

RAJKOT MUNICIPAL CORPORATION

e-Tender No.: RMC/Vigilance/2022-23/01



a) Estimated cost.	a) Rs. 37,60,000/-
b) Amount of EMD	b) Rs. 37,600/-
c) e-Tender fee	c) Rs. 1,875/-
d) Time limit for completion of work	d) 6 Months
e) Trial Run	e) 3 Months

**Bid Documents For Itemwise percentage base Tender for
Supply, Installation, Testing & Commissioning of Equipment for
Quality Control Laboratory inclusive of Calibration and
Comprehensive Maintenance**

July - 2022

:: Milestone dates of e-Tendering ::	
1. Downloading of e-Tender documents	Dt. 21-07-2022 to Dt.22-08 -2022 up to 18.00 Hrs.
2. Pre-bid Queries to be submitted by e-mail at mail ID hsheth@rmc.gov.in Pre-bid Meeting in Office of the Vigilance Officer (Tech.), RMC. at Gurukul ESR Campus Office	Pre-bid Queries by E-mail can be submitted before Pre-bid Meeting held on Dt.28-07-2022 at 11.30 am Hours
3. Online submission of e-Tender	Dt.22-08 -2022 up to 15.00 Hrs.
4. Submission of EMD, Tender fee, Documents required for pre-qualification and other necessary documents by Hand Delivery / Regd. Post. A.D. / Speed Post.	up to Dt.26-08 -2022 at 18.00 Hrs.
5. Opening of online Primary Bid (Technical Bid)	Dt.29-08 -2022 Time 10-30 am onwards
6. Verification of submitted documents (EMD, Tender fee, Documents required for pre-qualification and other necessary)	Dt.29-08 -2022 to Dt.02-09-2022 at 18.00 Hrs.
7. Opening of online Commercial Bid (Price Bid) for technically qualified bidders only.	Dt.03-09-2022 at 10.30 Hrs. onwards (If possible)
8. Bid Validity	One eighty (180) calendar days

Office of Vigilance Officer (Tech.)
Vigilance (Tech.) and Quality Control Department
RAJKOT MUNICIPAL CORPORATION
Gurukul ESR, Central ZONE,
Dhebar ROAD,
RAJKOT - 360 001

RAJKOT MUNICIPAL CORPORATION

**Bid Documents For
Itemwise percentage base Tender for
Supply, Installation, Testing & Commissioning of Equipment for
Quality Control Laboratory inclusive of Calibration and
Comprehensive Maintenance**

General Conditions of Contract

Section-1 Invitation for Bid, Information to the Tenderer, e-Tender declaration Form, Instructions to Tenderer and Formats.

Section-2 General Conditions of Contract

ABBREVIATIONS

Statement showing the details of abbreviations.

Full Form	Abbreviation
Rajkot Municipal Corporation	RMC
City Engineer	CE
Operation and Maintenance	O&M
Net Present Value	NPV
Engineering Procurement and Construction	EPC
Paschim Gujarat Vij Company Limited	PGVCL
Critical Path Method	CPM
Reinforced Cement Concrete	RCC
High Ground Level Reservoir	HGLR
Kilometer	KM
Mild Steel	MS
Bureau of Indian Standard	BIS
American Water Works Association	AWWA
American Petroleum Industries	API
Million Liter per Day	MLD
High Yield Strength Deformed bar	HYSD
Corrosion Resistant Steel	CRS
Ordinary Portland Cement	OPC
American Standard for Testing of Material	ASTM
Flux Compensated Magnetic Amplifier	FCMA
Cost Insurance and freight	CIF
Free On Board	FOB
EX - Works	EXW
General Condition	GC

I N D E X

Sr No	Particulars
1	Invitation to Bid
2	Information to the Tenderer
3	e-Tender Declaration Form
4	Instruction to the Tenderer
5	Common Formats
6	General Conditions of Contract

VOLUME- I

SECTION - 1

INVITATION FOR BIDS

RAJKOT MUNICIPAL CORPORATION
INVITATION FOR BIDS
e-Tender Notice

Rajkot Municipal Corporation, Vigilance (Tech.) and Quality Control Department, invites e-Tenders with two bid system from the experienced contractors for below mentioned work.

Sr. No.	Name of work	a) Estimated cost. b) Amount of EMD c) e-Tender fee d) Time limit for completion of work e) Trial Run
1	Itemwise percentage base Tender for Supply, Installation, Testing & Commissioning of Equipment for Quality Control Laboratory inclusive of Calibration and Comprehensive Maintenance	a) Rs. 37,60,000/- b) Rs. 37,600/- c) Rs. 1,875/- d) 6 Months e) 3 Months
:: Milestone dates of e-Tendering ::		
1	Downloading of e-Tender documents	Dt. 21-07-2022 to Dt.22-08 -2022 up to 18.00 Hrs.
2.	Pre-bid Queries to be submitted by e-mail at mail ID hnsbeth@rmc.gov.in Pre-bid Meeting in Office of the Vigilance Officer (Tech.), RMC. at Gurukul ESR Campus Office	Pre-bid Queries by E-mail can be submitted before Pre-bid Meeting held on Dt.28-07-2022 at 11.30 am Hours
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7.	Opening of online Commercial Bid (Price Bid) for technically qualified bidders only.	Dt.03-09-2022 at 10.30 Hrs. onwards (If possible)
8.	Bid Validity	One eighty (180) calendar days

All bidders must submit tender fee and bid security in person as above either directly deposited in Account No.01018640000035 (Rajkot Municipal Corporation) IFSC Code HDFC0000101 or submit at the below mentioned address in form of Demand draft in favour of "Rajkot Municipal Corporation", Rajkot, from any Nationalized Bank or Scheduled Bank (except Co-operative Bank) in India. The required documents to be submitted for verification should be duly certified by Gazetted Officer.

Office of Vigilance Officer (Tech.)
Vigilance and Quality Control Department
RAJKOT MUNICIPAL CORPORATION
Gurukul ESR, Central ZONE,
Dhebar ROAD,
RAJKOT - 360 001

- The pre-qualification requirement is as under:
 - i) Financial Criteria:
 1. An average annual turnover of last seven financial years should not be less than the 50% of estimated tender cost.
 2. Working capital must not be less than 25% of estimated cost.
 3. Available Bid Capacity-ABC must be more than the estimated tender cost.
 4. Bidder shall have a solvency Solvency Equal to or more than Rs. 2 Lacs. The solvency shall be in form of certified banker's statement not older than 3 months shall be attached.

ii) Experience Criteria for each work:

The bidder should possess following minimum experience. Bidder should have completed the work/works of Civil Engineering Material Test Lab Equipment supply and installation with maintenance of either Government or Semi-Government as a main contractor in period of last seven years

(a) One work of 60% OR (b) two works of 50% magnitude

- Bidder should have enough machinery and experienced personnel to manufacture and erection-installation the whole work.

Note:

1. Enhancement factor at 10 % per year for last seven years will be applicable to arrive average annual turnover and finalize the magnitude of work done in last seven years.

	Financial Year	Multiplying factor
	2022-23 (Base Year)	1.00
1	2021-22	1.10
2	2020-21	1.21
3	2019-20	1.33
4	2018-19	1.46
5	2017-18	1.61
6	2016-17	1.77
7	2015-16	1.95

2. Available Bid Capacity (ABC) will be derived by the following method.

ABC is calculated as $ABC=2*A*N-B$

Where,

A = Maximum value of works executed in any one year during the last five years (updated to present price level by applying enhancement factor) taking into account the completed as well as works in progress.

N = Number of years prescribed for completion of the works for which tenders are invited.

B = Value (present price level by applying enhancement factor) of existing commitments and on-going works to be completed during that next N year (period of completion of the works for which the tenders are invited.)

3. Joint Venture (JV)

Joint Venture will not be permitted for this tender. However, experience of JV shall be considered for individual JV partner based on the proportionate share of each individual partner in the JV for the purpose of qualification criteria and based on this qualification individual JV partner can bid in the same name and style of individual company forming part of JV. For this purpose, the bidder shall enclose the notarized copy of JV agreement along with physical submission of technical bid.

- While furnishing Experience Data & Bank Documents, the agency submitting the tender shall have to provide the Contact Address, Phone No., Fax No, e-mail address of the authorities issuing the Experience Certificate for confirmation by this office. In case of failure of confirmation, the tender will be liable to be rejected out rightly.
- The Tenderers shall upload the valid & present Certificate copies of PAN, GST, Service Tax Registration No, Contractor's Registration, Pass Book, receipt of professional tax for technical bid qualification eligibility.
- Before submission of online bids, bidders must ensure that scanned copies of all the necessary documents have been attached with bid.
- After opening of online Technical Bid, the procedure for the pre-qualification shall be adopted and the e-Price Bid of only successful qualified bidder shall be opened for final evaluation of the contract. The decision of Municipal Commissioner regarding the pre- qualification shall be final and binding to all the bidders.
- The Tender of those bidder(s) those who fail to submit the required documents physically within the stipulated date and time will be treated as none responsive and their Price Bid will not be opened.
- The bidder should not have been Black Listed or debarred by Government of India / Government of Gujarat or any State Board / Corporations, since inception of the firm / Company. A Declaration in this regard on Rs.300/- Stamp Paper duly Notarized, shall have to be submitted as per Annexure, along with the tender documents.
- Corrigendum's/ modifications / corrections, if any, will be published in the website only.
- The bidder should provide accurate information on any litigation history or arbitration resulting from contracts completed or under execution by him over the last ten years. This should also include such cases, which are in process / progress. A consistent history of awards against the bidder may result in failure of the bid. In case the bidder has not provided such information and has come to the notice of the authority, the tender will be rejected at what so ever stage and in such case all the losses that will arise out of this issue will be recovered from the tenderer / bidder and he will not have any defense for the same.

- Rate shall be submitted in terms of percentage (Below, Above, at par) against mentioned Base Price rate (without GST) of each item. Rate shall be inclusive of all type taxes other than GST and F.O.R. destination RMC Lab.
- Conditional Tenders will be out rightly rejected.
- Commissioner, Rajkot Municipal Corporation, Rajkot, reserves the right to accept / reject any or all e-Tender(s) without assigning any reasons thereof.

Deputy Exe. Engineer
Vigilance (Tech.)
Rajkot Municipal Corporation

e-TENDER DECLARATION FORM

TO
The Commissioner
Rajkot Municipal Corporation
Rajkot.

Ref :

Name of Work :

Itemwise percentage base Tender for Providing Equipment for Quality Control Laboratory and Equipment Yearly Calibration and Maintenance

Dear Sir,

I/We the undersigned have carefully gone through and clearly understood the tender documents comprising Notice Inviting Tenders, Articles of Agreement, Scope of work, Definition of terms, Instruction to Tenderer, Condition of Contract, Special condition of contract, Appendices, Specification, Schedule of quantities and tendered drawing furnish by The Rajkot Municipal Corporation. I/We have satisfied myself/ourselves as to the location of site, examined drawings.

I/We do hereby offer to execute and complete the whole of work within the time specified all in accordance with the specifications, designs, drawing and instructions in writing referred to in the said documents and with such materials as are provided for at the respective rates which I/We have quoted in the schedule-B or at such other rates as may be fixed under provisions of these conditions.

In the event of this tender being accepted I/We agree to enter into agreement as and when required and execute the contract, according to your Form of Agreement or in default where of I/We myself/our self to forfeit the 'Earnest Money' Deposit.

I/We understand that if I/We shall not enter in agreement within 10 days from the date of receipt of letter of acceptance, you will forfeit the earnest money paid by me/us and take necessary action as deemed fit.

I/We have enclosed a DEMAND DRAFT as an "Earnest Money Deposit" of the sum of Rs. 37,600/- the full value of which is to be absolutely forfeited to the Owner if I/We fail to commence the works specified. Otherwise the said sum shall be retained by the Owner as on account of such 'Security Deposit' as provided for in the aforesaid documents.

I/We agree not to employ Sub-Contractors other than those that may be approved in accordance with conditions in the aforesaid documents.

I/We understand that you are not bound to accept the lowest or any tender which you may receive.

I/We am/are bound to execute the job if the work order is issued within 180 days from the date opening of the tender.

I/We agree to pay the Government Income-Tax, Service Tax, Sales Tax (Central & State), Sales Tax on contraction, Value Added Tax, Labour Cess, Professional Tax, GST and Other Taxes prevailing from time to time on such items on which the same leviable and the rates quoted by me/us are inclusive of the same.

Date:-_____

Yours faithfully,

Signature of Contractor

Address:

Contractor.....

Deputy Exe. Engineer
Vigilance (Tech)
Rajkot Municipal Corporation

**INSTRUCTIONS
TO
THE TENDERER**

INSTRUCTIONS TO THE TENDERER

IT 1. GENERAL

The contract documents may be secured in accordance with the Notice Inviting e-TENDER for the work called. The work shall include supply of materials necessary for construction of the work.

IT 2. INVITATION TO e-TENDER

The Rajkot Municipal Corporation hereinafter referred as the Corporation will receive e-Tenders for the work of as per the specifications and schedule of prices in the e-Tender document. The e-Tenders shall be opened online as specified in the e-Tender notice in the presence of interested Tenderers or their representatives. The Corporation reserves the right to reject the lowest or any other or all e-Tenders or part of it which in the opinion of the Corporation does not appear to be in its best interest, and the Tenderer shall have no cause of action or claim against the Corporation or its officers, employees, successors or assignees for rejection of his e-Tender.

IT 3. LANGUAGE OF e-Tender

e-Tenders shall be submitted in English, and all information in the e-Tender shall also be in English / Gujarati, Information in any other language shall be accompanied by its translation in English/Gujarati. Failure to comply with this may make the e-Tender liable to rejection.

IT 4. QUALIFICATIONS OF TENDERERS

- A. The Tenderers shall abide by the laws of the Union of India and of Gujarat State and legal jurisdiction of the place where the works are located. i.e. this contract shall be construed according to and subject to the laws of India and the State of Gujarat and under the jurisdiction of the Courts of Gujarat at Rajkot city only.
- B. The Tenderer shall furnish a written statement of financial and technical parameters with details and documents along with his e-Tender which contains namely as below:
 - i. The Tenderer's experience in the fields relevant to this contract.
 - ii. The Tenderer's financial capacity/resources and standing over at least 7 (Seven) years.
 - iii. The Tenderer's present commitments (Jobs on hand).
 - iv. The Tenderer's capability and qualifications of himself and his regular staff etc.
 - v. Plants and Machinery available with the Tenderer for the work Tendered.

C. Joint venture

Joint Venture will not be permitted for this tender. However, experience of JV shall be considered for individual JV partner based on the proportionate share of each individual partner in the JV for the purpose of qualification criteria and based on this qualification individual JV partner can bid in the same name and style of individual company forming part of JV. For this purpose, the bidder shall enclose the notarized copy of JV agreement along with physical submission of technical bid.

IT 5. e-Tender DOCUMENTS

The e-Tender documents and drawings shall comprehensively be referred to as e-Tender document. The several sections form in the document are the essential parts of the contract and a requirement occurring in one shall be as binding as though occurring in all, they are to be taken as mutually, explanatory and describe and provide for complete works.

IT 6. EXAMINATION BY TENDERERS

A. At this own expense and prior to submitting his e-Tender, each Tenderer shall (a) examine the Contract Documents, (b) visit the site and determine local conditions which may affect the work including the prevailing wages and other pertinent cost factors, (c) familiarize, himself with all central, state and local laws, ordinance, rules regulations and codes affecting the material supply including the cost of permits and licenses required for the work and (d) correlate his observations, investigations, and determinations with the requirements of the e-Tender Documents, site & subsoil investigation.

B. The e-Tender is invited on Itemwise % rate and Contractor shall have to quote his price on % bases above or below in the schedule -B/ Price Schedule against each item. The works shall have to be completed in all respect as stated in the e- Tender document to the satisfaction of the Corporation.

C. The following comprises in Contract Documents at a price of Rs. 1,875/-

e-Tender Document:

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General Conditions of Contract

1. Notice inviting Tenders.
2. Information to the Tenderer.
3. e-TENDER declaration form
4. Instructions to the Tenderer.
5. Common Formats.
6. Formats.
7. General conditions of contract

Section-II

Technical specifications

Section -III

Price Bid

- Bill of Quantities with price)
- Bid form (with price)
- Preamble to Price schedule

- D. Copy of the e-TENDER Document should be completed, checked in a responsible manner, digitally signed, and submitted. Tender security Bond shall be submitted in person by the stipulated date, which shall form the e-Tender.

The e-Tender is required to be completed with all the pages in which entries are required to be made by the Tenderer are contained in the e-Tender documents and the Tenderer shall not take out or add to or amend the text of any of the documents except in so far as may be necessary to comply with any addenda issued pursuant to Clause IT. 16 hereof.

IT 7. EARNEST MONEY DEPOSIT:

- A. Each Tenderer must submit a receipt of deposit as Tender guarantee towards Earnest money amounting to Rs. 37,600/- in the form of crossed Demand Draft in favor of "Rajkot Municipal Corporation", from any Scheduled bank (except Co-operative Bank) in India acceptable to owner payable at Rajkot. The Tender Bond, shall be valid for a period of not less than hundred and eighty (180) days from the date the e-Tenders are opened and shall comply with the requirements for Bond as stipulated in the General conditions of contract. The Tender guarantee bond will be held by the owner as a guarantee that the Tenderer, if awarded the contract, will enter into the contract agreement in good faith and furnish the required bonds. Any e-Tender not accompanied by a Tender guarantee in the form of earnest money deposited for the sum stipulated in the e-Tender Document will be summarily rejected.
- B. The Earnest Money Deposit will be refunded to the unsuccessful Tenderers after an award has been finalized.
- C. The Earnest Money Deposit (Tender Guarantee) will be forfeited in the event, the successful Tenderer fails to accept the contract and fails to submit the "Performance Guarantee Bonds to the Owner as stipulated in this e-Tender document within ten days. (10) days after receipt of notice of award of contract.
- D. The Earnest Money Deposit of the successful Tenderer shall be returned after the performance guarantee bond, as required, is furnished by the Contractor.
- E. Within 10 (ten) days from the date of issue of the letter accepting his tender, the successful Bidder shall furnish the required Security Deposit for performance and plus additional security if any for unbalanced bids in accordance with the condition of the contract and attend the office of the Engineer In-charge for execution of the contract documents. If he fails to furnish the Security Deposit for performance or enter into an agreement to execute the contract for the work offered to him, his Earnest Money Deposit will be forfeited and the Bidder will be Black Listed / Debarred from tendering for further works of Rajkot Municipal Corporation for the period of three years.
- F. No interest shall be paid by the owner on any e-Tender guarantee.

IT 8. PREPARATION OF e-TENDER DOCUMENTS

Tenderers are required to note the following while preparing the e-TENDER Documents:

- A. e-TENDER shall be submitted on the e-TENDER form bound here in English. All statements shall be properly filled in. Numbers shall be stated

- both in words and in figures where so indicated.
- B. All entries or prices and arithmetic shall be checked before submission of the e-Tenders. If there is discrepancy between the rates quoted in figures and in words, the rates expressed in words shall be considered as binding.
 - C. Each e-Tender shall be accompanied by the prescribed e-Tender security bond and other required documents and drawings. All witnesses and sureties shall be persons of status and probity and their full names, occupations and addresses shall be stated below their signature.
 - D. Variation to the contract Documents requested by the Tenderer may be affixed and duly signed and stamped. Such variations may be approved or refused by the Corporation is not obliged to give reason for his decisions.

IT 9. SUBMISSION OF e-TENDER DOCUMENTS

Tenderers are requested to submit the e-TENDER Documents on following lines.

- A. Volume containing following documents:
 - I. e-TENDER security bond (Earnest Money)
 - II. Certificates as registered Contractor with Government of Gujarat or appropriate authority.
 - III. Tenderer's financial capability and standing over at least past seven Years
 - IV. Current Income Tax clearance certificate. (DELETED)
 - V. Tenderer's experience in the field relevant to this contract.
 - VI. A list of the equipment the Tenderer possesses and that which he proposed to acquire and use for the purpose related to the work.
 - VII. Tenderer should submit All the drawings which they have received along with e-Tenders

The time limit for receipt of e-Tender shall strictly apply in all cases. The Tenderers should therefore ensure that their e-Tender is received by the competent authority The Rajkot Municipal Corporation at the required place before expiry of the time limit. No delay on account of any cause for receipt of e-Tender shall be entertained.

The e-Tender must contain the name address and residence and place of business of the person or persons submitting the e-Tender and must be digitally signed.

e-Tenders by partnership firm must be furnished with the full names and addresses of all partners and be signed by one of the members of the partnership or by a legally authorized representative holding power of attorney followed by signature and designation of the person of person signing.

E-Tenders by corporations/companies must be signed with the legal name of the Corporation/Companies by the president/or by the secretary or other person or persons legally authorized to bind the Corporation/Company in the matter.

All pages to be initialed:

All signatures in tender documents shall be dated as well as all the pages of the sections of tender documents shall be initialed at the lower right hand corner and signed wherever required in the tender papers by the tenderer or by a person holding power of attorney, authorizing him to sign on behalf of the tenderer before submission of tender.

IT 10 TENDER VALIDITY PERIOD

The validity period of the e-Tender submitted for this work shall be of One eighty (180) calendar days from the date of opening of the e-Tender and that the Tenderer shall not be allowed to withdraw or modify the e-Tender offer on his own during the validity period. The Tenderer will not be allowed to withdraw the e-Tender or make any modifications or additions in the terms and conditions on his own e-Tender. If this is done then the owner shall, without prejudice to any other right or remedy, be at liberty to reject the e-Tender and forfeit the earnest money deposit in full.

IT 11 GENERAL PERFORMANCE DATA

Tenderers shall present all the information which sought for in the e-Tender document in form of various schedules if given. E-Tenders may not be considered if left blank or the schedules are not properly filled in.

IT 12 SIGNING OF E-TENDER DOCUMENTS

If the e-Tender is made by an individual it shall be signed with his full name above his current address. If the e-Tender is made by a proprietary firm, it shall be signed by the proprietor above his name and the name of his firm with his current address.

If the e-Tender is made by a firm in partnership, it shall be signed by all the partners of the firm above their full names and current address, or by a partner holding the power of attorney for the firm, in which case a certified copy of the power of attorney shall accompany the e-Tender. A certified copy of the partnership deed, current addresses of all the partners of the firm shall also accompany the e-Tender.

If the e-Tender is made by a limited company or a limited corporation, it shall be signed by a duly authorized person holding the power of attorney, shall accompany the e-Tender. Such limited company or corporation may be required to furnish satisfactory evidence of its existence before the contract is awarded.

If the e-Tender is made by a group of firms, the sponsoring firm shall submit complete information pertaining to each firms in the group and state along with the bid as to which of the firms shall have the responsibility for e-Tendering and for completion of the contract documents and furnish evidence admissible in law in respect of the authority to such firms on behalf of the group of firms for e-Tendering and for completion of contract documents. The full information and satisfactory evidence pertaining to the participation of each member of the group of firms in the e-Tender shall be furnished along with the e-Tender.

All witnesses and sureties shall be persons of status and probity and their full names, occupations and addresses shall be stated below their signatures. All the signatures in the e-Tender document shall be dated.

IT 13 WITHDRAWAL OF TENDERS

If, during the tender validity period, the Tenderer withdraws his Tender, Tender security (Earnest Money) shall be forfeited and Tenderer will be debarred for next three years to quote in R.M.C.

IT 14 INTERPRETATIONS OF e-TENDER DOCUMENTS

Tenderers shall carefully examine the e-Tender document and fully inform themselves as to all the conditions and matters which may in any way affect the work or the cost thereof. If a Tenderer finds discrepancies, or omission from the specifications or other documents or should be in doubt as to their meaning, he should at once address query to the Deputy Exe. Engineer (vigilance-Tech) , R.M.C. The result of interpretation of the e-Tender will be issued to all Tenderers as addendum.

IT 15 ERRORS AND DISCREPANCIES IN e-TENDERS

In case of conflict between the figures and words in the rates the rate expressed in words shall prevail and apply in such cases.

IT 16 MODIFICATION OF DOCUMENTS

Modification of specifications and extension of the closing date of the e-Tender, if required will be made by an addendum. Each addendum will be made available online to all Tenderers. These shall form a part of e-Tender. The Tenderer shall not add to or amend the text of any of the documents except in so far as may be necessary to comply with any addendum.

ADDENDA

Addenda form part of the Contract Documents, and full consideration shall be given to all Addenda in the preparation of e-Tender. Tenderers shall verify the number of Addenda issued, if any and acknowledge the receipt of all Addenda in the e-TENDER Failure to so acknowledge may cause the e-Tender to be rejected.

- A. The Owner may issue Addenda to advise Tenderers of changed requirements. Such addenda may modify previously issued Addenda.
- B. No addendum may be issued after the time stated in the notice inviting e-Tenders.

IT 17. TAX AND DUTIES ON MATERIALS

All charge on account of excise duties, Central / State, sales tax, work contract tax, GST and other duties etc. on materials obtained for the works from any source shall be borne by the Contractors. (P) or 'C' or 'D' form shall not be supplied by the owner.

IT 18 EVALUATION OF e-TENDERS

While comparing e-Tenders, the Rajkot Municipal Corporation shall consider factors like price offer is workable with the market price, efficiency and reliability of construction method proposed, compliance with the specifications, relative quality, work done in past with Rajkot Municipal Corporation or other Government Organizations, litigation issues etc.

Evaluation criteria specifically mentioned in the specification will also be taken into consideration in the evaluation of e-Tenders.

