis of major items shall be submitted by L1 and L2 bidder after demand notification by e-mail to bidders by concerned BMC Engineer.

Rate analysis in prescribed format shall be submitted online to the engineer in-charge within 3 working days from the date of communication on email, failing which EMD will be forfeited, and the bid will be rejected, and next successful/ Responsive bidder will be considered. Thereafter, negotiation will be done with the said successive/ responsive bidder with respect to his quoted rate.

BID SECURITY OR EMD

The Bidder shall furnish, as part of the Bid, Bid Security/EMD, in the amount specified in the Bid Data Sheet. This bid security shall be in favor of the authority mentioned in the Bid Data Sheet and shall be valid till the validity of the bid.

The tenderers shall pay the EMD online instead paying the EMD at any of the CFC Centers in BMC Ward Offices.

Any bid not accompanied by an acceptable Bid Security and not secured as indicated in sub-clause mentioned above, shall be rejected by the Employer as non-responsive.

The Bid Security of the successful Bidder will be discharged when the Bidder has signed the Agreement and furnished the required Security Deposits.

The Bid Security/ EMD of L-3 and bidder shall be refunded immediately after opening of financial bid but, the EMD/ASD submitted by the L-2 bidder will be returned after obtaining Standing Committee Resolution.

The Bid Security may be forfeited:

- a) if the Bidder withdraws the Bid after bid opening (opening of technical qualification part of the bid during the period of Bid validity;
- b) in the case of a successful Bidder, if the Bidder fails within the specified time limit to:
 - i. sign the Agreement; and/or

ii. Furnish the required Security Deposits.

1. The cases wherein if the shortfalls are not complied by a contractor, will be informed to Registration and Monitoring Cell. Such non-submission of documents will be considered as 'Intentional Avoidance' and if three or more cases in 12 months are reported, shall be viewed seriously and disciplinary action against the defaulters such as banning/de-registration, etc. shall be taken by the registration cell with due approval of the concerned AMC.
2. In packet 'A' as well as packet 'B', 02 nos. of shortfalls in curable defects will be allowed.
3. In case of non-workable rate analysis and misleading information submitted by the bidder bid will be rejected.
4. In case of curable/ non curable defects due to non-fulfillment of requirement of BMC as prescribed & in the event, the bidder becomes non-responsive and bid will be rejected.

Revised guidelines for payment of EMD for tenders to be uploaded on Mahaportal are as follows.

1) Mode of payment of EMD

A tenderer shall pay entire amount of EMD through payment gateways of GoM on URL <http://mahatenders.gov.in>. The bidder shall upload scan copy of online paid EMD along with the bid submission in packet 'A'.

Any bid not accompanied by an acceptable Bid Security shall be rejected by the Employer as non-responsive.

2) If non-responsive;

If the bidder is found non-responsive after scrutiny of packet 'A'/'B', in such circumstances, **the bidder will be made non-responsive and financial packet 'C' of non-responsive bidder will not be opened. However, there will not be any forfeiture of EMD.**

3) Shortfalls:-

Maximum 5 shortfalls of curable defects shall be allowed and in case, curable defects are not complied by bidder within given time period, the bidder shall be treated as 'Non-Responsive' & such cases will be informed to Registration and Monitoring Cell. Such non-submission of documents will be considered as 'Intentional Avoidance' and if three or more cases in 12 months are reported, shall be viewed seriously and disciplinary action against the defaulters such as banning/de-registration, etc. shall be taken by Registration Cell with due approval of the concerned AMC.

4) Refund of EMD :-

- c) Except successful bidder all other unsuccessful bidders' 100% EMD paid online will be refunded automatically.
- d) The Bid security of successful bidder will be discharged when the bidder has signed the agreement and /or furnish the required Security Deposits as elaborated in Standard Bid Document.

5) Forfeiture of Entire EMD:-

The existing conditions laid down in Standard Bid Document regarding forfeiture of entire bid security (EMD) shall remain unchanged.

These, interim-instructions will remain in force till the issuance of circular regarding amendment in SBD.

Note:

i) Curable Defect shall mean shortfalls in submission such as:

a. Non-submission of following documents,

- i. Valid Registration Certificate.**
- ii. Valid Bank Solvency.**
- iii. Sales Tax Registration(VAT)/ GST Certificate**
- iv. Certified Copies of PAN documents and photographs of individuals owners, etc**
- v. Partnership Deed and any other documents.**
- vi. Undertakings as mentioned in the tender document.**
- vii. ~~Wrong calculation of Bid Capacity,(NA for this Tender)~~**

ii) Non-curable Defect shall mean

a. In-adequate submission of EMD/ASD amount,

b. In-adequacy of technical and financial capacity with respect to Eligibility criteria as stipulated in the tender.

c. No proper submission of experience certificates and other documents, etc.

BID VALIDITY

Bids shall remain valid for a period of not less than one eighty (180) days after the deadline date for bid submission specified in Bid Data Sheet. A bid valid for a shorter period shall be rejected by the Employer as non-responsive.

In exceptional circumstances, prior to expiry of the original time limit, the Employer may request that the bidders may extend the period of validity for a specified additional period. The request and the bidders' responses shall be made in writing or by cable. A bidder may refuse the request without forfeiting his Bid Security. A bidder agreeing to the request will not be required or permitted to modify his bid, but will be required to extend the validity of his bid security for a period of the extension.

DEFECT LIABILITY PERIOD

The Contractor is expected to carry out the work in Workmen like manner so as to meet the requirement and specification for the project. It is expected that the Workmanship and materials will be reasonably fit for the purpose for which they are required.

Defects or defective work is where standard and quality of workmanship and materials as specified in the contract is deficient. Defect is defined as a failure of the completed project to satisfy the express or implied quality or quantity obligations of the contract. Defective works are as the

works which fail short of complying with the express descriptions or requirements of the contract, especially any drawings or specifications with any implied terms and conditions as to its quality, workmanship, durability, aesthetic, performance or design. Defects in projects are attributable to various reasons.

Some of the defects are structural defects results in cracks or collapse of faulty defective plumbing, inadequate or faulty drainage system, inadequate or faulty ventilation, cooling or heating systems, inadequate fire systems etc. The defects could be various on accounts of different reasons for variety of the projects.

The Engineering In charge/Project Officer shall issue the practical completion certificate for the project. During the Defect Liability Period which commences on completion of the work, the Engineering In charge shall inform or the contractor is expected to be informed of any defective works by the Employer's representative of the defects and make good at contractor's cost with an intention of giving opportunity to the contractor of making good the defects appeared during that period. It is the contractor's obligation under the contract to rectify the defects that appear during Defect Liability Period and the contractor shall within a reasonable time after receipt of such instructions comply with the same at his own cost. The Engineering In charge/Project Officer shall issue a certificate to that effect and completion of making good defects shall be deemed for all the purpose of this contract to have taken place on the day named in such defect liability certificate.

If defective work or workmanship or design have been knowingly covered-up or concealed so as to constitute fraud, commencement of the Defect Liability Period may be delayed. The decided period may be delayed until **discover** actually occurs on at least the defect could have been discovered with reasonable diligence, whichever is earlier. The DLP shall be as below:

Dept	Type of works	DLP
Roads / Bridge	For cement concrete road/ Mastic works	5 years
	Asphalt work	3 years
	Paver Block	3 years
	Structural work	5 years
	General works	5 years
BM/SIC/HIC	General works	3 years
	Structural works	5 years
	Waterproofing works	5 years
Ward Works	All ward level works	2 years
Other Works	Pot holes and pre-monsoon bad patch repair work	1 years
For other departments	HE, WSP, SP, SWD, Garden	For M&E works 3 Years

- Also, in case of defect, the Engineer shall give notice to the Contractor of any Defects before the end of the Defects Liability Period, which begins at. The Defects Liability Period shall be

extended for as long as Defects remain to be corrected. Every time notice of Defect/Defects is given, the Contractor shall correct the notified Defect/Defects within the duration of time specified by the Engineer's notice. The Engineer may issue notice to the Contractor to carry out removal of defects or deficiencies, if any, noticed in his inspection, or brought to his notice.

The Contractor shall remove the defects and deficiencies within the period specified in the notice and submit to the Engineer a compliance report. It is the Completion Stage when the contractor has completed all of the works and fixed all of the defects that were on the list of issue by Engineer-in-charge. When this happens, the engineer must issue a 'Certificate of Completion'. On the issue of 'Certificate of Completion', the 'Defect Liability Period' starts. The contractor also must issue a 'Certificate statement' as an acknowledgment to the engineer not later than 14 days after the 'Certificate of Completion' has been issued. During the 'Defect Liability Period', the contractor has to obey all written instructions from the engineer to carryout repairs and fix any defects which appear in the Permanent Works. If the contractor does not attend defects, due to his own faults finish the repair works or fix the defects by the end of 'Defect Liability Period', the 'Defect Liability Period' will continue until all works instructed by engineer is done.

SECURITY DEPOSIT AND PERFORMANCE GUARANTEE

A. Security Deposit : The security deposit shall mean and comprise of

I) Contract Deposit and

~~H) Retention Money.~~

I) **Contract Deposit** – The successful tender, here after referred to as the contractor shall pay an amount equal to **Two (2)** percent of the contract sum shall be paid within thirty days from the date of issue of letter of acceptance. The said contract deposit shall be paid in the form of Demand Draft (D.D.) only.

~~H) **Retention Money** – The retention money equal to 15.00% of the Contract Sum will be recovered from the contractors every bill i.e. interim / running / final bill. The clause of retention money will not be applicable M. & E. Department.~~

B. Additional Security Deposit (Not applicable to this tender)

The **additional security deposit** shall be applicable as under:

Rebate quoted by contractor	ASD applicable
Up to 12% Rebate	No ASD
Rebate above 12.00% on estimated cost	At 2.00% of Estimated cost for each % rebate & part thereof, in D.D. only.

The bidders shall submit the ASD as applicable in the form of Demand Draft, which is to be submitted during office hours minimum one day before opening of packet 'C' to respective Head

Clerk (Expenditure) of the Engineer in-charge of the HE Division in sealed envelope. If A.S.D. is not applicable then the bidders shall submit sealed envelope mentioning on their letter head 'ASD is not applicable'.

~~If the bidder fails to submit the sealed envelope as mentioned above at least one day before opening of packet 'C' within office hours then the EMD of the respective bidders will be forfeited and the company with their Directors/ Partners and other companies with the said directors/ Partner will be further debarred from any tendering process for the period of at least 2 years.~~

C: Performance Guarantee (Not applicable for this tender)

The successful tender, here after referred to as the contractor shall pay in the form of “Performance Guarantee” at different rates for different slabs as stated below:

Offer	PG applicable %
For premium, at par and rebate 0 to 12%	PG= 0.92% x contract sum applicable for rebate of 12%
For rebate of 12.01%	P.G. = {0.92% x contract sum applicable for rebate of 12% } +(X) x contract sum where X= percentage rebate quoted more than 12%

Where, X= percentage rebate quoted more than 12%

Note: Contract sum shall mean amount after application of rebate/premium as quoted by the contractor with contingencies only and excluding price variation.

The PG shall be paid in one the following forms.

- I) Cash (In case guarantee amount is less than Rs.10,000/-)
- II) Demand Draft (In case guarantee amount is less than Rs.1,00,000/-)
- III) Government securities.
- IV) Fixed Deposit Receipts (FDR) of a Schedule Bank.
- V) An electronically issued irrevocable bank guarantee bond of any Schedule bank or in the prescribed form given in Annexure

Performance Guarantee is applicable over and above the clause of Security Deposit. Performance Guarantee will have to be paid & shall be valid till the defect liability period or finalization of final bill whichever is later.

This deposit will be allowed in the form of I to V as mentioned above and shall be paid within 15 days after receipt of Letter of Acceptance.

Note: Following exceptions shall be adopted for ‘Demolition Tenders’:

- Irrespective of the offer (Rebate/ at par/ premium), ASD shall be differed and only PG of 10% of contract sum be taken from the successful bidder on award of contract only.

- BMC departments shall ensure to incorporate specific condition regarding above in bid document and e-tender notice

D. Refund of Security Deposit

I. Refund of Contract Deposit : As Defect Liability Period (DLP) is not applicable for this tender, the Contract Deposit shall be released within 30 days after completion of 24 months of O&M works; subject to no recoveries are pending against the said work, provided that the Engineer is satisfied that there is no demand outstanding against the Contractor.

~~**II. Refund of Retention Money :** The Retention Money will be refunded after completion of defect liability and after issue of 'Defect Liability Certificate' (in case of 1 or 3 or 5 years DLP) provided that the Engineer is satisfied that there is no demand outstanding against the Contractor. In the event of different Defects Liability Periods have been specified or become applicable to different sections or parts of the Permanent Works, the said money will be released within 30 days on expiration of such Defects Liability Periods.~~

~~In the event the Engineer issues a Taking-over Certificate for a section or part of the Permanent Works, only such proposition thereof as the Engineer determines (having regard to the relative value of such section or part of the Works) shall be considered by the Engineer for payment to the Contractor.~~

III. Refund of Additional Security Deposit: One-half (50%) of the additional security deposited (ASD) shall be released after the completion of 50% financial progress of the work.

The balance ASD shall be released within 30 days of issue of 'Certificate of Completion' with respect to the whole of the Work. In the event the Engineer issues a Taking-over Certificate for a section or part of the Permanent Works, only such proposition thereof as the Engineer determines (having regard to the relative value of such section or part of the Works) shall be considered by the Engineer for Refund of ASD to the Contractor.

IV. Refund of Performance Guarantee (Not applicable to this work) : The Deposit on account of performance guarantee shall be released within 30 days of completion of Defects Liability Certificate subject finalization of final bill whichever is later and no recoveries are pending against the said work, provided that the Engineer is satisfied that there is no demand outstanding against the Contractor.

Summary of time of Refund of deposit is tabulated as follows:

a) **Time of Refund for works having 5 years DLP**

Deposits refunded after Completion	After 3 yrs of DLP	After Completion of DLP
ASD + 50% of RM	CD+50% of RM	PG

b) **Time of Refund for works having 1 or 2 or 3 years DLP**

Deposits refunded after completion	After Completion of DLP
ASD + 50% of RM	CD+50% of RM+PG

Note :

a) It shall be clearly mentioned that the BG shall be applicable for individual work/contract and clubbing of various contracts of the said contractor will not be allowed. In case of obtaining Bank Guarantee, it is necessary to mention that the same shall be valid further 6 months from the completion of defect liability period/ warranty period.

b) It shall be the responsibility of the bidder to keep the submitted B.G. “VALID” for the stipulated time period in the tender & in case of its expiry it will attract penalization.

c) Bank Guarantee should be issued by way of General Undertaking and Guarantee issued on behalf of the Contractor by any of the Nationalized or Scheduled banks or branches of foreign banks operating under Reserve Bank of India regulations located in Mumbai upto Virar & Kalyan. List of approved Banks is appended at the end of Instructions to Bidders (ITB). The Bank Guarantee issued by branches of approved Banks beyond Kalyan and Virar can be accepted only if the said Bank Guarantee is countersigned by the Manager of a Regional Branch of the same bank within the Mumbai City Limit categorically endorsing thereon that the said Bank Guarantee is binding on the endorsing Branch of the Bank or the Bank itself within Mumbai Limits and is liable to be enforced against the said Branch of the Bank or the bank itself in case of default by the Contractors furnishing the Bank Guarantee. The Bank Guarantee shall be renewed as and when required and/or directed from time to time until the Contractor has executed and completed the works and remedied any defects therein.

E. Legal + Stationary Charges: (As per applicable circular)

Successful tenderer shall pay the Legal Charges +Stationary charges as per Circular no.26206 of Legal Department; Dtd.31.08.2023.

Sr.No.	Contract Cost	Consolidated Revised Legal & Stationary charges for a period from Dt.01.09.2023 to Dt.31.03.2024
1.	Rs.50,000/-	NIL
2.	Rs.50,001/- to Rs.1,00,00,000/-	0.10% of Contract cost (Rounded off to next multiple of 100) plus 18% GST (Minimum of Rs.1,000 plus 18% GST and Maximum of Rs.10,000 plus 18% GST)
3.	Rs. 1,00,00,001/- to Rs.10,00,00,000/-	(a) Rs.10,000/- plus 18% GST for Contract cost upto Rs.1,00,00,000/- (b) 0.05% of Contract cost (Rounded off to next multiple of 100) plus 18% GST, for contract cost more than Rs.1,00,00,000/-
4.	Rs.10,00,00,001/- to onwards contract	(a) Rs.55,000/- plus 18% GST for Contract cost upto Rs.10,00,00,000/-

		(b) 0.01% of Contract cost (Rounded off to next multiple of 100) plus 18% GST, for contract cost more than Rs.10,00,00,000/-
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The tenderers are requested to note that stationary charges as given in the table above will be recovered from the successful tenderer for supply of requisite prescribed forms for preparing certificate bills in respect of the work.

F. Stamp Duty: (As per applicable circular at the time of award of contract)

It shall be incumbent on the successful tenderer to pay stamp duty on the contract.

i. As per the provision made in Article 63, Schedule I of Bombay Stamp Act 1958, stamp duty is payable for “works contract” that is to say, a contract for works and labour or services involving transfer of property in goods (whether as goods or in some other form) in its execution and includes a sub-contract, as under :

(a)	Where the amount or value set forth in such contract does not exceed rupees ten lakh.	Five Hundred rupees stamp duty
(b)	Where it exceeds rupees ten Lakhs	Five hundred rupees plus one hundred rupees For every Rs.1,00,000/- or part thereof, above rupees ten lakh subject to the maximum of rupees twenty five lakh stamp duty.

ii. The successful bidder shall enter into a contract agreement with BMC within 30 days from the date of issue of Work Order and the same should be adjudicated for payment of Stamp Duty by the successful bidder.

iii. Further shortfall if any, in amount of stamp duty paid as against prescribed amount for the documents executed in Mumbai City & Mumbai Suburban District be recovered from the concerned work contractors and to deposit the deficit or unpaid Stamp Duty and penalty by two separate Demand Draft or Pay Order in favour of “Superintendent of Stamp, Mumbai” within 15 days from intimation thereof.

iv. All legal charges and incidental expenses in this respect shall be borne and paid by the successful tenderer.

IMPORTANT DIRECTIONS

1. All the information uploaded shall be supported by the corroborative documents in absence of which the information uploaded will be considered as baseless and not accepted for qualification criteria. All the documents shall be uploaded with proper pagination. The page No. shall be properly mentioned in the relevant places.

The information shall be uploaded in the sequence as asked for with proper indexing etc. The

Bidder shall be fully responsible for the correctness of the information uploaded by him.

2. Applicants/Bidders shall refer portal.BMC.gov.in\tenders for “The Manual of Bid- Submission for Percentage Rate/Item Rate Tender Document.” The detail guidelines for creation and submission of bid are available in the referred document.

Any queries or request for additional information concerning this TENDER shall be submitted by e-mail to aewwcc02.he@mcgm.gov.in The subject shall clearly bear the following identification / title: "Queries/ Request for Additional Information: TENDER for **“Renovation of Powai Pumping Station along with allied works at Powai group of reservoirs under AE(M)WWES-II”**. Any changes in mail ID will be intimated on the portal.

3. In case of **Equal Percentage** of lowest bidders (L1), the allotment of work shall be done by giving 48 hrs (**2 working days**) from the day of opening of packet C **on same BID-Document number for re-quoting** and such development needs to be done by IT department in BMC's SRM system. **Till such development is made; ‘Sealed Bids’ shall be called from the bidders quoting the same rates i.e. L1.**

In case of equal percentage of lowest bidders is obtained even after re-quoting, then the successful bidder will be decided by lottery system by concerned Ch.Engg.

~~The bidder shall need to submit the additional ASD if applicable within 7 days after receipt of notification issued by concerned Chief Engineer.~~

~~Also, the Performance Guarantee shall be paid in 15 days after receipt of Letter of Acceptance.~~

SECTION 7

SCOPE OF WORK

BRIHANMUMBAI MUNICIPAL CORPORATION
(HYDRAULIC ENGINEER'S DEPARTMENT)

Subject: - Renovation of Powai Pumping Station along with allied works at Powai group of reservoirs under AE(M)WWES-II

SCOPE OF WORK:-

The scope of work shall comprise of following & also includes all tools, tackles, other materials in order to complete the job satisfactorily.

In short the major activities in scope of work include:

1. Replacement of 6 nos of pumpsets (4 Nos of 300 HP + 2 Nos of 150 HP).
2. Replacement of Switchgears, spare parts etc. of Main LT panel, APFC panel of pumping station
3. Supply & Installation of various control valves, NRVs, piping, pressure gauges, drain lines etc.
4. Supply & installation of 5T EOT crane.
5. Supply & Installation of CCTV Surveillance System
6. Supply & Installation of illumination System
7. Providing pneumatic compressor, DG sets, submersible pumpsets and allied electromechanical equipments etc.
8. Buyback of existing pump-motor sets, NRV's, Crane girders & gearbox, remote panel of pumpsets and APFC isolator panel.

The successful contractor shall pay buyback / rebate amount by depositing cash/ DD in CFC of BMC through challan. Also, it's the responsibility of the successful contractor to deposit / pay applicable GST, 1% TCS and any other applicable taxes on buyback / rebate amount.

The office estimated buyback cost of Pumpsets, NRVs, parts of HOT Crane, APFC changeover panel, pump remote panel mentioned in BoQ 2` is Rs.28,82,716/- (including 18% GST). The bidder shall ensure to quote minimum 'at par' or above the office estimated buyback price for this particular BoQ2 item. Even if the bidder quotes below the office estimated cost, the price bid of BoQ item 2 shall be considered at par with office estimate i.e.minimum Rs.28,82,716/- only.

It is to be noted by all the potential bidders that the site at which the subject work is to be carried out, is very critical pumping station of BMC which operates for almost 18-20 hours a day to cater to the water supply needs of the designated area. Therefore, while executing the work, the priority will always be given to not to hamper daily water supply. Accordingly, upon request, water supply isolation will be provided by this section during non-supply hours. The successful contractor has to manage the time made available to them to carry out the work within stipulated time period. No claim shall be made by the contractor in this regard.

(A) General Instructions

1. The technical specifications for the work included in this tender are prepared with care with a view not to create any additional work. However, all the items and works which are required for satisfactory completion and guaranteed performance of the system / projects are deemed to be included in the offer and no extra cost will be paid by BMC.
2. The contractor shall extend full cooperation to municipal staff & other agencies, if any working at site.
3. The work shall be carried out with good workmanship following standard engineering practice.
4. The successful contractor shall take utmost care not to cause any nuisance due to noise, welding, operations etc. All the proper precautions shall be taken by them in this respect.
5. All the manpower, machinery and tools etc. required to carry out the work for successful completion of job shall be arranged by contractors only.
6. The tenderer shall make their own arrangement for security & safety of their materials and other belongings during erection and commissioning work at site.
7. The successful tenderer has to make his arrangement for loading, unloading, transportation and handling of the equipment. The tenderer shall make immediate arrangement for removal of their belongings after the completion of work.
8. The tenderers shall have to take all safety measures for his staff / labours / materials and safety measures for other live parts during the course of work. For any mishaps etc. if happened the contractors will be held responsible.
9. The tenderers shall inspect the site prior to submission of their offer, so as to assess the site conditions and other details. No claim on account of ignorance of site condition or adverse site condition, etc. will be entertained during the execution of the work.
10. Any material /work carried out which is found to be defective or which does not meet the specifications has to be replaced free of cost by the contractors.
11. The work has to be carried out in consultation with the site Engineers.
12. Defect Liability Period: 36 months from the date of satisfactory commissioning of Work at site.
13. Cost : The Cost quoted should be firm through out the contract period, which shall also include loading, unloading, packing and forwarding, transportation, freight, transit insurance and all types of taxes, duties, levies, etc.
14. No escalation in the cost of whatsoever nature will be allowed while execution of these works.
15. The Municipal Commissioner does not bind himself to accept the lowest or any tender.
16. Contractor shall handover peaceful possession of the entire system/ installation in good working condition to BMC after successful completion of the contract period.

NOTE : This is general scope of work required to be carried out in the premise of Powai Reservoirs and Pumping Station. Hence, the tenderer is requested to refer the specifications described in tender & if necessary, visit the actual site to understand the scope of work and discuss their queries before filling of the tender document to avoid any discrepancies, misinterpretations, technical deviations etc., during the execution of contract work. No claim of any sort shall be entertained subsequently, after award of contract. **The detailed technical specification of the complete work is specified in Section – 10 i.e. Specification.**

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SECTION 8

BILL OF QUANTITIES

BRIHANMUMBAI MUNICIPAL CORPORATION**(HYDRAULIC ENGINEER'S DEPARTMENT)****Packet 'C'**

SUBJECT : Renovation of Powai Pumping Station along with allied works at Powai group of reservoirs under AE(M)WWES-II.

SCHEDULE / BILL OF QUANTITY & RATES

(For Information purpose only, actual rates shall be filled online)

BoQ 1- For the SITC work

Sr. No.	Item	Total Quantity		Amount in Rs. Per Unit (Inclusive GST)	Total Amount
		Qty	Unit		
1	Supply, Installation, Testing and Commissioning (SITC) of 530 LPS @ 31 mtr Head Pump set with suitable Motor (225 KW; 300HP)	4	Sets	ONLINE	ONLINE
2	S.I.T.C of 270 LPS @ 31 mtr Head Pump set with suitable Motor (110KW; 150HP)	2	Sets	ONLINE	ONLINE
3	Supply of various dia control valves as specified in scope of work	3	Nos	ONLINE	ONLINE
4	Supply and installation (S &I) of NRVs, piping, drainline, chequered plates, pressure gauges, fastners etc alongwith refurbishment of dismantling joints, as specified in scope of work	1	Job	ONLINE	ONLINE
5	SITC of 5 Ton EOT Crane on girder (Aprx. Span 10 m, lift 6-8 m, length 29m) along with DSL System with Load test	1	Job	ONLINE	ONLINE
6	Refurbishment of various LT panels, APFC panel along with cable terminations & maintenance free earthing, as specified in scope of work	1	Job	ONLINE	ONLINE
7	Supply & installation of Instrumentation system	1	Job	ONLINE	ONLINE
8	S&I of Pnuematic Compressor system along with Air Piping and allied accessories	1	Job	ONLINE	ONLINE
9	Supply of various Dewatering, jet pump, Submersible pumpsets, as specified in scope of work	1	Job	ONLINE	ONLINE
10	Supply & installation of Illumination system, as specified in scope of work	1	Job	ONLINE	ONLINE
11	SITC of CCTV surveillance System, as specified in scope of work	1	Job	ONLINE	ONLINE
12	Supply of miscellenous items including various electro-mechanical tools, as specified in scope of work	1	Job	ONLINE	ONLINE
13	Supply of DG sets, as specified in scope of work	1	Job	ONLINE	ONLINE
Total Amount in Rs.					
Total amount in words (Rs. _____)					
Bidder's full address, Tel. No. & Vendor code no			Bidder's Signature & Office Stamp		

BoQ 2- For Rebate/ Buyback of Old materials

Sr. No.	Item	Total Quantity		Amount in Rs. Per Unit (Inclusive GST)	Total Amount
		Qty	Unit		
1	Buyback of 150 HP Pump-Motor Set	2	Sets	ONLINE	ONLINE
2	Buyback of 300 HP Pump-Motor Set	4	Sets	ONLINE	ONLINE
3	Buyback of 250 mm dia NRV	2	Nos	ONLINE	ONLINE
4	Buyback of 400 mm dia NRV	4	Nos	ONLINE	ONLINE
5	Buyback of Middle Girder & Side Girder with Gearbox of 5T HOT Crane	1	Set	ONLINE	ONLINE
6	Buyback of Remote Panel of Pumpsets	1	No	ONLINE	ONLINE
7	Buyabck of APFC Isolator Panel	1	Set	ONLINE	ONLINE
Total Amount in Rs.					
Total amount in words (Rs. _____)					
Bidder's full address, Tel. No. & Vendor code no			Bidder's Signature & Office Stamp		

Note: (A) This page does not need any uploading. The values are to be filled in online in Packet “C”. Due to character limitations in packet “C” full description of job cannot be incorporated. The full description can be referred to this page.

(B) The Tenderer shall quote inclusive of all taxes other than GST (Excluding GST), Levies, Duties, Cess etc. as applicable at the time of bid submission. GST as applicable shall be paid separately on submission of bills/invoice.

Input Tax Credit of GST as available with the bidder will not be claimed separately by BMC. However, while quoting the rates benefit of Input tax credit or exemptions shall be passed on to the BMC by way of equivalent reduction in quoted price.

(C) The successful contractor shall pay buyback / rebate amount by depositing cash in CFC of BMC through challan. Also, it's the responsibility of the successful contractor to deposit / pay applicable GST, 1% TCS and any other applicable taxes on buyback / rebate amount.

(D) The office estimated buyback cost of Pumpsets, NRVs, parts of HOT Crane, APFC changeover panel, pump remote panel mentioned in BoQ 2' is Rs.28,82,716/- (including 18% GST). The bidder shall ensure to quote minimum 'at par' or above the office estimated buyback price for this particular BoQ2 item. Even if the bidder quotes below the office estimated cost, the price bid of BoQ item 2 shall be considered at par with office estimate i.e.minimum Rs.28,82,716/- only.

(E) The BoQ 1 contains the items for the SITC work and the BoQ 2 contains the items for the rebate/ buyback of old materials. Bidder shall mandatorily fill and upload both these BoQs 1 & 2 to quote their offer. By evaluating the rates offered in both these BoQs, lowest responsive bidder shall be finalized. The overall contract cost for this e-tender will be exclusive of the final rebate/ buyback value offered by the lowest responsive bidder.

SECTION 9

GENERAL CONDITIONS OF CONTRACT

General Conditions of Contract

A. General

1. Definitions

1.1 Terms which are defined in the Contract Data are not also defined in the Conditions of Contract but keep their defined meanings. Capital initials are used to identify defined terms.

The “Contract” shall mean the tender and acceptance thereof and the formal agreement if any, executed between the Contractor, Commissioner and the Corporation together with the documents referred to therein including these conditions and appendices and any special conditions, the specifications, designs, drawings, price schedules, bills of quantities and schedule of rates. All these documents taken together shall be deemed to form one Contract and shall be complementary to one another.

The Contract Data defines the documents and other information which comprise the Contract.

The “Contractor” shall mean the individual or firm or company whether incorporated or not, whose tender has been accepted by the employer and the legal successor of the individual or firm or company, but not (except with the consent of the Employer) any assignee of such person.

The Bidder is a person or corporate body who has desired to submit Bid to carry out the Works, including routine maintenance till the tender process is concluded.

The Contractor's Bid is the completed bidding document submitted by the Contractor to the Employer.

The “Contract Sum” means the sum named in the letter of acceptance including Physical contingencies subject to such addition thereto or deduction there- from as may be made under the provisions hereinafter contained.

Note : The contract sum shall include the following –

- In the case of percentage rate contracts the estimated value of works as mentioned in the tender adjusted by the Contractor's percentage.
- In the case of item rate contracts, the cost of the work arrived at after finalisation of the quantities shown in schedule of items / quantities by the item rates quoted by the tenderers for various items and summation of the extended cost of each item.
- In case of lump sum contract, the sum for which tender is accepted.
- Special discount / rebate / trade discount offered by the tenderer if any and accepted by the Corporation.
- Additions or deletions that are accepted after opening of the tenders.

The “Contract Cost” means the Contract Sum plus Price Variation. This cost shall be included in the letter of acceptance.

A Defect is any part of the Works not completed in accordance with the Contract.

The Defects Liability Certificate is the certificate issued by the Engineer, after the Defect Liability Period has ended and upon correction of Defects by the Contractor.

Drawings means all the drawings, calculations and technical information of a like nature provided by the Engineer to the Contractor under the Contract and all drawings, calculations, samples, patterns, models, operation & maintenance manual and other technical information of like nature submitted by the Contractor and approved by the Engineer.

The Authority shall mean Brihanmumbai Municipal Corporation (BMC)

The “Employer” shall mean the Municipal Corporation for Greater Mumbai / Municipal Commissioner for Greater Mumbai, for the time being holding the said office and also his successors and shall also include all “Additional Municipal Commissioners, Director (Engineering Services & Projects)” and the Deputy Municipal Commissioner, to whom the powers of Municipal Commissioner, have been deputed under Section 56 and 56B of the Mumbai Municipal Corporation Act.