IT 19 TIME REQUIRED FOR COMPLETION

The completion period mentioned in this schedule is to be reckoned from the date of notice to proceed. Total completion period is 6 (Six) calendar months from the date of issue of notice to proceed and Contractor should adhere to this completion time. However, actual monsoon period which affects the transportation will be considered as non-working period and that shall be excluded in time limit. Actual dates will be notified.

IT 20 POLICY FOR TENDER UNDER CONSIDERATION

TENDER shall be termed to be under consideration from the opening of the e-Tender until such time any official announcement or award is made. While e-Tenders are under consideration, Tenderers and their representative or other interested parties are advised to refrain from contacting by any means any Corporations personnel or representatives on matters related to the e-Tenders under study.

The Corporation's representatives if necessary will obtain clarification on e-Tenders by requesting such information from any or all the Tenderers, either in writing or through personal contact, as may be necessary. The Tenderer will not be permitted to change the substance of his e-Tender after e-Tenders have been opened. This includes any post Tender price revision. Non-compliance with his provision shall make the Tender liable for rejection.

IT 21 PRICES AND PAYMENTS

The Tenderer must understand clearly that the prices quoted are for the total works or the part of the total works quoted for and include all costs due to materials, labour, equipment, supervision, other services, royalties, taxes etc. and to include all extra to cover the cost. No claim for additional payment beyond the prices quoted will be entertained and the Tenderer will not be entitled subsequently to make any claim on any ground.

IT 22 PAYMENT TERMS

The terms of payment are defined in the General Conditions of Contract and Technical specifications. The Corporation shall not under any circumstances relax these terms of payment and will not consider any alternative payment terms. Tenderers should therefore in their own interest note this provision to avoid rejection of their e-Tenders.

IT 23 AWARD

Award of the contract or the rejection or e-Tenders will be made during the Tender validity period. A separate Schedule-B (Price Schedule) is given. The Contractors are requested to quote their price offer in Itemwise % below or above on the given price in the schedule-B only.

- A. After all contract contingencies are satisfied and the Notice of Award is issued, the successful Tenderer shall execute the Contract Agreement within the time stated and shall furnish the Bond as required herein. The contract Agreement shall be executed, in form stipulated by the Owner.

- B. If the Tenderer receiving the Notice of Award fails or refuses to execute the Contract Agreement within the stated time limit or fails or refuses to furnish the Bond as required herein. The Owner may annul his award and declare the e-Tender security forfeited and will take action as deemed fit.
- C. A corporation, partnership firm or other consortium acting as the Tenderer and receiving the award shall furnish evidence of its existence and evidence that the officer signing the contract agreement and Bonds for the corporation, partnership firm or other consortium acting as the Tenderer is duly authorized to do so.

IT 24 SIGNING OF CONTRACT

The successful Tenderer shall be required to execute the contract agreement within 10 days of receipt of intimation to execute the contract, failing which the Corporation will be entitled annul to the award and forfeit the Earnest Money Deposit. The person to sign the contract document shall be person as detailed in Article IT. 12 (signing of e-Tender documents).

IT 25 DISQUALIFICATION

A e-Tender shall be disqualified and will not be taken for consideration if,

- (a) The Tender Security Deposit is not deposited in full and in the manner as specified as per Article IT. 7 i.e. Earnest Money Deposit.
 - (b) The e-Tender is in a language other than English or does not contain its English Translation in case of other language adopted for e-Tender preparation.
 - (c) The e-Tender documents are not signed by an authorized person (as per Article IT. 12 i.e. signing of e-Tender documents).
 - (d) The general performance data for qualification is not submitted fully (as per Article IT 11 i.e. General performance Data).
 - (e) Tenderer does not agree to payment terms defined as per Article IT. 22 i.e. payment terms.
- A. An e-Tender may further be disqualified if,
- (a) Price variation is proposed by the Tenderer on any principle other than those provided in the e-TENDER Documents.
 - (b) Completion schedule offered is not consistent with the completion schedule defined and specified in e-Tender document.
 - (c) The validity of e-Tender is less than that mentioned in Article IT. 10 i.e. e-Tender validity period.
 - (d) Any of the page or pages of e-Tender is/are removed or replaced.
 - (e) Any condition which affect the cost.

IT 26 PERFORMANCE GUARANTEE (SECURITY DEPOSIT)

As a contract security the Tenderer to whom the award is made shall furnish a performance guarantee (Security deposit) for the amount of 5% of the contract price to guarantee the faithful performance, completion and maintenance of the works of the contract in accordance with all conditions and terms specified herein and to the satisfaction of the Engineer-in-charge, and ensuring the discharge of all obligations arising from the execution of contract in the forms mentioned below:

- a. By a Demand Draft on the Rajkot Branch of any Nationalized

- Bank or Scheduled Bank except co-operative bank.
- b. A fixed deposit receipt of any Nationalized Bank or Schedule Bank except Co-operative Bank duly endorsed in favour of the Rajkot Municipal Corporation, Rajkot.

The performance guarantee shall be delivered to the Corporation within Twenty (20) days of the notice of award and at least three (3) days before the contract agreement is signed unless otherwise specified by the Engineer- in-charge. On due performance and completion of the contract in all respects, the Security Deposit / performance guarantee will be returned to the contractor without any interest after successful completion of 2nd Year Comprehensive Maintainance

IT 27 STAMP DUTY

The successful Tenderer shall have to enter into an agreement on a Non-Judicial stamp paper of amount as per Stamp Duty Act in the form of the agreement approved by the Corporation. The cost of stamp paper and adhesive stamp shall be borne by the contractor. The same shall be paid as per circular of Superintendent of Stamps, Gandhinagar. At present, the rate of stamp duty is 4.90% of amount of FDR of security deposit but it shall be lavied actual as applicable from time to time.

IT 28 BRAND NAMES

Specific reference in the specifications to any material by manufacturer's name, or catalogue shall be constructed as establishing a standard or quality and performance and not as limiting competition and the Tenderer in such cases, may at his option freely use only other product, provided that it ensures an equal of higher quality than the standard mentioned and meets Corporation approval.

IT 29 NON TRANSFERABLE

e-TENDER documents are not transferable.

IT 30 COST OF e-Tendering

The owner will not defray expense incurred by Tenderers in e-Tendering.

IT 31 EFFECT OF e-Tender

The e-Tender for the work shall remain for a period of 180 calendar days from the date of opening of the e-Tenders for this work and that the Tenderer shall not be allowed to withdraw or modify the offer in his own during the period. If any Tenderer withdraws or makes any modification or additions in the terms and conditions of his own e-Tender, then the Corporation shall, without prejudice to any other right or remedy, be at liberty to reject the e-Tender and forfeit the earnest money in full.

IT 32 CHANGE IN QUANTITY

The Corporation reserves the right to waive any information in any e-Tender and to reject one or all e-Tenders without assigning any reasons for such rejection and also to vary the quantities of items or group as specified in the scheduled of prices as may be necessary.

IT 33 NEW EQUIPMENT AND MATERIAL

All materials, equipment and spare parts thereof shall be new, unused and originally coming from manufacturer's plant to the Corporation. The rebuilt or

overhauled equipment/materials will not be allowed to be used on works.

IT 34 RIGHTS RESERVED

The owner reserves the right to reject any or all e-Tenders, to waive any informality or irregularity in any e-Tender without assigning any reason. The owner further reserves the right to withhold issuance of the notice to proceed, even after execution of the contract agreement. No payment will be made to the successful Tenderer on account of such withholding. The owner is not obliged to give reasons for any such action.

IT 35 ADDITIONAL RIGHTS RESERVED

The Commissioner, Rajkot Municipal Corporation, reserves right to reduce the scope of work & split the e-Tender on two or more parts without assigning any reason even after the awards of contract.

IT 36 MOBILIZATION ADVANCE

No mobilization advance or advance on machinery will be given.

IT 37 CONDITIONAL e-Tenders

The scope of work is clearly mentioned in the e-Tender documents. The Contractor shall have to carry out the work in accordance with the details specifications. No condition will be accepted. The conditional e-Tender will liable to be rejected.

IT 38 1% CESS & REGISTRATION:

For the welfare of labour working under construction Industry, the agency shall have to take the registration with competent authority as per Circular No. CWA/2004/841/M-3 dated 30-01-2006 of Government of Gujarat. Rajkot Municipal Corporation will deduct 1% Cess of the value of work and will deposit the same in Government.

IT 39 PROFESSIONAL TAX

The bidder shall have to pay the Professional Tax up to current financial year imposed by Government of Gujarat, and also produced Enrollment Certificate for the same.

IT-40 APPLICATION OF EMPLOYEES' PROVIDENT FUND & MISCELLANEOUS PROVISIONS ACT-1952

The bidder shall have to follow all the rules and regulations as per "Application of employees' provident fund and miscellaneous provisions ACT-1952".

Assistant Engineer

Deputy Exe. Engineer
Rajkot Municipal Corporation

Common Formats

Application Form (1)
General Information

All individual firms and each partner of a consortium applying for qualification are requested to complete the information in this form. Nationality information to be provided for all owners or applicants who are partnerships or individually-owned firms.

Where the Applicant proposes to use named sub-Contractors for critical components of the works, or for work contents in excess of 10 percent of the value of the whole works the following information should also be supplied for the specialist sub-Contractor(s).

1.	Name of Firm	
2.	Head office address	
3.	Telephone	Contact
4.	Fax	Telex
5.	Place of incorporation/registration	Year of incorporation/ registration

Signature of Contractor

	Nationality of owners	
	Name	Nationality
1.		
2.		
3.		
4.		
5.		

Signature of Contractor

Name of Bidders officers / Persons to be contacted			
Name.	Address	Phone Nos.	E-mail / Fax.

Signature of Contractor

Application Form (1A)
Structure and Organization

<p>The applicant is an individual a proprietary firm a firm in partnership a Limited Company or Corporation a group of firms/consortium (if Yes, give completion information in respect of each partner)</p>	
<p>Attach the Organization Chart showing the structure of the organization including the names of the Directors and position of officers</p>	
<p>Number of years of experience : as a Prime Contractor (Contractor shouldering major responsibility in own country other countries (specify country)</p>	
<p>in a consortium in own country other countries (Specify country)</p>	
<p>as a sub-Contractor (specify main Contractor) in own country other countries (Specify country)</p>	
<p>Name and address of any associates the applicant has in India (in case the applicant happens to be from foreign country) who are knowledgeable in the procedures of customs, immigration, taxes and other information necessary to do the work.</p>	
<p>For how many years has your organization been in business of similar work under its present name? What were your fields when your organization was established? Whether any new fields were added in your organization? And if so, when?</p>	

Signature of Contractor

<p>Were you ever required to suspend construction for a period of more than six months continuously after you started? If so, give the name of project and give reasons therefore.</p>	
<p>Have you ever left the work awarded to you incomplete? If so, give name of project and reasons for not completing work.</p>	
<p>In which fields of civil engineering Lab Teststs do you claim specialization and interest?</p>	
<p>Give details of Supply of Lab Iquipment machinery for Civil Engineering Works Test</p>	

Signature of Contractor



RAJKOT MUNICIPAL CORPORATION
ACCOUNTS DEPARTMENT
Room No. 4, 2nd Floor, Dr. Ambedkar Bhavan,
Debar Road, Rajkot - 360001

PARTY/VENDOR REGISTRATION FORM

VENDOR CODE	:	
Party Name	:	
Authorized Person	:	
PAN Card No.	:	
GST No.	:	
EPF No	:	
ESIC No.	:	
Address	:	
City	:	
Phone No.	:	
Mobile No.	:	
E-Mail ID	:	
Website	:	
Area Of Work	:	
Bank Details (attach copy of cancelled cheque)		
Bank Name	:	
Branch Name	:	
MICR Code	:	IFSC Code :
Account Type	:	
Account No.	:	

- (1) Any vendor while filling a tender shall quote registration details; if he is not registered he will give fresh details along with tender.
- (2) Accounts branch will designate a person who will keep the forms and also authorize new registrations or edit existing registrations.

TO,
CHIF ACCOUNTANT,
ACCOUNT DEPARTMENT,
RAJKOT MUNICIPAL CORPORATION

THE ABOVE MENTIONED DETAILS FOR VENDOR REGISTRATION HAS BEEN VERIFIED BY US &
FOUND CORRECT. KINDLY REGISTER ABOVE VENDOR.

SIGN
NAME
DESIGNATION
DEPARTMENT NAME

APPENDIX - M

(DECLARATION on Stamp Paper worth s.300/-)

Name of Work :-

Itemwise percentage base Tender for Supply, Installation, Testing & Commissioning of Equipment for Quality Control Laboratory inclusive of Calibration and Comprehensive Maintenance

I/We hereby declared that I/We am/are not partner(s) black listed or connected with firm blacklisted/Debarred in any States, CPWD / MES / Railways or any Government, Semi-Government or Private body.

My / our firm is / are not partner(s) blacklisted/ Debarred or connected with firm blacklisted/ Debarred in any States, CPWD / MES / Railways or any Government, Semi- Government or Private body.

I/We hereby declared that no contract of my/our firm with Rajkot Municipal Corporation has been terminated

I/We hereby declared that no contract of my/our firm with Rajkot Municipal Corporation is under Court or Arbitration procedurals or any other such dispute.

I/We hereby declared that no contract of my/our firm with Rajkot Municipal Corporation is under any litigation or in any dispute.

At present I/We am/are registered as approved contractor (s), firms in State, CPWD / MES / Railways.

We, the partners / owners of this firm, hereby give an undertaking that we are jointly and severally responsible to meet all the liabilities ever and above the business of this firm and make good the above financial loss sustained by the Rajkot Municipal Corporation as a result of our abandoning the works entrusted to us.

Date:

Seal and Signature of the Bidder

APPLICABILITY OF PROVIDENT FUND AND MISCELLANEOUS PROVISIONS ACT 1952

Successful bidder i.e. the agency whose tender is accepted by the RMC shall have to comply the necessary formalities under the employees provident fund and Miscellaneous Provisions Act, 1952 as Contributory Provident Fund Scheme is applicable to labourers engaged in construction activity and shall have to submit proofs regarding deduction of provident fund and other dues and depositing the same with government department under the act and the scheme regularly on monthly basis failing which no running / final bill payment will be made by the RMC to the contractor in any circumstances.

A certificate to the above effect has to be given by the contractor as under.

**Declaration
Of
Depositing Provident Fund contribution**

This to certify that we have deducted the employees' P.F. and deposited the same along with employer's contribution towards provident fund on labour charges / wages paid by us to the labourers engaged for the work of _

_____ with Provident

Fund Authority under our Provident Fund Code No. _____

We produce herewith the copies of the challans for the provident fund deduction and contribution deposited as mentioned above.

Date:

Seal and Signature of the Bidder

APPENDIX – A

STATEMENT OF FINANCIAL PARAMETERS

1. Annual turnover for last financial seven years

	Turnover Rs. In Lacs							
Financial year	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	Average of last Seven years

2. Working Capital

Working Capital (in Rs).	
as on Dt.31-03-2022	

Note: - The bidder shall have to submit the copies of Audited Report of last Seven Financial Years. The bidder shall also have to submit the Certificate regarding Turnover and Working Capital from the registered Chartered Accountant

Signature of Contractor

APPENDIX-B

ENGINEERING PERSONNEL

Sr. No	Name of person	Qualification	Experience	Since long with the firm and designation	Whether he will be spared for RMC work for months time.

Signature of Contractor

APPENDIX-C

DETAILS OF Manufacturing PLANTS & EQUIPMENTS AVAILABLE WITH FIRM

Sr No	Name of plants/ equipments	Make of Plants/ equipments	Model & Year of purchase	Details of R.T.O. Registration	Cost of plants / equipments	Location where the plants / equipments located	Hours utilized	Condition at present	Will be deployed on work or not?

Signature of Contractor

APPENDIX-D

INFORMATION ON BID CAPACITY (WORK FOR WHICH BIDS HAVE BEEN SUBMITTED AND WORKS WHICH ARE YET TO BE COMPLETED) AS ON THE DATE OF THIS BID (A) EXISTING COMMITMENTS AND ON-GOING WORKS

Sr. No.	Description of Work	Place and state	Contract No. & Date	Name and Address of the Owner	Value of Contract Rupees in Lacs	Stipulated period of Completion	Value of works remaining to be completed	Anticipated date of completion.
	1	2	3	4	5	6	7	8

Signature of Contractor

APPENDIX-E

WORKS FOR WHICH BIDS ALREADY SUBMITTED

Sr. No.	Description of work	Place and State	Estimated Value of works Rs. In Lakh	Stipulated period of completion	Date when decision is expected	Remarks if any

Signature of Contractor

APPENDIX – F

General Information Details

Estimated Amount		Tender Fee & EMD	PAN, GST, Certi. Details	Mention Annexure no/pagination no of concern documents					
Rs.				Turnover Details (Last Seven Years)		Turn Over in Rs. with enhancement factor	Solvency	Available Bid Capacity (working Capital) As per Formula $ABC = 2*A*N-B$ (Minimum)	Details of Certificate attached for Experience of Min. of single work.
Name of Agency		Detail	Professional Tax Details	Year	enhancement factor to be multiplied				
Address		Name of Bank & Bank Code, City	Vendor Registration Details	2015-16	1.95		Name of Bank & Bank Code, City	Value (present price level by applying enhancement factor) of existing commitments and on-going works to be completed during that next N year (period of completion of	----Do ---- with enhancement factor
				2016-17	1.77				
				2017-18	1.61				
Phone		Draft No.		2018-19	1.46		Solvency No.	Number of years prescribed for completion of the works for which tenders are invited	
Fax		Draft Date		2019-20	1.33		Certi. Issue Date	A= Max Value x Enhancement factor	
E-mail Address				2020-21	1.21			N = Next N Year	
				2021-22	1.10			B = Present Value	
				Average				Bid Capacity = $(2*A*N)-B$	
								Attach the Calculation sheet and Mention Figure Here	
Above all Details are True						Above Financial Details are True			
Contractor Sign & Seal						Chartered Accountant Sign & Seal			

APPENDIX - H

EXPERIENCE FOR Supplying Lab equipments and Maitainance

Sr. No	Name of the work (Machine Equipme nt) and location	Contract Cost (Rs. In Lacs.)	Contract period (Start date & End date)	Actual Cost at the end of contract (Rs. In Lacs.)	Actual Contract period (Start date & End date)	Material	Name of Test	Total Length in RMT	Name of Department / Client	Whether time limits extended and reason thereof	Whether project under litigation (Y/N) and reason thereof

Note :- The bidder shall have to give completion certificate from the concerned Department/Client. In absence of such certificate, experience shall not be considered for tender evaluation.

Signature of Contractor

SECTION - 2
GENERAL CONDITIONS OF CONTRACT

:: TABLE OF CONTESTS ::

No.	Description
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GC-2	Location of site and accessibility
GC-3	Scope of work
GC-4	Ruling language
GC-5	Interpretation of Contract Document
GC-6	Contractor to understand himself fully
GC-7	Errors in submissions
GC-8	Sufficiency of E-TENDER
GC-9	Discrepancies
GC-10	Performance Guarantee (Security Deposit)
GC-11	Inspection of work
GC-12	Defect Liability
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GC-14	Programme
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GC-22	Action of Forfeiture of Security Deposit
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GC-25	Members of the owner not individually liable
GC-26	Owner not bound by personal representations
GC-27	Contractor's office at site
GC-28	Contractor's subordinate staff and their conduct
GC-29	Termination of sub-contract by owner
GC-30	Power of entry
GC-31	Contractor's responsibility with the other Contractor and Agencies.
GC-32	Other Agencies at site
GC-33	Notices
GC-34	Rights of various interests
GC-35	Price adjustments
GC-36	Terms of Payment
GC-37	Retention Money
GC-38	Payments due from the Contractor
GC-39	Contingent Fee
GC-40	Breach of Contract by Contractor
GC-41	Default of Contractor
GC-42	Bankruptcy
GC-43	Ownership
GC-44	Declaration against waiver
GC-45	Laws governing the contract
GC-46	Over payment and under payment
GC-47	Settlement of disputes
GC-48	Disputes of differences to be referred to
GC-49	Interpretation Related To Tender
GC-50	Termination of the Contract
GC-51	Special risks

No.	Description
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GC-53	Sub-contractual relations
GC-54	Patents and Royalties
GC-55	Lien
GC-56	Execution of work
GC-57	Work in monsoon
GC-58	Work on Sundays and Holidays
GC-59	General Conditions for construction work
GC-60	Drawings to be supplied by the Owner
GC-61	Drawings to be supplied by the Contractor
GC-62	Setting out work
GC-63	Responsibilities of Contractor for correctness of work
GC-64	Materials to be supplied by the Owner
GC-65	Conditions of issue of materials by the Owner
GC-66	Materials procured with assistance of the Owner
GC-67	Materials obtained from dismantling
GC-68	Article of value of treasure found during construction
GC-69	Discrepancies between instructions
GC-70	Alternations in specifications and designs and extra work.
GC-71	Action when no specifications are issued
GC-72	Abnormal rates
GC-73	Assistance to Engineer -in-charge,
GC-74	Tests for quality of work
GC-75	Action and compensation in case of bad workmanship
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GC-77	Owner may do part of the work
GC-78	Possession prior to completion
GC-79	Completion Certificate
GC-80	Schedule of Rates
GC-81	Procedure for measurement of work in progress
GC-82	Running account payments to be regarded as advances
GC-83	Notice for claim for additional payment
GC-84	Payment of Contractor's Bill
GC-85	Final Bill
GC-86	Receipt for payment
GC-87	Completion Certificate
GC-88	Taxes, Duties, etc.
GC-89	General INSURANCE and Transit Insurance
GC-90	Damage to Property
GC-91	Contractor to Indemnify Owner
GC-92	Implementation of Apprentice Act 1954
GC-93	Health and Sanitary arrangements for workers
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GC-98	Work-order/Notice to start for Yearly Calibration and Maitainance Work
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No.	Description
GC-103	For the System & Other Software the following will apply
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GC-110	Warranty
GC-111	Maintenance Service
GC-112	Erection, Installation and Power Guarantee

GC-01

DEFINITIONS AND INTERPRETATIONS :

- 1.0 In the contract (as hereinafter defined) the following words and expressions shall, unless repugnant to the subject or context thereof, have the following means as signed to them.
- 1.1 The "Owner / Corporation" shall mean Rajkot Municipal Corporation and shall include its Municipal Commissioner or other Officers authorized by the Corporation and also include owner's successors and assignees.
- 1.2 The "Contractor" shall mean the person or the persons, firm or Company whose e-Tender has been accepted by the Owner and includes the Contractors legal representative, his successors and permitted assigned.
- 1.3 The "Engineer-in-charge" shall mean the person designated as such by the owner from time to time and shall include those who are expressly authorized by the Corporation to act for and on its behalf for all functions pertaining to the operation of this contract.
- 1.4 "Engineer-in-charge's Representative" shall mean any resident Engineer or Assistant to the Engineer-in-charge, appointed from time to time by the owner to perform duties set forth in the E-TENDER Document whose authority shall be notified in writing to the Contractor by the Engineer-in-charge.
- 1.5 "E-TENDER" – the offer or proposal of the Tenderer submitted in the prescribed form setting for the prices for the work to be performed, and the details thereof.
- 1.6 "Contract Price" shall mean total money payable to the Contractor under the contract.
- 1.7 "Addenda" shall mean the written or graphic notices issued prior to submission of e-Tender which modify or interpret the contract documents.
- 1.8 "Contract Time" – the time specified for the completion of work.
- 1.9 "Contract" shall mean agreement between the parties for the execution of works including therein all contract documents.
- 1.10 "Contract Document" shall mean collectively the e-Tender documents, designs, drawings, specifications, agreed variations, if any and such other documents constituting the e-Tender and acceptance thereof.
- 1.11 "The Sub-Contractor" shall mean any person, firm or company (other than the Contractor) to whom any part of the work has been entrusted by the Contractor with the written consent of the Engineer-in-charge and the legal representative successors and permitted assignee of such person, firm or company.
- 1.12 The "Specifications" shall mean all directions, the various Technical Specifications, provisions and requirements attached to the contract which pertains to the method and manner of performing the work, to the quantities and qualities of the work and the materials to be furnished under the contract for the work and any order(s) or instruction(s) there under. It shall also mean the latest Bureau of Indian Standard Specification relative to the particular work or part thereof, so far as they are not contrary to the E-TENDER specifications and in absence of any

other Country applied in Indian as a matter of standard engineering practice and approved in writing by the Engineer-in-charge with or without modification.

- 1.13 The "Drawings" shall include maps, plans, tracings, or prints thereof with any modification approved in writing by the Engineer-in-charge and as such other drawings as may, from time to time, be furnished or approved in writing by the Engineer-in-charge in connection with the work.
- 1.14 The "Work" shall mean the works to be executed in accordance with the contract or the part thereof as the case may be and shall include extra, additional, altered or substituted works as required for the purpose of the contract. It shall mean the totality of the work by expression or implication envisaged in the contract and shall include all materials, equipment and labour required for or relative or incidental to or in connection with the commencement, performance and completion of any work and / or incorporation in the work.
- 1.15 The "Permanent Work" shall mean works which will be incorporated in and form part of the work to be handed over to the owner by the Contractor on completion of the contract.
- 1.16 The "Temporary Work" shall mean all temporary works of every kind required in or about the execution, completion and maintenance of the work.
- 1.17 "Site" shall mean the land and other places, on, under, in or through which the permanent works are to be carried out and any other lands or places provided by the Corporation for the purpose of the contract together with any other places designated in the contract as forming part of the site.
- 1.18 The "Construction Equipment" shall mean all appliances / equipment of whatever nature required in or for execution, completion or maintenance of works or temporary works (as herein before defined) but does not include materials or other things intended to form or forming part of the permanent work.
- 1.19 "Notice in writing or written Notice" shall mean a notice written, typed or in printed form delivered personally or sent by Registered Post to the last known private or business address or Registered Office of the Contractor and shall be deemed to have been received in the ordinary course of post it would have been delivered.
- 1.20 The "Alteration / variation order" shall mean an order given in writing by the Engineer-in-charge to effect additions or deletions from or alterations in the work.
- 1.21 "Final Test Certificate" shall mean the final test certificate issued by the owner within the provisions of the contract.
- 1.22 The "Completion Certificate" shall mean the certificate to be issued by the Engineer-in-charge when the work has been completed and tested to his satisfaction.

- 1.23 The "Final Certificate" shall mean the final certificate issued by the Engineer-in-charge after the period of defects liability is over and the work is finally accepted by the owner.
- 1.24 "Defects Liability Period and warranty period" shall mean the specified period between the issue of Completion Certificate and the issue of final certificate during which the Contractor is responsible for rectifying all defects that may appear in the works.
- 1.25 "Approved" shall mean approved in writing including subsequent confirmation in writing of previous verbal approval and "Approval" means approved in writing including as aforesaid.
- 1.26 "Letter of Acceptance" shall mean an intimation by a letter to Tenderer that his e-Tender has been accepted in accordance with the provisions contained therein.
- 1.27 "Order" and "Instructions" shall respectively mean any written order or instruction given by the Engineer-in-charge within the scope of his powers in terms of the contract.
- 1.28 "Running Account Bill" shall mean a bill for the payment of "On Account" money to the Contractor during the progress of work on the basis of work done and the supply of non-perishable materials to be incorporated in the work.
- 1.29 "Security Deposit" shall mean the deposit to be held by the owner as security for the due performance of the contractual obligations.
- 1.30 "Retention Money" shall mean the money retained from R.A.Bills for the due completion of the "LET WORKS".
- 1.31 Unless otherwise specifically stated, the masculine gender shall include the feminine and neuter genders and vice-versa and the singular shall include the plural and vice-versa.
- GC-02 **LOCATION OF SITE AND ACCESSIBILITY:**
The work is to be carried out in city area. Non-availability of access roads shall in no case be the cause to condone delay in the execution of the work and no claim or extra compensation will be paid. Also work is to be carried out in residential area and as such excavation will be carried out in hard rock by mechanical equipments or by controlled blasting and at low charge.
- GC-03 **SCOPE OF WORK :**
The scope of work is defined broadly in the special conditions of contract and specifications. The Contractor shall provide all necessary materials, equipment and labour etc. for the execution and maintenance of the work. All material that goes with the work shall be approved by the Engineer-in-charge prior to procurement and use.
- Power Supply :**
The Contractor shall make his own arrangement for power supply during installation.

Land for Contractor's Field Office, Godown Etc.:

Owner will not be in a position to provide land required for Contractor's field office, godown, etc. The Contractor shall have to make his own arrangement for the same.

GC-04

RULING LANGUAGE :

The language according to which the contract shall be construed and interpreted shall be Gujarati. All entries in the contract document and all correspondence between the Contractor and the Corporation or the Engineer-in-charge shall be in English/Gujarati. All dimensions for the materials shall be given in metric units only.

GC-05

INTERPRETATION OF CONTRACT DOCUMENT :

1. The provision of the General Conditions of Contract and Special Conditions of Contract shall prevail over those of any other documents of the contract unless specifically provided otherwise, should there be any discrepancy, inconsistency, error or omission in the several documents forming the contract, the matter may be referred to the Engineer-in-charge for his instructions and decision. The Engineer-in-charge's decision in such case shall be final and binding to the Contractor.
2. Works shown upon the drawings but not described in the specifications or described in the specifications without showing on the drawings shall be taken as described in the specifications and shown on the drawings.
3. The headings and the marginal notes to the clause of these General Conditions of Contract or to the specifications or to any other part of e-Tender documents are solely for the purpose of giving a concise indication and not a summary of contents thereof. They shall never be deemed to be part thereof or be used in the interpretation or construction of the contract.
4. Unless otherwise states specifically, in this contract documents the singular shall include the plural and vice-versa wherever the context so requires. Works imparting persons shall include relevant Corporations / Body of individual / firm of partnership.
5. Notwithstanding the sub-division of the documents into separate section and volumes every part of each shall be supplementary to and complementary of every other part and shall be read with and into the context so far as it may be practicable to do so.
6. Where any portion of the General Conditions of Contract is repugnant to or at variance with any provisions of the Special Conditions of Contract, then, unless a different intention appears, the provisions of the special conditions of contract shall be deemed to over ride the provisions of General Conditions of Contract to the extent of each repugnancy of variance.
7. The materials, design, and workmanship shall satisfy the relevant ISS, and codes referred to. If additional requirements are shown in the specifications, the same shall be satisfied over and above ISS and other codes.
8. If the specifications mention that the Contractor shall perform certain work or provide certain facilities, it shall mean that the Contractor shall do so at his own cost.

9. "Contractor to Collect His Own Information" –

The details given in the e-Tender are arranged making necessary investigations for framing an estimate. However, when the work is being executed, changes in soil conditions are likely to be met with in view of the formation of soil, strata in Rajkot District. It is, therefore, desirable that the Contractor makes his own investigations or additional investigations as may be required for correctly assessing the cost of different items of work and submit his e-Tender accordingly. Any change in description or quantity of an item shall not vitiate the contract or release the Contractor from executing the work comprised in the contract according to the drawings and specifications at the e-Tendered rates.

He is deemed to have known the scope, nature and magnitude of the work and the requirements of materials and labour involved and as to whatever work he has to complete in accordance with the contract. The Contractor is expected to visit the site and surroundings to satisfy himself as to the nature of all existing structures, if any, and also as to the nature and the conditions of railways, roads, bridges and culverts, means of transport and communications whether by land, air or water and as to possible interruptions thereto and the access and gross from the site, to have examined and satisfied himself as to the sites for obtaining sand, stones, bricks and other materials, the site for disposal of surplus materials, the available accommodation and make such enquiries as may be necessary for executing and completing the work, to have local enquiries as to the sub-soil, subsoil water and variation thereof, storms, prevailing winds, climatic conditions and all other similar matters, effecting work. He is expected to be familiar with his liability for payment of Government taxes, customs and excise duty and other charges etc. in contract with the execution of this contract.

GC-06 CONTRACTOR TO UNDERSTAND HIMSELF FULLY :

The Contractor by e-Tendering shall be deemed to have satisfied himself, as to all considerations and circumstances affecting the e-Tender price, as to the possibility of executing the works as shown and described in the contract and to have fixed his prices according to his own view on these matters and to have understood that no additional allowances except as otherwise expressly provided, will afterwards be made beyond the contract price. The Contractor shall be responsible for any misunderstanding or incorrect information, however, obtained.

GC-07 ERRORS IN SUBMISSIONS :

The Contractor shall be responsible for any errors or omissions in the particulars supplied by him, whether such particulars have been approved by the Engineer-in-charge or not.

GC-08 SUFFICIENCY OF e-Tender :

The Contractor shall be deemed to have satisfied himself before e-Tendering as to the correctness of the e-Tender rates which rates shall, except as otherwise provides for, cover all the Contractor's liabilities and obligations set forth or implied in the contract for the proper execution of the work for compliance with requirements of Article GC-19 thereof.

GC-09 DISCREPANCIES :

The drawings and specifications are to be considered as mutually explanatory of each other, detailed drawings being followed in preference to small-scale drawings and figured dimensions in preference to scale and special conditions in preference to General Conditions. The special directions or dimensions given in the specifications shall supersede all else. Should any discrepancies however, appear or should any misunderstanding arise as to the meaning and intent of the said specifications or drawings, or as to the dimensions or the quality of the materials or the due and proper execution of the works, or as to the measurement or quality and valuation of the work executed under this contract or as extra there upon, the same shall be explained by the Engineer-in-charge and his explanation shall be subject to the final decision of the Municipal Corporation in case reference be made to it, be binding upon the Contractor and the Contractor shall execute the work according to such explanation and without addition or to deduction from the contract price and shall also do all such works and things necessary for the proper completion of the works as implied by the drawings and specifications, even though such works and things are not specially shown and described in the said specifications. In cases where no particular specifications are given for any article to be used under the contract, the relevant specifications of the Bureau of Indian Standard Institution shall apply.

GC-10 PERFORMANCE GUARANTEE (SECURITY DEPOSIT)

As a contract security the Tenderer to whom the award is made shall furnish a performance guarantee (Security deposit) for the amount of 5% of the contract price to guarantee the faithful performance, completion and maintenance of the works of the contract in accordance with all conditions and terms specified herein and to the satisfaction of the Engineer-in-charge, and ensuring the discharge of all obligations arising from the execution of contract in the forms mentioned below:

- a. By a Demand Draft on the Rajkot Branch of any Nationalized Bank or Scheduled Bank except co-operative bank.
- b. A fixed deposit receipt of any Nationalized Bank or Schedule Bank except Co-operative Bank duly endorsed in favour of the Rajkot Municipal Corporation, Rajkot.

PERFORMANCE GUARANTEE (SECURITY DEPOSIT) shall be submitted for duration of 3 Year from the date of Agreement.

The performance guarantee shall be delivered to the Corporation within Twenty (20) days of the notice of award and at least three (3) days before the contract agreement is signed unless otherwise specified by the Engineer- in-charge. On due performance and completion of the contract in all respects, the Security Deposit / performance guarantee will be returned to the contractor without any interest after successful completion of 2nd Year Comprehensive Maintainance

2. If the Contractor, sub-Contractor or their employees shall break, deface or destroy any property belonging to the owner or other agency during the execution of the contract, the same shall be made good by the Contractor at his own expense and in default thereof, the Engineer-in-charge, may cause the same to be made good by other agencies and recover expense from the Contractor (for which the certificate of the Engineer-in-charge, shall be final). These expenses can be recovered from the security deposit if recovery from other sources is not possible. The amount as reduced in security deposit will be made good by deduction from the next R.A. Bill of the Contractor.

GC-11

INSPECTION OF WORK :

1. The Engineer-in-charge, shall have full power and authority to inspect the work at any time wherever in progress either on the site or at the Contractor's or any other manufacturer's workshop or factories wherever situated and the Contractor shall afford to Engineer-in-charge, every facility and assistance to carry out such inspection. Contractor or his authorized representative shall, at all time during the usual working hours and all times when so notified, remain present to receive orders and instructions.

Orders given to Contractor's representative shall be considered to have the same force as if they had been given to the Contractor himself. Contractor shall give not less than ten (10) days notice in writing to the Engineer-in-charge, before covering up or otherwise placing beyond reach of inspection and measurement any work in order that the same may be inspected and measured. In the event of breach of the above, the same shall be uncovered at Contractor's expenses for carrying out such inspection or measurement.

2. The material shall be dispatched from Contractor's store on site of work after obtaining approval in writing of the Engineer-in-charge. Contractor shall provide at all times during the progress of work and maintenance period of proper means of access with ladders, gangways, etc. and make necessary arrangement as directed for inspection or measurement of work by Engineer-in-charge.
3. Bidder shall note that materials which is to be supplied for SITC under this tender will be inspected by Third Party Inspection(TPI) agency approved by RMC & its Quality Acceptance(QA) certificate must be produce with materials. The cost of TPI is to be borne by contractor. The TPI will be from any Government undertaking agency i.e RITES,CEIL, MACON, SGS, WAPCOS or as per approved list of TPI at Gujarat Water Supply & Sewage Board approved Third Party Inspection(TPI) agency.
4. Inspection and Tests: The purchaser (client) or its representative shall have the right to inspect and / or to test the Goods for confirming their conformity to the Contract. The special conditions of the contract and / or the Technical Specifications shall specify what inspections and tests the Purchaser requires and where they are to be conducted. If not specified or notwithstanding any mention, the contractor shall submit the inspection plan of all major bought-out items for approval with client specifying the stages of inspection as per manufacturer's quality plan and shall arrange to carry out the inspection along with client or it's representative at manufacturer's works as per the approved plan. The Purchaser shall notify the Contractor in writing of the identifying of any representatives retained for these purposes. All the expenses viz. lodging & boarding, transportation, all facilities as required for this purpose shall be furnished bt and beared by contractor (Bidder).

GC-12 DEFECT LIABILITY:

1. Contractor shall guarantee the work for a period for Defects for 1 (One) Year after completion of Work Any damage or defect that may arise or that may remain undiscovered at the time of issue of Completion Certificate connected in any way with the equipment or materials supplied by him or in the workmanship shall be rectified or replaced by Contractor at his own expense as desired by Engineer-in-charge, or in default Engineer-in-charge, may cause the same to be made good by other agency and deduct expenses of which the certificate of Engineer-in-charge, shall be final from any sums that may then or any time thereafter become due to Contractor or from his security deposit or the proceeds of sale thereof or of a sufficient portion thereof.
2. From the commencement to completion of work Contractor shall take full responsibility for the care of the work including all temporary works and in case any damages, occur from any cause whatsoever he shall at his own cost, repair and make good the same so that on completion, work shall be in good order and in conformity, in every respect, with the requirements of contract and as per the instructions of the Engineer-in-charge.
3. If at any time before the work is taken over, the Engineer-in-charge -
 - a) Decide that any work done or materials used by the Contractor are defective or not in accordance with the contract or that work or any portion thereof is defective or do not fulfill the requirements of contract (all such materials being herein after called defects in this clause) he shall, as soon as reasonably practicably, give notice to Contractor in writing of the said defect specifying particulars of the same then Contractor shall at his own expense and with all speed make good the defects so specified.
 - b) In case Contractor fails to do so, owner may take, at the cost of the Contractor, such steps as may in all circumstances be responsible to make good such defects. The expenditure so incurred by owner will be recovered from the amount due to Contractor. The decision of Engineer-in-charge, with regard to the amount to be recovered from Contractor will be final and binding on the Contractor.

GC-13 POWER OF ENGINEER-IN-CHARGE TO GIVE FURTHER INSTRUCTIONS:

The Engineer-in-charge shall have the power and authority from time to time and at all times to give further instructions and directions as may appear to him necessary or proper for the guidance of the Contractor and the works and efficient execution of the works according to the terms of the specifications, and the Contractor shall receive, execute, obey and be bound by the same, according to the true intent and meaning thereof, as fully and effectively as though the same had accompanied or had been mentioned or referred to in the specifications. No work which radically changes the original nature of the contract shall be ordered by the Engineer-in-charge and in the event of any deviation being ordered, which in the opinion of the Contractor changes the original nature of the contract, he shall nevertheless carry it out and any disagreement as to the nature of the work and the rate to be paid to thereof shall be resolved.

The time of completion of works shall, in the event of any deviations being ordered resulting in additional cost or reduction in cost over the contract sum, be extended or reduced reasonably by the Engineer-in-charge. The

Engineer-in-charge's decision in the case shall be final and binding.

GC-14

PROGRAMME:

The time allowed for execution of works shall be the essence of the contract. The contract period shall commence from the date of notice of intimation to proceed. The Tenderer at the time of submitting his e-Tender shall indicate in the construction schedule his programme of execution of work commencement with the total time specified. The Contractor shall provide the Engineer-in-charge, a detailed programme of time schedule for execution of the works in accordance with the specifications and the completion date. The entire programme to be finalized by the Contractor, has to conform to the execution period mentioned along with the Bill of Quantities in the e-Tender documents. The Engineer-in-charge, upon scrutiny of such submitted programme by Contractor, shall examine suitability of it to the requirement of contract and suggest modifications, if found necessary.

GC-15

SUB-LETTING OF WORK:

No part of the contract nor any share of interest thereon shall in any manner or degree be transferred, assigned or sublet by the Contractor directly or indirectly to any person, firm or Corporation whatsoever except as provided for in the succeeding sub-clause, without the consent in writing of the owner.

GC-16

SUB-CONTRACTS FOR TEMPORARY WORKS ETC.

The owner may give written consent to sub-Contractors for execution of any part of the works at the site, being entered upon the Contractor provided each individual contract is submitted to the Engineer-in-charge, before being entered into and is approved by him. List of sub-Contractors to be supplied.

Notwithstanding any subletting with such approval as aforesaid and notwithstanding the Engineer-in-charge, shall have received of any sub-Contractors, the Contractor shall be and shall remain solely responsible for the quality and proper and expeditious execution of the works and the performance of all the conditions of contract in all respects as if such subletting or subcontracting had not taken place and as if such works had been done directly by the Contractor.

GC-17

TIME FOR COMPLETION:

1.

The work covered under this contract shall be commenced from the date the Contractor is served with a notice to proceed with the work and shall be completed before the date as mentioned in the time schedule of work. The time is the essence of the contract and unless the same is extended as mentioned in Clause GC-18 "Extension of Time", the Contractor shall pay liquidated damages for the delay.

2.

The general time schedule for construction is given in the e-Tender document. Contractor shall prepare a detailed weekly or monthly construction programme in consultation with the Engineer-in-charge soon after the agreement and the work shall be strictly executed accordingly.

~~DELETED Below Para~~

~~(The time for construction includes, the time required for testing, rectifications, if any, retesting and completion of the work in all respects to the entire satisfaction of the Engineer-in-charge except the time consumed for process of scrutiny of Drawing-Design and for~~

items which are not coming in the way to commission the project . However, actual monsoon period or minimum 3 month will be considered as non-working period and that shall be excluded in time limit. Actual dates will be notified if found necessary.)

GC-18

EXTENSION OF TIME:

Time shall be considered as the essence of the contract. If, however, the failure of the Contractor to complete the work as per the stipulated dates referred to above arises from delays on the part of Corporation in supplying the materials or equipment, it has undertaken to supply under the contract or from delays on the quantity of work to be done under the contract, or force majeure an appropriate extension of time will be given by the Corporation. The Contractor shall request for such extension within one month of the cause of such delay with undertaking that he will not claim in terms of law and will not claim for price escalation and in any case before expiry of the contract period. **If time limit is extended no price escalation will be paid and no relief in other tender clause will be given i.e. agency has to work as per rate and terms condition sanctioned originally.** No financial claim will be entertained in this regard. No dispute shall be arisen by contractor in this regard. The Contractor shall submit the undertaking in this regard.

GC-19

CONTRACT AGREEMENT:

The successful Tenderer shall enter into and execute the contract agreement within 20 (Twenty) days of the notice of award, in the form shown in e-Tender documents with such modifications as may be necessary in the opinion of the Corporation. It shall be incumbent on the Contractor to pay the stamp duty and the legal charges for the preparation of the contract agreement. If the tenderer does not enter into agreement penalty shall be levied by RMC from Tenderer at the rate of 0.015% of Tender cost per day

GC-20

LIQUIDATED DAMAGES:

If the Contractor fails to complete the work or designated part thereof within the stipulated completion date for the work or for the part, he shall pay liquidated damages at 0.1 (zero point one) percent of uncompleted Work Amount for per day of delay subject to maximum of 10% of the contract value or as decided by Municipal Commissioner.

The Contractor shall complete one-sixth quantum of work within one fourth period, four-tenth quantum of work within one-half period and eight-tenth quantum of work within three-fourth period, failing which, the Contractor shall be liable to pay liquidated damages an amount as specified above, or as decided by Municipal Commissioner.

The amount of liquidated damages shall, however, be subjected to a maximum of 10 percent of the contract value.

GC-21

FORFEITURE OF SECURITY DEPOSIT:

Whenever any claim against the Contractor for the payment of a sum of money out of or under the contract arises, the Corporation shall be entitled to recover such sum by appropriating in part or whole, the security deposit of the Contractor. In case the security deposit is insufficient, the balance recoverable shall be deducted from any sum then due or which at any time thereafter may become due to the Contractor. The Contractor shall pay to the owner on demand any balance remaining due.

ACTION OF FORFEITURE OF SECURITY DEPOSIT:

In any case in which under any Clause or Clauses of the contract, the Contractor shall committed a breach of any of the terms contained in this contract, the owner shall have power to adopt any of the following courses as he may deem best suited to his interest.

- a) To rescind the contract (of which recession notice in writing to the Contractor under the hand of the owner shall be conclusive evidence) in which case the security deposit of the Contractor shall stand forfeited and be absolutely at the disposal of the owner.
- b) To employ labour and to supply materials to carry out the balance work debiting Contractor with the cost of labour employed and the cost of materials supplied for which a certificate of the Engineer-in-charge shall be final and conclusive against the Contractor and 10% of costs on above to cover all departmental charges and crediting him with the value of work done at the same rates as if it has been carried out by the Contractor under the terms of his contract. The certificate of Engineer-in-charge as to the value of the work done shall be final and conclusive against the Contractor.
- c) To measure up the work of the Contractor and to take such part thereof as shall be unexecuted out of his hand and give it to another Contractor to complete, the same. in this case the excess expenditure incurred than what would have been paid to the original Contractor, if the whole work had been executed by him, shall be borne and paid by the original Contractor and shall be deducted from any money due to him by the owner under the contract or otherwise and for the excess expenditure, the certificate of the Engineer-in-charge shall be final and conclusive.

In the event any of the above courses being adopted by the owner, the Contractor shall have no claims for compensation for any loss sustained by him by reason of his having purchased or procured any materials or entered into any agreements or made any advance on account of or with a view to the execution of the work or the performance of the contract. In purchase the Contractor shall not be entitled to recover or be paid any sum for any work actually performed under this contract unless the Engineer-in-charge will certify in writing the performance of such work and the value payable in respect thereof and he shall only be entitled to be paid the value so certified.

In the event of the owner putting in force the powers as stated in a, b, c, above vested in him under the proceeding clause, he may, if he so desires, take possession of all or any tools and plant, materials and stores in or upon the works or the site thereof 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 to be certified by the Engineer-in-charge. The Engineer-in-charge may give notice in writing to the Contractor or his representative requiring him to remove such tools, plant, materials or stores from the premises within the time specified in the notice and in the event of the Contractor failing to comply with any such notice, the Engineer-in-charge may remove them at the Contractor's expenses or sell them by auction or private sale on account of the Contractor and his risks in all respects without any further notice as to the date, time or place of the sale and the certificate of Engineer-in-charge as to the expense of any such removal and the amount of the proceeds and the expenses of any such sale shall be final and conclusive against the Contractor.

- GC-23 **COMPENSATION FOR ALTERATION IN OR RESTRICTION IN WORK:**
If at any time from the commencement of the work, the owner shall for any reasons whatsoever not require the whole work or part thereof as specified in the e-Tender to be carried out, the Engineer-in-charge shall give notice in writing of the fact to the Contractor, who shall have no claim to any payment or compensation whatsoever on account of any profit or advantage which he might have derived from the execution of the work in full but which he did not derive in consequence of full amount of the work not having been carried out. He also shall not have any claim for compensation by reasons of any alterations having been made in original specifications, drawings, designs and instructions which shall involve any curtailment of the work as originally contemplated.
- When the Contractor is a partnership firm, the prior approval in writing of the owner shall be obtained before any change is made in the Constitution of the firm. Where the Contractor is an individual or a Hindu Undivided Family or business concern, such approval as aforesaid shall, likewise be obtained before Contractor enters into an agreement with other parties where under, the reconstituted firm would have the right to carry out the work hereby undertaken by the Contractor. In either case, if prior approval as aforesaid is not obtained, the contract shall be deemed to have been allotted contravention of subletting clause hereof and the same action may be taken and the same consequence shall ensure as provided in the subletting clause.
- GC-24 **IN THE EVENT OF DEATH OF THE CONTRACTOR:**
Without prejudice to any of the rights or remedies under the contract, if the Contractor dies, the owner shall have the option of terminating the contract without compensation to the Contractor.
- GC-25 **MEMBERS OF THE OWNER NOT INDIVIDUALLY LIABLE:**
No official or employee of the owner shall in any way be personally bound or liable for the acts or obligation of the owner under the contract, or answerable for any default or omission in the observance or performance of any acts, matters or things, which are herein, contained.
- GC-26 **OWNER NOT BOUND BY PERSONAL REPRESENTATIONS:**
The Contractor shall not be entitled to any increase on the schedule of rates or any other rights or claims whatsoever by reason of representation, promise or guarantees given or alleged to have been given to him by any person.
- GC-27 **CONTRACTOR'S OFFICE AT SITE:**
The Contractor shall provide and maintain an office at the site for the accommodation of his agent and staff and such office shall remain open at all reasonable hours to receive information, notices or other communications.
- GC-28 **CONTRACTOR'S SUBORDINATE STAFF AND THEIR CONDUCT:**
The Contractor on award of the work shall name and depute a qualified Engineer having experience of carrying out work of similar nature, whom equipments, materials, if any, shall be issued and instructions for work given. The Contractor shall also provide to the satisfaction of Engineer-in-charge sufficient and qualified staff, competent sub-agents, foreman and loading hands including those specially qualified by previous experience to supervise the type of works comprised in the contract in such manner as will ensure work of the best quality and expeditious working. If, in the

opinion of the Engineer-in-charge additional properly qualified supervision staff is considered necessary, it shall be employed by the Contractor, without additional charge on account thereof. The Contractor shall ensure to the satisfaction of the Engineer-in-charge that sub-Contractors, if any, shall provide competent and efficient supervision over the work entrusted to them.