The Engineer in-charge shall mean the Executive Engineer in executive charge of the works and shall include the superior officers of the Engineering department i.e. Dy.Ch.Eng/Ch.Eng. and shall mean and include all the successors in BMC.

The Engineer's Representative shall mean the Assistant Engineer, Sub. Engineer/ Jr. Engineer in direct charge of the works and shall include Sub Eng./ Jr. Eng of Civil section/ Mechanical section/ Electrical section appointed by BMC.

The “Engineer” shall mean the City Engineer / the Hydraulic Engineer / the Chief Engineer / the Special Engineer, appointed for the time being or any other officer or officers of the Municipal Corporation who may be authorized by the commissioner to carry out the functions of the City Engineer / the Hydraulic Engineer / the Chief Engineer / the Special Engineer or any other competent person appointed by the employer and notified in writing to the Contractor to act in replacement of the Engineer from time to time.

Contractor’s Equipment means all appliances and things of whatsoever nature required for the execution and completions of the Works and the remedying of any defects therein, but does not include plant material or other things intended to form or forming part of the Permanent Works.

The Initial Contract Price is the Contract Price listed in the Employer's Letter of Acceptance.

The Intended Completion Date is the date on which it is intended that the Contractor shall complete the construction works. The Intended Completion Date is specified in the Contract Data. The Intended Completion Date may be revised only by the Engineer by issuing an extension of time.

Materials are all supplies, including consumables, used by the Contractor for incorporation in the Works and works of routine maintenance.

Plant is any integral part of the Works that shall have a mechanical, electrical, electronic, chemical, or biological function.

Routine Maintenance is the maintenance of activities of the completed structure for five years

as specified in the Contract Data.

The “Site” shall mean the land and other places including water bodies more specifically mentioned in the special conditions of the tender, on, under in or through which the permanent works or temporary works are to be executed and any other lands and places provided by the Municipal Corporation for working space or any other purpose as may be specifically designated in the contract as forming part of the site.

Site Investigation Reports are those that were included in the bidding documents and are reports about the surface and subsurface conditions at the Site.

“Specification” shall mean the specification referred to in the tender and any modification thereof or addition or deduction thereto as may from time to time be furnished or approved in writing by the Engineer.

The Start Date/Commencement Date is given in the Contract Data. It is the date when the Contractor shall commence execution of the Works. It does not necessarily coincide with any of the Site Possession Dates.

A Nominated Sub-Contractor is a person or corporate body who has a Contract with the Contractor to carry out a part of the construction work and/or routine maintenance in the Contract, which includes work on the Site.

Temporary Works are works designed, constructed, installed, and removed by the Contractor that are needed for construction or installation of the Works.

Variation means a change to the:-

- i) Specification and /or Drawings (if any) which is instructed by the Employer.
- ii) Scope in the Contract which is instructed by the Employer.
- iii) Price in the Contract which is instructed by the Employer.

The Works, as defined in the Contract Data, are what the Contract requires the Contractor to construct, install, maintain, and turn over to the Employer. Routine maintenance is defined separately.

Jurisdiction: In case of any claim, dispute or difference arising in respect of a contract, the cause of action thereof shall be deemed to have arisen in Mumbai and all legal proceedings in respect of any claim, dispute or difference shall be instituted in a competent court in the City of Mumbai only.

2. Interpretation

2.1 In interpreting these Conditions of Contract, singular also means plural, male also means female or neuter, and the other way around. Headings have no significance. Words have their normal meaning under the language of the Contract unless specifically defined. The Engineer will provide instructions clarifying queries about these Conditions of Contract.

2.2 If sectional completion is specified in the Contract Data, references in the Conditions of Contract to the Works, the Completion Date, and the Intended Completion Date apply to any Section of the Works (other than references to the Completion Date and Intended Completion Date for the whole of the Works).

2.3 The documents forming the Contract shall be interpreted in the following documents: (1) Agreement, (2) Letter of Acceptance, (3) Notice to Proceed with the Work , (4) Contractor's Bid, (5) Contract Data, (6) Special Conditions of Contract Part (7) General Conditions of Contract Part I, (8) Specifications, (9) Drawings, (10) Bill of Quantities, and (11) Any other document listed in the Contract Data.

3 . Engineer's Decisions

3.1 Except where otherwise specifically stated, the Engineer will decide contractual matters between the Employer and the Contractor in the role representing the Employer. However, if the Engineer is required under the rules and regulations and orders of the Employer to obtain prior approval of some other authorities for specific actions, he will so obtain the approval, before communicating his decision to the Contractor.

3.2 Except as expressly stated in the Contract, the Engineer shall not have any authority to relieve the Contractor of any of his obligations under the contract.

4. Delegation

4.1 The Engineer, with the approval of the Employer, may delegate any of his duties and responsibilities to other person(s), except to the Adjudicator, after notifying the Contractor, and may cancel any delegation after notifying the Contractor.

5. Communications

All certificates, notices or instructions to be given to the Contractor by Employer/ Engineer shall be sent on the address or contact details given by the Contractor of Bid.

The address and contact details for communication with the Employer/ Engineer shall be as per the details given in Contract Data. Communications between parties that are referred to in the conditions shall be in writing. The Notice sent by facsimile (fax) or other electronic means shall be effective on confirmation of the transmission. The Notice sent by Registered post or Speed post shall be effective on delivery or at the expiry of the normal delivery period as undertaken by the postal service.

6. Subcontracting (Not allowed for this work)

6.1 Unless specifically mentioned in the contract subletting will not be allowed. Subletting, where otherwise provided by the contract shall not be more than 25% of the contract price.

6.2 The Contractor shall not be required to obtain any consent from the Employer for:

- a. the sub-contracting of any part of the Works for which the Subcontractor is named in the Contract;
- b. the provision for labour, or labour component.
- c. the purchase of Materials which are in accordance with the standards specified in the Contract.

6.3 Beyond what has been stated in clauses 6.1 and 6.2, if the Contractor proposes

sub contracting any part of the work during execution of the Works, because of some unforeseen circumstances to enable him to complete the Works as per terms of the Contract, the Employer will consider the following before according approval:

- a. The Contractor shall not sub-contract the whole of the Works.
 - b. The permitted subletting of work by the Contractor shall not establish any contractual relation- ship between the sub-contractor and the BMC and shall not relieve the Contractor of any responsibility under the Contract.
- 6.4 The Engineer should satisfy himself before recommending to the Employer whether
- a. the circumstances warrant such sub-contracting; and
 - b. the sub-Contractor so proposed for the Work possesses the experience, qualifications and equipment necessary for the job proposed to be entrusted to him.

7. Other Contractors

7.1 The Contractor shall cooperate and share the Site with other Contractors, public authorities, utilities, and the Employer between the dates given in the Schedule of Other Contractors, as referred to in the Contract Data. The Contractor shall also provide facilities and services for them as described in the Schedule. The Employer may modify the Schedule of Other Contractors, and shall notify the Contractor of any such modification.

7.2 The Contractor should take up the works in convenient reaches as decided by the Engineer to ensure there is least hindrance to the smooth flow and safety of traffic including movement of vehicles and equipment of other Contractors till the completion of the Works.

8. Personnel

8.1 The Contractor shall employ for the construction work and routine maintenance the key personnel including technical personnel named in the Contract Data or other personnel approved by the Engineer. The Engineer will approve any proposed replacement of technical personnel only if their relevant qualifications and abilities are substantially equal to those of the personnel stated in the Contract Data.

8.2 The Contractor's personnel shall appropriately be qualified, skilled and experienced in their respective trades or occupations. The Engineer shall have authority to remove, or cause to be removed, any person employed on the site or works, who carries out duties incompetently or negligently and persists in any conduct which is prejudicial to safety, health or the protection of the environment.

8.3 If the Engineer asks the Contractor to remove a person who is a member of the Contractor's staff or work force, stating the reasons, the Contractor shall ensure that the person leaves the Site within seven days and has no further connection with the Works in the Contract.

8.4 The Contractor shall not employ any retired Gazetted officer who has worked in the Engineering Department of the BMC /State Government and has either not completed two years after

the date of retirement or has not obtained BMC/State Government's permission to employment with the Contractor.

9. Employer's and Contractor's Risks

9.1 The Employer carries the risks which this Contract states are Employer's risks, and the Contractor carries the risks which this Contract states are Contractor's risks.

10. Employer's Risks

10.1 The Employer is responsible for the excepted risks which are (a) in so far as they directly affect the execution of the Works in the Employer's country, the risks of war, invasion, act of foreign enemies, rebellion, revolution, insurrection or military or usurped power, civil war, riot, commotion or disorder (unless restricted to the Contractor's employees) and contamination from any nuclear fuel or nuclear waste or radioactive toxic explosive, or (b) a cause due solely to the design of the Works, other than the Contractor's design.

11. Contractor's Risks

11.1 All risks of loss of or damage to physical property and of personal injury and death which arise during and in consequence of the performance of the Contract other than the excepted risks, referred to in clause 11.1, are the responsibility of the Contractor.

12. Insurance

12.1 The Contractor at his cost shall provide, in the joint names of the Employer and the Contractor, insurance cover from the Start Date to the end of Defects Liability Period, in the amounts and deductibles stated in the Contract Data for the following events which are due to the Contractor's risks:

- a) Loss of or damage to the Works, Plant and Materials;
- b) Loss of or damage to Equipment;
- c) Loss of or damage to property (other than the Works, Plant, Materials, and Equipment) in connection with the Contract; and
- d) Personal injury or death.

12.2 Insurance policies and certificates for insurance shall be delivered by the Contractor to the Engineer for the Engineer's approval before the Start Date. All such insurance shall provide for compensation to be payable in the types and proportions of currencies required to rectify the loss or damage incurred.

12.3 Alterations to the terms of insurance shall not be made without the approval of the Engineer.

12.4 Both parties shall comply with any conditions of the insurance policies.

12.5 If the Contractor does not provide any of the policies and certificates required, the Employer may affect the insurance which the Contractor should have provided and recover the premiums the Employer has paid, from payments otherwise due to the Contractor or if no payment is due, the payment of premiums shall be debt due.

13. Site Investigation Reports

13.1 The Contractor, in preparing the Bid, may rely, at his own risk, on any Site Investigation Reports referred to in the Contract Data, supplemented by any other information available to him, before submitting the bid.

14. Queries about the Contract Data

14.1 The Engineer will clarify queries on the Contract Data.

15. Contractor to Construct the Works and Undertake Maintenance (if specified in the tender)

15.1 The Contractor shall construct, and install and maintain the Works in accordance with the Specifications and Drawings and as per instructions of the Engineer.

15.2 The Contractor shall construct the works with intermediate technology, i.e., by manual means with medium input of machinery required to ensure the quality of works as per specifications. The Contractor shall deploy the equipment and machinery as required in the contract.

15.3 The Contractor shall take all reasonable steps to protect the environment on and off the Site and to avoid damage or nuisance to persons or to property of the public or others resulting from pollution, noise or other causes arising as a consequence of his methods of operation.

During continuance of the contract, the Contractor and his sub-contractors shall abide at all times by all existing enactments on environmental protection and rules made there under, regulations, notifications and byelaws of the State or Central Government, or local authorities and any other law, bye-law, regulations that may be passed or notification that may be issued in future by the State or Central Government or the local authority. Salient features of some of the major laws that are applicable are given below:

The Water (Prevention and Control of Pollution) Act, 1974, this provides for the prevention and control of water pollution and the maintaining and restoring of wholesomeness of water. 'Pollution' means such contamination of water or such alteration of the physical, chemical or biological properties of water or such discharge of any sewage or trade effluent or of any other liquid, gaseous or solid substance into water (whether directly or indirectly) as may, or is likely to, create a nuisance or render such water harmful or injurious to public health or safety, or to domestic, commercial, industrial, agricultural or other legitimate uses, or to the life and health of animals or plants or of aquatic organisms.

The Air (Prevention and Control of Pollution) Act, 1981, this provides for prevention, control and abatement of air pollution. 'Air Pollution' means the presence in the atmosphere of any 'air pollutant', which means any solid, liquid or gaseous substance (including noise) present in the atmosphere in such concentration as may be or tend to be injurious to human beings or other living creatures or plants or property or environment.

The Environment (Protection) Act, 1986, this provides for the protection and

improvement of environment and for matters connected therewith, and the prevention of hazards to human beings, other living creatures, plants and property.

‘Environment’ includes water, air and land and the inter-relationship which exists among and between water, air and land, and human beings, other living creatures, plants, micro-organism and property.

The Public Liability Insurance Act, 1991, This provides for public liability insurance for the purpose of providing immediate relief to the persons affected by accident occurring while handling hazardous substances and for matters connected herewith or incidental thereto. Hazardous substance means any substance or preparation which is defined as hazardous substance under the Environment (Protection) Act 1986, and exceeding such quantity as may be specified by notification by the Central Government.

16. The Works and Routine Maintenance to be completed by the Intended Completion Date

16.1 The Contractor may commence execution of the Works on the Start Date and shall carry out the Works and Routine Maintenance, if specified in the tender, in accordance with the Programme submitted by the Contractor, as updated with the approval of the Engineer, and complete them by the Intended Completion Date.

17. Approval by the Engineer (Not applicable to this tender)

17.1 The Contractor shall submit Specifications and Drawings showing the proposed Temporary Works to the Engineer, who is to approve them if they comply with the Specifications and Drawings.

17.2 The Contractor shall be responsible for design and safety of Temporary Works.

17.3 The Engineer’s approval shall not alter the Contractor’s responsibility for design and safety of the Temporary Works.

17.4 The Contractor shall obtain approval of third parties to the design of the Temporary Works, where required.

17.5 All Drawings prepared by the Contractor for the execution of the temporary or permanent Works, are subject to prior approval by the Engineer before their use.

18. Safety

18.1 The Contractor shall be responsible for the safety of all activities on the Site. He shall comply with all applicable safety requirements and take care of safety of all persons entitled to be on the site and the works. He shall use reasonable efforts to keep the site and the works, both during construction and maintenance, clear of unnecessary obstruction so as to avoid danger to the persons and the users.

Workers employed on mixing asphaltic materials, cement and lime mortars shall be provided with protective footwear and protective goggles.

Stone breaker shall be provided with protective goggles and protective clothing and seated at sufficiently safe intervals.

The area should be barricaded or cordoned off by suitable means to avoid mishaps of any kind. Power warning signs should be displayed for the safety of the public whenever cleaning works are undertaken during night or day.

The workers engaged for cleaning the manholes/sewers should be properly trained before allowing working in the manhole.

18.2 Safety Programs:-

- I. Have adequate safety supervision in place to ensure that safety programs set up by the firms/agencies are in compliance with prevalent laws and regulations.
- II. Review safety programs developed by each of the trade firms, prepare and submit a Comprehensive safety program.
- III. Monitor day to day implementation of safety procedures.

18.3 First Aid Facilities: -

- i. At every work place there shall be provided and maintained, so as to be easily accessible during working hours, first-aid boxes at the rate of not less than one box for 150 contract labour or part thereof ordinarily employed.
- ii. The first-aid box shall be distinctly marked with a red cross on white back ground.
- iii. Adequate arrangements shall be made for immediate recoupment of the equipment when necessary.
- iv. Nothing except the prescribed contents shall be kept in the First-aid box.
- v. The first-aid box shall be kept in charge of a responsible person who shall always be readily available during the working hours of the work place.
- vi. Person in charge of the First-aid box shall be a person trained in First-aid treatment, in the work places where the number of contract labour employed is 150 or more.

19. Discoveries

19.1 Anything of historical or other interest or of significant value unexpectedly discovered on the Site shall be the property of the Employer. The Contractor shall notify the Engineer of such discoveries and carry out the Engineer's instructions for dealing with them.

20. Possession of the Site (Not applicable to this tender)

20.1 The Employer shall handover complete or part possession of the site to the Contractor 7 days in advance of construction programme. At the start of the work, the Employer shall handover the possession of at-least 75% of the site free of all encumbrances, the remaining 25 % of the possession as per contractor's construction programme.

21. Access to the Site

21.1 The Contractor shall allow access to the Site and to any place where work in connection with the Contract is being carried out, or is intended to be carried out to the Engineer and any person/persons/agency authorized by: a. The Engineer b. The Employer or authorized by the Employer.

22. Instructions

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

22.2 The Contractor shall permit the appointed and/or authorized persons to inspect the Site and/or accounts and records of the Contractor and its subcontractors relating to the performance of the Contract, and to have such accounts and records audited by auditors appointed, if so required. The Contractor's attention is invited to Clause of 'Fraud and Corruption', which provides, inter alia, that acts intended to materially impede the exercise of the inspection and audit rights provided for under the Clause & constitute a obstructive practice subject to contract termination.

22.3 Engineer to have power to issue further drawings or instructions:

The Engineer shall have the power and authority from time to time and at all times to make and issue such further drawings and to give such further instructions and directions as may appear to him necessary or proper for the guidance of the contractor and the good and sufficient execution of the works according to terms of the specifications and Contractor shall receive, execute, obey and be bound by the same, according to the true intent and meaning thereof, as fully and effectually as though the same had accompanied or had been mentioned or referred to in the specification, and the Engineer may also alter or vary the levels or position of nature of works contemplated by the specifications, or may order any of the works contemplated thereby to be omitted, with or without the substitution of any other works in lieu thereof, or may order any work or any portion of work executed or partially executed, to be removed, changed or altered, added if needful, may order that other works shall be substituted instead thereof and difference of expense occasioned by any such diminution or alteration so ordered and directed shall be added to or deducted from the amount of this Contract, as provided under condition no. 10 (a) hereinafter.

No work which radically changes the original nature of the Contract shall be ordered by the Engineer and in the event of any deviation being ordered which in the opinion of the Contractor changes the original nature of Contract he shall nevertheless carry it out and disagreement as to the nature of the work and the rate to be paid therefore shall be resolved in accordance with condition no.13d.

The time for completion of the Works, shall be in even of any deviations resulting in additional cost over the contract price being ordered, be extended or reduced reasonably by the Engineer. The Engineer's decision in this case shall be final.

B. Time Control

23. Programme

23.1 Within the time stated in the Contract Data, the Contractor shall submit to the Engineer for approval a Programme, including Environment Management Plan showing the general methods, arrangements, order, and timing for all the activities in the Works, along with monthly cash flow forecasts for the construction of works.

After the completion of the construction works, the programme for the Routine Maintenance Work, showing the general methods, arrangements, order and timing for all the activities involved in the Routine Maintenance will also be submitted by the Contractor to the Engineer for approval if specified in the tender. The programme for Routine Maintenance will be submitted in each year for the period of Maintenance.

23.2 The Contractor shall submit the list of equipment and machinery being brought to site, the list of key personnel being deployed, the list of machinery/ equipments being placed in field laboratory and the location of field laboratory along with the Programme. The Engineer shall cause these details to be verified at each appropriate stage of the programme.

23.3 An update of the Programme shall be a programme showing the actual progress achieved on each activity and the effect of the progress achieved on the timing of the remaining Works, including any changes to the sequence of the activities.

23.4 The Contractor shall submit to the Engineer for approval an updated Programme at intervals no longer than the period stated in the Contract Data. If the Contractor does not submit an updated Programme within this period, the Engineer may withhold the amount stated in the Contract Data from the next payment certificate and continue to withhold this amount until the next payment after the date on which the overdue Programme has been submitted.

23.5 The Engineer's approval of the Programme shall not alter the Contractor's obligations. The Contractor may revise the Programme and submit it to the Engineer again at any time. A revised Programme shall show the effect of Variations and Compensation Events.

24. Extension Of Time In Contracts : Subject to any requirement in the contract as to completion of any portions or portions of the works before completion of the whole, the contractor shall fully and finally complete the whole of the works comprised in the contract (with such modifications as may be directed under conditions of this contract) by the date entered in the contract or extended date in terms of the following clauses:

a)Extension attributable to BMC

(i) Extension Due To Modification: If any modifications have been ordered which in the opinion of the Engineer have materially increased the magnitude of the work, then such extension of the contracted date of completion may be granted as shall appear to the Engineer to be reasonable in the circumstances, provided moreover that the Contractor shall be responsible for requesting such extension of the date as may be considered necessary as soon as the cause thereof

shall arise and in any case **should not be less than 30 days before the expiry of the date fixed for completion of the works.**

(ii) Extension For Delay Due To BMC: In the event of any failure or delay by the BMC to hand over the Contractor possession of the lands necessary for the execution of the works or to give the necessary notice to commence the works or to provide the necessary drawings or instructions or any other delay caused by the BMC due to any other cause whatsoever, then such failure or delay shall in no way affect or vitiate the contract or alter the character thereof or entitle the contractor to damages or compensation therefore, but in any such case, the BMC may grant such extension(s) of the completion date as may be considered reasonable.

Note: For extension of time period as governed in (i) and (ii) above, any modifications in design/drawings, specifications, quantities shall be needed to be justified with recorded reasons with approval of Ch.Eng. for not anticipating the same while preparing estimates and draft tender.

(b) Extension Of Time For Delay Due To Contractor : The time for the execution of the work or part of the works specified in the contract documents shall be deemed to be the essence of the contract and the works must be completed no later than the date(s) / the programme for completion of work as specified in the contract. If the contractor fails to complete the works within the time as specified in the contract for the reasons other than the reasons specified in above as (a.i) and (a.ii), the BMC may, if satisfied that the works can be completed by the contractor within reasonable short time thereafter, allow the contractor for further extension of time as the Engineer may decide. On such extension the BMC will be entitled without prejudice to any other right and remedy available on that behalf, to recover the compensation as governed by Clause 8(e) of GCC

For the purpose of this Clause, the contract value of the works shall be taken as value of work as per contract agreement including any supplementary work order/contract agreement issued.

Further, competent authority while granting extension to the currency of contract under Clause (b) of as above may also consider levy of penalty, as deemed fit based on the merit of the case. Also, the reasons for granting extension shall be properly documented.

25. Delays Ordered by the Engineer

25.1 The Engineer may instruct the Contractor to delay the start or progress of any activity within the Works. Delay/delays totaling more than 30 days will require prior written approval of the DMC/AMC.

26. Management Meetings

26.1 The Engineer may require the Contractor to attend a management meeting. The business of a management meeting shall be to review the plans for progress of the Works.

26.2 The Engineer shall record the business of management meetings and provide copies of the record to those attending the meeting. The responsibility of the parties for actions to be taken shall be decided by the Engineer either at the management meeting or after the management meeting and stated in writing to all those who attended the meeting.

C. Quality Control

27.1. Work to be open to Inspection and Contractor or Responsible agent to be present

All works under or in course of execution or executed in pursuance of the contract shall at all times be open to the inspection and supervision of the Eng-in-charge and his subordinates and the contractor shall at all times during the usual working hours, at all other times, during the usual working hours and at all other times at which reasonable notice of the intention of the Eng-in-charge and his subordinates to visit the works shall have been given to the contractor, either himself be present to receive orders and instruction or have responsible agent duly accredited in writing present for that purpose. Order given to the contractors' duly authorized agent shall be considered to have the same force and effect as if they had been given to the contractor himself.

27.2. Notice To Be Given Before Work Is Covered Up

The contractor shall give not less than ten days' notice in writing to the Eng-In- Charge or his subordinate incharge of the work before covering up or otherwise placing beyond the reach of measurement any work in order that the same may be measured and correct dimension thereof taken before the same is so covered up or placed beyond the reach of measurements and shall not cover up or place beyond the reach of measurement any work without the consent in writing of the Eng-In-Charge or his subordinate incharge of the work, and if any work shall be covered up or placed beyond the reach of measurement, without such notice having been given or consent obtained the same shall be uncovered at the contractors expenses, and in default thereof no payment or allowance shall be made for such work or for the materials with which the same was executed.

27.3 Works to be executed in accordance with specifications / drawings / orders etc. :

The contractor shall execute the whole and every part of the work the most substantial and workman like manner and both has regards material and every other respect in strict accordance with specifications. The contractor shall also confirm exactly, fully and faithfully to the designs, drawings and instructions in writing relating to the work signed by the Engineer In-charge and lodged in his office and to which the contractor shall be entitled to have access for the purpose of inspection at such office, or on the site or work during office hours. The contractor shall be entitled to receive three sets of contract drawings and working drawings as well as one certified copy of the accepted tender along with the work order free of cost.

27.4 ~~Ready Mix Concrete/ Asphalt Mix~~

- ~~i) The contractor shall have to arrange Ready Mix concrete (RMC)/Asphalt from RMC/ASPHALT producing plants registered with BMC~~
- ~~ii) The contractor shall, within a 7 days of award of the work, submit a list of at least three RMC/Asphalt producers with details of such plants including details and number of transit, mixers & HT VCBs etc. to be deployed indicating name of owner/company, its location, capacity, technical establishment. The Engineer in charge will reserve right to inspect at any stage and reject the concrete if he is not satisfied about quality of product at the user's end.~~
- ~~iii) The Engineer in charge reserves the right to exercise control over the:-~~
- ~~a) Calibration check of the RMC/Asphalt plant.~~
- ~~b) Weight and quantity check on the ingredients, water and admixtures added for batch mixing for RMC plants.~~
- ~~c) Time of mixing of concrete/grade of asphalt.~~
- ~~d) Testing of fresh concrete/asphalt mix, recording of results and declaring the mix fit or unfit for use. This will include continuous control on the work ability during production and taking corrective action, if required.~~
- ~~e) For exercising such control, the Engineer in charge shall periodically depute his authorized representative at the RMC/Asphalt plant. It shall be responsibility of the contractor to ensure that all necessary equipment, manpower & facilities are made available to Engineer in charge and or his authorized representative at RMC/Asphalt plant.~~
- ~~f) All required relevant records of RMC/Asphalt mix shall be made available to the Engineer in charge or his authorized representative. Engineer in charge shall, as required, specify guidelines & additional procedures for quality control & other parameters in respect of material production & transportation of concrete mix which shall be binding on the contractor & the RMC/Asphalt plant. Only concrete as approved in design mix by Engineer in charge shall be produced in RMC plant and transported to the site.~~
- ~~g) The contractor shall have to produce a copy of challan receipts/SCADA reports/VTS reports as issued by the RMC/Asphalt plant as a documentary proof in lieu of supply of RMC/Asphalt mix before releasing payment.~~

28. Identifying Defects

28.1 The Engineer shall check the Contractor's work and notify the Contractor of any Defects that are found. Such checking shall not affect the Contractor's responsibilities. The Engineer may instruct the Contractor to search for a Defect and to uncover and test any work that the Engineer considers may have a Defect.

28.2 The Contractor shall permit the Employer's technical person(s) to check the Contractor's work and notify the Engineer and Contractor if any defects that are found.

29. Tests (Not applicable for this work)

29.1 For carrying out mandatory tests as prescribed in the specifications, the Contractor shall establish field laboratory at the location decided by Engineer. The field laboratory will have minimum of equipments as specified in the Contract Data. The contractor shall be solely responsible for :

- a. Carrying out the mandatory tests prescribed in the Specifications, and
- b. For the correctness of the test results, whether preformed in his laboratory or elsewhere.

29.2 If the Engineer instructs the Contractor to carry out a test not specified in the Specification/ Quality Assurance Handbook to check whether any work has a Defect and the test shows that it does, the Contractor shall pay for the test and any samples. If there is no defect, the test shall be a compensation event.

When required by the Engineer-in-charge the contractor(s) shall supply for the purpose of testing samples of all materials proposed to be used in the works. Samples submitted either to govern bulk supplies or required for testing before use shall be in suitable packages to contain them and shall be provided free of charge by the contractor. The cost of testing shall be borne by the contractor even if the result of the sample confirms or do not confirm to the relevant BIS code specifications.

- i. All expenditure required to be incurred for taking the samples conveyance, packing shall be borne by the contractor himself.
- ii. The failed material shall be removed from the site by the contractor at his own cost within a week time of written order of the Engineer-in-charge.

29.3 ~~Setting of Site Laboratories:~~

~~Contractors shall set up a laboratory at site before commencement of work at their cost for performing various tests and at least the following machines and equipments shall be provided therein—~~

- ~~1. Set of Sieves as per I.R.C. /I.S.~~
- ~~2. Compressive Testing Machine(For new works)~~
- ~~3. Oven, Electrically Operated~~
- ~~4. Weighing Balance (20 kg capacity)~~
- ~~5. 3 m straight edge~~
- ~~6. Sieve shaker~~
- ~~7. First Aid Box~~
- ~~8. Measuring Jar (for silt content)~~
- ~~9. Other Machines/apparatus as may be directed by the Engineer.~~
- ~~10. Vernier Caliber~~
- ~~11. Level / Theodolite~~

~~All the test records shall be maintained in the site office and made available as and when required. The laboratory must be established within 15 days from the date of receipt of the orders from Engineer In charge. On failure to do so, a penalty of Rs 1000/ per day shall be imposed.~~

~~The contractor shall install testing equipment at site. The contractor shall ensure and certify the calibration of the equipment so installed and shall maintain the same in working order throughout the period of construction. The contractor shall also provide necessary technically qualified experienced trained staff for carrying out such tests for using such equipment. The tests shall be carried out under the supervision of the Engineer in charge. The calibration shall be checked every twelve months as directed by Engineer in charge.~~

30. Correction of Defects noticed during the Defects Liability Period.

30.1 (a) The Engineer shall give notice to the Contractor of any Defects before the end of the Defects Liability Period, which begins at Completion and ends after three years. The Defects Liability Period shall be extended for as long as Defects remain to be corrected.

(b) Every time notice of Defect/Defects is given, the Contractor shall correct the notified Defect/Defects within the duration of time specified by the Engineer's notice.

(c) The Engineer may issue notice to the Contractor to carry out removal of defects or deficiencies, if any, noticed in his inspection, or brought to his notice. The Contractor shall remove the defects and deficiencies within the period specified in the notice and submit to the Engineer a compliance report.

31. Uncorrected Defects and Deficiencies

31.1 If the Contractor has not corrected a Defect pertaining to the Defect Liability Period under clause and deficiencies in maintenance, to the satisfaction of the Engineer, within the time specified in the Engineer's notice, the Engineer will assess the cost of having the Defect or deficiency corrected, and the Contractor shall pay this amount, on correction of the Defect or deficiency by another agency.

D. Cost Control

32. Variations

The Engineer shall, having regard to the scope of the Works and the sanctioned estimated cost, have power to order, in writing, Variations within the scope of the Works he considers necessary or advisable during the progress of the Works. Such Variations shall form part of the Contract and the Contractor shall carry them out and include them in updated Programmes produced by the Contractor. Oral orders of the Engineer for Variations, unless followed by written confirmation, shall not be taken into account.

33. Payments for Variations

33.1 If rates for Variation items are specified in the Bill of Quantities, the Contractor shall carry out such work at the same rate.

33.2 The rate for Extra/Excess shall be governed by clause 10.A of Standard General

34. Cash Flow Forecasts

When the Programme is updated, the Contractor shall provide the Engineer with an updated cash flow forecast.

35. Payment Certificates

The payment to the Contractor will be as follows for construction work:

- (a) A bill shall be submitted by the Contractor monthly or before the date fixed by the Engineer In-charge for all works executed in the previous month, and the Engineer In-charge shall take or cause to be taken requisite measurement for the purpose of having the same verified and the claim, so far as it is admissible, shall be adjusted, if possible, within 10 days from the presentation of the bill. If the contractor does not submit the bill within the time fixed as aforesaid, the Engineer In-charge may depute a subordinate to measure up the said work in the presence of the contractor or his duly authorized agent whose counter signature to the measurement list shall be sufficient warrant, and Engineer In-Charge may prepare a bill from such list which shall be binding on the contractor in all respects.
- (b) The Engineer shall check the Contractor's fortnightly/monthly statement within 14 days and certify the amount to be paid to the Contractor.
- (c) The value of work executed shall be determined, based on measurements by the Engineer.
- (d) The value of work executed shall comprise the value of the quantities of the items in the Bill of Quantities completed.
- (e) The value of work executed shall also include the valuation of Variations and Compensation Events.
- (f) The Engineer may exclude any item certified in a previous certificate or reduce the proportion of any item previously certified in any certificate in the light of later information.
- (g) The contractor shall submit all bills on the printed forms at the office of In-charge. The charges to be made in the bills shall always be entered at the rates specified in tender.