2. If and whenever any of the Contractor's or sub-Contractor's agents, sub-agents, assistants, foreman or other employees shall, in the opinion of the Engineer-in-charge be guilty of any misconduct or be incompetent or insufficiently qualified or negligent in the performance of their duties or that in the opinion of the owner or Engineer-in-charge, it is undesirable for administrative or any other reason for person or persons to be employed in the works, the Contractor if so directed by the Engineer-in-charge, shall at once remove such person or persons from employment thereon. Any person or persons so removed shall not again be re-employed in connection with the works without the written permission of the Engineer-in-charge. Any person, so removed from the works shall be immediately replaced at the expense of the Contractor by a qualified and competent substitute. Should the Contractor be required to repatriate any person removed from the works he shall do so after approval of Engineer-in-charge and shall bear all costs in connection therewith.
3. The Contractor shall be responsible for the proper behavior of all the staff, foreman, workmen and others and shall exercise proper control over them and in particular and without prejudice to the said generality, the Contractor shall be bound to prohibit and prevent any employee from trespassing or acting in any way detrimental or prejudicial to the interest of the community or of the properties or occupiers of land and properties in the neighborhood and in the event of such employees so trespassing, the Contractor shall be responsible therefore and relieve the owner of all consequent claims, actions for damages or injury or any other ground whatsoever. The decision of the Engineer-in-charge upon any matter arising under this claim shall be final.
4. If and when required by the owner, the Contractor's personnel entering upon the owner's premises shall be properly identified by badges of a type acceptable to the owner which must be worn at all times on owner's premises.

GC-29

TERMINATION OF SUB-CONTRACT BY OWNER:

If any sub-Contractor engaged upon the works at the site execute any work which in the opinion of Engineer-in-charge is not accordance with the contract documents, the owner may by written notice to the Contractor request him to terminate such sub-contract and the Contractor upon the receipt of such notice shall terminate such sub-contracts and the latter shall forthwith leave the works, failing which, the owner shall have the right to remove such sub-Contractors from the site.

No action taken by the owner under the above clause shall relieve the Contractor of his liabilities under the contract or give rise to any right to compensation, extension of time or otherwise.

GC-30

POWER OF ENTRY:

If the Contractor shall not commence the work in the manner previously described in the contract documents or if he shall at any time, in the opinion of Engineer-in-charge.

- i) Fail to carry out works in conformity with the contract documents, or

- ii) Fail to carry out the works in accordance with the time schedule, or
- iii) Substantially suspend work or the works for a period of seven days without authority from Engineer-in-charge, or
- iv) Fail to carry out and execute the work to the satisfaction of the Engineer-in-charge, or
- v) Fail to supply sufficient or suitable construction plant, temporary works, labour, materials or things, or
- vi) Commit breach of any other provisions of the contract on his part to be performed or observed or persists in any of the above mentioned breaches of the contract for seven days after notice in writing shall have been given to the Contractor by the Engineer-in-charge requiring such breach to be remedied, or
- vii) Abandon the work, or
- viii) During the continuance of the contract becomes bankrupt, make any arrangement or compromise with his creditors, or permit any execution to be levied or go into liquidation whether compulsory or voluntary not being merely a voluntary liquidation for the purpose of amalgamation or reconstruction then in any such case.

The owner shall have the power to enter upon the works and take possession thereof and of the materials, temporary works, constructional plant and stores therein and to revoke the Contractor's license to use the same and to complete the works by his agents, other Contractor or workmen, to relate the same upon any terms to such other person firm or Corporation as the owner in his absolute discretion may think proper to employ, and for the purpose aforesaid to use or authorize the use of any materials, temporary works, constructional plant, and stores as aforesaid with making payments or allowance to the Contractor for the said materials other than such as may be certified in writing by the Engineer-in-charge to be reasonable and without making any payment or allowance to the Contractor for the use of said temporary works, constructional plant and stock or being liable for loss or damage thereto. If the owner shall be reason of his taking possession of the works or of the work being got completed by other Contractor incurred excess expenditure be deducted from any money which may be due for the work done by the Contractor under the contract and not paid for. Any deficiency shall forthwith be made good and paid to the owner by the Contractor and the owner shall have power to sell in such manner and for such price as he may think fit all or any of the constructional plant, materials etc., consist constructed by or belonging to and to recoup and retain the said deficiency or any part thereof out of the proceeds of the sale.

GC-31 CONTRACTOR'S RESPONSIBILITY WITH THE OTHER CONTRACTOR AND AGENCIES:

Without repugnance to any other conditions, it shall be the responsibility of the Contractor executing the work, to work in close co-operation and co-ordination with other Contractors or their authorized representatives and the Contractor will put a joint scheme with the concurrence of other Contractors or their authorized representatives showing the arrangements

for carrying his portion of the work to the Engineer-in-charge and get the approval. The Engineer-in-charge before approving the joint scheme will call the parties concerned and modify the scheme if required. No claim will be entertained on account of the above. The Contractor shall conform in all respects with the provisions of any statutory regulations, ordinances or bylaws of any local or duly constituted authorities or public bodies which may be applicable from time to time to works or any temporary works. The Contractor shall keep the owner indemnified against all penalties and liabilities of every kind arising out of non-adherence to such

statutes, ordinance, laws, rules, regulations etc.

- GC-32 **OTHER AGENCIES AT SITE:**
The Contractor shall have to execute the work in such place and condition where other agencies will also be engaged for other works, such as site grading, filling and leveling, electrical and mechanical engineering works etc. No claim shall be entertained for works being executed in the above circumstances.
- GC-33 **NOTICES:**
Any notice under this contract may be served on the Contractor or his duly authorized representative at the job site or may be served by Registered Post direct to the official address of the Contractor. Proof of issue of any such notice could be conclusive of the Contractor having been duly informed of all contents therein.
- GC-34 **RIGHTS OF VARIOUS INTERESTS:**
The owner reserves the right to distribute the work between more than one Contractor. Contractor shall co-operate and afford reasonable opportunity to other Contractors for access to the works, for the carriage and storage of materials and execution of their works. Whenever the work being done by department of the owner or by other Contractor employed by the owner is contingent upon work covered by this contract, the respective rights of the various interests shall be determined by the Engineer-in-charge to secure the completion of various portions of the work in general harmony.
- GC-35 **PRICE ADJUSTMENTS:**
No adjustment in price shall be allowed and no price escalation will be allowed.
- GC-36 **TERMS OF PAYMENT:**
The payment of bills shall be made progressively according to the rules and practices followed by the Corporation. The progressive payment unless otherwise provided in the contract agreement or subsequently agreed to by the parties shall be made generally monthly on submission of a bill by the Contractor in prescribed form of an amount according to the value of the work performed less the price of materials supplied by owner, aggregate of previous progressive payments and as required by Clause GC-37 (Retention of Money) herein. All such progressive payments shall be regarded as payments by way of advance against final payment. Payment for the work done by the Contractor will be based on the measurement at various stages of the work, in accordance with the condition at clause GC-81 (measurement of work in progress).
- GC-37 **RETENTION MONEY:**
Pursuant to Clause-36 (Term of Payment) on at money due to the contractor for work done the, the corporation will retain five (5) Percent of the gross R.A.Bill amount as mentioned in clause GC-82 (Running Account Payment) and same will be paid with the final bill. The same will be kept as deposit format and released individually with final bill.
- GC-38 **PAYMENTS DUE FROM THE CONTRACTOR:**
All costs, damages or expenses, for which under the contract, Contractor is liable to the Corporation, may be deducted by the Corporation from any money due or becoming due to the Contractor under the contract or from any other contract with the Corporation or may be recovered by action at law or otherwise from the Contractor.

- GC-39 **CONTINGENT FEE:**
- i) The Contractor warrants that he has not employed a person to solicit or secure the contract upon any agreement for a commission, percentage, and brokerage contingent fee. Breach of this warranty shall give the Corporation the right to cancel the contract or to take any drastic measure as the Corporation may deem fit. The warranty does not apply to commission payable by the Contractor to establish commercial or selling agent for the purpose of securing business.
 - ii) No officer, Owner or agent of the Corporation shall be admitted to any share or part of this contract or to any benefit that may rise there from.

GC-40 **BREACH OF CONTRACT BY CONTRACTOR:**

If the Contractor fails to perform the work under the contract with due diligence or shall refuse or neglect to comply with instructions given to him in writing by the Engineer-in-charge in accordance with the contract, or shall contravene the provisions of the contract, the Corporation may give notice in writing to the Contractor to make good such failure, neglect, or contravention. Should the Contractor fail to comply with such written notice within 14 (fourteen) days of receipt, it shall be lawful for the Corporation, without prejudice to any other rights the Corporation may have under the contract, to terminate the contract for all or part of the works, and make any other arrangements it shall deem necessary to complete the work outstanding under the contract at the time of termination / Black List / Debar the agency for the period of three years from the works of RMC. In this event, the performance Bond shall immediately become due and payable to the Corporation. The value of the work done on the date of termination and not paid for shall be kept as deposit for adjustment of excess expenditure incurred in getting the remaining work completed and the Corporation shall have free use of any works which the Contractor may have at the site at the time of termination of the contract.

If Contractor fails to carry out the work in timely manner as mentioned in GC-20, Rajkot Municipal Corporation may give notice in writing to the Contractor to expedite the progress of work, so that the work can be completed as per time schedule. If Contractor fails to expedite the progress of work within 14 days, Rajkot Municipal Corporation may terminate the contract and put the Contractor in Black List for three years and the remaining work will be executed through other agency at the risk and cost of the Contractor.

- GC-41 **DEFAULT OF CONTRACTOR:**
- i) The Corporation may upon written notice of default to the Contractor terminate the contract circumstances detailed as under :
 - a) If in the opinion of the Corporation, the Contractor fails to make completion of works within the time specified in the completion schedule or within the period for which extension has been granted by the Corporation to the Contractor.
 - b) If in the opinion of the Corporation, the Contractor fails to comply with any of the other provisions of this contract.
 - ii) In the event, the Corporation terminates the contract in whole or in part as provided in Article GC-50 (Termination of the Contract) the Corporation reserves the right to purchase upon such terms and in such manner as it may be deem appropriate, plant similar to one which is not supplied by the Contractor and the Contractor will be liable to the Corporation for any

additional costs for such similar plant and / or for liquidated damages for delay until such time as may be required for the final completion of works.

- iii) If this contract is terminated as provided in this paragraph GC-30 (Power of Entry), the Corporation in addition to any other rights provided in this clause, may require the Contractor to transfer title and deliver to the Corporation.
 - a) Any completed works
 - b) Such partially completed information and contract rights as the Contractor has specifically produced or acquired for the performance of the contract so terminated.
- iv) In the event, the Corporation does not terminate the contract as provided in the paragraph GC-50 (Termination of Contract) the Contractor shall continue performance of the contract, in which case, he shall be liable to the Corporation for liquidated damages for delay until the works are completed and accepted.

GC-42 BANKRUPTCY:

If the Contractor shall become bankrupt or insolvent or has a receiving order made against him, or compound with his creditors, or being the Corporation commence to be wound up not being a member voluntary winding up for the purpose of amalgamation or reconstruction, or carry on its business under a receiver for the benefit of his creditors or any of them, the Corporation shall be at liberty to either (a) terminate the contract forthwith by giving notice in writing to the Contractor or to the receiver or liquidator or to any person or Organization in whom the contract may become vested and to act in the manner provided in Article GC-41 (Default of Contractor) as though the last mentioned notice had been the notice referred to in such article or (b) to give such receiver, liquidator or other persons in whom the contract may become vested the option of carrying out the contract subject to his providing a satisfactory guarantee for the due and faithful, performance of the contract up to an amount to be agreed. In the event that the Corporation terminates the contract in accordance with this article, the performance bond shall immediately become due and payable on demand to Corporation.

GC-43 OWNERSHIP:

Works hand over pursuant to the contract shall become the property of the Corporation from whichever is the earlier of the following times, namely;

- a) When the works are completed pursuant to the contract.
- b) When the Contractor has been paid any sum to which he may become entitled in respect thereof pursuant to Clause GC-36 (Terms of Payment).

GC-44 DECLARATION AGAINST WAIVER:

The condemnation by the Corporation of any breach or breaches by the Contractor or an authorized sub-Contractor of any of the stipulations and conditions contained in the contract, shall in no way prejudice or affect or be construed as a waiver of the Corporation's rights, powers and remedies under the contract in respect of any breach or breaches.

GC-45 LAWS GOVERNING THE CONTRACT :

This contract shall be construed according to and subject to the laws of India and the State of Gujarat and under the jurisdiction of the Courts of Gujarat at Rajkot city only.

GC-46 OVER PAYMENT AND UNDER PAYMENT :

Whenever any claim for the payment of a sum to the Corporation arises out of or under this contract against the Contractor, the same may be deducted by the Corporation from any sum then due or which at any time thereafter may become due to the Contractor under this contract and failing that under any other contract with the Corporation (which may be available with the Corporation), or from his retention money or he shall pay the claim on demand. The Corporation reserves the right to carry out post payment audit and technical examinations of the final bill including all supporting vouchers, abstracts etc. The Corporation further reserves the right to enforce recovery of any payment when detected, notwithstanding the fact that the amount of the final bill may be included by one of the parties as an item of dispute shall be resolved as per GC-49 (Interpretation Related To Tender Conditions or Contract Agreement) of this contract and notwithstanding the fact that the amount of the final bill figures as resolved through GC-49. If as a result of such audit and technical examinations any over payment is discovered in respect of any work done by the Contractor or alleged to have been done by him under the contract, it shall be recovered by the Corporation from the Contractor as prescribed above. If any under payment is discovered by the Corporation, the amount due to the Contractor under this contract, may be adjusted against any amount then due or which may at any time thereafter become due before payment is made to the Contractor.

GC-47

SETTLEMENT OF DISPUTES :

Except as otherwise specifically provided in the contract, all disputes concerning questions of fact arising under the contract shall be decided by the Engineer-In-Charge subject to a written appeal by the Contractor to the Engineer-In-Charge and those decisions shall be final and binding on the parties hereto. Any disputes or differences including those considered as such by only one of the parties arising out of or in connection with this contract shall be to the extent possible settled amicably between the parties. If amicable settlement cannot be reached then all disputed issues shall be settled as provided in Article GC-48 (Disputes or differences to be referred to) and Article No.GC-49 (Interpretation Related To Tender Conditions or Contract Agreement).

GC-48

DISPUTES OF DIFFERENCES TO BE REFERRED TO :

If at any time, any question, disputes or differences of any kind whatsoever shall arise between the Engineer-In-Charge and the contractor upon or in relation to or in connection with this contract either party may forthwith give to the other, notice in writing of the existence of such question, dispute or difference as to any decision, opinion, instruction, direction, certificate or evaluation of the Engineer-In-Charge. The question, dispute or differences shall be settled by the Municipal Commissioner, Rajkot Municipal Corporation, who shall state his decision in writing and give notice of same to the Engineer-In-Charge and to the Contractor. Such decision shall be final and binding upon both parties.

GC-49

INTERPRETATION RELATED TO TENDER CONDITIONS OR CONTRACT AGREEMENT :

For any interpretation related to tender conditions or contract agreement conditions, the decision of Municipal Commissioner, Rajkot Municipal Corporation shall be considered as final and binding and in the event of any dispute arising pertaining to tender conditions or contract agreement conditions the jurisdiction shall be Rajkot Civil Court /Commercial Court of Rajkot City only.

GC-50

TERMINATION OF THE CONTRACT:

- i) If the Contractor finds it impracticable to continue operation owing to force majeure reasons or for any reasons beyond his control and/or the Corporation find it impossible to continue operation, then prompt notification in writing shall be given by the party affected to the other.

- ii) If the delay or difficulties so caused cannot be expected to cease or become unavoidable or if operations cannot be resumed within two (2) months then either party shall have the right to terminate the contract upon 10 (ten) days written notice to the other. In the event of such termination of the contract, payment to the Contractor will be made as follows:
 - a) The Contractor shall be paid for all works approved by the Engineer-in-charge and for any other legitimate expenses due to him.
 - b) If the Corporation terminates the contract owing to Force Majeure or due to any cause beyond its control, the Contractor shall additionally be paid for any work done during the said two (2) months period including any financial commitment made for the proper performance of the contract and which are not reasonably defrayed by payments under (a) above.
 - c) The Corporation shall also release all bonds and guarantees at its disposal except in cases where the total amount of payment made to the Contractor exceeds the final amount due to him in which case the Contractor shall refund the excess amount within thirty (30) days after the termination and the Corporation thereafter shall release all bonds and guarantees. Should the Contractor fail to refund the amounts received in excess within the said period such amounts shall be deducted from the bonds or guarantees provided.

- iii) On termination of the contract for any cause the Contractor shall see the orderly suspension and termination of operations, with due consideration to the interests of the Corporation with respect to completion safeguarding of storing materials procured for the performance of the contract and the salvage and resale thereof.

GC-51

SPECIAL RISKS:

If during the contract, there shall be an outbreak of war (whether war is declared or not), major epidemic, earthquake or similar occurrence in any part of the world beyond the control of either party to the contract which financially or otherwise materially affects the execution of the contract, the Contractor shall unless and until, the contract is terminated under the provisions of this article use his best endeavors to complete the execution of the contract, provided always that the Corporation shall be entitled at any time after the onset of such special risks, to terminate the contract by giving written notice to the Contractor and upon such notice being given this contract shall terminate but without prejudice to the rights of either party in respect of any antecedent breach thereof.

The Contractor shall not be liable for payment of compensation for delay or for failure to perform the contract for reasons of Force Majeure such as acts of public enemy, acts of Government, fires, floods, cyclones, epidemics, quarantine restrictions, lockouts, strikes, freight embargoes and provided that the Contractor shall within 10 (ten) days from the beginning of such delay notify the Engineer-in-charge in writing, of the cause of delay, the Corporation shall verify the facts and grant such extension as the facts justify.

GC-52

CHANGE IN CONSTITUTION:

Where the Contractor is a partnership firm, the prior approval in writing of the owner shall be obtained before any change is made in the constitution of the firm. Where the Contractor is an individual or undivided family business concern such approval as aforesaid shall likewise be obtained before the Contractor enters into any partnership agreement where under the partnership firm would have the right to carry out the works hereby undertaken by the Contractor. If prior approval as aforesaid is not obtained, the contract shall be deemed to have been assigned in contravention of contract.

GC-53

SUB-CONTRACTUAL RELATIONS:

All works performed for the contract by a sub-Contractor shall be pursuant to an appropriate agreement between the Contractor and the sub-Contractor, which shall contain provision to:

- a) Protect and preserve the rights of the Corporation and the Engineer-in-charge with respect to the works to be performed under the sub-contracting party will not prejudice such rights.
- b) Require that such work be performed in accordance with the requirements of contract documents.
- c) Require under such contract to which the Contractor is a party, the submission to the Contractor of application for payment and claims for additional costs, extension of time, damages for delay or otherwise with respect to the sub-contracted portions of the work in sufficient time, that the Contractor may apply for payment comply in accordance with the contract documents for like claims by the Contractor upon the Corporation.
- d) Waive all rights the contracting parties may have against one another for damages caused by fire or other perils covered by the property insurance except such rights as they may have to the proceeds of such insurance held by the Corporation as trustee and,
- e) Obligate each sub-Contractor specifically to consent to the provisions of this Article.

GC-54

PATENTS AND ROYALTIES:

1.

Contractor, if licensed under any patent covering equipment, machinery, materials or composition of matter to be used or supplied or methods and process to be practiced or employed in the performance of this contract agrees to pay all royalties and license fees, which may be due with respect thereto. If any equipment, machinery, materials, composition matters, to be used or supplied or methods practiced or employed in the performance of this contract, is covered by a patent under which Contractor is not licensed, then the Contractor before supplying / using the equipment, machinery, materials, compositions, methods of process shall obtain such license and pay such royalties and license fees as may be necessary for performance of this contract. In the event Contractor fails to pay such royalty or to obtain any such license, any suit for infringement of such patents which is brought against the Contractor or the owner as a result of such failure will be defended by the Contractor at his own expenses and the Contractor will pay any damages and costs awarded in such suit. The Contractor shall promptly notify the owner if the Contractor has acquired knowledge of any plant under which a suit for infringement could be reasonably brought because of the use by the owner of any equipment

machinery, materials, and process methods to be supplied in hereunder. Contractor agrees to and does hereby grant to owner together with the right to extend the same to any of the subsidiaries of the owner an irrevocable royalty fee license to use in any Country, any invention made by the Contractor or his employees in or as a result of the performance of work under contract.

2. With respect to any sub-contract entered into by Contractor pursuant to the provisions of the relevant clause hereof, the Contractor shall obtain from the sub-Contractor an understanding to provide the owner with the same patent protection that contracts is required to provide under the provisions of the clause.

3. The Contractor shall indemnify and save harmless the owner from any loss on account of claims against owner for the contributory infringement of patent rights arising out of and based upon the claim that the use by the Corporation of the process included in the design prepared by the Contractor and used in the operation of the plant infringes on any patent rights.

GC-55 **LIEN:**

If, at any time, there should be evidence of any lien or claim for which owner might have become liable and which is chargeable to the Contractor, the owner shall have the right to retain out of any payment then due or thereafter to become due an amount sufficient to completely indemnify the owner against such lien or claim or if such lien or claim be valid the owner may pay and discharge the same and deduct the amount as paid from any money which may be due or become due and payable to the Contractor. If any lien or claims remaining unsettled after all payments are made, the Contractor shall refund or pay to the owner all money that the latter may be compelled to pay in discharging such lien or claim including all costs and reasonable expenses.

GC-56 **EXECUTION OF WORK:**

The whole work shall be carried out in strict conformity with the provisions of the contract document, detailed drawings, specifications and the instructions of the Engineer-in-charge from time to time. The Contractor shall ensure that the whole work is executed in the most substantial, and proper manner with best workmanship using materials of best quality in strict accordance with the specifications to the entire satisfaction of the Engineer-in-charge.

GC-57 **WORK IN MONSOON:** (DELETED)

When the work continues in monsoon if required, the Contractor shall maintain minimum labour force required for the work and plan and execute the construction and erection work according to the prescribed schedule. No extra rate will be considered for such work in monsoon. During monsoon and entire construction period, the Contractor shall keep the site free from water at his own cost. However, actual monsoon period or minimum 3 month will be considered as non-working period and that shall be excluded in time limit. Actual dates will be notified if found necessary.

GC-58 **WORK ON SUNDAYS AND HOLIDAYS:**

No work except curing shall be carried out on Sunday and holidays. However, if the exigencies of the work need continuation of work on Sundays and Holidays, written permission of the Engineer-in-charge shall be obtained in advance.

GC-59

GENERAL CONDITIONS FOR CONSTRUCTION WORK:

Working hours shall be eight every day. The overtime work in two shifts could be carried out with the written permission of the Engineer-in-charge but no compensation shall be paid for the same. The rate quoted shall include this. The Contractor shall plan his work in such a way that his labourers do not remain idle. The owner will not be responsible for idle labour of the Contractor. The Contractor shall submit to the owner progress report every week. The details and Performa of the report will be as per mutual agreement.

GC-60

DRAWINGS TO BE SUPPLIED BY THE OWNER:

The drawings attached with the e-Tender documents shall be for general guidance of the Contractor to enable him to visualize the type of work contemplated and scope of work involved. Detail working drawings according to which the work is to be done shall be prepared by the Contractor for executing the work.

GC-61

DRAWINGS TO BE SUPPLIED BY THE CONTRACTOR:

Where drawings, data are to be furnished by the Contractor they shall be as enumerated in special conditions of contract and shall be furnished within the specified time. Where approval of drawings has been specified it shall be Contractor’s responsibility to have these drawings got approved before any work is taken up with regard to the same. Any changes becoming necessary in those drawings during the execution of the work shall have to be carried out by the Contractor at no extra cost. All final drawings shall bear the certification stamp as indicated below duly signed by both the Contractor and Engineer-in-charge.

Certified true for

.....
Project Agreement No
Signed

Contractor

Engineer-in-charge.

Drawings will be approved within three (3 weeks of the receipt of the same by the Engineer-in-charge.

GC-62

SETTING OUT WORK:

The Contractor shall set out the work on the site handed over by the Engineer-in-charge and shall be responsible for the correctness of the same. The work shall be carried out to the entire satisfaction of Engineer-in-charge. The approval thereof or partaking by Engineer-in-charge or setting out work shall not relieve Contractor of any of his responsibilities. The Contractor shall provide at his own cost all necessary level posts, pegs, bamboos, flags, ranging rods, strings and other materials and labourers required for proper setting out of the work. The Contractor shall provide fix and be responsible for the maintenance of all stakes, templates, level markets, profiles and similar other things and shall take all necessary precautions to prevent their removal or disturbance and shall be responsible for the consequences for such removal or disturbance. The Contractor shall also be responsible for the maintenance of all existing survey marks, boundary marks, and distance marks and centerline marks either existing or face lines and cross lines shall be marked by small masonry pillars. Each pillar shall have distance mark at the center for

setting up the theodolite. The work shall not be started unless the setting out is checked and approved by Engineer-in-charge in writing but such approval shall not relieve the Contractor of his responsibilities about the correctness of setting out. The Contractor shall provide all materials, labour and other facilities necessary for checking at his own cost. Pillars bearing geodetic marks on site shall be protected by the Contractor. On completion of the work, the Contractor shall submit the geodetic documents according to which the work has been carried out.

GC-63 **RESPONSIBILITIES OF CONTRACTOR FOR CORRECTNESS OF THE WORK:**

The Contractor shall be entirely and exclusively responsible for the correctness of every part of the work and shall rectify completely any errors therein at his own cost when so instructed by Engineer-in-charge. If any error has crept in the work due to non-observance of this clause, the Contractor will be responsible for the error and bear the cost of corrective work.

Materials to be supplied by the Contractor:

1. Contractor shall procure and provide all the material required for the execution and maintenance of work including M S rods; all tools, tackles, construction plant and equipment except, the materials to be supplied by the owner detailed in the contract documents. Owner shall make recommendations for procurement of materials to the respective authorities if desired by the Contractor but assumes no responsibility of any nature. Owner shall insist for procurement of materials with ISI marks supplied by reputed firms of the DGS & D list.
2. If however, the Engineer-in-charge feels that the work is likely to be delayed due to Contractor's inability to procure materials, the Engineer-in-charge shall have the right to procure materials, from the market and the Contractor will accept these materials at the rates decided by Engineer-in-charge.

GC-64 **MATERIALS TO BE SUPPLIED BY THE OWNER:**

1. If the contract provided certain materials or stores to be supplied by the owner, such materials and stores transported by the Contractor at his cost from owner's stores or Railway Station. The cost from Contractor for the value of materials supplied by the owner will be recovered from the R.A.Bill on the basis of actual consumption of materials in the work covered and for which R A Bill has been prepared. After completion of the work, the Contractor has to account for the full quantity of materials supplied to him.
2. The value of store materials supplied by owner to the Contractor shall be charged at rates shown in the contract document and in case any other material not listed in the schedule of materials is supplied by the owner, the same shall be charged at cost price including carting and other expenses incurred in procuring the same. All materials so supplied shall remain the property of the owner and shall not be removed from the site on any account. Any material remaining unused at the time of completion of work or termination of contracts shall be returned to owner's store or any other place as directed by the Engineer-in-charge in perfectly good condition at Contractor's cost. When materials are supplied free of cost for use in work and surplus and unaccounted balance thereof are not returned to the owner, recovery in respect of such balance will be effected at double the applicable issue rate of the material or the market rates whichever is higher.

GC-65

CONDITIONS OF ISSUE OF MATERIALS BY THE OWNER : (N.A.)

The materials specified to be issued by the owner to the Contractor shall be issued by the owner at his store and all expenses for it carting site shall be borne by the Contractor will be issued during working hours and as per rules of owner from time to time.

Contractor shall bear all expenses for storage and safe custody at site of materials issued to him before use in work.

Material shall be issued by the owner in standard / non-standard sizes as obtained from manufacturer.

Contractor shall construct suitable godowns at site for storing the materials to protect the same from damage due to rain, dampness, fire, theft etc.

The Contractor should take the delivery of the materials issued by the owner after satisfying himself that they are in good condition. Once the materials are issued, it will be the responsibility of the Contractor to keep them in good condition and in safe custody. If the materials get damaged or if they are stolen, it shall be the responsibility of the Contractor to replace them at his cost according to the instructions of the Engineer-in-charge.

For delay in supply or for non-supply of materials to be supplied by the owner, on account of natural calamities, act of enemies, other difficulties beyond the control of the owner, the owner carries no responsibilities. In no case the Contractor shall be entitled to claim any compensation for loss suffered by him on this account.

None of the materials issued to the Contractor, shall be used by the Contractor for manufacturing items which can be obtained from the manufacturers. The materials issued by the owner shall be used for the work only and no other purpose.

Contractor shall be required to execute indemnity bond in the prescribed form for the safe custody and account of materials issued by the owner.

Contractor shall furnish sufficiently in advance a statement of his requirements of quantities of materials to be supplied by the owner and the time when the same will be required for the work, so as to enable Engineer-in-charge to make arrangements to procure and supply the materials.

A daily account of materials issued by the owner shall be maintained by the Contractor showing receipt, consumption and balance on hand in the form laid down by Engineer-in-charge with all connected paper and shall be always available for inspection in the site office.

Contractor shall see that only the required quantities of materials are got issued and no more. The Contractor shall be responsible to return the surplus materials at owner's store at his own cost.

GC-66

MATERIALS PROCURED WITH ASSISTANCE OF THE OWNER:

Notwithstanding anything contained to the contrary in any of the clauses of this contract, where any materials for the execution of the contract are procured with the assistance of the owner either by issue from owner's stock or purchase made under orders or permits or licenses issued

materials as trustees for owner, and use such materials not disposed them off without the permission of owner and unserviceable materials that may be left with him after completion of the contract or at its termination for any reason whatsoever on his being paid or credited such price as Engineer-in-charge, shall determine having due regard to the conditions of the materials. The price allowed to Contractor shall not exceed the amount charged to him excluding the storage of breach of the aforesaid condition, the Contractor shall in terms of license or permits and/or for criminal breach of trust be liable to compensate owner at double the rate or any higher rates. In the event of these materials at that time having higher rate or not being available in the market than any other rate to be determined by the Engineer-in-charge at his decision shall be final and conclusive.

GC-67 MATERIALS OBTAINED FROM DISMANTLING:

If the Contractor, in the course of execution of work, is called upon to dismantle any part of work for reasons other than on account of bad or imperfect work, the materials obtained from dismantling will be property of the owner and will be disposed off as per instructions of Engineer-in-charge in the best interest of the owner.

GC-68 ARTICLE OF VALUE OF TREASURE FOUND DURING CONSTRUCTION:

All gold, silver and other minerals of any description and all precious stones, coins, treasures, relics, antiques and other similar things which shall be found in, under or upon site shall be the property of the owner and the Contractor shall properly preserve the same to the satisfaction of the Engineer-in-charge and shall hand over the same to the owner.

GC-69 DISCREPANCIES BETWEEN INSTRUCTIONS:

If there is any discrepancy between various stipulations of the contract documents or instructions to the Contractor or his authorized representative or if any doubt arises as to the meaning of such stipulation or instructions, the Contractor shall immediately refer in writing to the Engineer-in-charge and shall hand over the same to the owner.

GC-70 ALTERATIONS IN SPECIFICATIONS & DESIGNS & EXTRA WORK:

The Architect / Engineer-in-charge shall have power to make any alterations in, omission from, addition to substitution for, the schedule of rates, the original specifications, drawings, designs and instructions that may appear to him to be necessary or advisable during the progress of work and the Contractor shall be bound to carry out such altered / extra / new items of work in accordance with any instructions which may be given to him in writing signed by Engineer-in-charge and such alteration omissions, additions or substitutions, shall not invalidate contract and any altered, additional or substituted work shall be carried out by the Contractor on the same conditions of contract. The time of completion may be extended by Architect as may be considered just and reasonable by him. The rates for such additional altered or substitute work shall be worked out as under:

- a) If the rates for additional, altered or substitutes work are specified in the contract for work, the Contractor is bound to carry out such work at the same rates as specified in the contract.
- b) If the rates for additional, altered or substituted work are not specifically provided in the contract for the work, the rates will be derived from the rates of similar items of work in the contract work. The opinion of

Engineer-in-charge as to whether the rates can be reasonably so derived the items of contract will be final and binding to the Contractors.

- c) If the rates of altered, additional or substitute work cannot be determined as specified in (a) or (b) above, the rate shall be paid as per current S.O.R. of RMC and if the same is not available in RMC current S.O.R. the same can be adopted from current GWSSB.
- d) If the rates of altered, additional or substitute work cannot be determined as specified in (a) or (b) or (c) above, the Contractor shall within seven days of the receipt of order to carry out the work inform the Architect / Engineer-in-charge of the rate which he intends to charge for such work supported by rate analysis and the Architect / Engineer-in-charge will determine the rate on the basis of prevailing market rates of materials, labour cost at schedule of labour plus 15% there on as Contractor's supervision overheads and profit. The opinion of Architect / Engineer-in-charge as to the market rates of materials and the quantity of labour involved per unit of measurement will be final and binding on Contractor.

But under no circumstances, the Contractor suspends work or the plea of non settlement of items falling under this clause.

GC-71 **ACTION WHEN NO SPECIFICATIONS ARE ISSUED:**
In case of any class of work for which no specifications is supplied by the owner in the e-Tender documents, such work shall be carried out in accordance with relevant latest ISS and if ISS do not cover the same, the work shall be carried out as per General Technical Specification for building work; and if not covered in then it is to be with standard Engineering Practice subject to the approval of Engineer-in-charge.

GC-72 **ABNORMAL RATES:**
Contractor is expected to quote rate for each item after careful analysis of cost involved for the performance of the completed item considering all specifications and conditions of contract.

GC-73 **ASSISTANCE TO ENGINEER-IN-CHARGE:**
Contractor shall make available to Engineer-in-charge free of cost all necessary instruments and assistance in checking of any work made by the Contractor setting out for taking measurement of work etc.

GC-74 **TESTS FOR QUALITY OF WORK:**
1. The Contractor shall be required to give satisfactory hydraulic test where required and shall rectify the defects, if any, free of cost. The necessary water, power, labour etc., required for the hydraulic test shall also be arranged by the Contractor at his own cost.

2. All workmanship shall be of the best kind described in the contract documents and in accordance with the instructions of Engineer-in-charge and shall be subjected from time to time to such tests at Contractor's cost as the Engineer-in-charge may direct at the place of manufacture of fabrication or on the site or at any such place. Contractor shall provide assistance, instruments, labour and materials as are normally required for examining, measuring and testing of any work of workmanship as may be selected and required by Engineer-in-charge.

3. All tests necessary in connection with the execution of work as decided by Engineer-in-charge shall be carried out at an approved laboratory at Contractor's cost.
4. Contractor shall furnish the Engineer-in-charge for approval when requested or if required by the specification, adequate samples of all materials and finished goods to be used in work sufficiently in advance to permit tests and examination thereof. All materials furnished and finished goods applied in work shall be exactly as per the approved samples.

GC-75 **ACTION AND COMPENSATION IN CASE OF BAD WORKMANSHIP:**
If it shall appear to the Engineer-in-charge that any work has been executed with materials of inferior description, or quality or are unsound or with unsound, imperfect or unskilled workmanship or otherwise not in accordance with the contract, the Contractor shall, on demand in writing from Engineer-in-charge or his authorized representative specifying the work, materials or articles complained of, notwithstanding that the same may have been inadvertently passed, certified and paid for, forthwith rectify or remove and reconstruct the work, so specified. In the event of failure to do so within a period to be specified by the Engineer-in-charge in his aforesaid demand, Contractor shall be liable to pay compensation at the rate of 0.1 (zero point one) percent of the value of work for per day of delay limited to a maximum of ten (10%) percent of the value of work while his failure to do so continues and in the case of any such failure, the Engineer-in-charge may on expiry of the notice period rectify and remove and re-execute the work or remove and replace with others at the risk and cost of the Contractor. The decision of the Engineer-in-charge as to any question arising under this clause shall be final and conclusive.

GC-76 **SUSPENSION WORK:**
Contractor shall, if ordered in writing by Engineer-in-charge or his representative temporarily suspended the work or any part thereof for such time (not exceeding one month) as ordered and shall not after receiving such written notice proceed with the work until he shall have received a written order to proceed therewith. The Contractor shall not be entitled to claim compensation for any loss or damage sustained by him by reason of temporary suspension of work as aforesaid. An extension of time for completion of work will be granted to the Contractor corresponding to the delay caused by such suspension of work if he applies for the same provided the suspension was not consequent upon any default or failure on the part of the Contractor.

GC-77 **OWNER MAY DO PART OF THE WORK:**
When the Contractor fails to comply with any instructions given in accordance with the provisions of this contract, the owner has the right to carry out such parts of work as the owner may designate whether by purchasing materials and engaging labour or by the agency of another Contractor. In such case the owner shall deduct from the amount which otherwise might become due to Contractor, the cost of such work and materials with then (10) percent added to cover all departmental charges and should the total amount thereof exceed the amount due to contract, Contractor shall pay the difference to owner.

GC-78 **POSSESSION PRIOR TO COMPLETION:**
The Engineer-in-charge shall have the right to take possession of or to use any completed or partly completed work or part of work. Such possession or use shall not be deemed to be an acceptance of any work completed in accordance with the contract. If such prior possession or use by Engineer-

in-charge delays the process of work, equitable adjustment in the time of completion will be made and the contract shall be deemed to be modified accordingly.

GC-79

COMPLETION CERTIFICATE:

As soon as the work has been completed in accordance with contract (except in minor respects that do not affect their use for the purpose for which they are intended and except for maintenance thereof) as per General Conditions of Contract the Engineer-in-charge shall issue a certificate (hereinafter called completion certificate) in which shall certify the date on which work has been completed and has passed the said tests and owner shall be deemed to have taken over work on the date so certified. If work has been divided in various groups in contract, owner shall be entitled to take over any group or groups before the other or others and there upon the Engineer-in-charge will issue a completion certificate, which will, however, be for such group or groups so taken over.

In order that Contractor could get a completion certificate, he shall make good will all speed any defect arising from the defective materials supplied by Contractor of workmanship or any act or omission of Contractor that may have been discovered or developed after the work or groups of works has been taken over. The period allowed for carrying out such work will be normally, one month. If any defect be not remedied within the time specified, owner may proceed to do work at Contractor's (Agency, or Firm) risk and expenses and deduct from the final bill such amount as may be decided by owner. If by reason of any default on the part of the Contractor, a completion certificate has not been issued in respect of every portion of work within one month after the date fixed by contract for completion of work, owner shall be at liberty to use work or any portion thereof in respect of which a completion certificate has been issued, provided that work or the portion thereof so used as aforesaid shall be afforded reasonable opportunity for completion of that work or the portion thereof so used as aforesaid shall be afforded reasonable opportunity for completion of that work for the issue of completion certificate.

GC-80

SCHEDULE OF RATES:

1. The rates quoted by the Contractor shall remain firm till the completion of the work and shall not be subject to escalation. Schedule of rates shall be deemed to include and cover all costs, expenses and liabilities of every description and risks or every kind to be taken in executing, completing and handing over the work to owner by Contractor. The Contractor shall be deemed to have known the nature, scope, magnitude and the extent of work and materials required though contract documents may not fully and precisely furnish them. He shall make such provision in the Schedule of Rates as he may consider necessary to cover the cost of such items of work and materials as may be reasonable and necessary to complete the work. The opinion of Engineer-in-charge as to the item of work which are necessary and reasonable for completion of the work shall be final and binding on Contractor although the same may be not shown on drawings or described specifically in contract documents.
2. The Schedule of Rates shall be deemed to include and cover the cost of all constructional plant, temporary work, materials, labour and all other matters in connection with each item in Schedule of Rates and the execution of work or any portion thereof finished complete in every respect and maintained as shown or described in the contract document or as may be ordered in writing during the continuance of the contract.
3. The Schedule of Rates shall be deemed to include and cover the cost of all

royalties and fees for the articles and processes, protected by letters patent or otherwise incorporated in or used in connection with work, also all royalties, rents and other payments in connection with obtaining material of whatsoever kind for work and shall include an indemnity to owner which Contractor hereby gives against all action, proceedings, claims, damages, costs and expenses arising from the incorporation in or use on the works of any such articles, processes or materials. Other Municipal or local Board charges if levied on material, equipment or machineries to be brought to site for use on work shall be borne by the Contractor.

4. No exemption or reduction of custom duties, excise duties, sales tax, GST or any other taxes or charges of the Central or State Government or of any Local Body whatsoever will be granted or obtained and all such expenses shall be deemed to have been included in and covered by Schedule of Rates. Contractor shall also obtain and pay for all permits or other privileges necessary to complete the work.
5. The Schedule of Rates shall be deemed to include and cover risk on account of delay and interference with Contractor's conduct of work which may occur from any cause including orders of owner in the exercise of his powers and on account of extension of time granted due to various reasons.
6. For work under unit rate basis, no alteration will be allowed in the Schedule of Rates by reasons of work or any part of them being modified, altered, extended, diminished or omitted.

GC-81 **PROCEDURE FOR MEASUREMENT OF WORK IN PROGRESS:**

1. All measurements shall be in metric system. All the work in progress will be jointly measured by the representative of Engineer-in-charge and Contractor's authorized agent. Such measurements will be got recorded in the Measurement Book by the Engineer-in-charge or his authorized representative and signed by the Contractor or his authorized agent in token of acceptance. If the Contractor or his authorized agent fails to be present whenever required by the Engineer-in-charge for taking measures for every reason whatsoever, the measurement will be taken by the Engineer-in-charge or his authorized representative notwithstanding the absence of Contractor and these measurements will be deemed to be correct and binding on the Contractor.
2. Contractor will submit a bill in approved Performa in quadruplicate to the Engineer-in-charge of the work giving abstract and detailed measurements of various items executed during a month as mutually agreed. The Engineer-in-charge shall verify the bill and the claim, as far as admissible, adjusted if possible, within 10 days of presentation of the bills.

GC-82 **RUNNING ACCOUNT PAYMENTS TO BE REGARDED AS ADVANCES:**

1. All running account payments shall be regarded as payments by way of advance against the final payment only and not as payment for work actually done and completed and shall not preclude the requiring of bad, unsound and imperfect or unskilled work to be removed and taken away and reconstructed or rejected or to be considered as an admission of the due performance of contract or any part thereof.
2. Five (5) percent of the gross R A Bill amount shall be retained from each bill as retention amount and the same will be paid with the final bill.

- GC-83 **NOTICE FOR CLAIM FOR ADDITIONAL PAYMENT:**
If the Contractor considers that he is entitled to extra payment or compensation or any claim whatsoever in respect of work, he shall forthwith give notice in writing to the Engineer-in-charge about his extra payment and / or compensation. Such notice shall be given to the Engineer-in-charge within ten (10) days from the happening of any event upon which Contractor basis such claims and such notice shall contain full particulars of the nature of such claim with full details and amount claimed. Failure on the part of the Contractor to put forward any claim with the necessary particulars as above, within the time above specified shall be an absolute waiver thereof. No omission by owner to reject any such claim and no delay in dealing therewith shall waiver by owner or any rights in respect thereof.
- GC-84 **PAYMENT OF CONTRACTOR'S BILL:**
1. The price to be paid by the owner to Contractor for the work to be done and for the performance of all the obligations undertaken by the Contractor under contract shall be based on the contract price and payment to be made accordingly for the work actually executed and approved by the Engineer-in-charge.
2. No payment shall be made for work costing less than Rs.10,00,000/- till the work is completed and a certificate of completion given. But in case of work estimated to cost more than Rs.10,00,000/-. Contractor on submitting the bill thereof will be entitled to receive a monthly payment proportionate to the part thereof, approved and passed by Engineer-in-charge, whose certificate of such approval and passing of the sum so payable shall be final and conclusive against contractor. This payment shall be made after necessary deductions as stipulated elsewhere in the contract documents for materials, security deposit etc. The payment shall be released to the Contractor within Two (2) month of submission of the bill duly pre-occupied on proper revenue stamp. Payment due to Contractor shall be made by the owner by Electronic clearing system or RTGS only in Indian currency. Successful bidder must furnish his details for the ECS/RTGS.
- GC-85 **FINAL BILL:**
The final bill shall be submitted by Contractor within one (1) month of the date of physical completion of work, otherwise the Engineer-in-charge's certificate of the measurement and of total amount payable for work shall be final and binding on all parties.
- GC-86 **RECEIPT FOR PAYMENT:**
Receipt for payment made on account of work when executed by a firm must be signed by a person holding Power of Attorney in this respect on behalf of Contractor except when described in the e-Tender as a limited company in which case the receipt must be signed in the name of the Company by one of its principal officers or by some person having authority to give effectual receipt for the Company.
- GC-87 **COMPLETION CERTIFICATE:**
1. When the Contractor fulfils his obligation as per terms of contract, he shall be eligible to apply for Completion Certificate. Contractor may apply for separate Completion Certificate in respect of each such portion of work by submitting the completion documents along with such application for Completion Certificate.
The Engineer-in-charge, shall normally issue to Contractor the Completion Certificate within one (1) month after receiving an application thereof from Contractor after verifying, from the completion documents and satisfying

- himself that work has been completed in accordance with and as set out in the construction and erection drawings and the contract documents. Contractor after obtaining the Completion Certificate is eligible to present the final bill for work executed by him under the terms of contract.
2. Within one month of completion of work in all respects Contractor shall be furnished with a certificate by the Engineer-in-charge of such completion but no certificate shall be given nor shall work be deemed to have been executed until all (i) scaffolding, surplus materials and rubbish is cleaned off site completely, (ii) until work shall have been measured by the Engineer-in-charge whose measurement shall be binding and conclusive and, (iii) until all the temporary works, labour and staff colonies etc. constructed are removed and the work site cleaned to the satisfaction of the Engineer-in-charge. If Contractor shall fail to comply with the requirements as aforesaid or before date fixed for the completion of work, the Engineer-in-charge may at the expense of Contractor remove such scaffolding, surplus materials and rubbish and dispose off the same as he thinks fit.
3. The following documents will form the completion documents: -
- a) Technical documents according to which the work has been carried out.
 - b) Three sets of construction drawings showing therein the modifications and corrections made during the course of execution signed by the Engineer-in-charge.
 - c) Completion Certificate for "Embedded" or "Covered" up work.
 - d) Certificate of final levels as set out for various works.
 - e) Certificate of test performed for various work.
 - f) Material appropriation statement for the materials issued by owner for work and list of surplus materials returned to owner's store duly supported by necessary documents.
 - g) Operation and maintenance manual (If necessary)
4. Upon expiry of the period of defect liability and subject to Engineer-in-charge being satisfied that work has been duly maintained by Contractor during the defect liability period /Warranty period of fixed originally or as extended subsequently and that Contractor has in all respects made up any subsidence and performed all his obligations under contract, the Engineer- in-charge (without prejudice to the rights of owner in any way) give final certificate to that effect. The Contractor shall not be considered to have fulfilled the whole of his obligation until final certificate shall have been given by the ENGINEER-IN-CHARGE.
5. Final Certificate only evidence of completion:
Except the final certificate, no other certificate of payment against a certificate or on general account shall be taken to be an admission by owner of the due performance of contract or any part thereof of occupancy or validity or any claim by the Contractor.

GC-88

TAXES, DUTIES, ETC. :

1. Contractor agrees to and does hereby accept full and inclusive liability for the payment of any and all taxes including Sales Tax, Duties, Income Tax, Value Added Tax, Professional Tax, Labour cess, etc., now or hereinafter imposed, increased or modified from time to time in respect of work and materials and all contributions and taxes for unemployment, compensation, insurance and old age pension or annuities now or

hereinafter imposed by the Central or State Government authorities with respect to or covered by the wages, salaries or other compensation paid to the persons employed by Contractor. GST is excluded among these tax.

If the Contractor is not liable to Sales Tax assessment, a certificate to that effect from the Competent Authority shall be produced without which final payment to the Contractor shall not be made. P, 'C' and 'D' Form shall not be supplied by the owner, and the Contractor shall be required to pay full tax as applicable.

2. Contractor shall be responsible for compliance with all obligations and restrictions imposed by the labour law or any other law affecting Owner-employee relationship.
3. Contractor further agrees to comply and to secure the compliance of all sub Contractors with applicable Central, State, Municipal and local laws and regulations and requirement. Contractor also agrees to defend, indemnify the hold harmless the owner from any liability or penalty which may be imposed by Central, State or local authority by reasons of any violation by Contractor or sub Contractor of such laws, regulations or requirements and also from all claims, suits or proceedings that may be brought against owner arising under, growing out of or by reasons or work provided for by this Contract by third parties or by Central or State Government authority or any administrative Sub-Division thereof.
The Sales Tax/Value Added Tax/GST on work contract will be borne by the Contractor.
 - a. The prevailing Max rate for GST for these works is 18% whereas it will be presumed that the agency has quoted their rates excluding GST. Prevailing rate of GST applicable at particular time will be beared by RMC as client and shall be paid extra to Bidder against his invoice.

GC-89 General INSURANCE and Transit Insurance :

General INSURANCE

Contractor shall at his own expenses carry and maintain the reputable Insurance Companies to the satisfaction of owner as follows:

1. Contractor agrees to and uses hereby accept full and exclusive liability for compliance with all obligations imposed by the Owner's State Insurance Act, 1948 and Contractor further agrees to defend, indemnify and hold owner hardness from any liability or penalty which may be imposed by the Central or State Government or local authority by reasons of any assorted violation by Contractor or Sub-Contractor or the Employees State Insurance Act, 1948 and also from all claims, suits or proceedings that may be brought against owner arising under, growing out of or by reasons of the work provided for by this contract whether brought by employees of Contractor by third parties or by Central or State Government authority or any administrative Sub-division thereof.

Contractor agrees to fill in with the Employees State Insurance Corporation, the declaration form and all forms which may be required in respect of Contractor's or sub-Contractor's employees whose aggregate remuneration is Rs.400/- p.m. or less and who are employed in work

provided for or those covered by ESI from time to time under the agreement. The Contractor shall deduct and secure the agreement of the sub-Contractor to deduct the employees contribution as per the first schedule of the Employees State Insurance Act from wages. Contractor shall remit and secure the agreement of sub-Contractor to remit to the State Bank of Indian Employees State Insurance Accounts, the employee's contribution as required by the Act. Contractor agrees to maintain all cards and records as required under the Act in respect of employees and payments and Contractor shall secure the agreements of the sub Contractors to maintain in such records, any expenses incurred for the contributions, making contributions or maintaining records shall be to Contractors or sub-Contractors own account. Owner shall retain such sum as may be necessary from the contract value until Contractor shall furnish satisfactory proof that all contribution as required by the Employees State Insurance Act, 1948 have been paid.

2. Workman's compensation and employee's liability insurance: Insurance shall be affected for all Contractors employees engaged in the performance of this contract. If any part of work is sublet, Contractor shall require the sub-Contractor to provide workman's compensation and Owner's liability insurance, which may be required by owner.
3. Other Insurance required under law of regulations or by owner Contractor shall also carry and maintain any and all other insurance which may be required under any law or regulation from time to time. He shall also carry and maintain any other insurance, which may be required by owner.