36. Payments

36.1 Payments shall be adjusted for deductions for advance payments, retention, security deposit, other recoveries in terms of the Contract and taxes at source, as applicable under the law. The Employer shall pay the Contractor the amounts certified by the Engineer within 15 days of the date of each certificate.

36.2 All sums payable by a contractor by way of compensation under any of these conditions, shall be considered as a reasonable compensation to be applied to the use of BMC without reference to the actual loss or damage sustained and whether any damage has or has not been sustained.

36.3 No payment shall be made for any work estimated to cost less than Rupees One Thousand till after the whole of work shall have been completed and the certificate of completion given. But in the case of works estimated to cost more than Rs. One Thousand, the contractor shall on submitting a monthly bill therefore be entitled to receive payment proportionate to the part of the work than approved and passed by the Engineer In-charge, whose certificate of such approval and passing of the sum so payable shall be final and conclusive against the contractor. All such intermediate payments shall be regarded as payments by way of advance against the final payments only and not as payments for work actual done and completed and shall not preclude the Engineer In-charge from requiring any bad, unsound, imperfect or unskillful work to be removed or taken away and reconstructed or re-erected nor shall any such payment be considered as an admission of the due performance of the contract or any part thereof in any respect or the offering of any claim not shall it conclude, determine or effect in any other way, the powers of the Engineer In-charge as to the final settlement and adjustment of the accounts or otherwise, or in any other way vary or effect the contract. The final bill shall be submitted by the Contractor within one month of the date fixed for the completion of the work otherwise the Engineer In-charge's certificate of the measurements and of the total amount payable for the work shall be final and binding on all parties.

37. The Contractor shall not be entitled to compensation to the extent that the Employer's interests are adversely affected by the Contractor for not having given early warning or not having cooperated with the Engineer.

38. Tax : All taxes, duties, cess and charges such as Octroi, Service Tax, Terminal or Sales Tax, VAT, GST etc. and other duties on material obtained for the work from any source including the tax applicable as per Maharashtra Sales Tax Act, on the transfer of property in goods involved in the execution of work contract (re-enacted) Act 1989 or as amended shall be borne by tenderer. The tenderer will not be reimbursed the taxes, duties, cess and charges whether now in force or that may be enforced in future.

Rates accepted by BMC shall hold good till completion of work and no additional individual claim shall be admissible on account of fluctuations in market rates; increase in taxes/any other levies/tolls etc. except that payment/recovery for overall market situation shall be made as per Price Variation and if there is any subsequent change (after submission of bid) in rate of GST applicable on the work/services to be executed as per tender, i.e. any increase will be reimbursed by BMC whereas any reduction in the rate of GST shall be passed on to BMC as per the provisions of the GST Act.

39. Currencies

All payments will be made in Indian Rupees.

40. Liquidated Damages

Both, the Contractor and the Employer have agreed that it is not feasible to precisely estimate the amount of losses due to delay in completion of works and the losses to the public and the economy,

therefore, both the parties have agreed that the Contractor shall pay liquidated damages to the Employer and not by way of penalty, at the rate per week or part thereof stated in the Contract Data for the period that the Completion Date is later than the Intended Completion Date. Liquidated damages at the same rates shall be withheld if the Contractor fails to achieve the milestones prescribed in the Contract Data. However, in case the Contractor achieves the next milestone, the amount of the liquidated damages already withheld shall be restored to the Contractor by adjustment in the next payment certificate. The Employer and the contractor have agreed that this is a reasonable agreed amount of liquidated damage. The Employer may deduct liquidated damages from payments due to the Contractor. Payment of liquidated damages shall not affect the Contractor's other liabilities.

41. Cost of Repairs

Loss or damage to the Works or Materials to be incorporated in the Works between the Start Date and the end of the Defects Correction periods shall be remedied by the Contractor at his cost if the loss or damage arises from the Contractor's acts or omissions.

E. Finishing the Contract

42. Completion of Construction and Maintenance

42.1 The Contractor shall request the Engineer to issue a certificate of completion of the construction of the works, and the Engineer will do so upon deciding that the works is completed. This shall be governed as per clause no.8(g) of Standard General Conditions of Contract.

43. Taking Over

43.1 The Employer shall take over the works within seven days of the Engineer issuing a certificate of completion of works. The Contractor shall continue to remain responsible for its routine maintenance during the maintenance period if specified in the contract.

44. Final Account

Final joint measurement along with the representatives of the contractor should be taken recorded and signed by the Contractors. Contractors should submit the final bill within 1 month of physical completion of the work

If the contractor fails to submit the final bill within 1 month, the BMC staff will prepare the final bill based on the joint measurement within next 3 months.

Engineer's decision shall be final in respect of claims for defect and pending claims against contractors.

No further claims should be made by the Contractor after submission of the final bill and these shall be deemed to have been waived and extinguished. Payment of those items of the bills in respect of which there is no dispute and of items in dispute, for quantities and rates as approved by the Commissioner shall be made within a reasonable period as may be necessary for the

purpose of verification etc.

After payment of the final bill as aforesaid has been made, the contractor may, if he so desires, reconsider his position in respect of a disputed portion of the final bills and if he fails to do so within 84 days, his disputed claim shall be dealt with as provided in the contract.

A percentage of the retention money, over and above the actual retention money as indicated below shall be held back from payments till the finalization of final bill to be submitted as per above and will be paid within 30 days of acceptance of the final bill.

Sr.no.	Amount of Contract Cost	Minimum Payable Amount in final bill
1	Upto Rs.5 Crs.	Rs.10 Lacs or final bill whichever is more
2	Upto Rs.25 Crs.	Rs.1 Crore or final bill amount whichever is more
3	Upto Rs. 50 Crs.	Rs.2 Crores or final bill amount whichever is more
4	Upto Rs.100 Crs.	Rs.4 Crore or final bill amount whichever is more
5	More than Rs.100 Crs..	Rs.7 Crore or final bill amount whichever is more

The contractor have to submit the bill for the work carried out within 15 days from the date of completion of the work to the respective executing department. If the contractor fails to submit their bills to concerned executing department, penalty or action as shown below will be taken for each delayed bill:-

After 15 days from the date of completion/running bill up to certain date, up to next 15 days i.e. up to 30 days	Equal to 5% of bill amount
Next 15 days up to 45 days from the date of completion/running bill up to specified date	Equal to 10% of bill amount
If not submitted within 45 days from the date of completion/ R.A. bill	Bill will not be admitted for payment.

45. Operating and Maintenance Manuals

45.1 If "as built" Drawings and/or operating and maintenance manuals are required, the Contractor shall supply them by the dates stated in the Contract Data.

45.2 If the Contractor does not supply the Drawings and/or manuals by the dates stated in the Contract Data, or they do not receive the Engineer's approval, the Engineer shall withhold the amount stated in the Contract Data from payments due to the Contractor.

46. Termination

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

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

- a) the Contractor stops work for 30 days when no stoppage of work is shown on the current Programme and the stoppage has not been authorized by the Engineer;
- b) the Contractor is declared as bankrupt or goes into liquidation other than for approved

reconstruction or amalgamation;

- c) the Engineer gives Notice that failure to correct a particular Defect is a fundamental breach of Contract and the Contractor fails to correct it within a reasonable period of time determined by the Engineer;
- d) the Contractor does not maintain a Security, which is required;
- e) the Contractor has delayed the completion of the Works by the number of days for which the maximum amount of liquidated damages can be paid, as defined in relevant clause.
- f) the Contractor fails to provide insurance cover as required under relevant clause
- g) if the Contractor, in the judgment of the Employer, has engaged in the corrupt or fraudulent practices as defined in GCC in competing for or in executing the Contract.
- h) if the Contractor fails to set up a field laboratory with the prescribed equipment, within the period specified in the Contract Data; and
- i) any other fundamental breaches as specified in the Contract Data.
- j) if the Contractor fails to deploy machinery and equipment or personnel as specified in the Contract Data at the appropriate time.

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

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

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

47. Payment upon Termination

47.1 If the Contract is terminated because of a fundamental breach of Contract by the Contractor, the Engineer shall issue a certificate for value of the work done and materials ordered less liquidated damages, if any, less advance payments received up to the date of the issue of the certificate and less the percentage to apply to the value of the work not completed, as indicated in the Contract Data. If the total amount due to the Employer exceeds any payment due to the Contractor, the difference shall be recovered from the security deposit, and performance security. If any amount is still left un-recovered it will be a debt due from the Contractor to the Employer

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

48. Property

48.1 All Materials on the Site, Plant, Equipment, Temporary Works, and Works shall be deemed to be the property of the Employer for use for completing balance construction work if the Contract is terminated because of the Contractor's default, till the Works is completed after which it will be transferred to the Contractor and credit, if any, given for its use.

49. Release from Performance

If the Contract is frustrated by the outbreak of war or by any other event entirely outside the control of the Employer or the Contractor, the Engineer shall certify that the Contract has been frustrated. The Contractor shall make the Site safe and stop work as quickly as possible after receiving this certificate and shall be paid for all work carried out before receiving it and for any work carried out afterwards to which a commitment was made.

A) Other Conditions of Contract

50. Labour

50.1 The Contractor shall, unless otherwise provided in the Contract, make his own arrangements for the engagement of all staff and labour, local or other, and for their payment, housing, feeding and transport.

50.2 The Contractor shall, if required by the Engineer, deliver to the Engineer a return in detail, in such form and at such intervals as the Engineer may prescribe, showing the staff and the number of the several classes of labour from time to time employed by the Contractor on the Site and such other information as the Engineer may require.

51. Compliance with Labour Regulations

(a) During continuance of the Contract, the Contractor and his sub-Contractors shall abide at all times by all existing labour enactments and rules made there under, regulations, notifications and bye laws of the State or Central Government or local authority and any other labour law (including rules), regulations, bye laws that may be passed or notification that may be issued under any labour law in future either by the State or the Central Government or the local authority.

(b) Furthermore, the Contractor shall keep the Employer indemnified in case any action is taken against the Employer by the competent authority on account of contravention of any of the provisions of any Act or rules made there under, regulations or notifications including amendments. If the Employer is caused to pay or reimburse, such amounts as may be necessary to cause or observe, or for non-observance of the provisions stipulated in the notifications/bye laws/Acts/Rules/regulations including amendments, if any, on the part of the Contractor, the Engineer/Employer shall have the right to deduct any money due to the Contractor including his amount of performance guarantee. The Employer/Engineer shall also have right to recover from the Contractor any sum required or estimated to be required for making good the loss or damage suffered by the Employer.

(c) The Contractor shall require his employees to obey all applicable laws, including those concerning safety at work.

(d) The employees of the Contractor and the Sub-Contractor in no case shall be treated as the employees of the Employer at any point of time.

52. Drawings and Photographs of the Works

52.1 The Contractor shall do photography/video photography of the site firstly before the start of the work, secondly mid-way in the execution of different stages of work as required by Engineer In-charge and lastly after the completion of the work. No separate payment will be made to the Contractor for this.

52.2 The Contractor shall not disclose details of Drawings furnished to him and works on which he is engaged without the prior approval of the Engineer in writing. No photograph of the works or any part thereof or plant employed thereon, except those permitted under above clause, shall be taken or permitted by the Contractor to be taken by any of his employees or any employees of his sub-Contractors without the prior approval of the Engineer in writing. No photographs/ Video photography shall be published or otherwise circulated without the approval of the Engineer in writing.

53. The Apprentices Act, 1961

The Contractor shall duly comply with the provisions of the Apprentices Act 1961 (III of 1961), the rules made there under and the orders that may be issued from time to time under the said Act and the said Rules and on his failure or neglect to do so, he shall be subject to all liabilities and penalties provided by the said Act and said Rules.

54 Contract Document

The documents forming the contract are to be taken as mutually explanatory of one another. Unless otherwise provided in the contract, the priority of the documents forming the contract shall be, as follows:

- 1) Contract Agreement (if completed)
- 2) The letter of Acceptance
- 3) The Bid:
- 4) Addendum to Bid; if any
- 5) Tender Document
- 6) The Bill of Quantities:
- 7) The Specification:
- 8) Detailed Engineering Drawings
- 9) Standard General Conditions of Contracts (GCC)
- 10) All correspondence documents between bidder/contractor and BMC.

55 Conflict of Interest

The Applicant shall not have a conflict of interest (the “Conflict of Interest”) that affects the Bidding Process. Any Applicant found to have a Conflict of Interest shall be disqualified. An Applicant shall be deemed to have a Conflict of Interest affecting the Bidding Process, if

1. A constituent of such Applicant is also a constituent of another Applicant; or
2. Such Applicant has the same legal representative for purposes of this Application as any other Applicant; or
3. Such Applicant, or any Associate thereof has a relationship with another Applicant, or any Associate thereof, directly or through common third party/ parties, that puts either or both of them in a position to have access to each other’s information about, or to influence the Application of either or each other; or
4. The Applicant shall be liable for disqualification if any legal, financial or technical adviser of the Authority in relation to the Project is engaged by the Applicant, its Member or any Associate thereof, as the case may be, in any manner for matters related to or incidental to the Project. For the avoidance of doubt, this disqualification shall not apply where such adviser was engaged by the Applicant, its Member or Associate in the past but its assignment expired or was terminated 6 (six) months prior to the date of issue of this TENDER. Nor will this disqualification apply where such adviser is engaged after a period of 3 (three) years from the date of commercial operation of the Project.

56. Applications and costs thereof

No Applicant shall submit more than one Application for the Project. An applicant applying individually shall not be entitled to submit another application either individually. The Applicant shall be responsible for all of the costs associated with the preparation of their Applications and their participation in the Bid Process. The Authority will not be responsible or in any way liable for such costs, regardless of the conduct or outcome of the Bidding Process.

57. Acknowledgment by Applicant

It shall be deemed that by submitting the Application, the Applicant has:

- a. made a complete and careful examination of the tender;
- b. received all relevant information requested from the Authority;
- c. accepted the risk of inadequacy, error or mistake in the information provided in the tender or furnished by or on behalf of the Authority relating to any of the matters referred; and
- d. Agreed to be bound by the undertakings provided by it under and in terms hereof. “The Authority” shall not be liable for any omission, mistake or error in respect of any of the above or on account of any matter or thing arising out of or concerning or relating to the TENDER or the Bidding Process, including any error or mistake therein or in any information or data given by the Authority.

58. Right to accept or reject any or all Applications/ Bids

Notwithstanding anything contained in this TENDER, “The Authority” reserves the right to accept or reject any Application and to annul the Bidding Process and reject all Applications/ Bids, at any time without any liability or any obligation for such acceptance, rejection or annulment, and without assigning any reasons therefore. In the event that the Authority rejects or annuls all the Bids, it may, in its discretion, invite all eligible Bidders to submit fresh Bids hereunder.

“The Authority” reserves the right to reject any Application and/ or Bid if:

- (a) at any time, a material misrepresentation is made or uncovered, or
- (b) the Applicant does not provide, within the time specified by the Authority, the supplemental information sought by the Authority for evaluation of the Application.

In case it is found during the evaluation or at any time before signing of the Agreement or after its execution and during the period of subsistence thereof including the concession thereby granted by “The Authority”, that one or more of the pre- qualification conditions have not been met by the Applicant, or the Applicant has made material misrepresentation or has given any materially incorrect or false information, the Applicant shall be disqualified forthwith if not yet appointed as the Successful Bidder either by issue of the LOA (Letter of Approval) or entering into of the Agreement, and if the Applicant has already been issued the LOA or has entered into the Concession Agreement, as the case may be, the same shall, notwithstanding anything to the contrary contained therein or in this TENDER, be liable to be terminated, by a communication in writing by “The Authority” to the Applicant, without the Authority being liable in any manner whatsoever to the Applicant and without prejudice to any other right or remedy which the Authority may have under this TENDER, the Bidding Documents, the Concession Agreement or under applicable law.

“The Authority” reserves the right to verify all statements, information and documents submitted by the Applicant in response to the TENDER. Any such verification or lack of such verification by the Authority shall not relieve the Applicant of its obligations or liabilities hereunder nor will it affect any rights of the Authority there under.

59 The bid shall be rejected if the bidder-

- a. Stipulates the validity period less than 180 days.
- b. Stipulates own condition/conditions.
- c. Does not fill and (digital) sign undertaking forms, which are incorporated, in the document.

60 Clarifications

Applicants requiring any clarification on the tender may notify “the Authority” in writing or by fax or e-mail. They should send in their queries before the date specified in the header data. “The Authority” shall Endeavor to respond to the queries within the period specified therein. The responses will be sent by fax and/or e-mail. The Authority will forward all the queries and its responses thereto,

to all purchasers of the TENDER without identifying the source of queries.

“The Authority” shall Endeavor to respond to the questions raised or clarifications sought by the Applicants. However, the Authority reserves the right not to respond to any question or provide any clarification, in its sole discretion, and nothing in this Clause shall be taken or read as compelling or requiring the Authority to respond to any question or to provide any clarification, but not later than the date provided in header data.

“The Authority” may also on its own motion, if deemed necessary, issue interpretations and clarifications to all Applicants. All clarifications and interpretations issued by the Authority shall be deemed to be part of the tender. Verbal clarifications and information given by Authority or its employees or representatives shall not in any way or manner be binding on the Authority.

61 Amendment of tender

At any time prior to the deadline for submission of Application, the Authority may, for any reason, whether at its own initiative or in response to clarifications requested by an Applicant, modify the tender by the issuance of Addendum.

Any Addendum thus issued will be sent in writing/ Fax/ Email to all those who have purchased the tender.

In order to afford the Applicants a reasonable time for taking an Addendum into account, or for any other reason, the Authority may, in its sole discretion, extend the Application Due Date.

Preparation and Submission of Application

62 Language

The Application and all related correspondence and documents in relation to the Bidding Process shall be in English language. Supporting documents and printed literature furnished by the Applicant with the Application may be in any other language provided that they are accompanied by translations of all the pertinent passages in the English language, duly authenticated and certified by the Applicant. Supporting materials, which are not translated into English, may not be considered. For the purpose of interpretation and evaluation of the Application, the English language translation shall prevail.

63 Format and signing of Application

The Applicant shall provide all the information sought under this TENDER. The Authority will evaluate only those Applications that are received in the required formats and complete in all respects. Incomplete and /or conditional Applications shall be liable to rejection.

The Applicant will upload bid in One Folder in electronic form which shall contain the scanned certified copies of the documents given below and the documents uploaded has to be digitally signed by the bidder. These copies shall be certified by Practicing Notary approved by the Govt. of Maharashtra or Govt. of India with his stamp, clearly stating his name & registration number, except where original documents are demanded.

64 Marking of Applications

The Applicant shall submit the Application in the format specified at Appendix-I, together with the documents, upload in folder as “VENDOR” together with their respective enclosures. Applications submitted by fax, telex, telegram shall not be entertained and shall be rejected outright.

65 Late Applications

Applications received by the Authority after the specified time on the Application Due Date shall not be eligible for consideration and shall be summarily rejected.

66 Confidentiality

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

67 Clarification Of Financial Bids

To assist in the examination, evaluation and comparison of Bids, the Engineer may, at his discretion, ask any bidder for clarification of his Bid, including breakdown of unit rates. The request for clarification and the response shall be in writing or by post/facsimile/e- mail. No Bidder shall contact the Engineer on any matter relating to his bid from the time of the bid opening to the time the contract is awarded. Any effort by the Bidder to influence the Engineer in the Engineer's bid evaluation, bid comparison or contract award decisions may result in the rejection of the Bidder's bid.

68 Inspection of site and sufficiency of tender:

1. The Contractor shall inspect and examine the site and its surrounding and shall satisfy himself before submitting his tender as to the nature of the ground and subsoil (so far as is practicable), the form and nature of the site, the quantities and nature of the work and materials necessary for the completion of the works and means of access to the site, the accommodation he may require and in general shall himself obtain all necessary information as to risk, contingencies and other circumstances which may influence or affect his tender. He shall also take into consideration the hydrological and climatic conditions.
2. The Employer may make available to the Contractor data on hydrological and sub- surface

conditions as obtained by or on his behalf from investigations relevant to the works but the Contractor shall be responsible for his own interpretation thereof. The contractor shall engage his investigating agency with prior approval of the Engineer from the approved list of such agencies by BMC or Govt at his cost initially before commencing actual work and which shall be reimbursed immediately subject to satisfaction of the Engineer for faithful compliance and submission of required data regarding such investigation within specified time.

3. The Contractor shall be deemed to have satisfied himself before tendering as to the correctness and sufficiency of his tender for the works and of the rates and prices quoted in the schedule of works / items / quantities, or in Bill of Quantities, which rates and prices shall, except as otherwise provided cover all his obligations under the Contract and all matters and things necessary for proper completion and maintenance of the works. No extra charges consequent on any misunderstanding.

4. **Not Foreseeable Physical Obstructions or Conditions:** If, however, during the execution of the Works the Contractor encounters physical obstructions or physical conditions, other than climatic conditions on the Site, which obstructions or conditions were, in his opinion, not foreseeable by an experienced contractor, the Contractor shall forthwith give notice thereof to the Engineer. On receipt of such notice, the Engineer shall, if in his opinion such obstructions or conditions could not have been reasonably foreseen by an experienced contractor, after due consultation with the Contractor, determine:

any extension of time to which the Contractor is entitled and

The amount of any costs which may have been incurred by the Contractor by reason of such obstructions or conditions having been encountered, which shall be added to the Contract Price. and shall notify the Contractor accordingly. Such determination shall take of any instruction which the Engineer may issue to the Contractor in connection therewith, and any proper and reasonable measures acceptable to the Engineer which the Contractor may take in the absence of specific instructions from the Engineer.

However such costings shall be got approved by the competent authority as governed vide rules prevailing with authority.

5. **Office for the Engineer (Works costing upto Rs.50 Lakhs) Not applicable for this work-**

The Contractor shall at his own cost and to satisfaction of the Engineer provide a small temporary office, at the work-site which will include tables, chairs and lockers for keeping the records. He shall also make necessary arrangements for drinking water, telephone with a pre-requisite of e-governance and electronic communication. These offices are not to be allowed on public roads without the written instruction of the Engineer. These offices should be preferably located within 50 to 500 m of the worksite. In case the office is more than 500m away from the worksite, the contractor is to provide conveyance for Municipal Staff.

6. Office for the Engineer (Works costing above Rs.50 lakhs) Not applicable for this work-

The Contractor shall at his own cost and to satisfaction of the Engineer provide a temporary office at the work-site which will include tables, chairs and lockers for keeping the records. He shall also make necessary arrangements for drinking water, latrines, with doors, windows, locks, bolts and fastenings sufficient for security for the Engineer, and his subordinates, as close to the works from time to time in progress as can be conveniently arranged, and shall at his own cost furnish the office with such chairs, tables, lockers, locks and fastenings as may be required by the Engineer, and no expense of any kind in connection with the erection or upkeep of the offices or fittings shall be borne by the Corporation, but all such work shall be carried out by the Contractor and the expenses thereof defrayed by him. The Contractor shall also make water connections and fit up stand pipe with a bib tap at each office. The latrines and the water connections shall be subject to all the conditions herein elsewhere laid down for temporary water connection and latrines generally with all requisite equipments for e-governance and electronic and digital communication. These offices are not to be allowed on public roads without the written instruction of the Engineer. These offices should be preferably located within 50 to 500 m of the worksite. In case the office is more than 500m away from the worksite, the contractor is to provide conveyance. Also, for staff working beyond working hours the contractor has to provide conveyance.

7. Permission for provision and removal of office on completion of work: Not applicable for this work- The tenderer shall obtain permission for provision of site office, cement go-down, store, etc. on payment of necessary cost implication. The cement go-down, Watchman cabins, etc. shall be provided as directed and shall be removed by the Tenderers on completion of the work at their cost. It is binding on the Tenderer to fulfill requirements of Environmental Authorities. The location of such office shall be finalized and got approved from the Engineer before erection/commencement work.

8. Contractor's office near works: Not applicable for this work- The Contractor shall have an office near the works at which notice from the Commissioner or the Engineer may be served and shall, between the hours of sunrise and sunset on all working days, have a clerk or some other authorized person always present at such office upon whom such notices may be served and service of any notices left with such clerk or other authorized person or at such office shall be deemed good service upon the Contractor and such offices shall have pre-requisite facilities for e-governance.

69 Official Secrecy:

The Contractor shall of all the persons employed in any works in connection with the contract that the India Official Secrets Act 1923 (XIX of 1923) applies to them and will continue to apply even after execution of the said works and they will not disclose any information regarding this contract to any third party. The contractor shall also bring into notice that, any information found to be leaked out or disclosed the concern person as well as the Contractor will be liable for penal action; further the Corporation will be at liberty to terminate the contract without notice.

70 Subsequent Legislation:

If on the day of submission of bids for the contract, there occur changes to any National or State statute, Ordinance, decree or other law or any regulation or By-laws or any local or other duly constituted authority or the introduction of any such National or State Statute, Ordinance, decree or by which causes additional or reduced cost to the Contractor, such additional or reduced cost shall, after due consultation with the Contractor, be determined by the concerned Engineering Department of BMC and shall be added to or deducted from the Contract Price with prior approval of competent authority and the concerned Engineering Department shall notify the Contractor accordingly with a copy to the Employer. BMC reserve the right to take decision in respect of addition / reduction of cost in contract.

71 Patent, Right and Royalties:

The contractor shall save harmless and indemnify the Corporation from and against all claims and proceedings for or on account of infringement of any Patent rights, design trademark or name of other protected rights in respect of any constructional plant, machine work, or material used for or in connection with the Works or any of them and from and against all claims, proceedings, damages, costs, charges and expenses whatsoever in respect thereof or in relation thereto. Except where otherwise specified, the contractor shall pay all tonnage and other royalties, rent and other payments or compensation, if any, for getting stone, sand, gravel, clay or other materials required for the works or any of them.

72 Payments, Tax and Claims: The limit for unforeseen claims

Under no circumstances whatever the contractor shall be entitled to any compensation from BMC on any account unless the contractor shall have submitted a claim in writing to the Eng-in-change within 1 month of the case of such claim occurring.

No interest for delayed payments due to disputes, etc:

It is agreed that the Brihanmumbai Municipal Corporation or its Engineer or Officer shall not be liable to pay any interest or damage with respect of any moneys or balance which may be in its or its Engineer's or officer's hands owing to any dispute or difference or claim or misunderstanding between the Municipal Corporation of Greater Bombay or its Engineer or Officer on the one hand and the contractor on the other, or with respect to any delay on the part of the Municipal Corporation of Greater Bombay or its Engineer or Officers in making periodical or final payments or in any other respect whatever.

73 Settlement of Disputes: Termination of contract for death

If the Contractor is an individual or a proprietary concern and the individual or the proprietor dies and if the Contractor is a partnership concern and one of the legal representative of the individual Contractor or the proprietor of the proprietary concern and in case of partnership, the surviving partners, are capable of carrying out and completing the contract, the

Commissioner shall be entitled to cancel the contract as to its uncompleted part without the Corporation being in any way liable to payment of any compensation to the estate of the deceased Contractor and or to the surviving partners of the Contractor's firm on account of the cancellation of the contract. The decision of the Commissioner that the legal representative of the deceased Contractor or surviving partners of the Contractor's firm cannot carry out and complete the contract shall be final and binding on the parties. In the event of such cancellation the Commissioner shall not hold estate of the deceased Contractor and or surviving partners of the Contractor's firm liable in damages for not completing the contract.

Settlement of Disputes:

If any dispute or differences of any kind whatsoever other than those in respect of which, the decision of any person is, by the Contract, expressed to be final and binding) shall arise between the Employer and the Contractor or the Engineer and the Contractor in connection with or arising out of the Contract or carrying out of the Works (Whether during the progress of the Works or after their completion and whether before or after the termination, abandonment or breach of the Contract) it, the aggrieved party may refer such dispute within a period of 7 days to the concerned Addl. Municipal Commissioner who shall constitute a committee comprising of three officers i.e. concerned Deputy Municipal Commissioner or Director (ES&P), Chief Engineer other than the Engineer of the Contract and concerned Chief Accountant. The Committee shall give decision in writing within 60 days. Appeal on the Order of the Committee may be referred to the Municipal Commissioner within 7 days. Thereafter the Municipal Commissioner shall constitute a Committee comprising of three Addl. Municipal Commissioners including Addl. Municipal Commissioner in charge of Finance Department. The Municipal Commissioner within a period of 90 days after being requested to do so shall give written notice of committee's decision to the Contractor. Save as herein provided such decision in respect of every matter so referred shall be final and binding upon both parties until the completion of the works, and shall forthwith be given effect to by the Contractor who shall proceed with the works with due diligence, whether he requires arbitration as hereinafter provided or not. If the Commissioner has given written notice of the decision to the Contractor and no Claim to arbitration has been communicated within a period of 90 days from receipt of such notice the said decision shall remain final and binding upon the Contractor.

74 Arbitration and Jurisdiction:

If the Commissioner shall fail to give notice of the decision as aforesaid within a period of 90 days after being requested as aforesaid, or if the Contractor be dissatisfied with any such decision, then and in any such case the Contractor may within 90 days after receiving notice of such decision or within 90 days after the expirations of the first named period of 90 days (as the case may be) require that the matter or matters in dispute be referred to arbitration as hereinafter provided. All

disputes or differences in respect of which the decision (if any) of the Commissioner has not become final and binding as aforesaid shall be finally settled by Arbitration as follows :

Arbitration shall be effected by a single arbitrator agreed upon the parties. The arbitration shall be conducted in accordance with the provisions of the Arbitration Act,

1996 or any statutory modifications thereof, and shall be held at such place and time within the limits of Brihan-Mumbai as the arbitrator may determine. The decision of the arbitrator shall be final and binding upon the parties hereto and the expense of the arbitration shall be paid as may be determined by the arbitrator. Performance under the Contract shall, if reasonably be possible, continued during the arbitration proceedings and payment due to the Contractor by the Employer shall not be withheld unless they are the subject matter of arbitration proceedings. The said arbitrator shall have full power to open up, review and revise any decision, opinion, direction, certification or valuation of the Commissioner and neither party shall be limited in the proceedings before such arbitrator to the evidence or arguments put before the Commissioner for the purpose of obtaining his said decision. No decision given by the Commissioner in accordance with the foregoing provisions shall disqualify him from being called as a witness and giving evidence before the arbitrator on any matters whatsoever relevant to the disputes or difference referred to the arbitrator as aforesaid. All awards shall be in writing and for claims equivalent to 5,00,000 or more such awards shall state reasons for amounts awarded. The expenditure of arbitration shall be paid as may be determined by arbitrator.

In case of any claim, dispute or difference arising in respect of a contract, the cause of action thereof shall be deemed to have arisen in Mumbai and all legal proceedings in respect of any claim, dispute or difference shall be instituted in a competent court in the City of Mumbai only.

75 Copyright :

The copyright of all drawings and other documents provided by the Contractor under the contract shall remain vested in the Contractor or his sub-contractors as the case may be the employer shall have a license to use such drawings and other documents in connection with the design, construction, operation, maintenance of the works. At any time the Employer shall have further license without additional payment to the Contractor to use any such drawings or documents for the purpose of making any improvement of the works or enlargement or duplication of any part thereof, provided that such improvement, enlargement, or duplication by itself or in conjunction with any other improvements, enlargements or duplications already made in accordance with the further license does not result in the duplication of the whole works.

76. Receipts to be signed in firm's name by any one of the partners:

Every receipt for money which may become payable or for any security which may become transferable to the Contractor under these present shall, if signed in the partnership name by any one of the partners, be a good and sufficient discharge to the Commissioner and Municipal

Corporation in respect of the money or security purporting to be acknowledged thereby, and in the event of death of any of the partners during the pendency of this contract, it is hereby expressly agreed that every receipt by any one of the surviving partners shall, if so signed as aforesaid, be good and sufficient discharge as aforesaid provided that nothing in this clause contained shall be deemed to prejudice or effect any claim which the Commissioner or the Corporation may hereafter have against the legal representatives of any partners so dying or in respect of any breach of any of the conditions thereof, provided also that nothing in this clause contained shall be deemed prejudicial or affect the respective rights or obligations of the Contractors and of the legal representatives of any deceased Contractors interest.

77 Proprietary data

All documents and other information supplied by the Authority or submitted by an Applicant to the Authority shall remain or become the property of the Authority. Applicants are to treat all information as strictly confidential and shall not use it for any purpose other than for preparation and submission of their Application. The Authority will not return any Application or any information provided along therewith.