Transit Insurance

All Equipment shall have Transit Insurance. This Insurance shall cover all the activities of Transport / Transit Starting from loading / unloading from Tenderer's manufacturing unit to loading / unloading at Client's Site inclusive of erection / fitting and Electrical Power Performance Testing of Equipment. Whatever the expense occurs for transport or Transit Insurance shall be beared by Tenderere

GC-90

DAMAGE TO PROPERTY:

1. Contractor shall be responsible for making good to the satisfaction of owner any loss of and any damage to all structures and properties belonging to owner or being executed or procured or being procured by owner or of other agencies within the premises of all work of owner, if such loss or damage is due to fault and / or the negligence of willful act or omission of Contractor, his employees, agent, representatives or sub-Contractors.
2. Contractor shall indemnify and keep owner harmless of all claims for damage to properties other than property arising under by reasons of this agreement; such claims result from the fault and / or negligence or willful act or omission of Contractor, his employees, agent's representative or sub-Contractor.

GC-91

CONTRACTOR TO INDEMNIFY OWNER:

1. The Contractor shall indemnify and keep indemnified the owner and every member, officer and employee of owner from and against all actions, claims, demands and liabilities whatsoever under the in respect of the breach of any of the above clauses and / or against any claim, action or demand by any workman / employee of the Contractor or any sub-Contractor under any laws, rules or regulations having force of laws, including but not limited to claims against the owner under the workman

compensation Act, 1923, the Employee's Provident Funds Act, 1952 and / or the contract labour (Abolition and Regulations) Act, 1970.

2. PAYMENTS OF CLAIMS AND DAMAGES : If owner has to pay any money in respect of such claims or demands aforesaid, the amount so paid and the cost incurred by the owner shall be charged to and paid by Contractor without any dispute notwithstanding the same may have been paid without the consent or authority of the Contractor.

3. In every case in which by virtue of any provision applicable in the workman's Compensation Act, 1923 or any other Act, owner be obliged to pay compensation to workmen employed by Contractor the amount of compensation so paid, and without prejudice to the rights of owner under Section-(12) Sub-section-(2) of the said Act, owner shall be at liberty to recover such amount from any surplus due to on to become due to the Contractor or from the security deposit. Owner will not be bound to contest any claim made under Section-(12) Sub-section-(2) of the said act except on written request of Contractor and giving full security for all costs consequent upon the contesting of such claim.

The Contractor shall protect adjoining sites against structural, decorative and other damages that could be caused to adjoining premises by the execution of these works and make good at his cost, any such damage, so caused.

GC-92 IMPLEMENTATION OF APPRENTICE ACT 1954:
Contractor shall comply with the provisions of the apprentice Act 1954 and the orders issued there under from time to time. If he fails to do so, it will be a breach of contract.

GC-93 HEALTH AND SANITARY ARRANGEMENTS FOR WORKERS:
Contractor shall comply with all the rules and regulations of the local Sanitary Authorities or as framed by owner from time to time for the protection of health and provide sanitary arrangements of all labour directly or indirectly employed on the work of this contract.

GC-94 SAFETY CODE:
General:
Contractor shall adhere to safe construction practice and guard against hazardous and unsafe working conditions and shall comply with owner's rules as set forth herein.

1.0 First Aid and Industrial Injuries:
1.1 Contractor shall maintain First-Aid facilities for its employees and those of his sub-Contractors.

1.2 Contractor shall make outside arrangements for ambulance service and for the treatment of industrial injuries. Name of those providing these services shall be furnished to Engineer-in-charge prior to start of construction, and their telephone numbers shall be prominently posted in Contractor's field office.

1.3 All injuries shall be reported promptly to Engineer-in-charge and a copy of Contractor's report covering each personal injury requiring the attention of a physician shall be furnished to owner.

2.2 General Rules:

2.2 Carrying and striking, matches, lighters inside the project area and smoking within the job site are strictly prohibited. Violators of smoking rules shall be discharged immediately. Within the operation area, no hot work shall be permitted, without valid gas, safety, fire permits. The Contractor shall also be held liable and responsible for all lapses of his sub-Contractor s / employees in this regard.

2.2 Contractor's Barricades:

3.1 Contractor shall erect and maintain barricades without any extra cost, required in connection with his operation to guard or protect during the entire phase of the operation of this contract for –

- a) Excavation
- b) Hoisting areas
- c) Areas adjudged hazardous by Contractor's OR Owner's inspectors.
- d) Owner's existing property liable to be damaged by Contractor's operations, in the opinion of Engineer-in-charge / Site Engineer.
- e) Rail road unloading spots.

3.2 Contractor's employees and those of his sub-Contractors shall become acquainted with owner's barricading practices and shall respect the provisions thereof.

3.3 Barricades and hazardous areas adjacent to but not located in normal routes of travel shall be marked by red lantern at night.

4.0 Scaffolding:

4.1 Suitable scaffolding shall be provided for workman for all works that cannot safely be done from ladders. When a ladder is used, an extra mazdoor shall be engaged for holding the ladder and if the ladder is used for carrying materials as well suitable footholds and handholds shall be provided on the ladder and the same shall be given an inclination not steeper than 1 in 4 (1 horizontal and 4 vertical).

4.2 Scaffolding or staging, more than 3.6 M. (12') above the ground or floor, swing or suspended from an overhead support or erected with stationary support shall have a guard rail properly attached, bolted, braced and otherwise fixed at least 1.0 M (3') high above the floor or platform or scaffolding or staging and extending along the entire length of the outside ends thereof with only such openings as may be necessary for the delivery of materials. Such scaffolding or staging shall be so fastened as to prevent it from swaying from the building or structure.

4.3 Working platforms, gangways, and stairways should be so constructed that they should not sag unduly or inadequately and if the height of the platform or the gangway of the stairway is more than 3.6 (12') above ground level or floor level, they should be closely boarded, should have adequate width and should be suitably fastened as described in 4.2 above.

4.4 Every opening in the floor of a building or in a working platform be provided with suitable means to prevent the fall of persons or materials by providing suitable fencing or railing whose minimum height shall be 1.0 M (3'.0").

4.5 Safe means of access shall be provided to all working platforms and other

working places. Every ladder shall be securely fixed. No portable single ladder shall be over 9.0 M. (30') in length while the width between the side rails in rung ladder shall in no case be less than 30 cms (12 inches) for ladder up to and including 3.0 M. (10'), in longer ladders this width would be increased at least 6 mm (1/4") for each addition 30 c.m. (1.0) of length. Uniform step spacing shall not exceed 30 cms. (12"). Adequate precaution shall be taken to prevent danger from electrical equipment. No materials on any of the side of work shall be so stacked or placed as to cause danger or inconvenience to any person or public. The Contractor shall also provide all necessary all necessary fencing and lights to protect the workers and staff from accidents, and shall be bound to bear the expenses of defense of every suit action or other proceedings at law that may be brought by any persons for injury sustained owing to neglect of the above precautions and to pay damages and costs which may be awarded in any such suit or action or proceedings to any such person, or which, may be with the consent of the Contractor be paid to compromise any claim by any such person.

5.0 Excavation:

5.1 All trenches 1.2 M (4') or more in depth shall at all time are supplied with at least one ladder.

5.2 Ladder shall be extended bottom of the trench to at least 3" above the surface of the ground. The sides of the trench which are 1.5 M (5') or more in depth shall be stopped back to give suitable slope, or securely held by timber bracing, so as to avoid the danger of sides to collapse. The excavated materials shall not be placed within 1.5 M (5') of the trench of half of the trench depth whichever is more. Cutting shall be done from top to bottom. Under no circumstances, undermining or under cutting be done.

6.0 Demolition:

6.1 Before any demolition work is commenced and also during the progress of the work all roads and open area adjacent to the work site shall either be closed or suitably protected.

6.2 No electric cable or apparatus which is liable to be a source of danger shall remain electricity charged.

6.3 All practical steps shall be taken to prevent danger to persons employed from risk of fire or explosion of flooding. No floor or other part of the building shall be so over loaded with debris or materials as to render it unsafe.

2.2 Safety Equipment:

2.2 All necessary personal safety equipment as considered necessary by the Engineer-in-charge should be made available for the use of persons employed on the site and maintained in a condition suitable for immediate use, and the Contractor should take adequate steps to ensure proper use of equipment by those concerned.

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

8.0 Risky Place:

8.1 When the work is done near any place where there is a risk of drowning, all necessary safety equipment shall be provided and kept ready for use

and all necessary steps taken for prompt rescue of any person in danger and adequate provision should be made for prompt first-aid treatment of all injuries likely to be sustained during the course of the work.

9.0 Hoisting Equipment:

9.1 Use of hoisting machines and tackles including their attachments, and storage and supports shall conform to the following standards or conditions.

9.2 These shall be of good mechanical construction, sound material and adequate strength and free from patent defect and shall be kept in good condition and in good working order.

9.3 Every rope used in hoisting or lowering materials or as a means of suspension shall be of durable quality and adequate strength and free from patent defects.

9.4 Every crane driver or hoisting appliance operator shall be properly qualified and no person under the age of 21 years should be in-charge of any hoisting machine including any scaffolding.

9.5 In case of every hoisting machine and of every chain ring hook, shackle, swivel and pulley block used in hoisting or lowering or as means of suspension, the safe working load shall be ascertained by adequate means. Every hoisting machine and all gear referred to above shall be plainly marked with the safe working load and the conditions under which it is applicable shall be clearly indicated. No part of any machine or any gear referred to above in this paragraph shall be loaded beyond the safe working load except for the purpose of testing.

9.6 In case of departmental machine, the safe work load shall be notified by the Engineer-in-charge as regards Contractor s machine, the Contractor shall, notify, the safety working load of the machine to the Engineer-in-charge. Whenever the Contractor brings any machinery to site of work he should get it verified by the Engineer-in-charge concerned.

10.0 Electrical Equipment:

Motors, gears, transmission, electric wiring and other dangerous parts of hoisting appliances shall be provided with efficient safeguards, hoisting appliances should be provided with such means when will reduce to the minimum the risk of accidental descent of the load, adequate precautions shall be taken to reduce to the minimum the risk of any part or a suspended load becoming accidentally displaced. When workers are employed on electrical installations which are already energized, insulating mats, wearing apparel such as gloves, and booths as may be necessary shall be provided. The workers shall not wear any rings, watches and carry keys or other materials which are good conductors of electricity.

11.0 Maintenance of Safety Devices:

All scaffolds, ladders and other safety devices as mentioned or described herein shall be maintained in sound condition and no scaffold, ladder or equipment shall be altered or removed while it is in use. Adequate washing facilities should be provided at or near place of work.

12.0 Display of Safety Instructions:

The safety provisions should be brought to the notice of all concerned by

display on a Notice Board at a prominent place at the work spot. The persons responsible for compliance of the safety code shall be named therein by the Contractor.

13.0 Enforcement of Safety Regulations:

To ensure effective enforcement of the rules and regulations relating to safety precautions, the arrangement made by the Contractor shall be open to inspection by the Welfare Officer, Engineer-in-charge or Safety Engineer of the owner or their representatives.

14.0 No Exemption:

14.1 Notwithstanding the above clause 1.0 to 13.0 there is nothing to exempt the Contractor from the operations of any other Act or Rules in force in the Republic of India.

14.2 In addition to the above, the Contractor shall abide by the safety code provisions as per C.P.W.D. safety code framed from time to time.

GC-95 ACCIDENTS:

It shall be Contractor's responsibility to protect against accidents on the works. He shall indemnify the owner against any claim for damage or for injury to person or property resulting from, and in the course of work and also under the provisions of the workman's compensation Act. On the occurrence of an accident arising out of the works which results in death or which is so serious as to be likely to result in death, the Contractor shall within twenty-four hours of such accident, report in writing to the Engineer-in-charge the facts stating clearly and in sufficient details the circumstances of such accident and the subsequent action. All other accidents on the works involving injuries to person or damage to property other than that of the Contractor shall be promptly reported to the Engineer-in-charge stating clearly and in sufficient details the facts and circumstances of the accidents and the action taken. In all cases, the Contractor shall indemnify the owner against all loss or damage resulting directly or indirectly from the Contractor's failure to report in the manner aforesaid. This includes penalties or fines, if any, payable by the owner as a consequence of failure to give notice under the Workman's Compensation Act, or failure to conform to the provisions of the said act in regard to such accidents.

In the event of an accident in respect of which compensation may become payable under the Workman's Compensation Act VIII of 1923 including all modification thereof, the Engineer-in-charge may retain out of money due and payable to the Contractor such sum of sums of money as may in the opinion of Engineer-in-charge be sufficient to meet such liability. On

receipt of award from the Labour Commissioner in regard to quantum of compensation, the difference in amount will be adjusted.

GC-96 Inspections and Tests

- a) The Purchaser or its representative shall have the right to inspect and/or to test the Goods to confirm their conformity to the Contract specifications at no extra cost to the Purchaser.
- b) The inspections and tests may be conducted on the premises of the Supplier or its subcontractor(s), at point of delivery and/or at the Goods final destination. If conducted on the premises of the Supplier or its subcontractor(s), all reasonable facilities and assistance, including access to drawings and production data - shall be furnished to the inspectors at no charge to the Purchaser.
- c) Any inspected or tested Goods fail to conform to the specifications, the Purchaser may reject the goods and the Supplier shall either replace the rejected Goods or make alterations necessary to meet specification requirements free of cost to the Purchaser.
- d) The Purchaser's right to inspect, test and, where necessary, reject the Goods after the Goods' arrival at Project Site shall in no way be limited or waived by reason of the Goods having previously been inspected, tested and passed by the Purchaser or its representative prior to the Goods shipment.
- e) Nothing in GC Clause shall in any way release the Supplier from any warranty or other obligations under this Contract.

C-97 Patent Rights

The Supplier shall indemnify the Purchaser against all third-party claims of infringement of patent, trademark or industrial design rights arising from use of the Goods or any part thereof in India.

GC-98 Work-order/Notice to start for Yearly Calibration and Maintainance Work

Separate work-order/Notice to start the Yearly Calibration and Maintainance work will be issued after successful completion of one Year Liability period commissioning of Supplied iquipment / machine.

GC-99 Items may not purchased

Out of All items RMC reserves the right to not to purchase some items.

GC-100 Change in Specification during Pre-bid meeting Discussion

Change in Specification during Pre-bid meeting Discussion will be considered a part of tender

GC-101 Calibration and Comprehensive Maintainance Payment

Calibration shall be conducted during 1 Year. Comprehensive Maintainance means Necessary Service inclusive of change of damaged or unserviceable part of machine

without any extra cost. Payment includes both activities of Calibration and Comprehensive Maintenance.

GC-102 Manuals and Drawings

- 1) Before the goods and equipment are taken over by the Purchaser, the Supplier shall supply operation and maintenance manuals together with drawings of the goods and equipment. These shall be in such detail as will enable the Purchaser to operate, maintain, adjust and repair all parts of the equipment as stated in the specifications.
- 2) The manuals and drawings shall be in the ruling language (English) and in such form and numbers as stated in the contract.
- 3) Unless and otherwise agreed, the goods and equipment shall not be considered to be completed for the purpose of taking over until such manuals and drawings have been supplied to the Purchaser.

GC-103 For the System & Other Software the following will apply:

The Supplier shall provide complete and legal documentation of hardware, all sub-systems, operating systems, compiler, system software and the other software. The Supplier shall also provide licensed software for all software products, whether developed by it or acquired from others. The supplier shall also indemnify the purchaser against any levies/penalties on account of any default in this regard.

GC-104 Acceptance Certificates and training:

- 1 On successful completion of acceptability test, receipt of deliverables etc, and after the purchaser is satisfied with the working of the system, the acceptance certificate signed by the supplier and the representative of the purchaser will be issued. The date on which such certificate is signed shall be deemed to be the date of successful commissioning of the systems.
- 2 The training shall be conducted on the dates mutually agreed upon and within two months from the date of acceptance of supply .

GC-105 Packing

- 1 The Supplier shall provide such packing of the Goods as is required to prevent their damage or deterioration during transit to their final destination as indicated in the Contract. The packing shall be sufficient to withstand, without limitation, rough handling during transit and exposure to extreme temperatures, salt and precipitation during transit and open storage. Packing case size and weights shall take into consideration, where appropriate, the remoteness of the Goods' final destination and the absence of heavy handling facilities at all points in transit.
- 2 The packing, marking and documentation within and outside the packages shall comply strictly with such special requirements as shall be provided for in the Contract including additional requirements, if any, in any subsequent instructions ordered by the Purchaser.

3 Packing Instructions: The Supplier will be required to make separate packages for each Consignee. Each Package will be marked on three sides with proper paint/indelible ink the following:

i) Project, ii) Contract No., iii) Suppliers Name, and iv) Packing List Reference number.

GC-106 **Delivery and Documents**

Delivery of the Goods shall be made by the Supplier in accordance with the terms specified by the Purchaser in the Notification of Award.

GC-107 **Insurance**

The Goods supplied under the Contract shall be fully insured in Indian Rupees against loss or damage incidental to manufacture or acquisition, transportation, storage and delivery. For delivery of goods at site, the insurance shall be obtained by the Supplier in an amount equal to 110% of the value of the goods from “warehouse to warehouse” (final destinations) on “All Risks” basis including War risks and Strikes.

GC-108 **Transportation**

Where the Supplier is required under the Contract to transport the Goods to a specified place of destination within India defined as Project site, transport to such place of destination in India including insurance, as shall be specified in the Contract, shall be arranged by the Supplier, and the related cost shall be included in the Contract Price

GC-109 **Incidental Services**

The supplier may be required to provide any or all of the following services, including additional services

- (a) performance or supervision of the on-site assembly and/or start-up of the supplied Goods;
- (b) furnishing of tools required for assembly and/or maintenance of the supplied Goods;
- (c) furnishing of detailed operations and maintenance manual for each appropriate unit of supplied Goods;
- (d) performance or supervision or maintenance and/or repair of the supplied Goods, for a period of time agreed by the parties, provided that this service shall not relieve the Supplier of any warranty obligations under this Contract; and
- (e) training of the Purchaser's personnel, at the Supplier's plant and/or on-site, in assembly, start-up, operation, maintenance and/or repair of the supplied Goods.

Prices charged by the Supplier for incidental services, if not included in the Contract Price for the Goods, shall be agreed upon in advance by the parties and shall not exceed the prevailing rates charged to other parties by the Supplier for similar services.

GC-110 **Warranty**

The Supplier warrants that the Goods supplied under this Contract are new, unused, of the most recent or current models and that they incorporate all recent improvements in design and materials unless provided otherwise in the Contract. The Supplier further warrants that all Goods supplied under this Contract shall have no defect arising from design, materials or workmanship (except when the design and/or material is required by the Purchaser's Specifications) or from any act or omission of the Supplier, that may develop under normal use of the supplied Goods in the conditions prevailing in the country of final destination.

The Supplier shall, in addition, comply with the performance and/or consumption guarantees specified under the Contract. If for reasons attributable to the Supplier, these guarantees are not attained in whole or in part, the Supplier shall at its discretion either:

Upon receipt of such Complain notice, the Supplier shall, within the period of 3 days and with all reasonable speed, repair or replace the defective Goods or parts thereof, free of cost at the ultimate destination. The Supplier shall take over the replaced parts/goods at the time of their replacement. No claim whatsoever, shall lie on the Purchaser for the replaced parts/goods thereafter. In the event of any correction of defects or replacement of defective material during the Warranty period, the Warranty for the corrected or replaced material shall be extended to a further period of 36 months.

If the Supplier, having been notified, fails to remedy the defect(s) within 3 days, the Purchaser may proceed to take such remedial action as may be necessary, at the Supplier's risk and expense and without prejudice to any other rights which the Purchaser may have against the Supplier under the Contract.

The Supplier shall guarantee a 90% uptime of computer systems/peripherals

If any computer system (s) gives continuous trouble, say six times in a month during the Warranty period, the Supplier shall replace the system(s) with new system(s) without any additional cost to the Purchaser.

GC-111 Maintenance Service:

- (i) Free maintenance services shall be provided by the Supplier during the period of warranty and liability period. After warranty period, for 2 (Two) years, annual maintenance and repairs of the entire system including supply of spares etc. will be done by the Supplier. The annual maintenance and repair cost (after warranty period) shall be paid in Every Year instalments at the end of year from the date of completion of the warranty subject to satisfactory services rendered as specified in the bid document and the resultant contract as per the rates quoted in the price schedule.

- i i) The maximum response time for maintenance complaint from any of the destinations specified in the Schedule of Requirements (i.e. time required for supplier's maintenance engineer to report at the installation after a request call/E-mail is made or letter is written) shall not exceed 24 hours.

- iii) It is expected that the average downtime of the item (system) will be less than half the maximum downtime (i.e. defined as number of days for which an item of equipment is not usable because of inability of the supplier to repair it) as mentioned in the form of technical details. In case an item is not usable beyond the stipulated maximum downtime the supplier will be required to arrange for an immediate replacement of the same till it is repaired. Failure to arrange for the immediate.
- iv)

Repair/replacement will be liable for a penalty of 0.01% of approved Rate per day per item. The amount of penalty will be recovered from the security Deposit Performance Security guarantee or from any bill due at RMC during warranty period. During annual maintenance contract period, the penalty of 0.01% of approved Rate per item per day will be recovered from the amount of annual maintenance charges. The Purchaser reserves the right to terminate maintenance and repairs contract, after warranty period, at any time without assigning any reasons and the Supplier cannot claim any compensation in this respect.

GC-112 Erection, Installation, Commission and Power Guarantee

No Separate Payment will be done for Erection, Installation, commission. The same shall be done with all safety precautions. Tenderer shall submit the power consumption of equipment and shall adhere to the same while actual use of equipment. If more power is consumed, it will lead to penalty at rate of 0.01% per day of equipment cost till the correction is done by Tenderer.

A.A.E./A.E.
R.M.C.

D.E.E.
R.M.C.

Flow Diagram How e-tender will be executed

Download Tender
Online Submission
Physical Submission of Document
Opening Technical Bid
Evaluation of submitted documents wrt pre-qualification criteria
Opening Price Bid
Itemwise L-1 Rate
L-1 bidder may be more than for different item
Proposal by DEE for approval to Standing Committee through Municipal Commissioner
Approval by Standing Committee Resolution
Administrative Approval by Municipal Commissioner
Pre-Audit by Audit Department of RMC
Letter of Acceptance and entering into agreement to all L-1 Bidder for their items
Security Deposit submission
Agreement by bidder with RMC with details of Security Deposit
Work-Order with 6 month Time Limit for Supply
Stagewise payment Running Bill
On Completion supply 3 Month Trial Run
Final Bill of Supply
Defect Liability period/Warranty period of 1 Year after Completion of 3 Month Trial Run. No Payment during this period
First Year Calibration and Comprehensive Maintainance. Bill Payment for 1 st Year at the end of Year
Second Year Calibration and Comprehensive Maintainance. Bill Payment for 2 nd Year at the end of Year

Section -II

Detailed Specifications

TECHNICAL SPECIFICATION

Item No.- 2

Material	Name of Test	Name of Instrument	As per IS	Base Price
AGGREGATE	GRADING OF AGGREGATES	MOTORISED SIEVE SHAKER	IS 2386 P(1)	45,874

MOTORISED SIEVE SHAKER-GYRATORY-FOR 45CM DIA SIEVES WITH

DIGITAL TIMER Sieve Shaker Carries up to 7 sieves of 45 cm diameter in single adaptor. Supplied with ISI marked sieves of size 100mm,80mm,63mm,50mm,40mm,31.50mm,25mm,20mm,16mm,12.50mm,10mm,8mm,6.30mm,4.75mm and Lid-Pan

Carries up to 7 sieves of 450mm diameter in single adaptor. During use each square cm of the sieve is utilized. With gyratory motion there should be tapping motion. A pair of rod and holder is supplied along with the main unit. The instrument should contain Digital time switch adjustable from 0-99 minutes. Timer should be : Digital Pre-settable

Item No.- 3

Material	Name of Test	Name of Instrument	As per IS	Base Price
AGGREGATE	GRADING OF AGGREGATES	MOTORISED SIEVE SHAKER	IS 2386 P(1)	40,777

MOTORISED SIEVE SHAKER-GYRATORY-FOR 30CM DIA SIEVES WITH DIGITAL TIMER

Sieve Shaker Carries up to 7 sieves of 300mm diameter in single adaptor Supplied with ISI marked sieves of size 10mm,4.75mm,2.36mm,1.18mm,600micron,300micron,150micron,75micron and Lid-Pan.

During use each square cm of the sieve is utilized. With gyratory motion there should be tapping motion. A pair of rod and holder is supplied along with the main unit. The

instrument should contain Digital time switch adjustable from 0-99 minutes. Timer should be : Digital Pre-settable

Item No. – 8

Material	Name of Test	Name of Instrument	As per IS	Base Price
AGGREGATE	FLAKINESS & ELONGATION	THICKNESS GAUGE & LENGTH GAUGE	IS 2386 P(1)	4,248

LENGTH GAUGE (ELONGATION GAUGE)-ISI Marked As per IS:2386 (Part I)

Should consists of hard wood base with vertically mounted eight metal studs

The distance between nails is applied according to following table:

Distance between nails (mm)	-	81	58.5	-	40.5	32.4	25.6	20.2	14.7
Passing/ Retained (mm)	63/50	50/40	40/31.5	31.5/25	25/20	20/16	16/12.5	12.5/10	10/6.3

Item No.- 10

Material	Name of Test	Name of Instrument	As per IS	Base Price
AGGREGATE	ABRASION VALUE TEST	LOS ANGELES ABRASION VALUE TESTING MACHINE	IS 10070,AIM 458	1,61,410

LOS ANGELES ABRASION TESTING MACHINE -WITH PRESETTABLE DIGITAL COUNTER & DIGITAL CONTROLLER BOX WITH MEMORY RETENTION FACILITY As per IS:2386-IV.

Machine shall Complete with Pre-settable revolution counter, G.I.Tray,12Nos. cast iron or hardened steel spheres, each of approximately 48mm diameter and 390 to 445 gm in weight a Abrasive charge and instruction manual.

Item No.-11

Material	Name of Test	Name of Instrument	As per IS	Base Price
AGGREGATE	CRUSHING TEST	AGGREGATE CRUSHING VALUE	IS 2386 P(4)	9,685

AGGREGATE CRUSHING VALUE TEST APPARATUS-WITH MEASURING CYLINDERS of 7.5 cm and 15 cm size

The apparatus should consist of M.S. Cylindrical container 150 mm ±0.5mm dia X 130mm to 140mm high And 75 mm ±0.5mm dia X 130mm to 140mm high with base plate 200 to 230mm square X 6mm thick. A plunger of 148mm ± 0.5mm dia X 100 to 115mm high. Supplied complete with tamping rod, 16mm dia X 600mm long, one end rounded.

Item No.-12

Material	Name of Test	Name of Instrument	As per IS	Base Price
CEMENT	CONSISTENCY INITIAL SETTING TIME AND FINAL SETTING TIME	VICAT APPARATUS	IS 4031 P(4), IS 5513 IS 10086	5,115

VICAT NEEDLE APPARATUS with needles for initial setting time and final setting time complete with mould of standard size as per IS:4031 P(4) and IS 5513

Consist of a metallic frame bearing a movable rod with cap at one end and a Vicat Mould 80 ± 5mm in Dia. at the base, 70 ± 5mm at the Top and 40 ± 0.2mm High & with a glass base plate consistency plunger, initial and final setting needles in a nice jewelry case. With dash pot to facilitate the gentle lowering of the needle.

Item No.- 13

Material	Name of Test	Name of Instrument	As per IS	Base Price
CEMENT	(A) FINENESS BY BLAIN AIR PERMEABILITY	BLAIN AIR APPARATUS	IS 4031 P(2) IS 5516	4,927

BLAIN AIR PERMEABILITY TEST APPARATUS

As per IS:4031(Part 2) and IS 5516. The apparatus comprises of Standard permeability cell made of brass, 12.7 mm inside diameter with one perforated metal disc and one plunger, A U-Tube glass manometer with rubber coupling for permeability cell, mounted on a wooden stand,, Latex rubber tubing, 30 cm

long, 100 ml Dibutylphthalate liquid, Suction Bulb. Additional Instruments for the complete experiment Viz. Filter Paper discs, Precision Electronic balance(1 mg), Standard Cement, stop watch etc. available at extra cost.

Item No.- 14

Material	Name of Test	Name of Instrument	As per IS	Base Price
CEMENT	SOUNDNESS	LE CHATELIER APPARATUS	IS 4031 P(3) IS 10086	2,973

LE-CHATLIER MOULD –AS PER IS – SET OF SIX

Supplied complete with two glass plates and lead weight. As per IS : 269, 712, 5514, 1727, 2645, 4031, 6932

The apparatus consist of a small split cylinder of spring brass metal of 0.5 mm thickness forming a mould of 30 mm internal diameter and 30 mm high. On either side of the split,

two indicators are brazed suitably with pointed ends made of 2 mm diameter brass wire in such a way that the distance of these ends to the centre of the cylinder is 165 mm.

Item No.- 15,16

Item No.	Material	Name of Test	Name of Instrument	As per IS	Base Price
15	CEMENT	COMPRESSIVE STRENGTH	MORTAR MIXER	IS 4031 P(6)	82,404
16			VIBRATION MACHINE		51,991

15. MORTAR MIXER-4.75 LITERS As per IS:10890

16. VIBRATING MACHINE WITH DIGITAL TIMER & MOULD The machine shall be capable for compaction of cement mortar cubes as per IS: 4031 and designed as per Standard IS : 10080

Compact and tactful design. Exterior body powder coated in attractive shades

Paddle and bowl made of Stainless Steel Material. An epicyclic type stainless steel paddle imparts both planetary and revolving motion. Stainless steel bowl is fitted with heat resistant handle. Stainless Steel Handle is fitted with lid made of non-absorbing material and is attacked by cement, masonry cement, cement pozzolana mixture or lime pozzolana mixture. The blade is about 75 mm long, 50 mm wide and tapered to a thin edge. Mixer operates on two different speeds:

Mixer blade has low speed of (140 ± 5 rpm) and medium speed of (285 ± 10 rpm). It also has a planetary movement of (62 ± 5 rpm) in low range and planetary movement of (125 ± 10 rpm) in medium range. The mixing paddle has a planetary motion and is driven by a motor. The scraper should consist of semi rigid rubber blade attached to a handle about 150 mm long.

Overall Dimensions in Inches (L x W x H): 19 x 15 x 37

Capacity : 4.75 liters approx

Beater blade : 111 mm

Vessel Dimensions : 160 mm Dia x 130 mm H

Operation on: 230 Volts, 50 Hz, Single Phase, AC Supply

Paddle speed Should be the following:

Rotational Speed: 140+/- 5 rpm to 285+/-10 rpm

Planetary Speed : 62+/- 5 rpm to 125+/-10 rpm

The machine shall be capable for compaction of cement mortar cubes as per IS: 4031 and designed as per Standard IS : 10080. The complete frame assembly consists of device to hold a 7.06 cm cube mould to feed the sample in the mould. The frequency of vibration is 12000 ± 400 R.P.M. Vibration per minute. Should be supplied complete with one 7.06 cm cube mould with DIGITAL Timer. Complete with One No. poking rod to meet IS: 10086.

Item No.-17

Material	Name of Test	Name of Instrument	As per IS	Base Price
STEEL	TENSILE YIELD ELONGATION, BEND and REBEND	UNIVERSAL TESTING MACHINE	IS 1608P(1)	16,27,010

Digital Microprocessor based UNIVERSAL TESTING MACHINE (UTM) COMPUTERISED-1000 KN to be Supplied with Compression, Tension and Transverse test arrangement containing in built memory of 3000 Reading and computer software with attachment inclusive of Digital Vernier Caliperse 30 cm long having least count 0.01 mm and Micrometer Screw Gauge of Size 0 to 25 mm having least count 0.01 mm

Digital microprocessor based Universal testing machine (UTM) of 2000kN capacity with automatic(programmable) pace rate (rate of loading) should be capable of conducting compression, transverse, bending, shear, hardness, and tension tests in general on various type of ferrous and non-ferrous material specimens and especially all tests related to steel and likewise allied products specimens of all types of different sizes and Shapes as per relevant Indian Standards conforming to the testing procedures laid down in IS Standards. Accuracy of the system should comply with IS 1828 Class-I-(Part-1)- Metallic Materials - Verification of Static Uniaxial Testing Machines, Part 1: Tension/compression testing Machines - Verification and calibration of the force-measuring systems.

The machine should be based on Servo Hydraulic Closed Loop Principle and fully computer controlled, operated through Windows based software with ease of operation. The system should have an arrangement for automatic (programmable) Pacing (loading) system which is achieved by the combination of advance hydraulic and electronic system.

All bits should be available to check the tensile test of reinforcements

Technical Specifications should comply to:

- Capacity : 2000 kN

- 1st Measuring Range : 0-200 kN, Load Resolution :0. 1kN
- 2nd Measuring Range : 200-2000 kN, Load Resolution :1kN
- Clearance for Tension Test : 50-900 mm
- Clearance for Compression Test : 0-900 mm
- Clearance between columns: 750 mm minimum
- Load/Displacement Accuracy : $<\pm 1\%$ of measured value
- Ram stroke : 250 mm
- Displacement/ Position Resolution : 0.01mm
- Load control mode : 0.5 kN/sec- 20 kN/sec.
- Displacement Control mode : 0.01mm/sec-1.0 mm/sec.
- Digital/Computer Display : Load, Elongation, Extensometer on Computer software along with graphs
- Displacement Range : 0-250 mm

The machine shall comprise of following main parts.

- (A) Loading Frame
- (B) Hydraulic Pumping System
- (C) Pc Based Control System and Application Software
- (D) Standard Accessories

(A) LOADING FRAME:

The Loading Frame should consist of a central cross head whose position can be adjusted through a geared motor depending on the size of the test specimen. The lower table should be carried by the piston of the Hydraulic Ram of suitable capacity positioned in the cast iron base of the machine. The upper cross head should be carried by minimum four steel columns fixed to the lower table for stability and rigidity. Compression, transverse, bending, shear and hardness tests can be carried out between the central cross head and lower table while the tension test can be carried between the central and upper cross heads. Sensing of load should be through a strain gauge based transducers, while the movement of the lower table (ram stroke) should be measured by Displacement Transducer. Machine should be standardized with safety features like over travel limit for central cross head, over travel limit for ram and overloading of the system. Hydraulically Operated front loading grips should be supplied with the machine.

(B) HYDRAULIC PUMPING SYSTEM

Hydraulic Pumping system should be based on Servo Hydraulic principle with servo valve that controls motion of the cylinder/actuator. For easy movement of actuator, the supply of required flow and pressure should be controlled easily. The pumping system and actuator shall be able to change the pace rate (rate of loading), as per input command in the controlling software. The range of pace rate (rate of loading) for determination of Yield stress, Proof stress and Ultimate stress shall be as per IS: 1608 - Mechanical Testing of metals-Tensile Testing.

It should consist of oil tank having the adequate capacity and suitable vane type pump powered by a three phase motor. All the electrical controls should be fixed on one side of the tank. System should include all the accessories like pressure line filter, return line filter, oil level gauge, pressure gauge and air/water cooled heat exchanger to keep oil within working temperature range.

Anti-vibration mountings should be provided as standard along with the Hydraulic Pumping System. System should be operated at Power Supply-440 V AC, three phase. System should be provided with proper Constant Voltage Transformer to avoid any damage due to voltage fluctuations.

(C) PC BASED CONTROL SYSTEM AND APPLICATION SOFTWARE

Control system should provide the digital servo control, ramp generation for the machine actuator, data acquisition etc. for continuous operation of the system.

Operating Control Modes should be of following type & Testing Speeds should be programmable in all control modes.

Load Control (Stress Control) b) Displacement Control (Strain Control)

Measurement of Load should be done through Electronic load measuring device with Load accuracy of less than ± 1 % of the measured load from 2% to 100% of capacity of machine.

Measurement of Displacement should be through displacement transducer/LVDT with Displacement accuracy of less than ± 1 % of measured value of displacement.

System should be able to measure extension through variable gauge length extensometer.

Extension Resolution should be of 0.01 mm. Extension accuracy should be less than 0.5% of measured value of extension.

Item No.- 18

Material	Name of Test	Name of Instrument	As per IS	Base Price
BITUMEN	BINEDER EXTRACTION	Centrifugal extractor	ASTM 2172, IRC SP:11	48,423

SPECIAL MODEL WITH AC MOTOR AND DRIVE : Complies with following International Standards - ASTM D 2172, AASHTO T 58, T 164.

This model should facilitates precise speed control and vibration free smooth operation. Speed variation from 0 to 3600 RPM. The centrifuge extractor should be safe, portable model of sufficient size for quick and accurate determination of bitumen, corrosion-resistant model which can be used both in the field and the laboratory. It consists of removable cast aluminum rotor bowl mounted on a vertical shaft. A filter paper disc is pressed in between the nut. The bowl assembly is enclosed in a housing mounted on a cast aluminum body. The gears operate in oil bath with splash lubrication. Complete with 25 filter discs. Supplied with Digital RPM Indicator bowl weight should be minimum 1500gm. The bowl should be deep and its edge width should be minimum 23mm.

Item No.- 19

Material	Name of Test	Name of Instrument	As per IS	Base Price
BITUMEN	PENETRATION	STANDARD PENETROMETER	IS 1448(P-60),1203	25,995

STANDARD PENETROMETER FOR BITUMEN - AUTOMATIC DIGITAL TIME-DIALGAUGE As per IS 1203, IS 1448. ASTM D5.

The apparatus consist of a cast aluminum base with an iron stand on which moves an aluminum arm. A 6" dial is fixed on this arm and a brass chromium plated rod slide through the lower portion of the arm. A needle with weights is fitted to this rod. The dial is graduated from 0 to 400 in one tenth millimeter sub division. Supplied complete with adjustable needle holder, penetration needle sample container, transfer dish and weight of 50 & 100 gms. With automatic DIGITAL timer with electrical arrangement.

Item No.-20

Material	Name of Test	Name of Instrument	As per IS	Base Price
BITUMEN	DUCTILITY	DUCTILITY TESTING MACHINE,ELECTRICALLY OPERATED & DIGITAL	IS 1208, ASTM D113, AASTHO 51 ,IS 15462(2019)	25,995

DUCTILITY TESTING MACHINE - DIGITAL TEMP CONTROL –ELECTRICALLY OPERATED REFRIGERATED-IS1208

The apparatus should consist of water bath with a heater, and a circulating pump to maintain uniform water temperature. one half of the briquette moulds is fixed in a fixed plate in the water bath, the other half of the briquette old is fixed to a carrier which slides over a rotating threaded shaft with a clutch, The motor and gears to rotate the shaft are housed in a cabinet fixed above the other end of the bath. A pointer fixed to the carrier moves over a scale graduated from 0-100 cm x 1mm fixed on the bath with "0" (Zero) of the scale towards the fixed plates side. The rotating shaft should have 2 speeds of travel for the bracket, 5 cm/min and 1cm/min, selected by a clutch. Water bath inside is of stainless steel with insulation and water drain cock. The Temp. should be controlled by dual display Microprocessor based Auto Tuning PID Digital Temp. indicator cum controller. Control switches for motor, stirrer, heater and indicator lamps are fixed at a convenient place on the water bath. Should be complete with three briquette moulds and three base plate. All supply single phase.

Item No.-22

Material	Name of Test	Name of Instrument	As per IS	Base Price
BITUMEN	SOFTENING POINT	RING & BALL APPARATUS	IS 1205	11,944

RING AND BALL APPARATUS-ELECTRICALLY OPERATED A.C. MOTOR

Also called Softening Point Apparatus. Basic Model. This apparatus is meant for determination of softening point of bituminous and petrochemical materials according to IP 58 and IS 1205. The apparatus

should consist of Glass beaker of heat resistant glass of internal dia 8.5 cm X 12 cm depth (approx.), Two steel balls each of 9.5 mm dia, Two tapered brass rings, Two ball guides, ring stand and a motorized stirrer fitted with AC Motor. Higher end models also available for sophisticated application. Rate of rise @ 5°C per minute is Possible only in Digital Model.

Apparatus should consist of the following items as per Indian Standards:

(a) Steel balls:

Two Nos. shall be provided for one set, each 9.5 mm in diameter & weighing 3.50 +/- 0.050 gm.

(b) Brass Rings:

Two nos. shall be provided for one set. The rings shall be tapered (See fig. 2 of IS: 1205) and shall conform to the following dimension.

Depth	6.4 ±0.1 mm
Inside diameter at bottom	15.9±0.1mm
Inside diameter at top	17.5±0.1.mm
Outside diameter	20.6±0.1mm

For convenience in mounting the rings in a support of the type shown in Fig. 1 to 4 of IS-1205 the outside diameter of the ring at the bottom may be smaller but shall not be less than 19.0 mm.

(c) Ball Guide: A convenient form of ball centring guide. A recommended form of ball guide is shown in Fig.3 of IS-1205.

(d) Support: Any means of supporting the rings shall be provided and used, provided the following conditions are observed:

The rings shall be supported in a horizontal position with the upper surface of the rings 50 mm below the surface of the bath liquid.

There shall be a distance of exactly 25 mm between the bottom of the rings and the top surface of the bottom plate of the support, if any or the bottom of the bath.

There shall be a distance of exactly 25 mm between the bottom of the rings and the top surface of the bottom plate of the support, if any or the bottom of the bath.

(e) Thermometer: ASTM 7 C

It shall be of the mercury – in – glass type, nitrogen filled, with the stem made of lead glass or other suitable glass. It shall be engraved and enamelled at the back and provided with an expansion chamber and glass ring at the top. The bulb shall be cylindrical, made of suitable thermometric glass.

The dimensions, tolerances and graduation of the thermometer shall be as follows.

		Low Temperature	High Temperature
Range	:	- 2 ⁰ C to 80 ⁰ C	30 to 200 ⁰ C
Graduation at each	:	0.2 ⁰ C	0.5 ⁰ C
Longer lines at each	:	1 ⁰ C	1 ⁰ C
Figured at each	:	2 ⁰ C	5 ⁰ C
Immersion, mm	:	Total	Total
Overall length	:	378 mm to 384 mm	378 mm to 384 mm
Length of graduated portion	:	243 mm to 279 mm	243 mm to 279 mm
Length of Bulb , Max	:	9 to 14 mm Not larger than stem Diameter	9 to 14 mm Not larger than stem Diameter
Stem diameter	:	6.0 to 7.0 mm	6.0 to 7.0 mm
Distance from bottom of bulb to 0 ⁰ C	:	75 mm to 90 mm	75 mm to 90 mm
Scale error , Max	:	+/- 0.2 ⁰ C	+/- 0.3 ⁰ C

(f) Bath:

A heat resistance glass vessel not be less than 85 mm in dia. and 120 mm in depth

g) Stirrer with programmable digital temp. controller heater:

A softening point hot plate mounted with stirrer with mechanical heater which operates smoothly to ensure uniform heat distribution at all times throughout the bath shall be supplied. The stirrer shall be so placed that the moulds are not disturbed when the stirrer is in operation. A hot plate shall be supplied with control panel having Main Switch, Control Switch & Speed Regulator for stirrer. A suitable digital energy regulator to regulate the heat shall be provided. All above mentioned items should be placed in one unit i.e. glass vessel and entire unit should stir with electric device which operates smoothly to ensure uniform heat distribution at all times throughout the bath. The stirrer should be so placed that the moulds are not disturbed when the stirrer is in operation.

A heater to heat the liquid inside the glass vessel should be so placed that the temp of liquid is maintained with the help of programmable Digital Temperature Controller provided with PT100 sensor to achieve $5+0.5^{\circ}\text{C}$ /Min rise by ramp rate setting so that the system provides accurate and precise measurement of the softening point of the specimen.

Power supply: 220 V, 50 Hz, Ac single phase.

All necessary calibration certificates shall be supplied along with the instrument.

It shall be supplied with (1) Complete heating & stirring assembly. (2) Glass beaker with cover. (3) Ring and ball stand. (4) Cork for thermometer (5) Test certificate for stirrer & heating unit, designed to give temp. Rise at $5\pm 0.5^{\circ}\text{C}$ /Min per minute as required under IS 1205. The heater is controlled by a programmable Digital PID temperature controller indicator. (6) Glass thermometer ASTM 7 C with calibration certificate.

Item No.-23

Material	Name of Test	Name of Instrument	As per IS	Base Price
BITUMEN	ABSOLUTE VISCOSITY & KINEMATICS VISCOSITY	VISCOMETER	IS 1206 P(2 & 3)	2,29,372

ABSOLUTE AND KINEMATIC VISCOSITY TESTING EQUIPMENTS As per IS: 1206 (Part II and III). Supplied complete with Viscosity bath with built in Digital stop watch, Vacuum Pump - capable to maintain vacuum of 300 mm/Hg, with required accuracy, Vacuum Manning Viscometer No.12 and 13, Reverse flow Viscometer No.6, Silicon oil, silicon tubes and calibration Certificate for Viscosity bath, certificate of constant for Viscometers. Complete with instruction manual.

VISCOSITY GRADE APPARATUS

a) Cannon-Manning vacuum capillary viscometer with manufacture's certificate and constant, viscometer holder and silicon cork, as per following U tube Viscometer

a-1) **For Absolute Viscosity Test** :- 2 Nos. U-Tube Glass Viscometer- Cannon Manning Vacuum Capillary Viscometer, Cannon-Size No.12 with all compatible accessories including Thermometer, Bath, Vacuum System and Timing Device.

It shall be capillary type made of borosilicate glass, annealed suitable for the absolute viscosity test.

- Cannon-Manning vacuum viscometer, USA Make, shall be supplied with manufacturer's calibration certificate and constant(s),
- Viscometer holder and silicon cork - For size number 12, approximate bulb factor K and viscosity ranges for Cannon-Manning vacuum capillary viscometer shall be supplied complete as per FIG. 1 of IS: 1206 Part-II.
- Cork / Stopper made up of silicon or suitable material shall have the size & shape such that it synchronizes with filling tube A & vacuum tube M (as shown in FIG. 1). Ends of the tubes must be provided to maintain the inner temp. & atmosphere of tube till the testing.

TABLE

Viscosity Size No.	Approximate Calibration Factor, Poises 30 cm Hg vacuum Poises per s		Viscosity Range
	Bulb B	Bulb C	
12	20.0	6.0	360 to 8000

The volume of measuring bulb C is approximately three times that of bulb B. The viscosity ranges correspond to a filling time of 60 and 400 s for both measuring bulbs.

Mode of Measurement: -

Measurement shall be on number basis of item a-1)

For Absolute Viscosity Test :- 2 Nos. U-Tube Glass Viscometer- Cannon Manning Vacuum Capillary Viscometer, Cannon-Size No.13 with all compatible accessories including Thermometer, Bath, Vacuum System and Timing Device.

It shall be capillary type made of borosilicate glass, annealed suitable for the absolute viscosity test.

- Cannon-Manning vacuum viscometer, USA Make, shall be supplied with manufacturer's calibration certificate and constant(s),
- Viscometer holder and silicon cork - For size number 12, approximate bulb factor K and viscosity ranges for Cannon-Manning vacuum capillary viscometer shall be supplied complete as per FIG. 1 of IS: 1206 Part-II.
- Cork / Stopper made up of silicon or suitable material shall have the size & shape such that it synchronizes with filling tube A & vacuum tube M (as shown in FIG. 1). Ends of the tubes must be provided to maintain the inner temp. & atmosphere of tube till the testing.

The volume of measuring bulb C is approximately three times that of bulb B. The viscosity ranges correspond to a filling time of 60 and 400 s for both measuring bulbs.

Mode of Measurement: -

Measurement shall be on number basis of item

a-2) For Kinematic Viscosity Test :- Viscometer Modified:- 2 Nos. BS U - Tube Modified Reverse Flow Viscometer for Opaque Liquid Cannon Size No. 6 with all compatible accessories including Bath, Thermometer and Timing Device.

- The capillary type of viscometer shall be of borosilicate glass annealed suitable for the kinematic viscosity test for bitumen. The size is No. 6.
- BS U-tube modified reverse flow viscometer for Opaque Liquids USA Make shall be supplied with manufacturer's calibration certificate and constant along with viscometer holder and suitable cork. The detailed drawings of the viscometer is given in Fig. 2 of IS 1206 (Part-III) for reference.
- The size, dimensions, approximate constant, kinematic viscometer ranges, capillary diameter and bulb, volumes shall be as given in Table-2 of IS 1206 (Part-III). Cork / Stopper made up of silicon / suitable material shall have the size & shape such that it synchronizes with L & N (as shown in figure) ends of the tubes; must be provided to maintain the inner temp. & atmosphere of tube till the testing.

TABLE

Size No.	Approximate Constant CST/S	Viscosity Range, CST	Inside Dia of Tube R mm (+2%)	Length of the Tube R mm	G mm (+5%)	Volume Bulb C ml
6	1.0	60-1000	2.24	185	3.0-3.3	4.0

Mode of Measurement: -

Measurement shall be on number basis of item

(b) Constant temperature bath

Used for determination of Kinematic & Absolute viscosity of bitumen, emulsion and allied materials at constant temperature in accordance with IS 1206 (Part-II & III) having capacity to immerse 4 Nos. of vacuum capillary viscometer tubes.

The bath shall be suitable for immersion of the viscometer such that the liquid reservoir or top of the capillary whichever is uppermost is at least 20 mm below the upper bath level. It should be double walled, outer chamber made of CRC/G.I. powder coated with removable toughened glass window panel for the visibility of the viscometer and the thermometer, inner chamber made of S.S. FHP, motorized stirrer for maintaining uniform temperature, dual display microprocessor based digital temperature controller with PT-100 sensor; Temperature range from 5° C above ambient to 150° C. Control accuracy +/- 0.1° C. throughout the bath. The firm support for the viscometer shall be provided. Complete with

low voltage lighting attachment, universal viscometer holder viscometer tray and calibration certificate with traceability.

(c) Vacuum System

Vacuum system shall be capable of maintaining a vacuum within +/- 0.05 cm .of the desired level up to and including 30 cm. of the mercury, vacuum pump 760 psi capacity with vacuum decicator. The system shall consist of vacuum pump, moisture trap, vacuum regulator and manometer with electronic controller and bleed valve etc. a All inter connecting tubing/piping shall be of industrial heavy duty type for vacuum and any other accessories as needed to complete the vacuum system.

(d) Thermometer

The thermometer shall be of mercury in glass tube with cylindrical bulbs and made of suitable thermometer glass and shall conform to specifications narrated in IS 1206 (Part II).

(f) Viscometer Stand

Viscometer’s stand for holding 6 viscometers.