78 Correspondence with the Applicant

Save and except as provided in this TENDER, the Authority shall not entertain any correspondence with any Applicant in relation to the acceptance or rejection of any Application.

79 Price Variation Clause

The Contractor shall be reimbursed or shall refund to the Corporation as the case may be the variation in the value of the work carried out from time to time, depending on whether the prices of material and labour as a whole rise or fall, and the method adopted for such computations shall be as given below, it being clearly understood that the contractor shall have no claim for being reimbursed on the ground that the price of a particular material or group of materials have risen beyond the limits of the presumptions made in the following paras, however, no price variations shall be made applicable for contracts upto 12 months:

A) Controlled materials: Price variations shall be permitted in respect of these materials the price level of which is controlled by the Government or its agency. The rate ruling on the date of submission of the tender shall be considered as the basic price of such material for adjustment. Any variation in this rate shall be considered for reimbursement to the contractor or refund to be claimed from the contractor as the case may be. The contractor shall, for the purpose of adjustment submit in original the relevant documents from the suppliers.

B) Labour and other materials: For the purpose of this contract and for allowing reimbursement or refund on account of variation of prices of (i) labour, and (ii) materials other than materials mentioned in A above, computation will be based on the formula enunciated below which is based on the presumptions that :

- i) The general price level of labour, rises or falls in proportion to the rise or fall of consumer price index number 9 (general) for working class in Mumbai.
- ii) The general price level of materials rises or falls in proportion to rise or fall of whole-sale price index as published by 'Economic Adviser to Govt. of India'.
- iii) And that the component of labour is to the extent of 30 percent of 88 percent and the component of materials is to the extent of 70 percent of 88 percent of the value of the work carried out. The remaining 12 percent being the presumptive profit of the contractor.

a) Formula for Labour component:

$$VL = \frac{(0.88 R) \times 30}{100} \times \frac{(I - IO)}{IO}$$

b) Formula for Material component :

$$VM = \frac{(0.88 R \times 70 - C)}{100} \times \frac{(W - WO)}{WO}$$

Where –

VL = Amount of price variation to be reimbursed or claimed as refund on account of general rise or fall of index referred to above.

I = Consumer Price Index number of working class for Mumbai (declared by the Commissioner of Labour and Director of Employment, Mumbai) applicable to the period under reference (base year ending 2004-05 as 100 i.e. new series of indices).

IO = Consumer price index number for working class for Mumbai (declared by the Commissioner of labour and Director of Employment, Mumbai) prevailing, on the day of 28 days prior to the date of submission of the tender.

VM = The amount of price variation to be reimbursed or claimed as refund on account of general rise or fall of wholesale price index for period under reference.

W = Average wholesale price index as published by Economic Adviser to Govt. of India applicable to the period under reference.

WO = Wholesale price index as stated above prevailing on the day of 28 days prior to the date of submission of the tender.

R = Total value of the work done during the period under reference as recorded in the Measurement Book excluding water charges and sewerage charges but including cost of excess in respect of item upto 50 percent.

C = Total value of Controlled materials used for the works as recorded in Measurement Book and paid for at original basic rate plus the value of materials used .

i) The quantity of the Controlled material adopted in working out the value of 'C' shall be inclusive of permitted wastages as / if mentioned in specifications.

ii) The basic rate for the supply of controlled material shall be inclusive of all the components of cost of materials excluding transport charges incurred for bringing the material from place of

delivery to the site.

Computations based on the above formula will be made for the period of each bill separately and reimbursement will be made to (when the result is plus) and refund will be claimed from (when the result is minus) the contractor's next bill. The above formulae will be replaced by the formulae in Annexure-I as and when mentioned in special conditions of contract.

The operative period of the contract for application of price variation shall mean the period commencing from the date of commencement of work mentioned in the work order and ending on the date when time allowed for the work order and ending on the date when time allowed for the work specified in the contract for work expires, taking into consideration, the extension of time, if any, for completion of the work granted by Engineer under the relevant clause of the conditions of contract in cases other than those where such extension is necessitated on account of default of the contractor.

The decision of the Engineer as regards the operative period of the contract shall be final

iii) Where there is no supply of controlled items to contractor the component 'C' shall be taken as zero.

C) Adjustment after completion: If the Contractor fails to complete the works within the time for completion adjustment of prices thereafter until the date of completion of the works shall be made using either the indices or prices relating to the prescribed time for completion, or the current indices or prices whichever is more favorable to the employer, provided that if an extension of time is granted, the above provision shall apply only to adjustments made after the expiry of such extension of time.

D) Price variation will be calculated similarly and separately for extra items and / or excess quantities and provisional sums calculated under Sub Clause 10 (b) A (i) & (ii) and Sub Clause 10(b) B(ii) based on the above formula/formulae in Annexure-I as and when mentioned in Special conditions of contract; IO and WO being the indices applicable to the date on which the rates under Sub Clause 10 (a)A (i) & (ii) and Sub Clause 10 (a) B(iii) are fixed. No price variation shall be admissible for FAIR items created during execution.

80. Maximum Price Variation shall be as follows (Not applicable to this work)

Time Period of Project	Maximum limit of Price Variation
Up to 12 months	No variation allowed
Above 12 months to 24 months	5%
Above 24 months	10%

***Approval of AMC/MC shall be obtained before invitation of tender in case of any changes in above.**

Note: 1) The extension in time period for the projects originally estimated including monsoon results in change of price variation slabs as mentioned above i.e. from first slab to second slab or from second slab to third slab, then the maximum limit of original slab will prevail.

2) Operative period shall mean original or extended time period of contract.

Extension of Time period	Maximum Price Variation
If original period of 11 months including monsoon extends to 16. The operative period will be 11+5 months.	No variation allowed
If original period of 11 months excluding monsoon extends to 16. The operative period will be 11+5 months.	Maximum 5% variation Allowed

Price Variation during Extended Period of Contract:

(i) Extension Due To Modification & Extension for delay due to BMC :

The price variation for the period of extension granted shall be limited to the amount payable as per the Indices. In case the indices increases or decreases, above / below the indices applicable, to the last month of the original or extended period vide clause 8 (l) (a) (i) and (ii) of standard GCC

(ii) Extension Of Time For Delay Due To Contractor :

(a) The price variation for the period of extension granted shall be limited to the amount payable as per the Indices in case the indices increase, above the indices applicable, to the last month of the original completion period or the extended period vide above clause 8(l)(a)(i) and (ii) of standard GCC.

(b) The price variation shall be limited to the amount payable as per the indices, in case the indices decrease or fall below the indices applicable, to the last month of original / extended period of completion period vide above clause 8(l)(b) of standard GCC, then lower indices shall be adopted.

(iii) Extension of Time For Delay due to reasons not attributable to BMC and Contractor (Reference Cl.8(d) of Standard GCC):

The price variation for the period of extension granted shall be limited to the amount payable as per the Indices in case the indices increases or decreases, above/below the indices applicable, to the last month of the original period.

81. Payment: Interim Payment :

i) Interim bills shall be submitted by the Contractor from time to time (but at an interval

of not less than one month) for the works executed. The Engineer shall arrange to have the bills verified by taking or causing to be taken, where necessary, the requisite measurement of work.

ii) Payment on account for amount admissible shall be made on the Engineer certifying the sum to which the Contractor is considered entitled by way of interim payment for all the work executed, after deducting there from the amount already paid, the security deposit / retention money and such other amounts as may be deductible or recoverable in terms of the contract.

iii) On request, the contractor will be paid upto 75 percent of the value of the work carried out as an adhoc payment in the first week of next month after deducting there from recoveries on account of advances, interest, retention money, income tax etc. The balance payment due will be paid thereafter.

iv) No interim payment will be admitted until such time the Contractor have fully complied with the requirement of the Condition no.8 (g) and 8 (h) concerning submission and approval of Network Schedule for the works, as detailed in Condition 8(h). A fixed sum shall be held in abeyance at the time of next interim payment for non-attainment of each milestone in the network and shall be released only on attainment of the said milestone.

v) An interim certificate given relating to work done or material delivered may be modified or corrected by a subsequent interim certificate or by the final certificate.

No certificate of the Engineer supporting an interim payment shall of itself be conclusive evidence that any work or materials to which it relates is / are in accordance with the contract.

82 Banning/De-Registration of Agencies of Construction works in BMC

The regulations regarding Demotion/ Suspension Banning for specific period or permanently / De-Registration shall be governed as per the respective condition in Contractor Registration Rules of BMC.

83. JOINT VENTURE (Not Applicable for this work)

In case if Joint Venture is allowed for the Project, the guidelines for JV as follows shall be incorporated in the Tender Document:

a) Joint Venture should be allowed only when the number of identifiable different works is more than one and/or the estimated cost of tender is more than Rs.100 Crores. JV shall also be allowed for complex technical work below Rs.100 Crores with the approval of concerned AMC

b) Separate identity/name shall be given to the Joint Venture firm.

c) Number of members in a JV firm shall not be more than three in normal circumstances, if the work involves only one discipline (say Civil or Electrical). If number of members in JV is required to be more than three, then approval of concerned AMC needs to be sought.

d) A member of JV firm shall not be permitted to participate either in individual capacity or as a member of another JV firm in the same tender.

e) The tender form shall be purchased and submitted in the 'name of the JV firm or any constituent member of the JV.

- f)** Normally EMD shall be submitted only in the name of the JV and not in the name of constituent member. However, EMD in the name of lead partner can be accepted subject to submission of specific request letter from lead partner stating the reasons for not submitting the EMD in the name of JV and giving written confirmation from the JV partners to the effect that the EMD submitted by the lead partner may be deemed as EMD submitted by JV firm.
- g)** One of the members of the JV firm shall be the lead member of the JV firm who shall have a majority (at least 51%) share of interest in the JV firm. The other members shall have a share of not less than 20% each in case of JV firms with up to three members and not less than 10% each in case of JV firms with more than three members. In case of JV firm with foreign member(s), the lead member has to be an Indian firm with a minimum share 51 %
- h)** A copy of Letter of Intent or Memorandum of Understanding (MoU) executed by the JV members shall be submitted by the JV firm along with the tender. The complete details of the members of the JV firm, their share and responsibility in the JV firm etc. particularly with reference to financial technical and other obligation shall be furnished in the agreement.
- i)** Once the tender is submitted, the agreement shall not be modified/altered/terminated during the validity of the tender. In case the tenderer fails to observe/comply with this stipulation, the full Earnest Money Deposit (EMD) shall be forfeited. In case of successful tenderer, the validity of this agreement shall be extended till the currency of the contract expires.
- j)** Approval for change of constitution of JV firm shall be at the sole discretion of the BMC. The constitution of the JV firm shall not be allowed to be modified after submission of the tender bid by the JV firm except when modification becomes inevitable due to succession laws etc. and in any case the minimum eligibility criteria should not get vitiated. In any case the Lead Member should continue to be the Lead Member of the JV firm. Failure to observe this requirement would render the offer invalid.
- k)** Similarly, after the contract is awarded, the constitution of JV firm shall not be allowed to be altered during the currency of contract except when modification become inevitable due to succession laws etc. and in any case the minimum eligibility criteria should not get vitiated. Failure to observe this stipulation shall be deemed to be breach of contract with all consequential penal action as per contract condition.
- l)** On award of contract to a JV firm, a single Performance Guarantee shall be required to be submitted by the JV firm as per tender conditions. All the Guarantees like Performance Guarantee, Bank Guarantee for Mobilization advance, machinery Advance etc. shall be accepted only in the name of the JV firm and no splitting of guarantees amongst the members of the JV firm shall be permitted.
- m)** On issue of LOA, an agreement among the members of the JV firm (to whom the work has been awarded) has to be executed and got registered before the Registrar of the Companies under Companies Act or before the Registrar / Sub-Registrar under the Registration Act, 1908. This agreement shall be submitted by the JV firm to the BMC before signing the contract agreement

for the work. (This agreement format should invariably be part of the tender condition). In case the tenderer fails to observe/comply with this stipulation, the full Earnest Money Deposit (EMD) shall be forfeited and other penal actions due shall be taken against partners of the JV and the JV. This joint venture agreement shall have, inter-alia, following clauses:-

i. Joint and several liability - The members of the JV firm to which the contract is awarded, shall be jointly and severally liable to the Employer (BMC) for execution of the project in accordance with General and Special conditions of the contract. The JV members shall also be liable jointly and severally for the loss, damages caused to the BMC during the course of execution of the contract or due to no execution of the contract or part thereof.

ii. Duration of the Joint Venture Agreement -It shall be valid during the entire period of the contract including the period of extension if any and the maintenance period after the work is completed.

iii. Governing Laws - The Joint Venture Agreement shall in all respect be governed by and interpreted in accordance with Indian Laws.

iv. Authorized Member -Joint Venture members shall authorize one of the members on behalf of the Joint Venture firm to deal with the tender, sign the agreement or enter into contract in respect of the said tender, to receive payment, to witness joint measurement of work done, to sign measurement books and similar such action in respect of the said tender/contract. All notices/correspondences with respect to the contract would be sent only to this authorized member of the JV firm.

No member of the Joint Venture firm shall have the right to assign or transfer the interest right or liability in the contract without the written consent of the other members and that of the employer in respect of the said tender/contract.

n. Documents to be enclosed by the JV firm along with the tender:

i. In case one or more of the members of the JV firm is/are partnership firm(s), following documents shall be submitted:

- a.** Notary certified copy of the Partnership Deed,
- b.** Consent of all the partners to enter into the Joint Venture Agreement on a stamp paper of appropriate value (in original).
- c.** Power of Attorney (duly registered as per prevailing law) in favor of one of the partners to sign the MOU and JV Agreement on behalf of the partners and create liability against the firm.

ii. In case one or more members is/are Proprietary Firm or HUF, the following documents shall be enclosed:

- a.** Affidavit on Stamp Paper of appropriate value declaring that his Concern is a Proprietary Concern and he is sole proprietor of the Concern OR he is in position of "KARTA" of Hindu Undivided Family and he has the authority, power and consent given by other partners

to act on behalf of HUF.

iii. In case one or more members is/are limited companies, the following documents shall be submitted:

a. Notary certified copy of resolutions of the Directors of the Company, permitting the company to enter into a JV agreement, authorizing MD or one of the Directors or Managers of the Company to sign MOU, JV Agreement, such other documents required to be signed on behalf of the Company and enter into liability against the company and/or do any other act on behalf of the company.

b. Copy of Memorandum and articles of Association of the Company.

c. Power of Attorney (duly registered as per prevailing law) by the Company authorizing the person to do/act mentioned in the para (a) above.

o. All the members of the JV shall certify that they have not been black listed or debarred by BMC from participation in tenders/contract in the past either in their individual capacity or the JV firm or partnership firm in which they were members / partners.

p. Credentials & Qualifying criteria: Technical and financial eligibility of the JV firm shall be adjudged based on satisfactory fulfillment of the following criteria:

Technical eligibility criteria: In case of Work involving single discipline, the Lead member of the JV firm shall meet at least 35% requirement of technical capacity as stipulated in tender document.

OR

In case of composite works (e.g. works involving more than one distinct component such as Civil Engineering works, M&E works, Electrical works, etc. and in the case of major bridges, substructure and superstructure etc.), at least one member should have satisfactorily completed 35% of the value of any one component of the project work so as to cover all the components of project work or any member having satisfactorily completed 35% of the value of work of each component during last seven financial years.

In such cases, what constitutes a component in a composite work shall be clearly defined as part of the tender condition without any ambiguity.

Financial eligibility criteria: The contractual payments received by the JV firm or the arithmetic sum of contractual payments received by all the members of JV firm in any one of the previous three financial years and shall be at least **100% of the estimated value** of the work as mentioned in the tender.

84. Compensation for delay:

If the Contractor fails to complete the works and clear the site on or before the Contract or extended date(s) / period(s) of completion, he shall, without prejudice to any other right or remedy of Municipal Corporation on account of such breach, pay as agreed compensation, amount calculated as stipulated below (or such smaller amount as may be fixed by the Engineer) on the contract value

of the whole work or on the contract value of the time or group of items of work for which separate period of completion are given in the contract and of which completion is delayed for every week that the whole of the work of item or group of items of work concerned remains uncompleted, even though the contract as a whole be completed by the contract or the extended date of completion. For this purpose the term ‘ Contract Value’ shall be the value of the work at Contract Rates as ordered including the value of all deviations ordered:

- Completion period for projects (originally stipulated or as extended) not exceeding 6 months : **to the extent of maximum 1 percent per week.**
- Completion period for projects (originally stipulated or as extended) exceeding 6 months and not exceeding 2 years: **to the extent of maximum ½ percent per week.**
- Completion period for projects (originally stipulated or as extended) exceeding 2 years : **to the extent of maximum ¼ percent per week.**

When the delay is not a full week or in multiple of a week but involves a fraction of a week the compensation payable for that fraction shall be proportional to the number of days involved.

Provided always that the total amount of compensation for delay to be paid this condition shall not exceed the under noted percentage of the Contract Value of the item or group of items of work for which a separate period of completion is given.

- i) Completion period (as originally stipulated or as extended) not exceeding 6 months: **10 percent.**
- ii) Completion period (as originally stipulated or as extended) exceeding 6 months and not exceeding 2 years : **7½ percent.**
- iii) Completion period (as originally stipulated or as extended) exceeding 2 years: **5 percent.**

The amount of compensation may be adjusted set off against any sum payable to the contractor under this or any other contract with the Municipal Corporation.

85. Action And Compensation Payable In Case Of Bad Work And Not Done As Per Specifications

All works under or in course of execution or executed in pursuance of the contract, shall at all times be open and accessible to the inspection and supervision of the Engineer-in-charge, his authorized subordinates in charge of the work and all the superior officers, officer of the Vigilance Department of the BMC or any organization engaged by the BMC for Quality Assurance and the contractor shall, at all times, during the usual working hours and at all other times at which reasonable notice of the visit of such officers has been given to the contractor, either himself be present to receive orders and instructions or have a responsible agent duly accredited in writing, present for that purpose. Orders given to the Contractor’s agent shall be considered to have the same force as if they had been given to the contractor himself.

If it shall appear to the Engineer-in-charge or his authorized subordinates in-charge of the work or to the officer of Vigilance Department, that any work has been executed with unsound, imperfect or unskillful workmanship or with materials of any inferior description, or that any materials or articles provided by him for the execution of the work are unsound or of a quality inferior to that contracted for or otherwise not in accordance with the contract, the contractor shall, on demand in writing which shall be made within twelve months of the completion of the work from the Engineer-in-Charge specifying the work, materials or articles complained of notwithstanding that the same may have been passed, certified and paid for forthwith rectify, or remove and reconstruct the work so specified in whole or in part, as the case may require or as the case may be, remove the materials or articles so specified and provide other proper and suitable materials or articles at his own charge and cost. In the event of the failing to do so within a period specified by the Engineer-in-Charge in his demand aforesaid, then the contractor shall be liable to pay compensation at the same rate as under clause 8.e. of the general condition of contract in section 9 of tender document (for Compensation for delay) for this default. In such case the Engineer-in Charge may not accept the item of work at the rates of work at the rates applicable under the contract but may accept such items at reduced rates as the Engineer in charge may consider reasonable during the preparation of on account bills or final bill if the item is so acceptable without detriment to the safety and utility of the item and the structure or he may reject the work outright without any payment and/or get it and other connected and incidental items rectified, or removed and re-executed at the risk and cost of the contractor. Decision of the Engineer-in- Charge to be conveyed in writing in respect of the same will be final and binding on the contractor.

If the penalisation amount exceeds maximum limit with respect to Clause 8.e of Standard General Conditions of Contract, then a show cause notice shall necessarily be issued to the contract as to why the contract should not be terminated.

The above clause is summarized to make it easy to understand as follows:

1. The Engineer-in-charge shall issue notice to the contractor for rectifying the defects or redoing of the work if necessary, within specific time to achieve the desired quality and quantity of the work and this should be governed by clause 8.f and 9.b of Standard General Conditions of Contract.
2. If the contractor fails to comply the same, only then, the contractor shall be liable to pay compensation at the same rate as under clause 8.e of the Standard General Con- dition of Contract (for Compensation for delay) for this default.
3. If the penalization amount exceeds the maximum limit, then the contractor will be lia- ble for being banned/ deregistered from business dealings with BMC and this shall be governed by relative provision in Registration Rules of BMC and Standard Gen- eral Conditions of Contract.
1. This penalization shall be levied only on account of delay in work, unsound, imperfect or unskillful workmanship or with materials of any inferior description, or that any materials or articles provided by him for the execution of the work are unsound or of quality inferior to that

contracted for or otherwise not in accordance with the contract.

86. Contractors remain liable to pay compensation:

In any case in which any of the powers conferred upon the Engineer In-charge by the **relevant clauses** in documents that form a part of contract as exercised or is exercisable in the event of any future case of default by the Contractor, he is declared liable to pay compensation amounting to the whole of his security deposit. The liability of the Contractor for past and future compensation shall remain unaffected.

In the event of the Executive Engineer taking action against these **relevant clauses**, he may, if he so desires, take possession of all or any tools and plant, materials and stores in or upon the work of site thereof or belonging to the Contractor or procured by him and intended to be used for the execution of the work or any part thereof paying or allowing for the same in account at the contract rates, or in the case of contract rates not being applicable at current market rates to be certified by the Executive Engineer, may after giving notice in writing to the Contractor or his staff of the work or other authorized agent require him to remove such tools and plants, materials or stores from the premises within a time to be specified in such notice and in the event of the Contractor failing to comply with any such requisition, the Executive Engineer may remove them at the contractors expense or sell them by auction or private sell on account of the Contractor at his risk in all respects and certificate of the Executive Engineer as to the expense of any such removal and the amount of the proceeds an expense of any such sell be final and conclusive against the Contractor.

87. No Claim to Any Payment or Compensation or Alteration In or Restriction of Work

(a) If at any time after the execution of contract documents, the Engineer shall for any reason whatsoever, desires that the whole or any part of the works specified in the Tender should be suspended for any period or that the whole or part of the work should not be carried out, at all, he shall give to the Contractor a Notice in writing of such desire and upon the receipt of such notice, the Contractor shall forthwith suspend or stop the work wholly or in part as required after having due regard to the appropriate stage at which the work should be stopped or suspended so as not to cause any damage or injury the work already done or endanger the safety thereof, provided that the decision of the Engineer as to the stage at which the work or any part of it could be or could have been safely stopped or suspended shall be final and conclusive against the contractor.

The Contractor shall have no claim to any payment or compensation whatsoever by reason of or in pursuance of any notice as aforesaid, on account of any suspension, stoppage or curtailment except to the extent specified hereinafter.

(b) Where the total suspension of Work Order as aforesaid continued for a continuous period exceeding 90 days the contractor shall be at liberty to withdraw from the contractual obligations under the contract so far as it pertains to the unexecuted part of the work by giving

10 days prior notice in writing to the Engineer within 30 days of the expiry of the said period of 90 days, of such intention and requiring the Engineering to record the final measurement of the work already done and to pay final bill. Upon giving such Notice, the Contractor shall be deemed to have been discharged from his obligations to complete the remaining unexecuted work under his contract. On receipt of such notice the Engineer shall proceed to complete the measurement and make such payment as may be finally due to the contractor within a period of 90 days from the receipt of such Notice in respect of the work already done by the contractor. Such payment shall not in any manner prejudice the right of the contractor to any further compensation under the remaining provisions of this clause.

(c) Where the Engineer required to Contractor to suspend the work for a period in excess of 30 days at any time or 60 days in the aggregate, the Contractor shall be entitled to apply to the Engineer within 30 days of the resumption of the work after such suspension for payment of compensation to the extent of pecuniary loss suffered by him in respect of working machinery remained idle on the site or on the account of his having to pay the salary of wages and labour engaged by him during the said period of suspension provided always that the contractor shall not be entitled to any claim in respect of any such working machinery, salary or wages for the first 30 days whether consecutive or in the aggregate or such suspension or in respect of any such suspension whatsoever occasioned by unsatisfactory work or any other default on his part, the decision of the Engineer in this regard shall be final and conclusive against the contractor.

88. Contractor to supply plant, ladder, scaffolding, etc and is liable for damages arising from non provision of lights, fencing, etc.

The Contractor shall supply at his own cost all material, plant, tools, appliances, implements, ladders, cordage, tackle scaffolding and temporary works requisite or proper for the proper execution of the work, whether, in the original altered or substituted form and whether included in the specification of other documents forming part of the contract or referred to in these conditions or not and which may be necessary for the purpose of satisfying or complying with the requirements of the Eng- In-Charge as to any matter as to which under these conditions is entitled to be satisfied, or which is entitled to require together with the carriage therefore to and from the work.

The Contractor shall also supply without charge, the requisite number of person with the means and materials necessary for the purpose of setting out works and counting, weighing and assisting in the measurements of examination at any time and from time to time of the work or materials, failing which the same may be provided by the Engineer In-charge at the expense of the contractor and the expenses may be deducted from any money due to the contractor under the contract or from his security deposit or the proceeds of sale thereof, or offers sufficient portion thereof.

The contractor shall provide all necessary fencing and lights required to protect the public from accident and shall also be bound to bear the expenses of defence of every suit, action or

other legal proceedings, that may be brought by any person for injury sustained owing to neglect of the above precautions and to pay any damages and cost which may be awarded in any such suit action or proceedings to any such person or which may with the consent of the contractor be paid for compromising any claim by any such person.

89. Prevention of Fire :

The contractor shall not set fire to any standing jungle, trees, brushwood or grass without a written permit from the Engineer In-charge. When such permit is given, and also in all cases when destroying cut or dug up trees brushwood, grass, etc., by fire, the contractor shall take necessary measure to prevent such fire spreading to or otherwise damaging surrounding property. The Contractor shall make his own arrangements for drinking water for the labour employed by him.

90. Compensation for all damages done intentionally or unintentionally by contractor's labour whether in or beyond the limits of BMC property including any damage caused by spreading the fire shall be estimated by the Engineer In-charge or such other officer as he may appoint and the estimate of the Engineer in-charge to the decision of the Dy. Chief Engineer on appeal shall be final and the contractor shall be bound to pay the amount of the assessed compensation on demand failing which the same will be recovered from the Contractor as damages or deducted by the Engineer In-charge from any sums that may be due or become due from BMC to contractor under this Contract or otherwise. Contractor shall bear the expenses of defending any action or other legal proceedings that may be brought to prevent the spread of fire and he shall pay any damages and costs that may be awarded by the Court in consequence..

91. In the case of Tender by partners, any change in the constitution of the firm shall be forthwith, notified by the contractor through the Engineer In-charge for his information.

92. Action where no specifications :

In the case of any class of work for which there is no such specifications, such works shall be carried out in accordance with the specifications and in the event of there being no such specifications, then in such case, the work shall be carried out in all respects in accordance with all instructions and requirements of the Engineer In- charge.

93. Safety and medical help :

I. The Contractor shall be responsible for and shall pay the expenses of providing medical help to any workmen who may suffer a bodily injury as a result of an accident. If such expenses are incurred by BMC, the same shall be recoverable from the contractor forthwith and be included without prejudice to any other remedy of BMC from any amount due or that may become due to the Contractor.

II. The contractor shall provide necessary personal safety equipment and first-aid box for the use

of persons employed on the site and shall maintain the same in condition suitable for immediate use at any time.

III. The workers shall be required to use the safety equipments so provided by the contractor and the contractor shall take adequate steps to ensure the proper use of equipments by those concerned.

IV. When the work is carried on in proximity to any place where there is risk or drawing all necessary equipments shall be provided and kept ready for use and all necessary steps shall be taken for the prompt rescue of any person in danger.

94. No compensation shall be allowed for any delay caused in the starting of the work on account of acquisition of land or in the case of clearance of works, on account of any delay in according to sanction of estimates.

95. Anti-malaria and other health measures:

Anti-Malaria and other health measures shall be taken as directed by the Executive Health Officer of BMC. Contractor shall see that mosquitogenic conditions are created so as to keep vector population to minimum level. Contractor shall carry out anti-malaria measures in the area as per the guidelines issued by the Executive Health Officer of BMC from time to time.

In case of default, in carrying out prescribed anti-malaria measures resulting in increase in malaria incidence, contractor shall be liable to pay BMC on anti-malaria measures to control the situation in addition to fine.

96. Grievance Redressal Mechanism:

BMC has formed a Grievance Redressal Mechanism for redressal of bidder's grievances. Any Bidder or prospective Bidder aggrieved by any decision, action or omission of the procuring entity being contrary to the provisions of the tender or any rules or guidelines issued therein, in Packet 'A', 'B' & 'C' can make an application for review of decision of responsiveness in Packet 'A', 'B' & 'C' within a period of 7 days or any such other period, as may be specified in the Bid document.

While making such an application to procuring entity for review, aggrieved bidders or prospective bidders shall clearly specify the ground or grounds in respect of which he feels aggrieved.

Provided that after declaration of a bidder as a successful in Packet 'A' (General Requirements), an application for review may be filed only by a bidder who has participated in procurement proceedings and after declaration of successful bidder in Packet 'B' (Technical Bid), an application for review may be filed only by successful bidders of Packet 'A'. Provided further that, an application for review of the financial bid can be submitted, by the bidder whose technical bid is found to be acceptable / responsive.

Upon receipt of such application for review, BMC may decide whether the bid process is required to be suspended pending disposal of such review. The BMC after examining the application and the documents available to him, give such reliefs, as may be considered appropriate and communicate its decision to the Applicant and if required to other bidders or prospective bidders, as the case may be.

BMC shall deal and dispose off such application as expeditiously as possible and in any case within 10 days from the date of receipt of such application or such other period as may be specified in pre-qualification document, bidder registration document or bid documents, as the case may be.

Where BMC fails to dispose off the application within the specified period or if the bidder or prospective bidder feels aggrieved by the decision of the procuring entity, such bidder or prospective bidder may file an application for redressal before the “Internal Procurement Redressal Committee” within 7 days of the expiry of the allowed time or of the date of receipt of the decision, as the case may be. Every such application for internal redressal before Redressal Committee shall be accompanied by fee of Rs.25,000/- and fee shall be paid in the form of D.D. in favour of BMC

1st appeal by the bidder against the decision of C.E./ HOD/ Dean can be made to concerned DMC/Director who should decide appeal in 7 days.

If not satisfied, 2nd Appeal by the bidder can be made to concerned A.M.C. for decision.

Grievance Redressal Committee (GRC) is headed by concerned D.M.C./ Director of particular department for the first appeal/grievances by the bidder against the decision for responsiveness / non-responsiveness in Packet 'A', Packet 'B' or Packet 'C' and if not satisfied, concerned A.M.C. will take decision as per second appeal made by the bidder.

This Grievance Redressal Committee (GRC) will be operated through DMC (CPD) office where appeals of aggrieved bidder will be received with fee of rs. 25,000/- from aggrieved bidder. The necessary correspondence in respect of said applications to the aggrieved bidder & concerned department, issuing notices, arranging of Grievance Redressal Committee (GRC) with D.M.C. and further proceeding will be carried out through registrar appointed by BMC.

No application shall be maintainable before the redressal Committee in regard of any decision of the BMC relating to following issues:

Determination of need of procurement.

The decision of whether or not to enter into negotiations.

Cancellation of a procurement process for certain reasons.

On receipt of recommendation of the Committee, It will be communicate his decision thereon to the Applicant within 10 days or such further time not exceeding 20 days, as may be considered necessary from the date of receipt of the recommendation and in case of non- acceptance of any recommendation, the reason of such non-acceptance shall also be mentioned in such communication.

Additional Municipal Commissioner and/or Grievance Redressal Committee, if found, come to the conclusion that any such complaint or review is of vexatious, frivolous or malicious nature and submitted with the intention of delaying or defeating any procurement or causing loss to the procuring entity or any other bidder, then such complainant shall be punished with fine, which may extend to Five Lac rupees or two percent of the value of the procurement, whichever is higher.

SECTION 10

SPECIFICATIONS

&

SELECTION OF MATERIAL

10.1 SPECIFICATIONS & SELECTION OF MATERIAL

Subject: - Renovation of Powai Pumping Station along with allied works at Powai group of reservoirs under AE(M)WWES-II

Technical Specifications

Preamble: - It is proposed to replace existing pump set at Powai Pumping Station. The work includes Supply, Installation, Testing & Commissioning of pump sets along with Squirrel Cage Rotor Induction Motor and allied works.

SCOPE OF WORK: In brief the scope of work includes following:

1. SITC of 04 Nos. of Pump- sets to give discharge of 530 l/s against 31 Mtr. Head & 02 Nos. of Pump- sets to give discharge of 270 l/s against 31 Mtr. Head each along with electric squirrel cage induction motor suitable to operate above offered pumps.
2. Supply of Gear operated 450 mm. Butterfly Valve (01 no.), 300 mm. Butterfly Valve (01 no.).
3. Supply of Gear operated 300 mm. Sluice Valve (01 no.)
4. SITC of 400 mm. Non Return Valve (04 nos.)
5. SITC of 250 mm. Non Return Valve (02 nos.)
6. Refurbishment of Dismantling Joint 500 mm (4 Nos.); 450 mm (4 Nos.); 300 mm (2 Nos.); 250 mm (2 Nos.)
7. SITC of Field Instruments I.e. Pressure Gauge along with Piping and gland drain.
8. SITC of 5 Ton EOT Crane on girder (Aprx. Span 10 m, lift 6-8 m, length 29m) along with DSL System.
9. SITC of Pressure Transmitter, Vibration monitoring system along with Display Panel.
10. Refurbishment and Overhauling of existing MCC Panel (2 No. I/C, and 6 No. Motor Feeder).
11. Termination for cables (motor feeders to terminal box of Motors)
12. Refurbishment of existing APFC Panel - 400 kVAr.
13. SITC of 630 Amp Isolator Panel for 400 kVAr APFC Panel.
14. SITC of Lighting Distribution Board Panel.
15. SITC of Remote Control Panel for pump motor sets.
16. SITC of Maintenance Free Earthing System as per site requirement.
17. Supply of 3 HP, 5 HP, 10 HP Dewatering Pump along with Panel
18. SITC of various pumpsets.
19. SITC of Pneumatic Compressor system along with Air piping and allied accessories.
20. SITC of illumination system such as Street lighting & Station lighting for Powai Pumping Station, High reservoir 1 & 2 along with wiring.
21. SITC of CCTV System for Powai Pumping Station, High reservoir 1 & 2 along with wiring.
22. Supply of Mechanical and Electrical Tools + Welding Transformer+ Water cooler + Tachometer + clamp on Flow meter.
23. SITC of Chequre plate on pump floor (Cable Trench)
24. Misc. Item (Furniture, Safety Equipment, rubber Mat, etc)

COMPONENT SPECIFICATION

1. PUMPS

A) Make: - Mather & Platt (Wilo) / KBL / Jyoti / KSB

B) Type - It shall be horizontal axial split case centrifugal pump, coupled to electrical motor through flexible rubber pin bush C.I. Couplings.

C) Existing Material of Construction

i)	Casing :	Cast Iron IS:210 Grade FG 2
ii)	Impeller :	LTB2 (IS:318, Gr LTB2)
iii)	Casing Rings :	LTB5 (IS:318, Gr LTB5)
iv)	Shaft :	SS ASTM A276 CL 410
v)	Shaft Sleeve :	SS ASTM A276 CL 410
vi)	Base Plate :	Mild Steel Fabricated

D) Proposed Material of Construction

i)	Casing :	C.S. (Cast steel Gr WCB)
ii)	Impeller :	C.S. (Cast steel Gr WCB)
iii)	Casing Rings :	C.S. (Cast steel Gr WCB)
iv)	Shaft :	SS ASTM A276 CL 410
v)	Shaft Sleeve :	SS ASTM A276 CL 410
vi)	Base Plate :	Mild Steel Fabricated

Sr. No.	Description	Particulars
1	Design Capacity in LPS	530
2	Total Head in metre	31
3	Quantity	4 Nos.
4	Synchronous Speed at 50 Hz (rpm)	980 RPM / 6 Pole or suitable
5	Suction & Delivery Size in MM	500 MM x 400 MM
6	Minimum pump efficiency at duty point	Minimum 84%
7	Recommended Motor Rating in kW	225 KW or Suitable

Sr. No.	Description	Particulars
1	Design Capacity in LPS	270
2	Total Head in metre	31
3	Quantity	2 Nos.
4	Synchronous Speed at 50 Hz (rpm)	1485 RPM / 4 Pole or suitable
5	Suction & Delivery Size in MM	300 MM x 250 MM
6	Minimum pump efficiency at duty point	Minimum 81%
7	Recommended Motor Rating in kW	110 kW or Suitable

Horizontal Centrifugal Pump**1.1 Design Requirement**

- A) The Pump shall be capable of developing the required total head at rated capacity.
- B) The Total Head Capacity curve shall be continuously rising towards the shut off. The shut off head shall be at least 115% of the total head. The pump duty point shall be within +/- 10% of BEP.
- C) The required NPSH at duty point shall be at least 1.0 M less than the available NPSH.
- D) Pumps shall run smooth without undue noise and vibration.
- E) The Power rating of the Motor shall be the larger of the following:
 - I. The maximum power required by the pump in the entire operating range.
 - II. 110% of the power required at the duty point.

1.2 Features of Construction

- 1) Rotating assembly should be accessible for inspection or maintenance by removing upper casing without disturbing suction and delivery piping & motor.
- 2) Pumps of a particular category shall be identical and shall be suitable of parallel operation with equal load

sharing. Components of identical pump shall be interchangeable.

- 3) Since the suction and delivery piping's and valves are not to be changed, the suction and delivery size of proposed pump sets should be same as that of existing pump sets at site.
Pump casing shall be of robust construction liquid passage should be finished smooth and designed so as to allow free passage of liquid
- 4) The impeller shall be of enclosed type, positively locked and keyed to pump shaft. The pump shall be provided with removable and renewable casing ring. Materials and hardness of the Impeller and casing wear rings shall be selected to ensure that they are not susceptible to galling and premature wear.
- 5) The pump shaft shall be supported by end bearings or as per manufacturers design to withstand the unbalanced radial & axial hydraulic thrust.
- 6) Suitable Gland Packing shall be provided to prevent loss of lubricant and entrance of moisture and dirt.
- 7) Pump shall be provided with S.S. piping of adequate size.
- 8) Pump shall be supplied complete Pin bush type Couplings in Cast Iron. The coupling of motor & pumps shall be connected by high tensile steel coupling bolts through rubber bushings.
- 9) Non Sparking Coupling guard bolted to the base plate should be furnished.
- 10) The pump unit shall be provided with a structural M. S. "C" channel Base plate. The pump and motor mounted on a common base plate. The base plate shall be of sufficient size and rigid to maintain the pump and motor in proper alignment and position. Suitable holes should be provided for grouting. Foundation bolts should be complete with nuts and washers.
- 11) Tapping should be provided for suction and discharge nozzles for pressure gauge connection.
- 12) Ease of access to the parts to be serviced shall be ensured like mechanical seal and Bearings, without removing the upper half casing, recourse to disturb either pipe work or prime mover.
- 13) Casing wear rings & impeller wear rings should be designed such that in case of dry run the rotating assembly should not seize or get damaged.
- 14) Casing Coating – coating shall be applied to Liquid Flow passage of pump. Coating should be anti-erosion, anti-corrosion, Energy efficient & Hydrophobic in nature. The coating should be compatible with potable water and certified by WRAS/ national government certified water laboratory. Documentary evidence (i.e. the certificate of competent authority (WRAS/ NSF/ CSIR) proving that the coating is food grade compliant/ suitable to potable water, must be attached along with undertaking in Annexure E(ii); for the same to be uploaded in Technical Envelope which is mandatory.
- 15) The tenderer shall submit the Performance Certificate confirming that pumps of the make they have quoted are working in Government/ Semi Government/ Municipal Corporations in India in potable water application for at least 3 years since commissioning with maximum 0.5% decrease in efficiency per annum, duly approved by officer/ Site-In charge Engineer in Government/Semi Government/Municipal Corporations in India.
- 16) Bidder shall submit an undertaking from Pump Manufacturer confirming the technical support for the offered pumps as per the Annexure – E(i) given at pg. no. 162
- 17) Following tests shall be performed on each pump in presence of Contractor's Engineers prior to delivery of Pumps. The test shall be carried out with Job Motor. :-
 - i) The discharge against a specified head, when motor running at a specified speed under specified suction head and as well as at a different head.
 - ii) The power absorbed by the pump at the shaft (B.H.P.) under the above specified conditions.
 - iii) Efficiency of the pumps under above specified conditions.
 - iv) NPSH test on any of the pumps applicable
- 18) CERTIFICATES: Bidder shall submit:
 - i) Material test certificate of all major components of the pumps i.e. a) Casing b) Impeller c) Shaft, d) Wearing rings, e) Stuffing box, f) glands, g) sleeves before commencing the tests at manufacturer's works.
 - ii) Xerox copies of calibration certificates of all the measuring instruments / equipment used before pump testing shall be handed over to BMC's Engineer.

19) Foundation:

Contractors shall cast M 20 concrete foundation for pump sets as required. The contractors shall show the center line of pump and motor to BMC's Engineer and get his prior approval before casting the foundation. The contractors shall do the watering of foundation for proper curing. The contractors shall install the base plate on the foundation. Fix the same with bolts and check levels before placing pump sets on the base plate. After finalization of alignment all the foundation bolts shall be properly grouted with quick setting cement.

20) Erection services:

Erection of all the equipment included in this contract / specifications shall be carried by the contractors as shown in the attached drawings at Lump-sum price.

Erection rates quoted by the tenderers shall include, to store, erection and supervision, supply of labours, consumable materials and all other material and equipment required for complete erection.

Provision of the supervisory personnel and labour force for commissioning and testing of pumps shall also be included in scope of contract. Contractors shall be responsible for erecting the equipment to the dimension and elevations. Contractors shall correct location of equipment before starting the work. Preliminary arrangement such as excavation for foundation if any, trenches if any, piping work and finishing works such as reconditioning of floor wall etc. shall be included in the contract.

Pipes, bed plates, chequered plates shall be painted before handing over the work completed.

2.0 MOTORS

1. TEFC type, Squirrel cage induction motor to be operated on 415 +/- 10 %, 3phase, 50 Hz, +/- 5%, A.C. supply having Class 'F' Insulation. The mounting surface shall be machined & grooved to active maximum contact area (85%) with necessary nuts & bolts and coupling guard. Motor shall be suitable to above specified pump. It should be directly coupled through flexible rubber bush type C.I. coupling to pump.
2. Make - CGL , Kirloskar, Marathon, ABB, Siemens, Alstom, Jyoti
3. Type - Motor shall be squirrel cage induction motor designed for operation on 415 volts (+/- 10%) 3 phase, 50 Hz (+/- 5%) power supply. The Motor should be High Energy Efficiency (IE3) type only.
4. Type of enclosure - Motor shall be totally enclosed fan cooled type as per IP 55.
5. Insulation 'F' Class. The winding shall be impregnated with special varnish & painted with anti- moisture paint.
6. Output - Rated output of the motor shall be more than the maximum input required by the pump.
7. Rating - Rating of the motor shall be continuous. Maximum rating at 6 starts per hour against full load torque without injurious heating of insulated windings. Duty S1
8. Space heaters - Motor shall be incorporated with Anti-condensation heaters operating on 240 volts single-phase A.C. supply of suitable ratings.
9. Efficiency & Power factor of the motor should be mentioned at full load, $\frac{3}{4}$ load & $\frac{1}{2}$ load.
10. Cable Box - Cable box of the motor shall be suitable to accommodate the required sizes of Aluminum cables.
11. Coupling - Pin bush type Couplings in Cast Iron. The coupling of motor & pumps shall be connected by high tensile steel coupling bolts through rubber bushings / Cushion couplings.
12. Lifting hooks Motor shall be provided with lifting hook of adequate size
13. Earth terminals - Two earth terminals shall be provided on the frame of the motor.
14. Rating plate - The rating plate shall be provided on the no removable part of the frame and shall contain following data - Manufacturers' name,
 - I. Frame size
 - II. Serial No
 - III. Class of rating

- IV. Class of insulation
- V. Voltage/ Frequency/ Phases
- VI. Output in KW / H.P.
- VII. Full load current
- VIII. R.P.M.
- IX. Full load efficiency
- X. Driving / non driving end bearing Nos,

15. Noise Level Limited to be as per standard

16. Vibration Level Limited to be as per standard

17. **Testing of Motors:**

- I) Routine test of all motors shall be conducted at Manufacturers works in accordance with respective IS in presence of Contractor's Engineers prior to delivery of motors.
- II) Xerox copies of calibration certificates of all the measuring instruments / equipment used before motor testing shall be handed over to BMC's Engineer.

3. **VALVES:-**

3.1 **VALVES ON DELIVERY**

Supply of Gear operated 450 mm. Butterfly Valve (01 no.), 300 mm. Butterfly Valve (01 no.). Supply of Gear operated 300 mm. Sluice Valve (01 no.); SITC of 400 mm. Non Return Valve (04 nos.); SITC of 250 mm. Non Return Valve (02 nos.)

The valves shall be of 10 bar rating & shall be as per BMC approved Technical Specification.

TECHNICAL SPECIFICATION FOR DOUBLE FLANGED BUTTERFLY VALVE

BFV DESIGN DETAILS :-

- 3.1.1 All valves and accessories to be supplied under this contract shall be designed in accordance with A.W.W.A. C-504 & BS – 5155 / BS EN 593 / IS 13095 (wherever applicable) standards for a pressure rating of 10 BAR as detailed in the specifications. All valve operators and accessories shall be designed for pressure rating of the respective valve for **10 BAR** as stated in the specifications. All the valves shall be designed for velocity & pressures in both directions. **It shall be in accordance with Appendix – VII**
- 3.1.2 All valves shall be double flanged long body design only. Flangeless valve / short body or wafer type valves are not acceptable. Length over flanges or flange to flange distance for valves shall be as per following formula -

$$\text{Flange to flange distance} = 0.4 D + 150 \text{ MM}$$

Where D is the nominal diameter of the valve in MM.
- 3.1.3 All these valves are to be used for isolation and controlling purpose and as such the pressure of the downstream side of the valve might be zero when valve is closed and likely to be empty.
- 3.1.4 Each valve shall bear on its body, as cast indications/ plate in letters, the following information-
 - 1) Size of valve
 - 2) Pressure rating in bar
 - 3) Heat number on valve body / disc / Gear box of the approved foundry, casted in legible raised lettering, on non-machined surface.
- 3.1.5 The design of the valve shall be such that there shall be no contact between the valve seating on the disc

and the valve seating of the body in the fully open position. The body seat ring shall be so designed that with slight over travel or under travel at closing position of the disc at the maximum working pressure, the contact between the body seat ring & the disc seat ring shall be firm and should not break the contact under any circumstances prevailing.

MANUAL OPERATION OF VALVES

- 3.2.1 Manually operated valves shall be provided with operators i.e. **gear boxes** that require maximum input force on the hand wheel to develop the required operator torque i.e. the torque exerted at the hand wheel shaft or input shaft shall not exceed 180 Newton multiplied by the hand wheel diameter.
- 3.2.2 Manual operation shall be vertical & by means of a hand wheel fixed to the valve, or with a cap. The hand wheel shall be turned in a clockwise direction to open the valve and shall be clearly marked with the words 'OPEN' and "CLOSE" with arrows in the appropriate directions. The rims of hand wheel shall be machined to a smooth finish.

GEAR BOX

- 3.3.1 The gear operator shall be designed / selected for the torque values for respective sizes of valves considering 15% overload. It shall be designed based on various torques offered by valve.

TESTING :

The supplier shall provide personnel, material and all other facilities required for testing of the Completed BF valves, Gear boxes, etc. The Testing shall be carried out in as follows. The necessary test certificates which would be reviewed, if any, shall be submitted.

Movement test :-

Each valve with the manual operator mounted on the valve shall be shop operated three times from the fully open position to the fully closed position and reverse, under pressurized flow conditions, to demonstrate that the complete assembly is workable and the torque required for each valve shall be measured with appropriate device and recorded. Number of turns required for full operation along with the time be counted and recorded.

Hydrostatic and Leakage tests :-

Each valve will be installed with flanges in vertical position. All the clamping ring fasteners of disc seal shall be tightened properly with prescribed uniform torque to allow to expand the E.P.D.M. disc seal uniformly. Then the disc is completely closed. The tightening torque value is measured & recorded with suitable device.

The following tests should be carried out on each valve assembly under "open end" test conditions:

- i. **Leakage test (Seat test)** : With the valve disc in the closed position and one end open to atmosphere, the **rated pressure** (10 BAR) as stated in the schedule of Guarantees shall be applied to each side of the disc in turn for a period as per IS standards. The leakage past the seat from either side shall be nil.
- ii. **Hydrostatic test** : With both ends closed and the butterfly valve disc in the slightly open position, a pressure of one and a half times the pressure rating (16 BAR) shall be applied to the whole valve body for a period as per IS standards. Under these tests, there shall be no leakage through the metal, the flanged joints or the valve shaft sealing.
- iii. **Disc strength test** : Finally the disc shall be closed and a differential pressure of one and a half times the pressure rating (16 BAR) shall be applied to each side of the disc in turn for a period as per IS standards and disc deformation if any shall be checked.

Gearbox test :

The tests which are required to be conducted by the manufacturer shall be conducted and accordingly certificate to be provided.

3.2 SLUICE VALVES

The sluice valve shall be generally conforming to IS14846 / EN1074 / BS5163 or latest revisions. The valve shall be designed for a pressure of 10 bar. The valve shall be of non rising inside screw type. Valve shall be double flanged. Sluice valves shall be provided with 'shoe' and 'channel' arrangement so that the gate shall be guided throughout its travel. The direction of rotation for opening and closing shall be indicated on the hand wheel / position indicator.

The valve shall bear on their bodies / plate following data as cast indications in letters: -

- 1) Size of valve
- 2) Year of manufacture
- 3) Manufacturer's name
- 4) Pressure rating
- 5) Heat number

The material of construction for sluice valve shall be as follows: -

Sr. No.	Part	Material / Description
1.	Body, Bonnet, Wedge, Gland flange	Ductile Iron Gr. 500 / 7 or 400 / 12
2.	Seat ring / Wedge ring, Wedge nut	Ph. Bronze / Al. Bronze
3.	Stem	SS 410 / SS 316
4.	Gasket, Gland packing	EPDM (WRAS / NSF/ DVGW approved)
5.	Internal & external Fasteners	Stainless Steel A2 (SS304) / A4 (SS316) / Galvanized Steel (8.8)
6.	Coating	Fusion Bonded Non-toxic Epoxy NSF/WRAS coated min. 250 microns' thickness to DIN 36077-2 Standards, color RAL 5005 / 5017 Blue.
7.	Operation	Manual
8.	Design standard	IS 14846 / EN1074 / BS 5163
9.	Testing standard	IS 14846 / EN 12266-1&2
10.	Flange drilling	IS 1538 / EN1092
11.	Face to face standard	IS 14846 PD / EN558-3
12.	Pressure rating	10 bar

Testing: -

- 1) All valves must undergo hydraulic testing to IS 14846 / EN 12266 - 1&2.
 - Seat test 1.1 x Pr. rating
 - Body test 1.5 x Pr. rating
- 2) Painting thickness of Valves shall be tested to min. 250 microns.
- 3) After completion of assembly, each valve shall be offered for functional test. Valve shall be operated from fully closed position to fully open position under no flow condition. The number of turns required for full operation of the valves shall be noted.
- 4) Hydrostatic and leakage test – Each valve shall be subjected to hydrostatic tests. The test shall be made when

the wedge is open and the pressure applied to the whole body of the valve after releasing air through the gland. The test pressure of 1.5 times the working pressure shall be applied for a period as per IS norms. The second and third test shall be made to determine the water tightness of the faces with wedge closed and with valve fixed in vertical position at one end only. The second test shall be carried out at 1.1 times the working pressure for interval as per IS norms. The third test shall be carried with same pressure applied to other face of the wedge. Under this condition the valve seating on the downstream side shall be watertight.

3.3 NON RETURN VALVES

- a) Each pump shall be fitted with a non-return valve in the delivery pipe suitable for horizontal mounting with a suitable size bypass arrangement with isolating valve if required. NRV shall be of single door construction and shall be rated for 10 Bar and hydrostatically tested for 15 bar. The valve shall be with non slam quick closing characteristics, without external dampening arrangements. The materials of construction of NRV shall be as follows:

Body	: SGI 400/18 OR GGG 40 Or Ductile Iron Gr. 500/7 or GGG50
Doors/diaphragm	: SGI 400/18 OR GGG 40/Cast Steel: ASTM A 216 Gr WCB Or Ductile Iron Gr 500/7 with EPDM encapsulation
Seats/Faces	: Bronze to BS: EN 1982 or Equivalent

- b) Each NRV shall be hydraulically tested at Manufacturer's work as per relevant IS. All the test certificates shall be submitted to BMC immediately after inspection.

3.4 JOINTING MATERIALS :-

Each valve shall be supplied with all the necessary Flange, nuts, bolts and washers for completing the joints on both the Flanges of Valve supplied under the contract including the flanges which will be fastened to pipe work. The cost of jointing materials supplied under the contract shall be deemed to have been included in the quoted rates for valves and fittings. Joint rings shall be of flat section at least 5 mm thick. They shall be of rubber. Bolt heads and nuts shall be hexagonal.

3.5 LOOSE STEEL WELDING FLANGES (OR COMPANION FLANGES)

Matching flanges for the side of the valve not attached to flange adaptor shall be fabricated from mild steel plate and shall comply with relevant tables of B.S.4504, specification for flanges and Bolting for Pipes, valves and fittings of respective Metric Series size valve

The flanges shall be drilled strictly in accordance with IS 1538. Loose flanges shall be fabricated along with a skirt of which the I-D shall be equivalent to that of the pipeline enabling the same to be jointed to the pipeline by welding.

3.6 SUPPORT OF PIPEWORK AND VALVES

All necessary supports, saddles, slings, fixing bolts and foundation bolts shall be supplied to support the pipe work and its associated equipment in an approved manner. Valves, meters, strainers and other devices mounted in the pipe work shall be supported independently of the pipes to which they connect. All brackets or other forms of support, which can conveniently be so designed, shall be rigidly built up of steel by welding in preference to the use of castings. No point of passage of pipes through floors or walls shall be used as a point of support, except with the approval of the Engineer's Representative.

3.7 PIPE WORK

All flanges shall be stress relieved and machined after welding. If site Engineer desires, Contractor shall provide, suitable concrete supports to the pipe work, as directed by the site Engineer. The contractor shall carry out all the internal pipe work required to connect the pump Suction & delivery. All the pipes and other fittings used for above said work shall be seamless and of mild steel. Appropriate size of Pipe should be used for suction and delivery side. Thickness of pipe shall not be less than 6 mm.

Gland drain line should be installed for all 6 Nos. Pump set

3.8 Refurbishment of Dismantling Joint 500 mm (4 Nos.); 450 mm (4 Nos.); 300 mm (2 Nos.); 250 mm (2 Nos.)

3.9 PRESSURE GAUGES

Six pressure gauges (0-100 psi) for delivery line and Six Compound Gauge for suction line of glycerin filled type and 6" dial shall be provided to monitor the pressure. These gauges shall be Fiebig or equivalent make. Connections for these gauges shall be taken from drilling and tapping provided for gauges near suction and delivery flanges of the lower half casing of pump. These connections shall be brought to the wall by means of "C" class 1/2" G.I. pipe, and necessary fittings & 3 way cock shall be provided near gauges to release air trapped. Gauges shall be properly mounted on the wall at suitable height. G.I. pipe shall be clamped properly to floor / wall by means of appropriate size saddles and screws.

3.10 Chequered Plate (Cable tray):

Galvanized MS chequered plate on the cable tray on the pumping floor to be provided.

4.0 5 TON SINGLE GIRDER EOT CRANE

The technical particulars for EOT Crane shall be as per **Appendix – VIII**

The Crane bridge shall consist of single bridge girder carrying two wheels at each end of the span. The girder shall have enough strength to carry the test load without carrying undue stress or deflection.

Long travel bridge shall be rim toughened, heat treated carbon steel. They shall be double flanged type; wheel shall have antifriction ball/roller bearings. Wheel shall be machined on their treads to match the runway rail section. The bridge shall have a gear shaft and pulley, connection to opposite wheels of the span, to achieve long travel motion of the bridge by means of chain, supplied from the floor.

4.1 Cross Travel Trolley & Hoist:

The cross travel trolley shall consist of two wheels at each end running on the main girder of the crane. Trolley track wheels shall be rim toughened, heat treated carbon steel and shall be single flanged and shall have antifriction ball bearings. The wheel shall be aligned on their treads to match the flanges of the rack joints.

Electric hoist shall be complete with the hoisting motor, travel motor, wire rope drum, wire rope, hooks, necessary gearing, sheaves, electromagnetic brakes for hoisting and traveling motors, weatherproof contactor panel, all wiring, flexible trailing cables, limit switches, traveling stops for fixing on the girders, earth terminals and other accessories to meet the requirements.

Electric hoist shall be generally as per I.S Std. The scope of the work also includes all Cables from MCC Panel to crane junction box and Cable termination between Switchgear control panel, electric hoist and cross travel motors.

Rope drum shall be either cast or welded or Seamless pipe to sustain concentrated loads resulting from the rope pull; drum shall be machine grooved, right and left, with the grooves of proper shape for the rope used.

Gear shall be cut from solid cast or forged steel blanks and pinion shall be heat treated alloy steel. All the gearing shall be totally enclosed, proper lubricating arrangements shall be provided for gearing and pinions.

Hoist rope shall be extra flexible improved plug steel rope with well lubricated hemp core and having suitable construction to lift the load with the rated ultimate tensile strength as per standard. Rope shall be fastened to the drum with an attachment having strength equal to that of the ropes.

Hooks shall be solid forged, heat treated alloy or carbon steel of rugged construction. They shall be of a single hook type provided with a standard depressed type safety latch. They shall swivel and operate on ball or roller thrust bearings with hardened races. Locks to prevent hook from swiveling shall be provided.

Trolley and hoisting motor shall be equipped with electrically released, spring set, friction shoe type brakes having torque capable of holding 125% of the full rated hook load.

Electric motor shall be hoist duty, squirrel cage, TEFC induction motor with high starting torque, half an hour rates and operated at 415 V, 3 phase, 50 cycle electric supply. The hoist and travel motion shall be controlled from pendant type push button station. The push button shall be recessed type and suspended from the hoist and supported by G.I. wire ropes.

The pendant shall operate at a voltage of 24 V single phase A.C. and shall incorporate a key operated switch to prevent unauthorized operations. The following shall be provided on the pendant.

- 1) 'ON' – indicating lamp.
- 2) Cross Travel Push Button – Left & Right
- 3) Hoist Push Button – Raise & Lower
- 4) All stop push button.

Overload test at 125% of the rated load shall be carried out as per I.S.3938 at manufacturing works and also on site in presence of the Engineer.

5. Supply of various capacity pumpsets

Supply of Dewatering & submersible pump set		
Supply of 3 HP Dewatering Pump along with Panel	2	Nos.
Supply of 5 HP Dewatering Pump along with Panel	2	Nos.
Supply of 10 HP Dewatering Pump along with Panel	2	Nos.
S&I of 5 HP Monoblock Pump 120 lpm @ 60m head - Ramnagar (R3-ME-6-4-p)	1	No.
Supply of rotating assembly for 20 HP Centrifugal Pump - Ramnagar	1	No.
S&I of Jet Pump , Panel along with Piping (R3-ME-6-1-d)	1	No.
S&I of three phase 2 HP Mono block Pump - powai staff quarter (R3-ME-6-4-c)	2	No.

The successful contractor shall carry out above listed Supply & installation work as per M & E 2023 USOR technical specifications.

3/5/10 HP Dewatering Pump

The centrifugal pumps shall be compact, lightweight and suitable to operate on AC supply of various capacities. The submersible Dewatering pumps shall discharge the maximum LPM of water on their specific mentioned head in mm. The pump set shall achieve total head including suction and delivery head and losses in the system. The pump shall conform relevant IS latest amendment. The pump shall be of reputed make.

The Submersible pumps should have squirrel cage induction motor of continuous rating having 'F' class insulation with bi metallic switches embedded on stator winding to protect against overheating. The power cable shall be water proof /oil proof PVC insulated double sheathed copper conductor flexible cable. The Impeller shall be SS semi open mixed flow impeller to minimize the clogging and can handle high level abrasives

The detail technical specifications of submersible pumps shall be as per following:

Sr. No.	Item description	BMC's Requirement
1	Capacity	3/5/10 HP
2	Power cable	The power cable shall be water/oil proof flexible PVC insulated double sheathed copper conductor of suitable size 4 having 30 meters length.
3	Class of insulation	F
4	Electric Supply	3 phase
5	Voltage	415 V
6	Amps	As per design
7	Speed	As per Manufacturer
8	Capacity	3/5/10 HP
9	Frequency	50 Hz
10	Outlet	As per OEM
11	Qty.	2 Nos. of each capacity

**Supply of rotating assembly for 20 HP Centrifugal Pump – Ramnagar rawate pumping station
(Existing pump details)**

Make – KBL

Model – RKB 65/19E

6.0 Retrofitting of Existing MCC Panel: -

Quantity Per feeder: -

Sr. No.	Description	Qty /feeder	Unit
1.	Main Incomers-02 Nos.		
a)	L & T make, 2000 Ampere, ACB, Model - CN-CS 2000, breaking capacity -55 kA, making capacity - 140 kA, short- time current for 1sec: 55 kA, Voltage :- 500 v, 50 HZ with protection like over current, earth fault & short ckt.	01	Nos.
b)	CT , ration 2000/5 or of suitable rating	03	Nos.
c)	Load manager with Rs485 communication port.	01	Nos.
d)	R-Y-B- Isolated- Test -Service - ON-OFF_TRIP LED indicating lamp.	01	set
e)	5Ampere, Control fuses	03	nos.
f)	Exhaust fan, space Heater & Thermostat	01	set
2.	Outgoing/Motor feeder-Main Main -300 HP- 04 Nos.		
a)	Main Incomer- L& T Make, FN630 SFU with Rotary Handle	01	No.
b)	CT 400/5 or suitable	03	Nos.
c)	L&T make, 500 Ampere, HN size -3, HRC Fuse	03	Nos.
d)	Main Contactor- L&T make, ML12, (180-210) Ampere with Auxiliary switches or of suitable rating for 300 HP Motor feeders.	01	No.
e)	Star Contractor- L&T make, ML12, (180-210) Ampere with Auxiliary switches or of suitable rating for 300 HP Motor feeders.	01	No.
f)	Delta Contactor-L&T make, ML12, (180-210) Ampere with Auxiliary switches or of suitable rating for 300 HP Motor feeders.	01	No.
g)	Thermal Overload load relay - L& T make, MN12, (180-210Ampere) or of suitable rating for 300 HP Motor feeders.	01	No.
h)	Timer	01	No.
i)	Single Phase preventer	01	No.
j)	Load Manager with RS 485 communication port.	01	No.

k)	Start-stop Push Button	01	set
l)	Delta -star contactor ON, Trip ON Fault LED Indicating lamp.	01	set
m)	Exhaust fan, space Heater & Thermostat	01	set
n)	tinned copper vertical bus bar of suitable size & Control wiring	01	Job
3.	Outgoing/Motor feeder-Main Main -150 HP- 02 Nos		
a)	Main Incomer- L& T Make, FN630 SFU with Rotary Handle	01	No.
b)	CT 200/5 or suitable rating	03	No.
c)	L&T make, 315 Ampere, HN size -3, HRC Fuse	03	No.
d)	Main Contactor, - L& T make , ML10, 200 Ampere with auxiliary switches	01	No.
e)	star Contactor, - L& T make , ML10, 200 Ampere with auxiliary switches	01	No.
f)	Delta Contactor, - L& T make , ML10, 200 Ampere with auxiliary switches	01	No.
g)	Thermal Overload load relay - L& T make, MN12, (90-150 Ampere)	01	No.
h)	Timer	01	No.
i)	Single Phase preventer	01	No.
j)	Load Manager with RS 485 communication port.	01	No.
k)	Start-stop Push Button	01	set
l)	Delta -star contactor ON, Trip ON Fault LED Indicating lamp.	01	set
m)	Exhaust fan, space Heater & Thermostat	01	set
n)	Tinned copper vertical bus bar of suitable size & Control wiring	01	Job
4.	Dewatering DOL starter feeder	02	Nos.
5.	4P, 100 Ampere, MCCB	04	Nos.
6.	Colour spray Painting for MCC Panel(7000*1000*2000)mm	01	Job

Retrofitting of Existing 400 kVAr APFC Panel:-

Sr. No.	Description	Qty	Unit
1.	Supply, Installation, Testing & Commissioning of 25 kVAr Capacitor bank	16	Nos.
2.	SITC of 12 stage , Power factor controller relay	01	No.
3.	Servicing of existing 400 kVAr APFC Bank Panel	01	Job

SITC of 630 Amp Isolator Panel for Existing 400 kAVr APFC Panel:-

Sr. No.	Description	Qty	Unit
A.	Incoming & Outgoing feeder		
1	L & T make, 630 Ampere, FN 630 SFU	01	No.
2	R-Y-B-ON- OFF- TRIP LED Indicating lamp	01	set
3	Tinned copper bus bar of suitable rating along with accessories.	L/S	1

Remote Control Panel for pump motor set:-

Sr. No.	Description	Qty	Unit
1.	ON -OFF -Trip LED Indicating lamp	6	set
2.	Start -stop Push button	6	set

SITC of Lighting Distribution panel Board: -

Sr. No.	Description	Qty	Unit
A.	Main Incomer		

1.	L& T make , 315 Ampere, Changeover switch	1	No.
B.	Outgoing Feeders:-		
1.	L&T make, FN200 SFU	1	Nos.
2.	L & T make, TPN -100 Ampere SFU	6	Nos.
3.	L & T Make, FN 63	6	Nos.
4.	L & T Make, 32 Amp, SFU	2	No.

TERMINATION FOR CABLES:

- 1100 Volts Al/Cu conductor cables shall be terminated by using compression type heavy duty glands having proper size ring & rubber washers.
- Flange type gland shall be preferred for 1100 Volts power cables as to avoid undue pressure for fastening the lugs / sockets wherever applicable. However screw type gland shall be employed where flange type cannot be used.
- Approved make & type of lugs / sockets shall be used and crimping method shall be employed for fastening the lugs / sockets.

Termination for 3C x 120 sqmm cable O	8	Sets
Termination for 3C x 240 sqmm cable O	16	Sets

7 INSTRUMENTATION SYSTEM:

The technical particulars for instrumentation system shall be as per **Appendix –IV & V**

a) Pressure Measuring System

- Pressure measuring system shall consist of pressure transmitter and digital panel mounted pressure indicator and any other items required to complete the pressure measuring system.
- Pressure transmitter shall be rugged in construction and shall be suitable for continuous operation. Pressure transmitter shall be designed for operation over 130% of full range.
- Pressure transmitters shall be suitable for field mounting. They shall provide 4-20 mA DC output proportional to pressure. Transmitter output shall be isolated and shall be suitable for transmitting over long distance. Pressure transmitters shall have degree of weatherproof protection as specified in technical particular. Pressure transmitters shall have LCD display to indicate pressure.
- The Contractor shall mark the exact location of pressure measuring point on the pipe line and will arrange the equipment and staff required for providing pressure tapping on the lines and shall execute the work. The contractor shall provide all the hardware items including nuts, bolts, pipes, valves, gaskets etc. required for the work.

Vibration Monitoring System

- Scope of work included supply , installation , testing and commissioning of vibration monitoring system with 2 nos of sensors for motor and 2 nos of sensors for pump, each one for DE and NDE side , pickup cable , junction box , cable glands and lugs.
- G.A Drawing, Vibration Monitoring systems Data Sheet & wiring diagram shall be submitted for approval.
- The sensor shall be mounted in such a way that it should be accessible for adjustment, repair and replacement without dismantling the machine.
- Cubical panel shall be provided for display of vibration of all pump motor sets along with Scanner 4 channel input 4-20 mA with individual relay, cables and annunciator window.

Technical Specifications and Details.

- 1) Vibrations need to be measured and monitored continuously in each Panel. The measuring points are:
 - i) Motor Non Driving End (NDE).
 - ii) Motor Driving End (DE).
 - iii) Pump Non Driving End (NDE).
 - iv) Pump Driving End.(DE)
- 2) Each measured value needs to displayed on control unit for each sensor.
- 3) Each unit should measure Velocity mm/sec RMS.
- 4) Power supply 230V, 50Hz
- 5) Operating Frequency: 5 kHz – 10 kHz
- 6) Cable required from transmitter to display unit shall be as per manufacturer std.
- 7) The vibration Transmitter shall have following specification: -

Type	Continuous monitoring with display
Display	Digit, Type.
Input signal	From accelerometer, Velocity pick up
Ranges	0-25, mm/sec RMS
Measuring Parameters	Velocity
Frequency Range	As per Manufacturer design
Alarm level	As per Manufacturer design
Trip level	As per Manufacturer design
Operating Temperature	As per Manufacturer design

ELECTRICAL	
Power supply	230/110VAC @ 50HZ, OR 24 V DC
Output	4-20MA,DC(LOAD 300 ohms)Buffer outputs
Relays	Contract rating 230VAC@ 10A,28VDC@ 10A
Accuracy	0.5% of 0-25, mm/sec RMS
Linearity	0.1% of 0-25, mm/sec RMS
Enclosure	ABS Nylon Wall mounting type, protection class IP67

- 8) The vibration sensor (accelerometer) shall have following technical specifications:

Sensitivity +/-10%	100 mV/g
Electrical	
Voltage	18-30 VDC
Constant current Excitation	2-10mA
Environmental	
Temperature Range	-58 to 250o F
Vibration limit	+50
Max. shock protection	5,000g
Sealing	Welded, Hermetic
Physical	
Sensing element	PTZ Ceramic
Sensing Structure	Shear Mode
Weight	90grams
Case Material	316L Stainless steel
Mounting	¼-28 Tapped Hole
Connector 2 pin MIL-C-5015	

Cubical Panel for Pressure Transmitters and Vibration Monitoring system for Pump motor sets:-

Sr. No.	Description	Qty	Unit
1.	Digital pressure indicator with RS485/4-20 mA HART communication.	14	Nos.
2.	Scanner 4 channel input 4-20 mA with individual relay	6	Nos.
3.	Annunciator window.	6	Nos.

8. CCTV System:

- CCTV systems consisting of cameras, LCD colour monitors and cabling and fixing arrangements as per attached list.
- The video surveillance systems shall be digital systems and capable of displaying, recording and playing back simultaneously.
- Surveillance CCTV systems shall ensure effective surveillance of the areas as well as create a temper proof record for post event analyses. The systems shall provide an online display of video images on 42" LED monitors located in the control rooms.
- CCTV shall operate on 12V/24V and 230 V, 50 Hz single - phase power supplies. Power for all equipment shall be conditioned using on-line UPSs with a minimum of 30 minutes' back-up period.
- If any equipment operates on any voltage other than the supply voltage and supply frequency, necessary conversion devices for the supply shall be supplied along with the equipment.
- The areas under surveillance shall be monitored and controlled from the local control rooms. Continuous 24-hour surveillance shall be possible.

CCTV for Powai Low Level Reservoir			
Sr.	Descriptions	Unit	Qty.
1	IP Day/Night Bullet Camera (R3-ME-12-13-n)	No.	25
2	IP Day/Night PTZ Camera (R3-ME-12-13-o)	No.	1
3	IP 32 channel NVR (R3-ME-12-13-q)	No.	1
4	42" Smart Screen LED monitor (R3-ME-12-13-t)	No.	1
5	SITC of 16 ports 10/100/1000 with 2 combo ports PoE switch with installation (R3-ME-12-9-z)	No.	9
6	Camera protector (PO 4800692578)	No.	25
7	9 inch Rack (R3-ME-12-9-u)	No.	1
8	2 KV UPS (R3-ME-12-14-a)	No.	1
9	Hot dipped galvanised, round shape steel pole (R3-ME-12-13-u)	No.	8
10	SITC of 1IN/4OUT Video Splitter for additional viewing (R3-ME-12-13-v)	No.	1
11	Armoured CAT6 Cable	mtr	1800
12	3C x 1.5 Sqmm Cu Armoured cables (R3-ME-2-3-b)	mtr	40
13	GI Pipe for laying 25 mm (R3-ME-2-21-c)	M	350
14	Excavating the trenches and refilling, reinstatement of the same after the cable is laid in approved manner (750 mm deep, 600 mm wide), in all types of soils 1 Cu. Mtr. = 2.2 RMT. (R3-ME-2-8)	cum	91
15	Excavating the trenches and refilling the same after the cable is laid in approved manner (Size of trench: 750 mm deep, 600 mm wide) in concrete/ masonry / asphalt. 1 Cu. Mtr. = 2.2 RMT. And reinstatement. (R3-ME-2-9)	cum	68
16	Invertor System (R3-ME-4-11-a)	Nos	1
CCTV for Powai High Level Reservoir No 1			
Sr.	Descriptions	Unit	Qty.
1	IP Day/Night Bullet Camera (R3-ME-12-13-n)	No.	20
2	IP Day/Night PTZ Camera (R3-ME-12-13-o)	No.	2
3	16 channel NVR (R3-ME-12-13-p)	No.	2
4	42" Smart Screen LED monitor (R3-ME-12-13-t)	No.	1
5	SITC of 16 ports 10/100/1000 with 2 combo ports PoE switch with installation (R3-ME-12-9-z)	No.	4
6	Camera protector (PO 4800692578)	No.	20
7	9 inch Rack (R3-ME-12-9-u)	No.	1
8	2 KV UPS (R3-ME-12-14-a)	No.	1

9	Hot dipped galvanised, round shape steel pole (R3-ME-12-13-u)	No.	3
10	SITC of 1IN/4OUT Video Splitter for additional viewing (R3-ME-12-13-v)	No.	1
11	Armoured CAT6 Cable	mtr	1400
12	3C x 1.5 Sqmm Cu Armoured cables (R3-ME-2-3-b)	mtr	40
13	GI Pipe for laying 25 mm (R3-ME-2-21-c)	M	625
14	Excavating the trenches and refilling, reinstatement of the same after the cable is laid in approved manner (750 mm deep, 600 mm wide), in all types of soils 1 Cu. Mtr. = 2.2 RMT. (R3-ME-2-8)	cum	182
15	Excavating the trenches and refilling the same after the cable is laid in approved manner (Size of trench: 750 mm deep, 600 mm wide) in concrete/ masonry / asphalt. 1 Cu. Mtr. = 2.2 RMT. And reinstatement. (R3-ME-2-9)	cum	12
16	Invertor System (R3-ME-4-11-a)	Nos	2
CCTV for Powai High Level Reservoir No II			
Sr.	Descriptions	Unit	Qty.
1	IP Day/Night Bullet Camera (R3-ME-12-13-n)	No.	13
2	IP Day/Night PTZ Camera (R3-ME-12-13-o)	No.	1
3	32 channel NVR (R3-ME-12-13-q)	No.	1
4	42" Smart Screen LED monitor (R3-ME-12-13-t)	No.	2
5	SITC of 16 ports 10/100/1000 with 2 combo ports PoE switch with installation (R3-ME-12-9-z)	No.	4
6	Camera protector (PO 4800692578)	No.	13
7	9 inch Rack (R3-ME-12-9-u)	No.	1
8	2 KV UPS (R3-ME-12-14-a)	No.	1
9	Hot dipped galvanised, round shape steel pole (R3-ME-12-13-u)	No.	1
10	SITC of 1IN/4OUT Video Splitter for additional viewing (R3-ME-12-13-v)	No.	1
11	Armoured CAT6 Cable	mtr	1200
12	3C x 1.5 Sqmm Cu Armoured cables (R3-ME-2-3-b)	mtr	40
13	GI Pipe for laying 25 mm (R3-ME-2-21-c)	M	70
14	Excavating the trenches and refilling, reinstatement of the same after the cable is laid in approved manner (750 mm deep, 600 mm wide), in all types of soils 1 Cu. Mtr. = 2.2 RMT. (R3-ME-2-8)	cum	23
15	Excavating the trenches and refilling the same after the cable is laid in approved manner (Size of trench: 750 mm deep, 600 mm wide) in concrete/ masonry / asphalt. 1 Cu. Mtr. = 2.2 RMT. And reinstatement. (R3-ME-2-9)	cum	8
16	Invertor System (R3-ME-4-11-a)	Nos	1

The successful contractor shall carry out above listed SITC of CCTV work as per HE & M & E 2023 USOR technical specifications.

9. Maintenance free Earthing System:

- The tenderer shall provide 10 numbers of Maintenance Free earth pits inside the pumping station
- The tenderer shall provide 50 mm. dia. hot dip class B GI pipe.
- The tenderer shall provide 450x450 mm (L x W) chamber with brick masonry work for earth pit for easy maintenance activities. The pit cover shall be of cast iron with proper lifting arrangement.
- The tenderer shall carry out necessary excavation work and boring work required for earth pits.
- The tenderer shall interconnect the newly provided earth pits with existing earthing grid strips.
- The tenderer shall carry out the installation of electrode and then backfilling with treatment material. The earth enhancing compound shall conform to IS Std.

- The tenderer shall submit the report of the newly installed earth pits achieved values.
- Tenderer shall check the resistance of earth electrodes, if the resistance is within limits, carryout necessary rectifications & ensure that it is as per standards at least once in six months or as & when required during the DLP.

Earth electrode:

The earth electrode is the main component of the earthing system which is in direct contact with the ground and thus provides a means of releasing or collecting any earth leakage currents. The material should have good electrical conductivity and should not corrode in a wide range of soil conditions.

GI STRIP:

Size: 50mm width, 06 mm thick. Length as per requirement. Hot dip galvanized strip.
or

Cu STRIP:

Size: 50mm width, 06 mm thick. Length as per requirement.

Earth enhancement material:

Earth enhancement material is a superior conductive material that improves earthing effectiveness, especially in areas of poor conductivity. It improves conductivity of the earth electrode and ground contact area.

Specification for earth enhancing compound & back fill compound for earthing pits

- a) The earth-enhancing compound should conform to IEEE Std. It should be similar to Terec+ or equivalent.
- It shall not depend on the continuous presence of water to maintain its conductivity.
- It shall have Ionic property to create ions for easy conduction.
- It shall be enable to disperse the ions equally in the earth pits.
- The compound should expand so much to remove entrapped air (bad Conductor of electricity) and create a strong conduction between electrode and soil.
- The compound should diffuse in the soil to create conductive silicate. This Silicate should expand into the soil with the edge of the earth pits and result in progressive reduction of earth pit resistance.
- It should have a property to assist in absorbing humidity from the neighboring soil to keep earth pit moist, which in turn helps better conduction.
- The compound should have the property to ensure moisture is retained throughout the year irrespective of the weather condition without addition of water during the life of the earth pit.
- It should be non toxic, non reactive, non explosive & non corrosive.
- It shall be permanent & maintenance free and in its “set form”, maintain constant earth resistance with time.

10. Station Lighting/ Illumination system

Powai PS			
Sr.	Description	Unit	Total
1	7m high galvanized octagonal Street lightpole (R3-ME-10-5-e)	Nos	18
2	single arm standard bracket 1000MM long (R3-ME-10-6-a)	Nos	5
3	double arm standard bracket 1000MM long (R3-ME-10-6-b)	Nos	18
4	SITC of LED Street Light fittings: 80 Watt (R3-ME-4-27-e)	Nos	36
5	SITC of LED Street Light fittings: 60 Watt (R3-ME-4-27-d)	Nos	5
6	1.1 kV 3CX4 sqmm Cu Armoured Cables (R3-ME-2-3-j)	Mtr	700
7	1.1 KV 3CX2.5 sqmm Cu Flexible cables (R3-ME-2-5-d)	Mtr	150
8	25 mm GI Pipe for cable protection (R3-ME-2-21-c)	Mtr	330
9	Excavation in soft soil (R3-ME-2-8)	Mtr	70
10	Excavation in Concrete and Asphalt road (R3-Me-2-9)	Mtr	80
11	150x50 mm Junction Box 150 x 50mm (W x H) - PVC Trunking with cover (R3-ME-2-16-d)	Nos	3
12	32A MCB DP (R3-ME-1-17-i)	Nos	2
13	16A MCB DP (R3-ME-1-17-h)	Nos	2
14	6A SP MCB (R3-ME-1-17-a)	Nos	18

15	Pedestal fan of 450mm sweep, 230 Volts, AC 50 Hz, oscillating type complete with guard and regulator 3 mtrs. of 3 core 1.5sqmm, PVC insulated, copper conductor, flexible wire and Hand shield type 3 pin plug top. (R3-ME-4-12-o)	Nos	2
16	Ceiling fan of 1400 mm sweep with all accessories including Electronic Regulator for completing installation (R3-ME-4-12-e)	Nos	5
17	Exhaust Room 450mm - Industrial type (R3-ME-4-12-l)	Nos	2
18	1.1 kV 4CX2.5 sqmm Al Armoured Cables (R3-ME-2-1-0)	Mtr	40
19	SITC of LED Street Light fittings: 60 Watt (R3-ME-4-27-d)	Nos	8
20	1.1 kV 4CX4 sqmm Al Armoured Cables (R3-ME-2-1-p)	Mtr	40
21	150x50 mm Junction Box 150 x 50mm (W x H) - PVC Trunking with cover (R3-ME-2-16-d)	Nos	1
22	SITC LED Flood Light Fitting -150 W (R3-ME-4-28)	Nos	6
Powai Hill Reservoir 1			
Sr.	Description	Unit	Total
1	7m high galvanized octagonal Street lightpole (R3-ME-10-5-e)	Nos	7
2	single arm standard bracket 1000MM long (R3-ME-10-6-a)	Nos	7
3	double arm standard bracket 1000MM long (R3-ME-10-6-b)	Nos	5
4	SITC of LED Street Light fittings: 80 Watt (R3-ME-4-27-e)	Nos	17
5	SITC of LED Light fittings: 36 Watt (R3-ME-4-33-f)	Nos	5
6	1.1 kV 3CX4 sqmm Cu Armoured Cables (R3-ME-2-3-j)	Mtr	400
8	1.1 KV 3CX2.5 sqmm Cu Flexible cables (R3-ME-2-5-d)	Mtr	200
9	25 mm GI Pipe for cable protection (R3-ME-2-21-c)	Mtr	280
10	Excavation in soft soil (R3-Me-2-8)	Mtr	127
12	150x50 mm Junction Box 150 x 50mm (W x H) - PVC Trunking with cover (R3-ME-2-16-d)	Nos	1
13	32A MCB DP (R3-ME-1-17-i)	Nos	1
14	16A MCB DP (R3-ME-1-17-h)	Nos	1
15	6A SP MCB (R3-ME-1-17-a)	Nos	7
Powai Hill Reservoir 2			
Sr.	Description	Unit	Total
1	12.5 m High Mast (R3-ME-10-10-a)	No.	1
2	Foundation for 12.5 m High Mast (R3-ME-10-12-a)	No.	1
3	7m high galvanized octagonal Street lightpole (R3-ME-10-5-e)	Nos	7
4	single arm standard bracket 1000MM long (R3-ME-10-6-a)	Nos	5
5	double arm standard bracket 1000MM long (R3-ME-10-6-b)	Nos	5
6	SITC of LED Street Light fittings: 80 Watt (R3-ME-4-27-e)	Nos	19
7	1.1 kV 3CX4 sqmm Cu Armoured Cables (R3-ME-2-3-j)	Mtr	300
8	1.1 KV 3CX2.5 sqmm Cu Flexible cables (R3-ME-2-5-d)	Mtr	200
9	25 mm GI Pipe for cable protection (R3-ME-2-21-c)	Mtr	100
10	Excavation in soft soil (R3-Me-2-8)	Mtr	45
11	150x50 mm Junction Box 150 x 50mm (W x H) - PVC Trunking with cover (R3-ME-2-16-d)	Nos	1
12	32A MCB DP (R3-ME-1-17-i)	Nos	2
13	6A SP MCB (R3-ME-1-17-a)	Nos	4

The successful contractor shall carry out above listed station lighting work as per HE & M & E 2023 USOR technical specifications.

11. Pneumatic Compressor specifications: -

- A. Supply of screw type air compressor along with air dryer, air receiver tank, air and oil cooler, operating control panel, acoustic enclosure etc., as per detailed technical specification.
- B. Installations, site testing and commissioning of air compressors as per technical specifications.
- C. Supply and laying of GI pipe-line for carrying pressurized air.

Supply of screw type air compressor along with air dryer, air receiver tank, air and oil cooler, operating control panel, acoustic enclosure etc.

1. TECHNICAL DATA:

Sr No	Description	Value
1	Capacity [Free Air Delivered-FAD] in CFM at normal working pressure.	49 CFM [$1.3875\text{m}^3/\text{min}$] or suitable
2	Maximum working pressure in Kg/cm^2 or Bar (g).	10 Bar(g)
3	Sound level in dB[A]	68 dB[A]
4	Motor Capacity	11 KW or suitable

2. SCREW TYPE AIR COMPRESOR:

Screw type air compressor shall consist of the following.

- a) Single stage, rotary type screw element.
- b) Dry paper type suction air filter with silencer and filter elements shall be conveniently located for easy replacement.
- c) Unloader with integrated regulating valve for load/unload control system in the form of three-way solenoid valve.
- d) Air/Oil temperature switch/gauge shall be provided to shut down the compressor in case of too high air temperature at compressor element outlet.
- e) Air check valve at the compressor discharge end.

3. AIR OIL RECEIVER TANK CUM SEPERATOR:

Air oil receiver tank shall be provided for receiving the immediate discharge of the air from the air compressor. It shall consist of the following.

- a) Sight glass for oil level indication and oil filing arrangement.
- b) Minimum pressure valve to close off the compressor for maintaining the required air pressure in the system.
- c) Safety valve.
- d) Gauge for air oil receiver pressure. e) Oil draining arrangement.
- f) Three stage air oil separation system including first by cyclonic action [centrifugal], second by gravitational [heavy particles separate down] and third by passing through coalescent filter.

4. AIR AND OIL COOLER ASSEMBLY:

Air and oil cooler assembly shall be compact type of aluminum, for optimum heat transfer designed for lower air drop and lower weight. The cooler shall reduce the outlet air temperature to approximately 8 to 10 deg C above the ambient temperature. Oil filter shall be mounted on air cooler for filtration of lubricating oil. Thermostatic valve shall be provided to regulate oil temperature within the system.

5. MOTOR:

Motor shall be designed for suitable capacity, not more than 11 KW rating. It shall be 2 pole, squirrel cage induction motor with TEFC, IP55 enclosure, Class F insulation, suitable for 45 deg C ambient temperature. It shall be designed for 415+/-10% Volts, 50+3% Hz frequency.

6. RECEIVER:

The outlet of the newly installed compressors shall be connected to the newly installed Air tanks.

7. POWER AND CONTROL PANEL:

Power panel shall incorporate inbuilt star delta starter of suitable capacity with contactor, relay, etc. The single phasing preventer shall be provided to ensure safety of compressor by tripping in case of single phasing. The emergency stop button shall also be provided to the power panel.

The successful contractor shall lay appropriate size power/control cable for the operation of the compressor from LTMCC panel to the compressor. The contractor shall make necessary modifications so that only one compressor can be in operation at a time.

The control panel shall be provided with dial indicators mounted on facia for “Discharge Air Pressure” and “Compressor Outlet Air Temperature”. The Hour meter shall be mounted on facia for indicating “Total running hours”.

In addition to above, the control panel shall be provided with electronically regulated monitoring system, which permits the following functions.

I. Start, Stop and Reset push buttons for starting stopping and resetting the fault after necessary rectifications.

II. The following compressor status indications shall be displayed.

- ▮ Compressor on [operational]
- ▮ Compressor running idle to switch off
- ▮ Compressor running on load
- ▮ Compressor warning and shutdown indications [LED Indications]
- ▮ Compressor outlet air temperature high [Trip]
- ▮ Single phase [Trip]
- ▮ Motor Overload [Trip]

8. ACOUSTIC ENCLOSURE & DRIVE ARRANGEMENTS

The complete compressor assembly along with all its accessories shall be enclosed in a powder coated acoustic enclosures having sound absorbing material for limiting the noise level not more than 68 dB outside the acoustic enclosure. The enclosure shall be such that there should not be pressure drop at suction filter and avoid the entry of dust particles in the compressor. Similarly, the anti-vibration mount supports shall be provided for the electric motor and compressor.

The moving components of compressor shall be isolated from the rest of the structure. The cogged belts and pulley driver arrangement shall be provided for efficient power transmission. There shall be easy access for belt removal and tensioning. Similarly, there shall be foolproof arrangement to ensure the rotational direction of the motor.

9. REFRIGERATED DRYER:

The refrigerated dryer shall be provided along with the air compressor. The environment friendly refrigerant R134A/equivalent shall be used for dryer. The dew point indicator shall be also provided on the dryer. Compressed air discharge shall enter the receiver tank through the refrigerator dryer unit

10. FILTER ASSEMBLY:

Filters with pressure indicator shall be provided in the air passage between receiver and dryer and between air dryer and air discharge valve. Similarly, pre filter panels shall be provided for the air entering into the acoustic enclosure of compressor unit. These filters shall have easy access for cleaning purpose.

11. AIR OUTLET VALVE:

A Ball Valve of suitable size shall be provided as air outlet valve.

[B] INSPECTION AND TESTING OF AIR COMPRESSORS AT MANUFACTURER’S WORKPLACE, AS PER TECHNICAL SPECIFICATIONS.

Contractor shall offer the inspection and testing for both the air compressors at the manufacture’s factory. During inspection, the air compressor and its accessories shall be checked for dimensional verification and workmanship, etc. Routine tests, as per the relevant standards or factory procedure of testing shall be carried at manufacturer’s works for both the air compressors. The factory inspection, tests report shall be prepared and submitted.

[C] REMOVAL OF OLD AIR COMPRESSORS: -

The old air compressors along with their piping and other accessories shall be removed. During the

dismantling work, the contractor shall provide the blank connection to the air piping so as to plug it. Only one compressor shall be removed at a time. The compressors and their accessories shall be removed with standard engineering practice without causing damage to the civil and other structure/equipments. After removal, the existing air compressors and other accessories shall be kept at a suitable place, as per instructions of BMC Site Engineer.

[D] INSTALLATION, TESTING AND COMMISSIONING OF AIR COMPRESSORS: -

The newly supplied air compressor along with its accessories shall be properly installed at the place allotted. The necessary leveling of the floor if required as per site conditions, shall be done by the contractor. The spirit leveling of the machines shall be done and then the airlines shall be connected to the existing system. Necessary modification in the G.I. pipeline as per the site conditions shall be carried out in the laying of G.I. pipeline by the successful contractor in order to connect the newly installed compressor to the air receiver tanks. The Gun metal gate valves, NRVs shall be used as per site conditions. Subsequently, the electrical connections shall be done and the air compressor shall be commissioned. The site testing of air lines, compressor and receiver shall be checked for the leakages.

12 Miscellaneous items along with ElectriroMechanical Tools

All the tools shall be supplied of reputed make after prior approval of BMC competent authorities.

Sr.	Item Description	Qty	Unit
1	Portable inverter based single phase Welding machine: Rated Input Power: 7.3 KVA, Current Range: 20 - 200A	1	Nos.
2	Water cooler along with purifier (SOR R3-ME-9-16-a)	1	Nos.
3	Tachometer	1	Nos.
4	Portable Clamp on Flow meter for Range 50mm -700mm & 400 - 4500 mm (Bidder shall provide testing & calibration report alongwith supply)	1	Set
5	Hydraulic puller 3 jaw 30 T capacity	1	Nos.
6	Set of Die Sets with Die Holder & Socket for pipe Threading from size 0.5" to 1" 7 1.25" to 2.0"	2	Sets
7	Digital clamp on Multimeter with Jaw size upto 63 mm (Bidder shall provide testing & calibration report alongwith supply)	1	No.
8	Spirit Level	2	Nos
9	Fuse puller	1	Nos
10	Grease Gun	1	Nos
11	Filler gauge (0.02 to 1mm)	1	set
12	Vacuum cleaner	1	No.
13	Temperature Gun	1	No.
14	Thread pitch guage	1	No.
15	High potential/Insulation Testing kit (40KV) (Bidder shall provide testing & calibration report alongwith supply)	1	No.
16	10-12 mm thick Antiskid Rubber Mat for H.T./L.T. (2mx1m) as per IS	3	Nos.
17	Fire extinguishers: The contractor has to supply 6Kg. DCP type fire extinguisher along with sand bucket (R3-ME-15-30-e)	12	Nos.
18	FIRE Bucket of 9 Litres capacity R3-ME-15-31-a	12	Nos.
19	Providing Floor mounting stand for keeping of FIRE buckets R3-ME-15-31-b	3	Nos.
20	First aid box R3-ME-15-31-d	8	Nos.
21	Enclosed material store rack with lock & key arrangement (size: min 72" X 48" X 24")	2	No.
22	Office Table with draw (size: 48"x 24")	3	No.
23	Plastic chairs of reputed make	20	No.
24	Cup board - Big - Godrej	1	No.
25	Cup board - small - Godrej	1	No.

13) Supply of DG Sets:

A) 40 KVA DG Set:-

Specifications

Alternator		
Make	:	Crompton Greaves /Stamford/Leroy Somers/Jyoti Elec. or equivalent
Type	:	Brushless
Standard	:	IS 4722/1968/ BS 5000
KVA rating	:	40
Duty	:	Continuous
PF/ Voltage/Phase / Frequency	:	0.8, 415 / 440 V, 3 Phase, 50 Hz
Voltage Regulation		+/- 1%
Insulation Class	:	H
RPM	:	1400-1500
Type of excitation	:	AVR
Protection Class	:	IP 23
Type of winding	:	Copper
Type of Coupling	:	Closed Coupling
Coupling of Engine	:	Directly coupling through flexible coupling
Mounting	:	On sturdy MS Fabricated channel frame
Type of Pad	:	Cussy Foot.

Diesel Engine		
Make	:	Cummins or Kohler or Mahindra or Mitsubishi or Kirloskar or John Deere or equivalent
Standard	:	IS 10000/ BS 5514
Duty	:	Continuous
Power	:	32KW
RPM	:	1400-1500
No. of Cylinder	:	4 cylinders
Fuel	:	Diesel

Fuel Consumption	:	To be specified by tenderer
Type of Cooling	:	Radiator or water cooling
Type of Coupling	:	Closed Coupling flexible.
Type of Starting	:	12 V DC Battery start

Base frame

Material	:	MS C channel, Channel Iron Base Frame for mounting the Engine and alternator
Dimensions (mm)	:	2000 X1000 \pm (5%). The size of base frame should be very close to size of DG set.

Trailer & Canopy

Material of Trailer	:	IS 2062 MS channels, I beams and angles.
Material of towing hook	:	Forged M.S. rod. The minimum diameter at end of eye hook rod must be at least 75 mm
No. of Wheels	:	4
Axle size	:	80mm X 80mm (+/-5%)
Size of tyre	:	750 X 16. The tyre must be fitted on ring disk.
Make of tyre	:	To be specified by the bidder.
Type of tyre	:	Pneumatic rubber
Material of panels	:	18 SWG CRCA sheet
Flooring Material	:	MS/ Aluminum checkered sheets
Foot rest at the rear end	:	Required
Locker for tools, strainer, collecting head at rear end	:	M.S.
Heavy Duty Bumper	:	Required
Break	:	Required
Hinges of door	:	Required
Locking arrangement for door	:	Required
Ventilating louvers for both engine and alternator	:	Required
Internal illumination arrangement	:	minimum 1 TL / 1 bulb/ 1 Led

Details of acoustic arrangement	:	Modular in construction consisting of acoustically treated panels from all the four sides and top. All the panels will be jacket filled with PU foam/glass wool.
Turn Table Arrangement	:	Required

Battery		
Quantity	:	2 No
Volts	:	12 Volts
Fuel Tank		
Capacity	:	90 Ltrs minimum

Control Panel		
Start / stop switches with key	:	1 No
Lub. Oil temp. gauge	:	1 No
Battery charging ammeter	:	1 No
Lub. Oil pressure gauge	:	1 No
Coolant Temperature Gage	:	1 No
Speedometer	:	1 No
Hour meter	:	1 No
Control push / pull	:	1 No
Engine protection	:	1 No

Incoming		
Copper bus bar of suitable size	:	1 No
0-500 V analog type voltmeter flush type, 96 mm square, flush type, square & protective fuses	:	1 Set
Suitable analog type ammeter, 96 mm square, flush type, square	:	1 Set
Ring type tape wound C. T. class I, having burden of 5 VA and ratio of 200/5	:	1 Set
Neon indicating lamps, flush type, 250 V A.C., having red, yellow & blue indication	:	1 Set

Frequency meter digital 96 mm size, 45-50 Hz with common volt/Ampere/Frequency meter.	:	1 Nos
Moulded case circuit breaker of suitable rating, 3 pole DU 100	:	1 No
Control MCB 6/10 Amp SP MCB.	:	3 No

Outgoing :-		
miniature Circuit Breaker 100A, DP, 10KA	:	6 No
Current Transformer 100 / 5A, 5VA, TAPEWOUND	:	3 No
Current Transformer 60 / 5A, 5VA, TAPEWOUND	:	6 No
Ammeter Selector Switch R / Y/ B Off, 6A	:	5 No
AC Ammeter 0 - 100A,96sq.mm.ANALOG	:	1 No
Ac Ammeter 0 - 60A,96sq.mm.ANALOG	:	2 No
Ac Ammeter 0 - 30A, 96sq. Mm ANALOG	:	2 No
63 Amps TPN with necessary power output socket, 0-100 Amps Ammeter flush type, 3 way selector switch etc	:	1 Set
32 Amps TPN with necessary power output socket,0-60 Amps Ammeter flush type, 3 way selector switch etc	:	2 Set
16 Amps TPN with necessary power output socket, 0-30 Amps Ammeter flush type, 3 way selector switch etc	:	2 Set
5 Amps DP with necessary power output socket with metal clad cover etc.	:	3 Nos
15 Amps DP with necessary power output socket with metal clad cover etc	:	3 Nos

B) 5 KVA DG Set:-

1. The machine should be diesel engine driven.
2. The fuel tank capacity should be at least 12 Liter.
3. The engine power should be minimum 11 HP
4. The alternator should be 3 phase.
5. Maximum output should be 6.5 KVA
6. Voltage and frequency requirement 230 V and 50 Hz respectively.
7. The machine should have compact design.
8. The machine should be provided with two wheel trolley so that it becomes easy to transport.

Sd/-
J.E.(P.P.)

Sd/-
S.E. (P.P.)

Sd/-
A.E.(M)WWE/S-II

Sd/-
E.E.(H.W.)W.W.

SECTION 11

FRAUD AND CORRUPT

PRACTICES

FRAUD AND CORRUPT PRACTICES

The Applicants and their respective officers, employees, agents and advisers shall observe the highest standard of ethics during the Bidding Process. Notwithstanding anything to the contrary contained herein, the Authority may reject an application without being liable in any manner whatsoever to the Applicant if it determines that the Applicant has, directly or indirectly or through an agent, engaged in corrupt practice, fraudulent practice, coercive practice, undesirable practice or restrictive practice in the Bidding Process.

Without prejudice to the rights of the Authority under relevant Clause hereinabove, if an Applicant is found by the Authority to have directly or indirectly or through an agent, engaged or indulged in any corrupt practice, fraudulent practice, coercive practice, undesirable practice or restrictive practice during the Bidding Process, such Applicant shall not be eligible to participate in any tender or RFQ issued by the Authority during a period of 2 (two) years from the date such Applicant is found by the Authority to have directly or indirectly or through an agent, engaged or indulged in any corrupt practice, fraudulent practice, coercive practice, undesirable practice or restrictive practice, as the case may be.

For the purposes of this Clause , the following terms shall have the meaning hereinafter respectively assigned to them:

- A. **“corrupt practice”** means
- B. the offering, giving, receiving, or soliciting, directly or indirectly, of anything of value to influence the actions of any person connected with the Bidding Process (for avoidance of doubt, offering of employment to, or employing, or engaging in any manner whatsoever, directly or indirectly, any official of the Authority who is or has been associated in any manner, directly or indirectly, with the Bidding Process or the LOA or has dealt with matters concerning the Concession Agreement or arising there from, before or after the execution thereof, at any time prior to the expiry of one year from the date such official resigns or retires from or otherwise ceases to be in the service of the Authority, shall be deemed to constitute influencing the actions of a person connected with the Bidding Process); or save and except as permitted under the relevant sub clause, engaging in any manner whatsoever, whether during the Bidding Process or after the issue of the LOA or after the execution of the Concession
- C. **“fraudulent practice”** means a misrepresentation or omission of facts or suppression of facts or disclosure of incomplete facts, in order to influence the Bidding Process ;
- D. **“coercive practice”** means impairing or harming or threatening to impair or harm, directly or indirectly, any person or property to influence any persons participation or action in the Bidding Process;
- E. **“undesirable practice”** means (i) establishing contact with any person connected with or employed or engaged by the Authority with the objective of canvassing, lobbying or in any manner influencing or attempting to influence the Bidding Process; or (ii) having a Conflict of Interest; and
- F. **“Restrictive practice”** means forming a cartel or arriving at any understanding or arrangement among Applicants with the objective of restricting or manipulating a full and fair competition in the Bidding Process.
- G. If the Employer/Financier determines that the Contractor has engaged in corrupt, fraudulent,

collusive, coercive or obstructive practices, in competing for or in executing the Contract, then the Employer may, after giving 14 days' notice to the Contractor, terminate the Contractor's employment under the Contract and expel him from the Site, and the provisions of relevant Clause shall apply as if such expulsion had been made.

H. Should any employee of the Contractor be determined to have engaged in corrupt, fraudulent, collusive, coercive, or obstructive practice during the execution of the Works, then that employee shall be removed in accordance with relevant Clause.

For the purposes of this Sub-Clause:

- i. "corrupt practice" is the offering, giving, receiving to soliciting, directly or indirectly, of anything of value to influence improperly the actions of another party;
- ii. "another party" refers to a public official acting in relation to the procurement process or contract execution. In this context, "public official" includes Financer staff and employees of other organizations taking or reviewing procurement decisions.
- iii. "fraudulent practice" is any act or omission, including a misrepresentation, that knowingly or recklessly misleads, or attempts to mislead, a party to obtain a financial or other benefit or to avoid an obligation;
- iv. "collusive practice" is an arrangement between two or more parties designed to achieve an improper purpose, including to influence improperly the actions of another party;
- v. "coercive practice" is impairing or harming, or threatening to impair or harm, directly or indirectly, any party or the property of the party to influence improperly the actions of a party;
- vi. "obstructive practice" is deliberately destroying, falsifying, altering or concealing of evidence material to the investigation or making false statements to investigators in order to materially impede the Financier investigation into allegations of a corrupt, fraudulent, coercive or collusive practice; and/or threatening, harassing or intimidating any party to prevent it from disclosing its knowledge of matters relevant to the investigation or from pursuing the investigation; or
- vii. acts intended to materially impede the exercise of the Financer's inspection and audit rights provided .
- viii. "party" refers to a public official; the terms "benefit" and "obligation" relate to the procurement process or contract execution; and the "act or omission" is intended to influence the procurement process or contract execution.
- ix. "parties" refers to participants in the procurement process (including public officials) attempting to establish bid prices at artificial, noncompetitive levels.
- x. a "party" refers to a participant in the procurement process or contract execution

SECTION 12

PRE BID MEETING

PRE-BID MEETING

Pre-bid meeting of the interested parties shall be convened at the designated date, time and place. A maximum of three representatives of each Applicant shall be allowed to participate on production of authority letter from the Applicant. Interested Bidder shall send their queries 2 days prior to the date of Pre – bid meeting only. No queries will be entertained if any queries are not submitted during the said period.

~~During the course of Pre-bid meeting, the Applicants will be free to seek clarifications and make suggestions for consideration of the Authority.~~ The Authority shall Endeavour to provide clarifications and such further information as it may, in its sole discretion, consider appropriate for facilitating a fair, transparent and competitive Bidding Process.

12.1 Interpretation of e-Tender Document:

- a) Tenderer(s) shall examine the tender document and acquaint themselves to all conditions and matters affecting the cost of the works. If any tenderer(s) finds discrepancies or omissions in the Document or if in doubt about their meaning, he should address a query during pre-bid meeting.
- b) Any resulting interpretation of the tender document will be issued to tenderer(s) as an addendum. Verbal clarification obtained from any source shall not be binding on the Corporation.
- c) No tenderer(s) shall amend the text of any document except as may be necessary to comply with any addendum.

12.2 Clarification of e-Tendering Documents

Pre-bid meeting (If proposed as per e-Tender notice)

- a) The tenderer or his authorized representative is allowed to attend a pre-bid meeting as per the date, time and venue mentioned in the tender notice/header data.
- b) The purpose of the pre-bid meeting will be to clarify issues and to answer questions on any matter that may be raised 2 days prior to the pre-bid meeting.
- c) Any tenderer requiring any clarification of the tender document and/or the works may submit their questions on AE(M) WWES-II's e-mail i.e. aewwcc02.he@BMC.gov.in Please note that all emails which will reach the inbox 2 days before meeting, shall only be entertained.

d) Pre-Bid Meeting date & time & Venue details are as mentioned below:

Date – 19/03/2024 Time: 12:00 Hrs

Venue: Office of Hydraulic Engineer, 1st floor, Engineering Hub Building, Dr.E.Moses Road, Worli, Mumbai- 400018

SECTION –13

LIST OF APPROVED BANKS

LIST OF APPROVED BANKS

1. The following Banks with their branches in Greater Mumbai and in suburbs and extended suburbs up to Virar and Kalyan have been approved only for the purpose of accepting Banker's guarantee from 1997-98 onwards until further instructions.

2. The Bankers Guarantee issued by branches of approved Banks beyond Kalyan and Virar can be accepted only if the said Banker's Guarantee is countersigned by the Manager of a branch of the same Bank, within the Mumbai Limit categorically endorsing thereon that said bankers Guarantee is binding on the endorsing Branch of the bank within Mumbai limits and is liable to be on forced against the said branch of the Bank in case of default by the contractor/supplier furnishing the bankers Guarantee.

List of approved Banks:-

A	S.B.I and its subsidiary Banks	B	Nationalized Banks
1	State Bank Of India.	19	Punjab & Sindh Bank.
2	State Bank Of Bikaner & Jaipur.	20	Syndicate Bank.
3	State Bank Of Hyderabad.	21	Union Bank Of India.
4	State Bank Of Mysore.	22	United Bank Of India.
5	State Bank Of Patiyala.	23	UCO Bank.
6	State Bank Of Saurashtra.	24	Vijaya Bank.
7	State Bank Of Travankore	24A	Corporation Bank
B	Nationalized Banks	C	Scheduled Commercial Banks
8	Allahabad Bank.	25	Bank Of Madura Ltd.
9	Andhra Bank.	26	Bank Of Rajasthan Ltd.
10	Bank Of Baroda.	27	Banaras State Bank Ltd.
11	Bank Of India.	28	Bharat Overseas Bank Ltd
12	Bank Of Maharashtra.	29	Catholic Syrian Bank Ltd.
13	Central Bank Of India.	30	City Union Bank Ltd.
14	Dena Bank.	31	Development Credit Bank.
15	Indian Bank.	32	Dhanalakshmi Bank Ltd
16	Indian Overseas Bank.	33	Federal Bank Ltd.
17	Oriental Bank Of Commerce.	34	Indsind Bank Ltd.
18	Punjab National Bank.	35	I.C.I.C.I Banking Corporation Ltd.
C	Scheduled Commercial Banks	D	Schedule Urban Co-op Banks
36	Global Trust Bank Ltd.	61	Sangli Urban Co-op Bank Ltd.
37	Jammu & Kashmir Bank Ltd.	62	Saraswat Co-op Bank Ltd.
38	Karnataka Bank Ltd.	63	ShamraoVithal Co-op Bank Ltd.

39	KarurVysya Bank Ltd.	64	Mahanagar Co-op Bank Ltd.
45	S.B.I Corporation & Int Bank Ltd.	65	Citizen Bank Ltd.
46	Tamilnadu Mercantile Bank Ltd.	66	Yes Bank Ltd.
47	United Western Bank Ltd.	E	Foreign Banks
48	Vysya Bank Ltd.	67	ABM AMRO (N.Y.) Bank.
D	Schedule Urban Co-op Banks	68	American Express Bank Ltd.
49	Abhyudaya Co-op Bank Ltd.	69	ANZ Grindlays Bank Ltd.
50	Bassein Catholic Co-op Bank Ltd.	70	Bank Of America N.T. & S.A.
51	Bharat Co-op Bank Ltd.	71	Bank Of Tokyo Ltd.
52	Bombay Mercantile Co-op Bank Ltd.	72	Bankindosuez.
53	Cosmos Co-op Bank Ltd.	73	BanqueNationale de Paris.
54	Greater Mumbai Co-op Bank Ltd.	74	Barclays bank.
55	JanataSahakari Bank Ltd.	75	City Bank N.A.
56	Mumbai District Central Co-op Bank Ltd.	76	Hongkong & Shanghai banking Corporation.
57	Maharashtra State Co-op Bank Ltd.	77	Mitsui Taiyokbe Bank Ltd.
58	New India Co-op Bank Ltd	78	Standard Chartered Bank.
59	North Canara G.S.B. Co-op Bank Ltd.	79	Cho Hung Bank.
60	Rupee Co-op Bank Ltd.		

SECTION –14

APPENDIX

APPENDIX – I

List of Preferred makes for major equipment.

Sr. No.	Name of the equipment	Name of the manufacturer
1	Pump	Mather & Platt (Wilo) / KBL / Jyoti / KSB
2	Motor	CGL , Kirloskar, Marathon, ABB, Siemens, Alstom, Jyoti
3	415 Volts Switchgears.	Siemens, L&T., Schneider Electric, GE Power, ABB
4	MCCB	Schneider Electric, GE Power, L&T, Siemens, ABB
5	MCB	Schneider Electric, MDS, Siemens.
6	Electrical Meters	Enercon, Automatic Electric, ABB, Siemens
7	Power Contactors	L&T, Siemens, ABB
8	Capacitors	Epcos, Usha, Crompton-Greaves, Siemens, L&T, Shreem, Worldtech, Sunny
9	Cables	RPG, Universal. Finolex, CCI, Nicco Corporation, Polycab, Havells.
10	Pressure Transmitter	Siemens, Rittmayer, Khrono, Forbes Marshall, ABB
11	Butterfly Valve/ NRV	VAG, Fouress, R&D multiple, Kirloskar
12	Sluice Valve	IVC, aarco, Mcwane-Kenedy, Kirloskar

Bidder's seal & Signature

APPENDIX - II

TECHNICAL DATA SHEET FOR 300 HP PUMP

Description	BMC Requirement	Offered by bidder
Standard of testing / manufacturing	ISO 9906 Gr 2B / BS 5316 Part I & II	
Make	As per Annexure – I	
Liquid	Water	
Temperature	Ambient	
Pump type	Horizontal Split case	
Pump Model	As per manufacturer's standard	
Recommended motor KW/HP	225 KW / 300 HP	
Suction size in mm	500	
Delivery size in mm	400	
Bearing type	As per manufacturer's standard	
Speed	980 RPM or suitable	
Min. efficiency	84%	
Head	31 Mtrs.	
Power input at duty point	As per design.	
Capacity at	530 LPS	
Shut off head	Not less than 36 Mtrs	
NPSH (R)	As per design.	
MATERIAL OF CONSTRUCTION		
Casing	C.S. (Cast Steel Gr WCB)	
Impeller	C.S. (Cast Steel Gr WCB)	
Casing wearing rings	C.S. (Cast Steel Gr WCB)	
Shaft	SS ASTM A 276 CL 410	
Shaft sleeve	SS ASTM A 276 CL 410	
FEATURES OF CONSTRUCTION		
Type of impeller	Closed	
Diameter of impeller	As per design.	
Balancing of impeller	As per IS Std.	
Direction of rotation	CW From Coupling end or as per site	

Manufacturer's Seal & Signature

Bidder's seal & Signature

TECHNICAL DATA SHEET FOR 150 HP PUMP

Description	BMC Requirement	Offered by bidder
Standard of testing / manufacturing	ISO 9906 Gr 2B / BS 5316 Part I & II	
Make	As per Annexure – I	
Liquid	Water	
Temperature	Ambient	
Pump type	Horizontal Split case	
Pump Model	As per manufacturer's standard	
Recommended motor KW/HP	110 KW / 150 HP	
Suction size in mm	300	
Delivery size in mm	250	
Bearing type	As per manufacturer's standard	
Speed	1485 RPM or suitable	
Min. efficiency	81%	
Head	31 Mtrs.	
Power input at duty point	As per design.	
Capacity at	270 LPS	
Shut off head	Not less than 36 Mtrs.	
NPSH (R)	As per design.	
MATERIAL OF CONSTRUCTION		
Casing	C.S. (Cast Steel Gr WCB)	
Impeller	C.S. (Cast Steel Gr WCB)	
Casing wearing rings	C.S. (Cast Steel Gr WCB)	
Shaft	SS ASTM A 276 CL 410	
Shaft sleeve	SS ASTM A 276 CL 410	
FEATURES OF CONSTRUCTION		
Type of impeller	Closed	
Diameter of impeller	As per design.	
Balancing of impeller	As per IS Std.	
Direction of rotation	CW From Coupling end or as per site	

Manufacturer's Seal & Signature

Bidder's seal & Signature

APPENDIX – III**TECHNICAL DATA SHEET FOR 300 HP MOTOR**

Sr. No.	Parameters	BMC Requirement	Offered by bidder
1	Application / Designation	Suitable for rated capacity pump	
2	Make	As per Annexure – I	
3	Application standard	IS 325 and other relevant standard	
4	Rated Output	As per pump design	
5	Rated Speed	980 RPM or suitable	
6	Type of Duty (IS 325 or equivalent)	Continuous	
7	Rated voltage	415 V \pm 10%	
8	No. of phases	3 Ph	
9	Frequency	50 Hz \pm 5%	
10	FLC	As per manufacturer's design	
11	Starting Current	As per manufacturer design	
12	Full load Efficiency	Not less than 93% suitable (without any negative tolerance as admissible in relevant standard.) at rated capacity.	
13	Full load power factor	0.78	
14	Method of starting	Star- Delta starter	
15	Torque		
a)	Starting	As per Manufacturer design	
b)	Pull out	As per Manufacturer design	
16	Class of insulation	F- As per specifications	
a)	Ref. ambient Temp	As per Manufacturer design	
b)	Temp. rise by Res. Method	As per Manufacturer design	
17	Type of enclosure	Totally Enclosed Fan Cooled	
18	Degree of protection	IP 55	
19	Dimensional drawing enclosed	During drawing approval confirmation	
20	Space Heaters		
a)	Rated voltage	240 volts	
b)	No. & location	2 No. inside stator	
21	Two earth pads with nuts /bolts arrangement provided on opposite sides, suitable to receive earth conductor	Suitable for earth arrangement	
22	Direction of rotation viewed from non drive end	Bidirectional.	
23	Method of coupling with the driven	Pin bush type flexible coupling	
24	Sealing arrangement for bearings	Labyrinth or suitable	
25	Details of painting	As per relevant IS	
26	Motor bearings	Anti-friction bearing, grease lubricated at both the ends.	
a)	Details of bearings, type, make		

	for both DE & NDE		
b)	Motor bearing lubrication system	Yes	
27 a)	Permissible vibration limits	As per relevant IS Std.	
b)	Whether conforming to standard	Yes	
28	Details of power cable, if any		
29	Instructional manual	Required	
30	General arrangement drawing	Required	
31	Test reports	Required	

Bidder's seal & Signature

TECHNICAL DATA SHEET FOR 150 HP MOTOR

Sr. No.	Parameters	BMC Requirement	Offered by bidder
1	Application / Designation	Suitable for rated capacity pump	
2	Make	As per Annexure – I	
3	Application standard	IS 325 and other relevant standard	
4	Rated Output	As per pump design	
5	Rated Speed	1485 RPM or suitable	
6	Type of Duty (IS 325 or equivalent)	Continuous	
7	Rated voltage	415 V \pm 10%	
8	No. of phases	3 Ph	
9	Frequency	50 Hz \pm 5%	
10	FLC	As per manufacturer's design	
11	Starting Current	% suitable for soft starter of full load current	
12	Full load Efficiency	Not less than 93% suitable (without any negative tolerance as admissible in relevant standard.) at rated capacity.	
13	Full load power factor	0.82	
14	Method of starting	Star- Delta starter	
15	Torque		
a)	Starting	As per Manufacturer design	
b)	Pull out	As per Manufacturer design	
16	Class of insulation	F- As per specifications	
a)	Ref. ambient Temp	As per Manufacturer design	
b)	Temp. rise by Res. Method	As per Manufacturer design	
17	Type of enclosure	Totally Enclosed Fan Cooled	
18	Degree of protection	IP 55	
19	Dimensional drawing enclosed	During drawing approval confirmation	
20	Space Heaters		
a)	Rated voltage	240 volts	
b)	No. & location	2 No. inside stator	
21	Two earth pads with nuts /bolts arrangement provided on opposite sides, suitable to receive earth conductor	Suitable for earth arrangement	
22	Direction of rotation viewed from non drive end	Bidirectional.	
23	Method of coupling with the driven	Pin bush type flexible coupling	
24	Sealing arrangement for bearings	Labyrinth or suitable	
25	Details of painting	As per relevant IS	

26	Motor bearings	Anti-friction bearing, grease lubricated at both the ends.	
a)	Details of bearings, type, make for both DE & NDE		
b)	Motor bearing lubrication system	Yes	
27 a)	Permissible vibration limits	As per relevant IS Std.	
b)	Whether conforming to standard	Yes	
28	Details of power cable, if any		
29	Instructional manual	Required	
30	General arrangement drawing	Required	
31	Test reports	Required	

Bidder's seal & Signature

APPENDIX – IV

TECHNICAL PARTICULARS FOR INSTRUMENT SYSTEM

Technical Particulars for DPM:

Digital Panel Meters for pressure indicator

a)	Type	Microprocessor based
b)	Display	Digital, seven segment LCD /LED display.
c)	No. of Digits	4 Digit.
d)	Input	4-20 mA DC (Isolated) from pressure transmitters.
e)	Zero & Span Adjustment	Required
f)	Engineering Unit for display	0 to 12 kg/cm ²
g)	Accuracy	+/- 1% of span.
h)	Enclosure Material	Die cast aluminum/ ABS Plastic
i)	Enclosure Protection	IP - 20
j)	Retransmission output	4-20 mA
k)	Power supply to Transmitters	Required
l)	Communication Port	RS-485 (for communication PC system)

Technical Particulars for Pressure Transmitters:

a)	Quantity	14 Nos.
b)	Overall accuracy of measurement loop	+/- 0.5% of measured value
c)	<u>Pressure Sensor & Transmitter</u>	
(i)	Sensor	Diaphragm sensor
(ii)	Type	Indicating type having back-lit LCD display.
(iii)	Material	Non corrosive.
(iv)	Process connection	1 / 2" NPT (M)
(v)	Mounting	Field
(vi)	Range	Adjustable over full span.
(vii)	Zero & span Adjustment	Required
(viii)	Output	4-20 mA DC (Isolated)
(ix)	Enclosure protection	IP-65

Bidder's seal & Signature

APPENDIX – V

TECHNICAL DATA SHEET FOR VIBRATION MONITORING SYSTEM

<u>BMC Required</u>		To be offered by bidder
GENERAL		
Make	Sensor of vibration monitoring system should be CE certified.	
Type	Continuous monitoring with display	
Display	3 ½ Digit, LEDType.	
Input signal	From accelerometer, Velocity pick up	
Ranges	0-25, mm/sec RMS	
Measuring Parameters	Velocity	
Alarm level	As per Manufacturer	
Trip level	As per Manufacturer	
Operating Temperature	As per Manufacturer	
ELECTRICAL		
Power supply	230/110VAC @ 50HZ, OR 24 V DC	
Output	4-20MA,DC(Load 300 ohms)Buffer outputs	
Relays	Contract rating 230VAC@ 10A,28VDC@ 10A	
Accuracy	0.5% of 0-25, mm/sec RMS	
Linearity	0.1% of 0-25, mm/sec RMS	
Enclosure	ABS Nylon Wall mounting type, protection class IP67	

Bidder's seal & Signature

APPENDIX – VI

TECHNICAL DATA SHEET FOR SV

Sr. No.	Part	Material / Description
1	Body, Bonnet, Wedge, Gland flange	Ductile Iron Gr. 500 / 7 or 400 / 12
2	Seat ring / Wedge ring, Wedge nut	Ph. Bronze / Al. Bronze
3	Stem	SS 410 / SS 316
4	Gasket, Gland packing	EPDM (WRAS / NSF/ DVGW approved)
5	Internal & external Fasteners	Stainless Steel A2 (SS304) / A4 (SS316) / Galvanized Steel (8.8)
6	Coating	Fusion Bonded non-toxic Epoxy NSF / WRAS coated min. 250 microns thickness to DIN 36077-2 Standards, color RAL 5005 / 5017 Blue.
7	Operation	Manual
8	Design standard	IS 14846 / EN1074 / BS 5163
9	Testing standard	IS 14846 / EN 12266-1&2
10	Flange drilling	IS 1538 / EN1092
11	Face to face standard	IS 14846 PD / EN558-3
12	Pressure rating	10 bar

APPENDIX – VII

TECHNICAL DATA SHEET FOR BFV

Sr.No	Part Component	BMC Required
		10 bar
1.	Body	SGI IS 1865 Gr.500/7
2.	Disc	SGI IS 1865 Gr.500/7
3.	Shaft(DE / NDE)	SS AISI 316
4.	Seal	EPDM Rubber
5.	Seat Ring / Retaining Ring	SS AISI 316
6.	Bushes	Steel backed PTFE
7.	Internal Hardware	SS AISI 316
8.	External Hardware	SS AISI 316
9.	Hand wheel	Chrome plated.
10.	Painting	As per Manufacturer Std.
11.	Drilling of valve flange	Drilling of the flange shall be as per IS 1538 and thickness of the flange as per the pressure rating of the valve.

Bidder's seal & Signature

APPENDIX – VIII

TECHNICAL PARTICULARS FOR 5 TON EOT CRANE

Sr. No.	Description	BMC Requirement	Offered by bidder
1	Type	Single girder	
2	Rated capacity	5 Ton S.W.L.	
3	Span	10Mtrs. Approx OR as per site.	
4	Runway length	25Mtrs. approx. OR as per site.	
5	Head room available (from top of the rail to lower end of the beam)	Min 1.0 Mtrs. Approx.	
6	Lift	8 Mtrs. approx	
7	No. of falls	4 (Minimum)	
8	Operating speed with the rate loads		
i	Hoist	4 Mtrs / Min. or suitable	
ii	Cross travel	4 Mtrs. / Min. or suitable	
iii	L. T.	10 Mtrs. / Min. or suitable	
9	Type of Service	Indoor duty	
Note: The above dimensions and clearances are tentative and contractor should visit the site and take actual measurement.			

Bidder's seal & Signature

Appendix II- Annexures

ANNEXURE " A "

Name of work: Renovation of Powai Pumping Station along with allied works at Powai group of reservoirs under AE(M)WWES-II

1) Earnest Money

- a) Name of Ward :
- b) Estimated cost of Tender : **Not applicable to item rate tender**
- c) Earnest Money : **Rs. 9,88,000 /-**

2) Definition

: The Engineer for this work is **Hydraulic Engineer**

3) Security Deposit Amended

- a) **Contract Deposit** : 2% of the Contract Sum
- b) **Retention Money** : N.A.

4) Contract Period

: **15 (Fifteen) Months including monsoon** from the date of receipt of PO

5) Defect Liability Period

: 36 months from the date of completion of work

6) Advances (Recovery of advances)

: as per G.C.C

7) Payment

: within 30 Days from the date of receipt of bill
(A) For BoQ 1 item no 3,12 & 13
i) 100% against supply of Material as per BOQ 1 (On pro – rata basis),
(B) For BoQ 1 item no 1,2,4,5,6,7,8,9,10 &11
i) 70% against supply of Material as per BOQ 1 (On pro – rata basis),
ii) 30% after successful Installation, testing & commissioning/ Completion of Work as per BoQ 1 (On pro – rata basis)

8) Drawing approvals

The bidder shall obtain drawings of all the major equipments such as pumps, motor, valves (NRV's,CV's,BFV's,SV's) crane, DG Set and Air compressor from the manufacturer. Bidder shall get the drawings approved from the BMC competent authorities before manufacturing the equipments.

9) Inspection

The successful bidder / contractor shall carry out inspection as per requisite IS standard procedure of all the major equipments such as pumps, motor, valves (NRV's,CV's,BFV's,SV's), crane, DG Set and Air compressor at manufacturer's work place. After successful inspection the contractor shall submit all the inspection, testing reports and calibration certificates of instruments used for inspection to BMC competent authorities.

10) Solvency Certificates

Bidders shall have to produce along with their tender latest Solvency Certificate (**Issued maximum twelve months prior to the due date of the tender**) of at least **Rs. 8 Lakh (Rupees Eight Lakh Only)** from any Bank recognized by Reserve Bank of India / Govt. of India. The amount of Solvency Certification is worked out as per table below:

Estimated cost in Rs.	Amount of Solvency Certificate in Rs.
Upto 2 lakh	0.5 Lakh
Fron 2 lakh to 7.5 lakhs	1.5 Lakhs
7.5 lacs to 15 lakhs	3 lakhs
15 lakhs to 25 lakhs	4 lakhs
Above 25 lakhs	8 lakhs

11) Penalty : In addition to clause no 84 in 'General Conditions' on page no 89 & 90, following penalty is also applicable for subject work:

- a) For causing any damage to any equipment/ system accessories or electrical switch gears/wiring/cabling etc amount equivalent to the replace of the damages in addition to Rs 5000/- for affecting water supply will be deducted from the running bill
- b) Contractor's maximum liability of the penalty shall be limited to 10 % of the total Contract Cost.

Signature of Contractor

Date :

Annexure – A1

Irrevocable Undertaking

(On RS. 500/- stamp paper duly notarized by notary with red seal and registration number)

I Shri./Smt. aged..... years Indian Inhabitant.
Proprietor/Partner/Director of M/s. resident at do hereby
give Irrevocable undertaking as under :

- 1) I Say & undertake that as specified in section 171 of CGST Act 2017, any reduction in rate of tax on supply of goods or services or the benefit of input tax credit shall be mandatorily passed on to BMC by way of commensurate reduction in prices.
- 2) I further say and undertake that I understand that in case the same is not passed on and is discovered at any later stage, BMC shall be at liberty to initiate legal action against me for its recovery including, but not limited to, an appeal to the Screening Committee of the GST Counsel.
- 3) I say that above said irrevocable undertaking is binding upon me/my partners/Company/other Directors of the company and also upon my/our legal heirs, assignee, Executor, Administrator etc.
- 4) If I fail to compliance with the provisions of the GST Act, I shall be liable for penalty/punishment or both as per the provisions of GST Act.

Whatever has been stated here in above is true & correct to my/our own knowledge & belief.

Solemnly affirmed at

DEPONENT

This day of

BEFORE ME

Interpreted Explained and Identified by Me.

FORM OF TENDER

To,

The Municipal Commissioner for Greater Mumbai

Sir,

I/ We have read and examined the following documents relating to the **Renovation of Powai Pumping Station along with allied works at Powai group of reservoirs under AE(M)WWES-II**

- i. Notice inviting tender.
- ii. Directions to tenderers (General and special)
- iii. General conditions of contract of the Brihanmumbai Municipal Corporation as amended up to date.
- iv. Relevant drawings
- v. Specifications.
- vi. Special directions
- vii. Annexure A and B.
- viii. Bill of Quantities and Rates.

1A. I/We_____ (full name in capital letters, starting with surname), the Proprietor/ Managing Partner/ Managing Director/ Holder of the Business, for the establishment / firm / registered company, named herein below, do hereby offer to

.....
.....

Referred to in the specifications and schedule to the accompanying form of contract of the rates entered in the schedule of rates sent herewith and signed by me/ us” (strike out the portions which are not applicable).

1B. I/We do hereby state and declare that I/We, whose names are given herein below in details with the addresses, have not filled in this tender under any other name or under the name of any other establishment /firm or otherwise, nor are we in any way related or concerned with the establishment /firm or any other person, who have filled in the tender for the aforesaid work.”

2. I/We hereby tender for the execution of the works referred to in the aforesaid documents, upon the terms and conditions, contained or referred to therein and in accordance with the specifications designs, drawings and other relevant details in all respects.

* At the rates entered in the aforesaid Bill of Quantities and Rates.

3. According to your requirements for payment of Earnest Money amounting to **Rs.9,88,000/- (Rs Nine Lakh Eighty Eight Thousand only)** I/We have deposited the amount through online payment gateways with the C.E. of the Corporation not to bear interest

4. I/We hereby request you not to enter into a contract with any other person/s for the execution of the works until notice of non/acceptance of this tender has first been communicated to me/us, and in consideration of yours agreeing to refrain from so doing I/we agree not to withdraw the offer constituted by this tender before the date of communication to me/us of such notice of non/acceptance, which date shall be not later than ten days from the date of the decision of the Standing Committee or Education Committee of the Corporation, as maybe required under the Mumbai Municipal Corporation Act, not to accept this tender.(Subject to condition 5 below).

5. I/We also agree to keep this tender open for acceptance for a period of 180 days from the

date fixed for opening the same and not to make any modifications in its terms and conditions which are not acceptable to the Corporation.

6. I/We agree that the Corporation shall, without prejudice to any other right or remedy, be at liberty to forfeit the said earnest money absolutely, if

- a. I/We fail to keep the tender open as aforesaid.
- b. I/We fail to execute the formal contract or make the contract deposit when called upon to do so.
- c. I/we do not commence the work on or before the date specified by the Engineer in his work order.

7. I/We hereby further agree to pay all the charges of whatsoever nature in connection with the preparation, stamping and execution of the said contract.

8. ~~I/We further agree that, I/we shall register ourselves as 'Employer' with the Bombay Iron and Steel Labour Board' and fulfill all the obligatory provisions of Maharashtra Mathadi, Hamal and other Manual workers (Regulation of Employment and Welfare) Act 1969 and the Bombay Iron and Steel unprotected workers Scheme 1970.~~

9. "I/We..... have failed in the accompanying tender with full knowledge of liabilities and, therefore, we will not raise any objection or dispute in any manner relating to any action, including forfeiture of deposit and blacklisting, for giving any information, which is found to be incorrect and against the instructions and directions given in this tender.

10. "I/We further agree and undertake that in the event it is revealed subsequently after the allotment of work/contract to me/us, that any information given by me/us in this tender is false or incorrect, I/We shall compensate the Brihanmumbai Municipal Corporation for any such losses or inconvenience caused to the Corporation in any manner and will not resist any claim for such compensation on any ground whatsoever. I/we agree and undertake that I/we shall not claim in such case any amount by way of damages or compensation for cancellation of the contract given to me/us or any work assigned to me/us or is with- drawn by the Corporation,

Address

Yours faithfully,

.....

.....

Digital Signature of the Tenderer or the Firm

1.....

2.....

3.....

4.....

5.....

Full Name and private residential address
of all the partners constituting the Firm

A/c No.

.....

1.

Name of Bank

2

.....

3

Name of Branch

4.

.....

Vender No.

.....

AGREEMENT FORM

Tender / Quotation

dated 20...

Standing Committee / Education Committee Resolution No. _____ CONTRACT
FOR THE WORKS

.....
.....This agreement made this day of
..... Two thousand.....Between
inhabitants of Mumbai, carrying on business at.....
..... in Bombay under the style and name of Messrs
..... (Hereinafter called “the contractor of the
one part and Shri., the Dy.Municipal Commissioner(S.E)
(hereinafter called “the Dy.Municipal commissioner” in which expression are included unless the
inclusion is inconsistent with the context, or meaning thereof, his successor or successors for the time
being holding the office of Dy.Municipal Commissioner(S.E) of the second part and the
Brihanmumbai Municipal Corporation (hereinafter called “the Corporation”) of the third part,
WHEREAS the contractor has tendered for the construction, completion and maintenance of the works
described above and his tender has been accepted by the Commissioner (with the approval of the
Standing Committee/Education Committee of the Corporation NOW THIS AGREEMENT
WITNESSETH as follows:-

- 1) In this agreement words and expressions shall have the same meanings as are respectively assigned to them in the General Conditions of Contract for works hereinafter referred to:-
- 2) The following documents shall be deemed to form and be read and constructed as a part of this agreement viz.
 - a) The letter of Acceptance
 - b) The Bid:
 - c) Addendum to Bid; if any
 - d) Tender Document
 - e) The Bill of Quantities:
 - f) The Specification:
 - g) Detailed Engineering Drawings
 - h) Standard General Conditions of Contracts (GCC)
 - i) All correspondence documents between bidder and BMC

- 3) In consideration of the payments to be made by the Commissioner to the contractor as

hereinafter mentioned the contractor hereby covenants with the Commissioner to construct, complete and maintain the works in conformity in all respects with the provision of the contract.

4) The Commissioner hereby covenants to pay to the Contractor in consideration of the construction, completion and maintenance of the works the contract sum, at times and in the manner prescribed by the contract.

IN WITNESS WHERE OF the parties hereto have caused their respective common seals to be herein to affixed (or have hereunto set their respective hands and seals) the day and year above written.

Signed, Sealed and delivered by the contractors

In the presence of

Trading under the name and style of

Full Name &
Address

Signed by the DMC(SE) in the presence of

D.M.C.(S.E.)

The Common seal of the Brihanmumbai Municipal Corporation was hereunto affixed on the 20 in the presence of two members of the Standing Committee.

1.	1.
2.	2.

And in the presence of the Municipal Secretary

Municipal Secretary

E.E.(H.W.)W.W.

Dy.H.E.(Maint.)

H.E.

ANNEXURE " A "

Name of work :

1. ~~The Engineer for this work:~~

Chief Engineer () Dy.Ch.Eng.() Exe.Eng.()

2. ~~Estimated cost of Tender:~~

Sr. No.	Description of work	Total Amount Rs.
1.	Civil Work	
2.	Electrical Work	
3.	Total Amount	

3. ~~Earnest Money (1% of the Estimated cost) Rs.~~_____

4. **Time Period**

1. Contract as a whole Period completion	
2. Part or Groups of items	
i-	i-
ii-	ii-
iii-	iii-

~~9. Percentage to be charged as supervision charges for the work got executed through other meanspercent.~~

~~The "Actual cost of the work" shall mean in the case of percentage rate contracts the actual cost of the work executed at the rates as mentioned in the Contract Schedule _____ adjusted by the Contractor's percentage rate and cost of extra and excess, but excluding the cost on account of Water Charges and Sewerage Charges if any, payable by the contractor and also excluding cost on account of price variation claims as provided in price variation clause as~~

amended up to date.

~~1. In case of item rate contracts the actual cost calculated for the work executed at the rates mentioned in the contract schedule for different items including cost of excess and extra items of the work excluding the cost of water charges and sewerage charges if any, payable by the contractor and excluding cost on account of price variation claims~~_____

~~as provided in extra excess conditions as amended up to date.~~

~~1. In case of lump sum contract the cost of the work actually carried out as per break up and programme of the work and the schedule of payment included in the contract including cost of any excess and/or extra items, of the work, excluding the cost on account of water charges and sewerage charges and also excluding cost on account of price variation claims as provided in extra excess conditions as amended up to date.~~_____

Annexure- B
PRE-CONTRACT INTEGRITY PACT

The Bidder commits himself to take all measures necessary to prevent corrupt practices, unfair means and illegal activities during any stage of his bid or during any pre-contract or post-contract stage in order to secure the contract or in furtherance to secure it and in particular commits himself to the following:-

1. The Bidder will not offer, directly or through intermediaries, any bribe, gift, consideration, reward, favour, any material or immaterial benefit or other advantage, commission, fees, brokerage or inducement to any official of the BMC, connected directly or indirectly with the bidding process, or to any person, organization or third party related to the contract in exchange for any advantage in the bidding, evaluation, contracting and implementation of the Contract.
2. The Bidder further undertakes that he has not given, offered or promised to give, directly or indirectly any bribe, gift, consideration, reward, favour, any material or immaterial benefit or other advantage, commission, fees, brokerage or inducement to any official of the BMC or otherwise in procuring the Contract or forbearing to do or having done any act in relation to the obtaining or execution of the Contract or any other Contract with the Government for showing or forbearing to show favour or disfavour to any person in relation to the Contract or any other Contract with the Government.
3. The Bidder will not collude with other parties interested in the contract to impair the transparency, fairness and progress of the bidding process, bid evaluation, contracting and implementation of the contract.
4. The Bidder will not accept any advantage in exchange for any corrupt practice, unfair means and illegal activities.
5. The Bidder, either while presenting the bid or during pre-contract negotiations or before signing the contract, shall disclose any payments he has made, is committed to or intends to make to officials of the BMC or their family members, agents, brokers or any other intermediaries in connection with the contract and the details of services agreed upon for such payments.
6. The Bidder shall not use improperly, for purposes of competition or personal gain, or pass on to others, any information provided by the BMC as part of the business relationship, regarding plans, technical proposals and business details, including information contained in any electronic data carrier. The Bidder also undertakes to exercise due and dequate care lest any such information is divulged.
7. The Bidder commits to refrain from giving any complaint directly or through any other manner without supporting it with full and verifiable facts.
8. The Bidder shall not instigate or cause to instigate any third person to commit any of the actions mentioned above.

9. The Bidder and their respective officers, employees, agents and advisers shall observe the highest standard of ethics during the Bidding Process. Notwithstanding anything to the contrary contained herein, the Authority may reject an Application without being liable in any manner whatsoever to the Applicant if it determines that the Applicant has, directly or indirectly or through an agent, engaged in corrupt practice, fraudulent practice, coercive practice, undesirable practice or restrictive practice in the Bidding Process

For the purposes of this Clause 9, the following terms shall have the meaning herein after respectively assigned to them.

1. “fraudulent practice” means a misrepresentation or omission of facts or suppression of facts or disclosure of incomplete facts, in order to influence the Bidding Process
2. “coercive practice” means impairing or harming or threatening to impair or harm, directly or indirectly, any person or property to influence any persons participation or action in the Bidding Process;
3. “undesirable practice” means (i) establishing contact with any person connected with or employed or engaged by the Authority with the objective of canvassing, lobbying or in any manner influencing or attempting to influence the Bidding Process; or (ii) having a Conflict of Interest; and
4. “restrictive practice” means forming a cartel or arriving at any understanding or arrangement among Applicants with the objective of restricting or manipulating a full and fair competition in the Bidding Process.

Annexure- C

(On Rs. 200/- Stamp Paper)

DECLARATION CUM INDEMNITY BOND

Bid No 2024_BMC_

I, _____ of _____, do hereby declared and undertake as under.

1. I declare that I have submitted certificates as required to Executive engineer (Monitoring) at the time of registration of my firm/company _____ and there is no change in the contents of the certificates that are submitted at the time of registration.

2. I declare that I _____ in capacity as Manager/Director/Partners/Proprietors of _____ has not been charged with any prohibitory and /or penal action such as banning(for specific time or permanent)/de-registration or any other action under the law by any Government and/or Semi Government and/or Government undertaking.

3. I declare that I have perused and examined the tender document including addendum, condition of contract, specifications, drawings, bill of quantity etc. forming part of tender and accordingly, I submit my offer to execute the work as per tender documents at the rates quoted by me in capacity as _____ of _____.

4. I further declare that if I am allotted the work and I failed to carry out the allotted work in accordance with the terms and conditions and within the time prescribed and specified, BMC is entitled to carry out the work allotted to me by any other means at my risk and cost, at any stage of the con-tract.

5.I also declare that I will not claim any charge/damages/compensation for non availability of site for the contract work at any time.

6. I declare that I will positively make the arrangements of the required equipment on the day of commencement or with respect to the progress of the work in phases, as per the instructions of site in charge

Signature of Tenderer/Bidder

UNDERTAKING FOR BEST PRICE

Bid No
2024_BMC_

“I/We _____ (full name in capital letters, starting with surname), the Proprietor/Managing Partner/Managing Director/Holder of the business / Manufacturer / Authorized Dealer, for the establishment/firm/registered company, named herein below, do hereby, state and declare that I/We _____ whose names are given herein in below in details with the addresses have not filled in this quotation under any other name or under the name of any other establishment / firm or otherwise, nor are we in any way related or concerned with any establishment / firm or any other person, who have filled in the quotation for the aforesaid work”.

“I/We do hereby further undertake that, we have offered the best prices for the subject supply work as per the present market rates. Further, we do hereby undertake and commit that we have not offered/supplied the subject product/similar product/systems or sun systems in the past one year in the Maharashtra State for quantity variation up to - 50% or +10% at a price lower than that offered in the present quotation to any other outside agencies including Govt./Semi Govt. Agencies and within BMC also. Further, we have filled in the accompanying quotation with full knowledge of the above liabilities and therefore we will not raise any objection or dispute in any manner related to any action including forfeiture of deposit and blacklisting, for giving any information which is found to be incorrect and against the instruction and direction given in this behalf in this quotation.

I/We further agree and undertake that in the event it is revealed subsequently after the allotment of work/contract to me/us ,that any information given by me /us in this quotation is false or incorrect ,I/We shall compensate the Brihanmumbai Municipal Corporation for any such losses or inconvenience caused to the corporation in any manner and will not resist any claim for such compensation on any ground whatsoever ,I/We agree and undertake that I/We shall not claim in such case any amount ,by way of damages or compensation for cancellation of the contract given to me/us or any work assigned to me/us or is withdrawn by corporation.”

However, in case of price difference, if it is a result of differential tax structures, different Dollar value of Rupee, considering this aspect, before invoking the penalty, blacklisting etc., I/We will be given a reasonable opportunity of being heard by representing our case as to why such price variation/differential has been arisen.

In case if the explanation submitted by me/us is unsatisfactory then action as stated above including forfeiture of deposit & blacklisting may be taken against me/us.

**Tenderer's Full name, signature and
address with rubber stamp**

(This affidavit should be given on Rs 500 Stamp Paper duly notarized by Notary with red seal and registration Number.)

UNDERTAKING FORM

To,

The Municipal Commissioner,

Brihanmumbai Municipal Corporation.

Bid No. 2024_BMC_

Sub: Renovation of Powai Pumping Station along with allied works at Powai group of reservoirs under AE(M)WWES-II

Sir,

I / We have read all the terms and conditions as stipulated in the above tender notice and accept the same.

Yours faithfully,

Tenderer's full address & telephone
no. & Vender Reg. No. if any

Tenderer's signature and
office stamp

BANKERS GURANTEE IN LIEU OF CONTRACT DEPOSIT

THIS INDENTURE made this _____ day of _____ BETWEEN
THE _____ BANK incorporated under the English/Indian Companies Acts and
carrying on business in Mumbai (hereinafter referred to as 'the bank' which expression shall be
deemed to include its successors and assigns) of the first part
_____ inhabitants carrying on business at
_____ in Mumbai under the style
and name of Messer's _____ (hereinafter referred to as 'the consultant') of the
second part Shri. _____ THE MUNICIPAL COMMISSIONER FOR
GREATER MUMBAI (hereinafter referred to as 'the commissioner' which expression shall be
deemed, also to include his successor or successors for the time being in the said office of Municipal
Commissioner) of the third part and THE MUNICIPAL CORPORATION OF GREATER
MUMBAI (hereinafter referred to as 'the Corporation') of the fourth part WHEREAS the consultants
have submitted to the Commissioner tender for the execution of the
work of _____ and the terms of such tender /contract require that the
consultants shall deposit with the Commissioner as/contract deposit/ earnest money and /or the
security a sum of Rs. _____ (Rupees _____) AND WHEREAS if and
when any such tender is accepted by the Commissioner, the contract to be entered into in furtherance
thereof by the consultants will provide that such deposit shall remain with and be appropriated by the
Commissioner towards the Security -deposit to be taken under the contract and be redeemable by the
consultants, if they shall duly and faithfully carry out the terms and provisions of such contract and
shall duly satisfy all claims properly chargeable against them there under AND WHEREAS the
consultants are constituents of the Bank and in order to facilitate the keeping of the accounts of the
consultants, the Bank with the consent and concurrence of the consultants has requested the
Commissioner to accept the undertaking of the Bank hereinafter contained, in place of the
contractors depositing with the Commissioner the said sum as earnest money and /or security as
aforesaid AND WHEREAS accordingly the Commissioner has agreed to accept such
undertaking NOW THIS AGREEMENT WITNESSES that in consideration of the premises,
the Bank at the request of the consultants (hereby testified) UNDERTAKES WITH the
commissioner to pay to the commissioner upon demand in writing , whenever required by him ,
from time to time , so to do , a sum not exceeding in the whole Rs. _____ (Rupees
_____) under the terms of the said tender and /or the contract .The B.G. Is
valid up to _____ "Notwithstanding anything what has been stated above, our liability
under the above guarantee is restricted to Rs. _____ only and guarantee shall remain in
force up to _____ unless the demand or claim under this guarantee is made on us
in writing on or before _____ all your right under the above guarantee shall be forfeited and we
shall be released from all liabilities under the guarantee thereafter"

IN WITNESS WHEREOF

WITNESS(1) _____

Name and _____

address _____

WITNESS(2) _____

Name and _____

the duly constituted Attorney Manager

address _____

the Bank and the said Messer's _____

(Name of the Bank)

WITNESS(1) _____

Name and _____

address _____

WITNESS(2) _____

Name and _____

For Messer's _____

address _____

have here into set their respective hands the day and year first above written.

The amount shall be inserted by the Guarantor, representing the Contract Deposit in Indian Rupees.

Annexure-D

INFORMATION REGARDING STATUS OF BIDDER

(1) (a) Whether it is a proprietor -----
concern

(b) If so, name of the owner -----

(2) If it is a partnership concern, please -----
furnish name of each partner and -----
copy of registration certificate -----

(3) In case of company, please furnish -----
the documentary proof to show that -----
the company is registered. -----

(4) In case of Joint Venture, please -----
furnish the name of each firm and -----
Joint Venture forms. -----

**Signature of authorized
Person of concern/company**

Name of concern/company and seal

Annexure E(i)

Format for authorization Letter from Original Equipment Manufacturer of electrically driven, coupled Horizontal Split case type Pumpset)

(To be submitted on the letterhead of Original Equipment Manufacturer, In case of tenderer who are authorized representative of Horizontal Split case type Pump manufacturer)

To,

Date: DD/MM/YYYY

A.E (M) WW ES-II
Brihanmumbai Municipal Corporation
BMC Water Works Yard, Ghatkopar, Mumbai.

Sub: Name of Work _____(Mention Name of Work).

BMC Bid No-_____

This is to certify that M/s..... are Authorized Representative of
..... since till date for dealing in
.....

We authorize them to quote for the tender
.....bearing
no..... to be submitted on..... and also promise to provide all the
necessary technical support during execution of work & after sales service during the contract period.

Place :

Seal of the Manufacturer & Sign of

Authorized signatory

Date :

[Note:- Copy of Power of Attorney of Authorized Signatory to be submitted along with Support Letter]

Annexure E(ii)

Undertaking Letter from Original Equipment Manufacturer of pumpset for coating to be applied on impeller & casing

(To be submitted on the letterhead of Original Equipment Manufacturer of pumpset)

To,

Date: DD/MM/YYYY

A.E (M) WW ES-II
Brihanmumbai Municipal Corporation
BMC Water Works Yard, Ghatkopar, Mumbai.

Sub: Name of Work _____ (Mention Name of Work).

BMC Bid No- _____

Dear Sir,

This is to confirm that to improve the efficiency of pumpset, we apply _____ coating to Liquid Flow passage of the pump. We have the facility/agency to apply the said coating on the pumpset. This coating is anti-erosive, anti-corrosive, Energy efficient & Hydrophobic in nature and suitable for potable water applications.

The documentary evidence proving the compatibility of coating with potable water is attached with this letter for your reference.

Thanking you,

Yours faithfully,

(Signature)
Name and Designation

Name of OEM: M/s

Place:

Date: DD/MM/YYYY

Annexure -F

FORMATS FOR JOINT VENTURES

1. POWER OF ATTORNEY FOR LEAD PARTNER (Not Applicable)

TO BE EXECUTED BY ALL MEMBER PARTNERS IN CASE OF JOINT VENTURE (On

Non – judicial stamp paper of Rs. 200 duly attested by notary public)

Whereas the Municipal Corporation of Greater Mumbai (BMC) has invited bids for -

_____ (name of the work).Whereas, M/s

_____, M/s _____ and M/s

_____ (the respective names of the members of the Joint Venture along with address of their registered offices) have formed a Joint Venture and are interested in bidding for

the above mentioned work in accordance with the terms and conditions of the tender/contract and

Whereas, it is necessary for the partners of the Joint Venture to designate one of them as the Lead Partner with all necessary power and authority to do for and on behalf of the Joint Venture, all acts, deeds and things as may be necessary in connection with the Joint Venture's bid.

NOW THIS POWER OF ATTORNEY WITNESSETH THAT

WE, M/S _____, M/S _____

and M/S _____ (the respective names of the members of the Joint Venture along with address of their registered offices) do hereby designate M/s _____ (name along with address of

the registered office) being one of the partners of the Joint Venture, as the Lead Partner of the Joint Venture, to do on behalf of the Joint Venture, all or any of the acts, deed or things necessary or incidental to the Joint Venture's bid for the work, including submission of Proposal, participating in conference, responding to queries, submission of information/ documents and generally to represent the Joint Venture in all its dealings with BMC, any other Government Agency or any person, in-connection with Work until culmination of the process of bidding and thereafter till the Contract Agreement is entered into with BMC.

We here by agree to ratify all acts, deeds and things lawfully done by Lead Partner our said attorney pursuant to this Power of Attorney and that all acts, deeds and things done by our afore said attorney.

Dated this _____ day of _____ 2022 .

[Executants(s)]

(To be executed by all the Partners of the Joint Venture)

Note:-

The mode of execution of the Power of Attorney should be in accordance with the procedure, if any, laid down by the applicable law and the charter documents of the executants and when it is so required the same should be under common seal affixed in accordance with the required procedure.

Also wherever required, the executants should submit for verification the extract of the charter documents and documents such as resolution/ Power of attorney in favour of the person executing this Power of attorney for the designation of power here under on behalf of the Joint Venture.

2. POWER OF ATTORNEY TO A PERSON FOR SIGNING OF PROPOSAL

(Not Applicable)

TO BE EXECUTED BY THE LEAD PARTNER IN CASE OF JOINT VENTURE (On

Non – judicial stamp paper of Rs. 200 duly attested by notary public)

Know all men by these presents, we _____ (name and address of the registered office) do hereby constitute, appoint and authorize Mr. / Ms. _____ R/o _____ (name and address of residence) who is presently employed with us and holding the position of _____ (designation) as our attorney, to do in our name and on our behalf,

all such acts, deeds and things necessary in connection with or incidental to the bid of the Joint Venture consisting of _____, _____ and _____ (please state the name and address of the members of the Joint Venture) for _____

_____ (name of the work) including signing and submission of all documents and providing information/responses to Brihanmumbai Municipal Corporation (BMC), representing us in all matters in connection with our bid for the said work.

We hereby agree to ratify all acts, deeds and things lawfully done by our said attorney pursuant to this Power of Attorney and that all acts, deeds and things done by our aforesaid attorney shall and shall always be deemed to have been done by us.

For

(Signature)

(Name, Title and Address)

Accept

..... (Signature)

(Name , Title and Address of the Attorney)

Notes:

- i. To be executed by the Lead Partner in case of a Joint Venture.
- ii. The mode of execution of Power of Attorney should be in accordance with the procedure, if any, laid down by the applicable law and the charter documents of the executants and when it is so required the same should be under common seal affixed in accordance with the required procedure
- iii. Also, wherever required, the executants should submit for verification of the extract of the charter documents and documents such as a resolution / Power of attorney in favour of the Person executing this Power of Attorney for the delegation of power hereunder on behalf of the executants.

3. BOARD RESOLUTION FOR COMPANIES

3.1 FOR LEAD PARTNER (Not Applicable)

“RESOLVED THAT approval of the Board be and is hereby granted to join the Joint Venture with _____, _____ and _____ (name and address of the members of the Joint Venture) for submission of bid to BMC for _____ (name of the work)

“RESOLVED FURTHER THAT the “draft” Memorandum of Understanding (“MoU) to be entered into with the members of the Joint Venture (a copy where of duly initialed by the Chairman is tabled in the meeting) be and is hereby approved.”

“RESOLVED FURTHER THAT Mr. _____ (name), _____ (designation) be and is hereby authorized to enter into an MoU, on behalf of the company, with the members of the Joint Venture and to sign the form of Tender on behalf of the Joint Venture for submission of the bidding documents and execute a power of attorney in favour of the Company as Lead partner.”

3.2 FOR OTHER MEMBERS OF THE JOINT VENTURE (Not Applicable)

“RESOLVED THAT approval of the Board be and is hereby granted to join the Joint Venture with _____, _____ and _____ (name and address of the members of the Joint Venture) for submission of bid to BMC for _____ (name of the work)

“RESOLVED FURTHER THAT the “draft” Memorandum of Understanding (“MoU) to be entered into with the members of the Joint Venture (a copy where of duly initialed by the Chairman is tabled in the meeting) be and is hereby approved.”

“RESOLVED FURTHER THAT Mr. _____ (name), _____ (designation) be and is hereby authorized to enter into an MoU, on behalf of the company, with the members of the Joint Venture and to execute a power of attorney in favour of _____ (name of the Lead Partner of the Joint Venture) to act as the Lead Partner of Joint Venture.”

4. LETTER OF COMMITMENT (Not Applicable)

(Each member of a Joint Venture has to submit a letter of commitment)

Date: Place:

To

The Municipal Commissioner

Brihanmumbai Municipal Corporation

Dear Sir,

Subject: _____ (name of the work)

This has reference to the Bid being submitted by _____
(mention the Lead Partner of the Joint Venture), as Lead Partner of the Bidding Joint Venture
comprising _____, _____ and
_____ (mention name(s) of the Partners) in respect of
_____ (name of the work) in response to the
e-tender notice issued by the BMC dated _____, 201_.

We hereby confirm the following.

We _____ (name of the Key Person), have examined in detail and
have understood and satisfied ourselves regarding the contents mainly in respect of the
following.

The bid documents published by BMC;

All subsequent communications between BMC and the Joint Venture, represented by
_____ (name of the Lead Partner in case of a Joint Venture);

The MoU signed between/among _____ (name(s) of partners); and

The bid being submitted by _____ (name of the Joint Venture).

We have satisfied ourselves regarding our role in the MOU. If _____
_____ (name of the Joint Venture) is awarded the work/contract, we shall perform our role as outlined in the bid documents to the best of our abilities.

The nature of our legal relationship with the Lead Partner of the Joint Venture, is specified in the bid documents, as per the requirements stated in the bid Documents.

We undertake to support _____ (name of the Lead Partner, for which the Letter of Commitment is being furnished) in respect of the roles as detailed in the MOU.

We therefore request BMC to consider our strengths, our experience, and our track record as specified in the bid documents pursuant to the conditions specified in the bid, for the purposes of evaluation.

We understand that no change in the partnership in the joint venture, in the role and form of responsibility of any partner shall be permitted after submission of the bid. If any change in partnership of the joint venture is done it would adversely affect the same.

For and on behalf of

Signature

(Authorized Representative and Signatory) Name

of the Person :

Designation :

5. JOINT VENTURE SUMMARY (Not Applicable)

Names of all partners of a joint venture:

1. Partner in charge (Lead Partner): _____

2. Member Partner: _____

Details of participation in the Joint Venture:

(Indicate responsibility and extent of participation as applicable in respect of finance planning, construction equipment, key personnel and execution of the work of the partner in charge of the joint venture and of each of the joint venture partners)

PARTICIPATION DETAILS	FIRM A (Lead Partner)	FIRM B (Member Partner)	FIRM C (Member Partner)
Finance (%)			
Planning			
Construction Equipment			
Key Personnel			
Execution of Work (Give details on contribution of each)			

Signature of the Bidder along with stamp / seal

Annexure G

BRIHANMUMBAI MUNICIPAL CORPORATION
(HYDRAULIC ENGINEER'S DEPARTMENT)

UNDERTAKING FOR THE SITE VISIT

(To be submitted on the letterhead of TENDERER while uploading tender in packet A / packet B, failing which tender shall be treated as non-responsive)

I, Mr. (Name of person) _____ of M/s. (Name of Firm / Company)
_____ having my office at (Address)
_____ do hereby state & undertake as Follows:

I say that, I have purchased the Tender for the work of _____ Having bid invitation No _____ for the Brihanmumbai Municipal Corporation. I Confirm that, I have visited/ inspected the site of work before the submission of the tender on date _____ & understood the entire scope of work & site conditions. Considering all probable difficulties as could be reasonably foreseen by us as an experienced contractor, I wish to execute the said work as per the terms and conditions of the tender. This is to re-affirm that, all the conditions of contract shall be binding on us.

Place:-
Date:-

(Name, Seal & Authorized signatory of the tenderer)

Before me,
(Name, Designation, Sign & stamp
Of BMC Site Engineer)

PROFORMAS:

PROFORMA- I

The list of similar works as stated in para 'A' of Post qualification during last Seven years-

PROFORMA- I					
Sr. No.	Name of the Project	Name of the Employer	Stipulated date of completion	Actual date of completion	Actual Cost of work done
1	2	3	4	5	6

NOTE:

- Scanned Attested copies of completion/performance certificates from the Engineer-in-Charge for each work should be annexed in the support of information furnished in the above proforma.
- Works shall be grouped financial year-wise.

PROFORMA- II

Yearly turnover during the last three years.

PROFORMA- II					
Sr. No.	Financial year	Annual Turnover of Civil-Engineering Works	Updated value to current year	Average of last 5years	Page No.
1					
2					
3					
Total					

NOTE: The above figures shall tally with the audited balance sheets uploaded by the tenderers duly certified by Chartered Accountant.

PROFORMA- III

At least similar work, as stated in para 'A' of Post qualification,

PROFORMA-III							
Name of the Project	Name of the Employer	Cost of the Project	Date of issue of work Order	Stipulated Date of Completion	Actual Date of Completion	Actual cost of work done	Remarks explaining reasons for delay, if any
1	2	3	4	5	6	7	8

Note: Scanned Attested copies of completion/performance certificates from the Engineer-in-charge for each work should be annexed in support of information furnished in the above proforma.

PERSONNEL

PROFORMA- IV

PROFORMA-IV					
Sr. No.	Post	Name	Qualification	Work Experience	
		(Prime Candidate / Alternate)		No. of Years	Name of the Project
1	Principal Technical Representative				
2	Project / Site Engineer or Engineer				

NOTE: Scanned Attested copies of qualification certificates and details of work experience shall be submitted /uploaded.

MACHINERY: (for special work only)**PROFORMA- V/A**

PROFORMA- V/A			
Sr.No.	Equipment	Number	Owned/Leased/Assured
1	2	3	4

PROFORMA- V/B

PROFORMA- V/B			
Sr.No.	Equipment	Number	Owne d
1	2	3	4

Note: The tenderer(s) shall furnish/upload the requisite Scanned Attested documents of ownership/leased of machineries. The undertaking from the suppliers will not be accepted.

PROFORMA - VI / A

Details of Existing Commitments and ongoing works -

PROFORMA - VI / A							
Description n of work	Place	Contract t No.& Date	Name & Addresse s	Value of Contract in Rs.	Schedule d Date of completio n	Value of work remainin g to be complete	Anticipate d Date of completio n
1	2	3	4	5	6	7	8

Note: Scanned Attested copies of completion/performance certificates from the Engineer-in-Charge for each work should be annexed in the support of information furnished in the above proforma.

PROFORMA - VI / B

Details of works for which bids are already uploaded -

PROFORMA - VI / B						
Description n of Work	Place	Name & Ad- dresses	Value of Contract in	Time Period	Date on which decision	Remarks
1	2	3	4	5	6	7

Note: Scanned Attested copies of certificates from the Engineer-in-charge for each work shall be annexed.

PROFORMA- VII

Information on Litigation History in which the applicant is involved.

PROFORMA – VII				
Other Party (/Parties	Employer	Cause of Dispute	Amount involved	Remarks showing Present
1	2	3	4	5

Note: Scanned Attested copies of completion / performance certificates from the Engineer-in-charge for each work should be annexed and uploaded.