(g) Silicone Bath oil approx. 10 liters

Silicone bath oil suitable up to 150⁰C

Item No.-24

Material	Name of Test	Name of Instrument	As per IS	Base Price
BITUMEN	LOSS ON HEATING	ROLLING THIN FILM OVEN/LOSS ON HEATING OVEN	IS 1212 IS 15799-2008	91,749

ROLLING THIN FILM OVEN-INNER S.S.-(ASTM D1754)

Inner chamber made of S.S. 304 grade & outer of mild steel - powder coated or S.S 304. 65mm Glasswool insulation, double glass built in door to view inside temperature, Temp controlled at 163°C ± 1°C. by means of a calibrated PID based DIGITAL TEMP. INDICATOR CONTROLLER. Inside platform rotated by external motor from 5 to 6 R.P.M. (supplied with cups). To work on 230 V AC single phase.

Apparatus with accessories shall confirm to IS:9382. It shall be used for determination of heat and air on semi-solid bituminous materials by thin film oven test. The unit shall be heavily insulated and shall have a double glass built in door for view, inside temperature is controlled at 163 0 C +/- 10 C by AUTO TUNNING PID Temperature Controller. It shall meet the prescribed condition of temperature with an accuracy of 0.10 C. Inside platform should be rotatable by external motor from 5 to 6 R.P.M. 3 stainless steel containers shall also be provided to hold containers. (Supplied with containers) Inner chamber shall be made of stainless steel of 304 grade & outer of mild steel sheet stove painted to work on 230 volts, AC 50Hz supply.

Item No.-29,30,31,32

Item No.	Material	Name of Test	Name of Instrument	As per IS	Base Price
29	CONCRETE / PAVER BLOCK	COMPRESSION STRENGTH	DIGITAL COMPRESSIVE MACHINE	IS 516, IS 1959 IS 14858	2,49,760
30			CTM SOFTWARE WITH PC INTERFACE		22,654
31			BRICK TESTING ATTACHMENT FOR COMPRESSION TESTING MACHINE		5,720
32		SPLIT TENSILE TEST	SPLIT TENSILE ATTACHMENT FOR CONCRETE CUBE AND PAVER BLOCK - BIS 516, BIS 15658, ASTM C496		32,282

Digital dial Gauge and Micro Controller based COMPRESSION TESTING MACHINE (CTM) - 1000 KN-DIGITAL - AUTO PACE CONTROL-AUTO CALCULATION should be as per International design, Plate model for highest mechanical stability, accurate centering of

load and excellent repeatability. Auto pace rate control, auto stop and manual release on failure of test specimen. Reading of Load in KN and N/mm² with auto calculation with Pace Rate indication. CTM with Automatic Pace rate control is recommended for accurate Pace rate setting having inbuilt Storage capacity of 3000 Reading.

Compression testing machine shall meet the requirement as per IS 14858 & IS 516.

Compression testing machine should be operable through the Computer & Software supplied with the machine so that all the operation relating to machine control and functioning is done through computer & software. It should have provision for automatically turning the Pump on & off, controlling the pace rate and switching the machine off under pre-determined conditions. Control should release the pressure at the end of every run and re-initialize the machine at the end of every test.

The pace rate has to be maintained in the machine by suitable PID Controller.

Operation of the machine shall also be done through Digital Indicator.

It should have salient features as mentioned below.

1	Capacity	1000 kN
2	Least count	0.01kN to 0.1 kN
3	Maximum Clearance between Platens	390 mm
4	Maximum Clearance between side plates	260 mm
5	Platen size	222 mm dia
6	Ram/Piston stroke	Minimum 50 mm
7	Piston dia	157 mm

- **Loading Frame:** - It should be of fully welded construction with top cross head, base and solid walls. The precision ground hydraulic piston should be fixed to the base and the machine's platen are hardened, ground, and polished. The upper platen should come with self-aligning action and suitably sized spacers are also provided as standard to accommodate a variety of different sizes of specimen.
- **Pumping Unit:** - CTM should have minimum 1 HP, three phase, 440 V AC motor driven two- speed Hydraulic pump and bonded strain gauges based pressure transducer.
- **Digital Display of Indicator:** - It should have Digital display which shall be able to show the values of force & stress in metric or SI units and the integral load pacing bar shall display in kN/sec. Maximum load should held for approximately 15 minutes unless cancelled using the panel which has reset switch mounted on it.

Other key features should be as under.

- Configurable Engineering Unit for machine selection.
- Predefined Machine capacities for each engineering unit and Specific capacity can be selected from the drop menu.
- Flexible Calibration Points.
- Should have self aligning platen with fast accessory change capability.
- Peak Load, Peak Stress, Unique Test Record No. shall be displayed.
- Automatic stress determination and display.
- Should have Overload safety protection.
- Should have facility to configure more than one Mode like (1) Compression (2) Flexural (3)Tensile splitting strength . Each mode should have independent calibration points.
- Dynamic Calibration
- Menu Driven sample details.
- Data storage 3000 records.
- Data Download thru RS232 in ASCII format.
- Inbuilt SMPS to ensure constant voltage to digital indicator.
- Store records can be viewed & printed.
- Peak stress calculation based on sample type and shape.
- Password protection for system & calibration setup.
- 2% overload facility to calibrate the machine up to full capacity.
- Start, Stop, Pause & Reset facility.
- Automatic Pace rate control to set value.
- Auto close facility.
- Communication with supplied software through Serial Port (RS232). Machine can be operated through software.
- Online display of Load Vs Time
- **Should have Password protection for system & calibration setup.**

Silent Features of the Software:

- Test Method library
- Test Editor
- Tabbed Test & Recall Area
- Multiple Machine Control
- Multilingual
- Method Editor
- Multifaceted Security

Calibration

Calibration within 1% of full scale deflection with traceability to NABL should be provided.

Item No.-33

Material	Name of Test	Name of Instrument	As per IS	Base Price
CONCRETE / PAVEMENT BLOCK	COMPRESSIVE STRENGTH	DIGITAL COMPRESSIVE MACHINE	IS 516, IS 1959 IS 14858	2,49,760

Digital and Micro Controller based COMPRESSION TESTING MACHINE (CTM) - 3000 KN-DIGITAL - AUTO PACE CONTROL-AUTO CALCULATION should be as per International design, Plate model for highest mechanical stability, accurate centering of load and excellent repeatability. Auto pace rate control, auto stop and auto release on failure of test specimen. Reading of Load in KN and N/mm² with auto calculation with Pace Rate indication. CTM with Automatic Pace rate control is recommended for accurate Pace rate setting having inbuilt Storage capacity of 3000 Reading. There must no unnecessary sound while operating machine.

Compression testing machine shall meet the requirement as per IS 14858 & IS 516.

Compression testing machine should be operable through the Computer & Software supplied with the machine so that all the operation relating to machine control and functioning is done through computer & software. It should have provision for automatically turning the Pump on & off, controlling the pace rate and switching the machine off under pre-determined conditions. Control should release the pressure at the end of every run and re-initialize the machine at the end of every test. The pace rate has to be maintained in the machine by suitable PID Controller. Operation of the machine shall also be done through Digital Indicator. It should have salient features as mentioned below.

It should have salient features as mentioned below.

1	Capacity	3000 kN
2	Least count	0.01kN to 0.1 kN
3	Maximum Clearance between Platens	400 mm

4	Maximum Clearance between side plates	400 mm
5	Platen size	300mm dia
6	Ram/Piston stroke	Minimum 50 mm
7	Piston dia	272.2mm

- **Loading Frame:** - It should be of fully welded construction with top cross head, base and solid walls. The precision ground hydraulic piston should be fixed to the base and the machine's platen are hardened, ground, and polished. The upper platen should come with self-aligning action and suitably sized spacers are also provided as standard to accommodate a variety of different sizes of specimen.
- **Pumping Unit:** - CTM should have minimum 1 HP, three phase, 440 V AC motor driven two- speed Hydraulic pump and bonded strain gauges based pressure transducer.
- **Digital Display of Indicator:** - It should have Digital display which shall be able to show the values of force & stress in metric or SI units and the integral load pacing bar shall display in kN/sec. Maximum load should held for approximately 15 minutes unless cancelled using the panel which has reset switch mounted on it.

Other key features should be as under.

- Configurable Engineering Unit for machine selection.
- Predefined Machine capacities for each engineering unit and Specific capacity can be selected from the drop menu.
- Flexible Calibration Points.
- Should have self aligning platen with fast accessory change capability.
- Peak Load, Peak Stress, Unique Test Record No. shall be displayed.
- Automatic stress determination and display.
- Should have Overload safety protection.
- Should have facility to configure more than one Mode like (1) Compression (2) Flexural (3)Tensile splitting strength . Each mode should have independent calibration points.
- Dynamic Calibration
- Menu Driven sample details.
- Data storage 3000 records.
- Data Download thru RS232 in ASCII format.
- Inbuilt SMPS to ensure constant voltage to digital indicator.
- Store records can be viewed & printed.
- Peak stress calculation based on sample type and shape.
- Password protection for system & calibration setup.
- 2% overload facility to calibrate the machine up to full capacity.

- Start, Stop, Pause & Reset facility.
- Automatic Pace rate control to set value.
- Auto close facility.
- Communication with supplied software through Serial Port (RS232). Machine can be operated through software.
- Online display of Load Vs Time
- **Should have Password protection for system & calibration setup.**

Silent Features of the Software:

- Test Method library
- Test Editor
- Tabbed Test & Recall Area
- Multiple Machine Control
- Multilingual
- Method Editor
- Multifaceted Security

Calibration

Calibration within 1% of full scale deflection with traceability to NABL should be provided.

Item No.- 34

Material	Name of Test	Name of Instrument	As per IS	Base Price
CONCRETE	CURING	ACCELERATED CURING TANK & OVEN	IS 9013	81,701

IS 9013 Accelerated Curing Tank having capacity to accommodate various sizes of concrete cube moulds or Cement mortar Cube Moulds, with a facility for accelerated curing by boiling water method up to temperature range : 100 ± 2 °C as per IS standard IS:9013. Also it will have capacity for curing by warm water method at temperature 55 ± 2 °C.

Accelerated Curing Tank Should have capacity to accommodate various sizes of concrete cube moulds or Cement mortar Cube Moulds with a facility for accelerated curing by boiling water method up to temperature range : 100 ± 2 °C as per IS standard IS : 9013. Also it will have capacity for curing by warm water method at temperature 55 ± 2 °C.

The whole body of cube mould with the sample of concrete/cement mortar inside is to be immersed in the tank and the Tank is stout enough to bear heavy load on its platform. Tank will consist of a rectangular double walled metal cabinet, inner chamber made of thick gauge stainless steel. Outer chamber made of Galvanized sheet □ powder coated. Specially designed L shaped High wattage heaters should be mounted in the chamber in such a way that, it facilitates easy replacement within 5 minutes by normal skilled person. It will have facility to circulate water inside the chamber by stirrer to maintain the uniform temperature of water. Inside the chamber there will be a heavy gauge stainless steel perforated platform with ribs to withstand the heavy load of the cubes. It shall also have a lid with lifting handle to cover the chamber. The front panel will have power supply indicating lamp and one main switch suitable for operation on 220 V, 50 Hz single phase, AC supply. It will also have a DIGITAL Auto tuning PID temperature indicator cum controller fitted on the front panel. Clear working size: 31" X 25" X 10".

Item No.- 35

Material	Name of Test	Name of Instrument	As per IS	Base Price
CONCRETE BEAM	FLEXURAL STRENGTH	AUTOMATIC FLEXURAL STRENGTH TESTING MACHINE	IS 516	1,69,259

AUTOMATIC FLEXURAL STRENGTH TESTING MACHINE - DIGITAL

Suitable to test as IS:9399. Used for the determination of modulus of rupture of concrete, that is, 15 x 15 x 70 cm or 10 x 10 x 50 cm beams by three or four point loading method, Complete with motorized pumping unit, Digital Load indicator, To work on 220 Volts AC single Phase inclusive of 26 BLADES Feeler gauge metric & inch gap filler 0.04 to 0.63 mm thickness gauge for measurement tool marking gauge

Construction Details:

100 kN Capacity flexural machine with Digital Load Indicator Cum Controller

The machine should consist of a motorized load frame.

The lower platen should have two rollers, the distance between these two should be adjustable from 100mm to 800mm. Should have automatic pace rate control facility

For 150 mm x 150 mm x 700 mm beam, the center distance between the rollers is 600 mm, while it is 400 mm for beams of size 100 mm x 100 mm x 500 mm.

The upper platen should have also a pair of rollers whose distance is adjustable.

The distance between upper roller is 200 mm center to center, for 150 mm x 150 mm x 700 mm size beam and 133 mm for 100 mm x 100 mm x 500 mm size beam.

Microprocessor Based Digital Load Indicator to indicate applied load is fitted in the load frame.

The pace rate should be controlled automatically.

A separate electrically pumping unit housed in a cabinet is also supplied.

Pace rate control should not be manual and automatic

A micro switch and relay fitted inside the pressure gauge protects the unit from over loading.

The machine should have accuracy of Class 1 starting from 2% of the full capacity.

It should have easy front loading of the specimen.

It should be Class 1 range 4-100kN

Maximum vertical clearance distance between rings 425mm

Maximum horizontal clearance should be 640mm

Maximum Clearance between lower rollers should be 900mm

Weight should be 370kg

Salient Features of Digital Indicator:

Direct reading of total applied load in KN

Direct reading of compressive strength in kg/cm²

Direct reading of Flexural strength in N/mm² - no calculation is required

Peak hold facility

500 results should be stored

Section -III

Price Bid

Bill of Quantities with Item Rate price

Payment Break-up

Activity	Payment on Approved Rate of Item
On Supply at RMC Lab	57.39%
On Successful Erection and Installation	22.07%
On Successful Three Month Trial Run	8.83%
First Year Defect Liability Period with Calibration and Comprehensive Maintenance	No Payment
Second Year Calibration and Comprehensive Maintenance	8.26%
Third Year Calibration and Comprehensive Maintenance	9.09%

Bill of Quantities with price

Sr. No	Material	Name of Test	Name of Instrument	As per Latest IS Version	Description (including 2 Years Calibration and 2 Years Maintainance after One Year Defect Liability Period/Warranty Period)	Qty.	Unit	Base price per Unit without GST (Rs.)	% age Above/ Below or at par
1	SAND	SPECIFIC GRAVITY & WATER ABSORPTION	PYCNOMETER BOTTLE	IS 2386 P(3)	PYCNOMETER BOTTLE Supplied With brass cone, Has aluminum locking ring and rubber seal Capacity about 2 lbs - As Per IS : 2386 - Part-III, Method - III	5	No	934	
2	AGGREGATE	GRADING OF AGGREGATES	MOTORISED SIEVE SHAKER	IS 2386 P(1)	MOTORISED SIEVE SHAKER-GYRATORY-FOR 45CM DIA SIEVES WITH DIGITAL TIMER Sieve Shaker Carries upto 7 sieves of 45 cm diameter in single adaptor. Supplied with ISI marked sieves of diameter 100mm,80mm,63mm,50mm,40mm,31.50mm,25mm,20mm,16mm,12.50mm,10mm,8mm,6.30mm,4.75mm and Lid-Pan. Detailed specification as per Section	1	No	45,874	
3	AGGREGATE	GRADING OF AGGREGATES	MOTORISED SIEVE SHAKER	IS 2386 P(1)	MOTORISED SIEVE SHAKER-GYRATORY-FOR 30CM DIA SIEVES WITH DIGITAL TIMER Sieve Shaker Carries upto 7 sieves of 300mm diameter in single adaptor Supplied with ISI marked sieves of diameter 10mm,4.75mm,2.36mm,1.18mm,600micron,300micron,150micron,75micron and Lid-Pan. Detailed specification as per Section	1	No	40,777	
4	AGGREGATE	SP. GRAVITY & WATER ABSORPTION	BUOYANCY BALANCE WITH DENSITY BASKET	AIM 9933,BS 1881-114	BUOYANCY BALANCE 10KG WITH DENSITY BASKET - G.I. 20 X 20 CM Buoyancy balance of 10kg with 0.5g sensitivity and wire basket of not more than 6.3 mm galvanized wire mesh or a perforated container of convenient size with wire hangers not thicker than one mm suspending it from the balance, as per IS:2386 (Part III).	1	No	20,000	

Bill of Quantities with price

Sr. No	Material	Name of Test	Name of Instrument	As per Latest IS Version	Description (including 2 Years Calibration and 2 Years Maintainance after One Year Defect Liability Period/Warranty Period)	Qty.	Unit	Base price per Unit without GST (Rs.)	% age Above/ Below or at par
5	AGGREGATE	FLAKINESS & ELONGATION	THICKNESS GAUGE & LENGTH GAUGE	IS 2386 P(1)	FLAKINESS GAUGE - M.S. CHROME/POWDER COATED As per IS:2386-Part I	1	No	1,274	
6	AGGREGATE	FLAKINESS & ELONGATION	THICKNESS GAUGE & LENGTH GAUGE	IS 2386 P(1)	FLAKINESS GAUGE - ISI MARKED Consist of CRC sheet frame with M.S. Sliding panel having Normal Aperture Size of 63,50,40,31.5,25,20,16,12.5,10,6.3 mm as per IS	1	No	4,248	
7	AGGREGATE	FLAKINESS & ELONGATION	THICKNESS GAUGE & LENGTH GAUGE	IS 2386 P(1)	LENGTH GAUGE (ELONGATION GAUGE) As per IS:2386 (Part I)	1	No	1,240	
8	AGGREGATE	FLAKINESS & ELONGATION	THICKNESS GAUGE & LENGTH GAUGE	IS 2386 P(1)	LENGTH GAUGE - ISI MARKED Details Specification as following page	1	No	4,248	
9	AGGREGATE	IMPACT VALUE	IMPACT TESTING MACHINE	IS 2386 P(4); IS 9377	AGGREGATE IMPACT TESTING MACHINE Complete with a cylindrical cup, 102 mm dia X 50 mm depth, one measure 75 mm dia X 50 mm deep and a tamping rod of circular cross section 10 mm in diameter and 230 mm long, rounded at one end. AS PER IS: 2386 (Part - IV)/ IS 9377 With Blow counter	1	No	21,663	
10	AGGREGATE	ABRASION VALUE	LOS ANGELES ABRASION TESTING MACHINE	IS 10070, AIM 458	LOS ANGELES ABRASION TESTING MACHINE - WITH PRESETTABLE DIGITAL COUNTER & DIGITAL CONTROLLER BOX WITH MEMORY RETENTION FACILITY As per IS:2386 - IV.	1	No	1,61,410	

Bill of Quantities with price

Sr. No	Material	Name of Test	Name of Instrument	As per Latest IS Version	Description (including 2 Years Calibration and 2 Years Maintenance after One Year Defect Liability Period/Warranty Period)	Qty.	Unit	Base price per Unit without GST (Rs.)	% age Above/ Below or at par
11	AGGREGATE	CRUSHING TEST	AGGREGATE CRUSHING VALUE	IS 2386 P(4)	AGGREGATE CRUSHING VALUE TEST APPARATUS- WITH MEASURING CYLINDERS of 7.5 cm & 15 cm size	1	No	11,685	
12	CEMENT	CONSISTENCY INITIAL SETING TIME AND FINAL SETING TIME	VICAT APPARATUS	IS 4031 P(4), IS 5513 IS 10086	VICAT NEEDLE APPARATUS with needles for initial setting time and final setting time complete with mould of standard size as per IS:4031 P(4) and IS 5513	1	No	5,115	
13	CEMENT	(A) FINENESS BY BLAIN AIR PERMEABILITY	BLAIN AIR APPARATUS	IS 4031 P(2) IS 5516	BLAIN AIR PERMEABILITY TEST APPARATUS As per IS:4031(Part 2) and IS 5516. The apparatus comprises of Standard permeability cell made of brass, 12.7 mm inside diameter with one perforated metal disc and one plunger, A U-Tube glass manometer with rubber coupling for permeability cell, mounted on a wooden stand,, Latex rubber tubing, 30 cm long, 100 ml Dibutylphthalate liquid, Suction Bulb. Additional Instruments for the complete experiment Viz. Filter Paper discs, Precision Electronic balance(1 mg), Standard Cement,stop watch etc. available at extra cost.	1	No	4,927	
14	CEMENT	SOUNDNESS	LE CHATELIER APPARATUS	IS 4031 P(3) IS 10086	LE-CHATLIER MOULD WITH ISIS CERTIFICATION MARK- AS PER IS - SET OF SIX Should be complete with two glass plates and lead weight and Le Chatlier water bath with controller. As per IS : 269, 712, 5514, 1727, 2645, 4031, 6932	1	No	2,973	

Bill of Quantities with price

Sr. No	Material	Name of Test	Name of Instrument	As per Latest IS Version	Description (including 2 Years Calibration and 2 Years Maintanance after One Year Defect Liability Period/Warranty Period)	Qty.	Unit	Base price per Unit without GST (Rs.)	% age Above/ Below or at par
15	CEMENT	COMPRESSIVE STRENGTH	MORTAR MIXER & VIBRATION MACHINE	IS 4031 P(6)	MORTAR MIXER-4.75 LITERS- IS 10890 As per IS:10890 inclusive of Standarad Sand (Grade 1, 2, 3)	1	No	82,404	
16	CEMENT	COMPRESSIVE STRENGTH			VIBRATING MACHINE WITH DIGITAL TIMER & MOULD The machine shall be capable for compaction of cement mortar cubes as per IS: 4031 and designed as per Standard IS : 10080 Requirements.	1	No	51,991	
17	STEEL	TENSILE YIELD ELONGATION, BEND and REBEND	UNIVERSAL TESTING MACHINE	IS 1608 P(1)	Digital Microprocessor based UNIVERSAL TESTING MACHINE (UTM) COMPUTERISED-1000 KN to be Supplied with Compression, Tension and Transverse test arrangement containing in built memory of 3000 Reading and computer software with attachment inclusive of Digital Vernier Caliperse 30 com long having least count 0.01 mm and Micrometer Screw Gauge of Size 0 to 25 mm having least count 0.01 mm	1	No	16,27,010	
18	BITUMEN	BINEDER EXTRACTION		ASTM 2172, IRC SP:11	SPECIAL MODEL WITH AC MOTOR AND DRIVE : Complies with following International Standards - ASTM D 2172, AASHTO T 58, T 164. Detailed specification as per technical specification	1	No	48,423	
19	BITUMEN	PENETRATION	STANDARD PENETROMETER	IS 1448(P-60),1203	STANDARD PENETROMETER FOR BITUMEN - AUTOMATIC DIGITAL TIMER - DIAL GAUGE As per IS 1203, IS 1448. ASTM D5. Detailed specification as per technical specification.	1	No	25,995	

Bill of Quantities with price

Sr. No	Material	Name of Test	Name of Instrument	As per Latest IS Version	Description (including 2 Years Calibration and 2 Years Maintenance after One Year Defect Liability Period/Warranty Period)	Qty.	Unit	Base price per Unit without GST (Rs.)	% age Above/ Below or at par
20	BITUMEN	DUCTILITY	DUCTILITY TESTING MACHINE SS Body	IS 1208, ASTM D113, AASTHO 51, IS 15462(2019)	DUCTILITY TESTING MACHINE - THERMOSTATIC - (NON-REFRIGERATED) - (IS 1208) As per IS : 1208. SS Body NonDigital, with Thermostatic control. Complete with 3 Nos. Ductility Moulds and one mould casting Plate. Digital temp. controlled machine available at extra cost, if desired. Further details as mentioned in detailed description.	1	No	25,995	
21	BITUMEN	DUCTILITY	DUCTILITY TESTING MACHINE	IS 1208, IS 15462(2019)	DUCTILITY TESTING MACHINE - DIGITAL TEMP CONTROL –ELECTRICALLY OPERATED REFRIGERATED - IS 1208 Detail Specification as per following page.	1	No	1,67,170	
22	BITUMEN	SOFTENING POINT	RING & BALL APPARATUS	IS 1205	RING AND BALL APPARATUS-ELECTRICALLY OPERATED A.C. MOTOR Also called Softening Point Apparatus. Basic Model. This apparatus is meant for determination of softening point of bituminous and petrochemical materials according to IP 58 and IS 1205. The apparatus consist of Glass beaker of heat resistant glass of internal dia 8.5 cm X 12 cm depth (approx.), Two steel balls each of 9.5 mm dia, Two tapered brass rings, Two ball guides, ring stand and a motorized stirrer fitted with AC Motor. Higher end models also available for sophisticated application. Rate of rise @ 5°C per minute is Possible only in Digital Model.	1	No	11,944	

Bill of Quantities with price

Sr. No	Material	Name of Test	Name of Instrument	As per Latest IS Version	Description (including 2 Years Calibration and 2 Years Maintenance after One Year Defect Liability Period/Warranty Period)	Qty.	Unit	Base price per Unit without GST (Rs.)	% age Above/ Below or at par
23	BITUMEN	ABSOLUTE VISCOSITY & KINEMATICS VISCOSITY	VISCOMETER	IS 1206 P(2 & 3)	ABSOLUTE AND KINEMATIC VISCOSITY TESTING EQUIPMENTS As per IS: 1206 (Part II and III). Supplied complete with Viscosity bath with builtin Digital stop watch, Vacuum Pump - capable to maintain vacuum of 300 mm/Hg, with required accuracy, Vacuum Manning Viscometer No.12 and 13, Reverse flow Viscometer No.6, Silicon oil, silicon tubes and calibration Certificate for Viscosity bath, certificate of constant for Viscometers. Complete with instruction manual. Detailed Specification as mentioned in technical part mentioned below.	1	No	2,29,372	
24	BITUMEN	LOSS ON HEATING	Rolling THIN FILM OVEN/LOSS ON HEATING OVEN [AIM 9840]	IS 1212 IS 15799-2008	Rolling THIN FILM OVEN-INNER S.S.-(ASTM D1754)- Inner chamber made of S.S. 304 grade & outer of mild steel - powder coated or S.S 304. 65mm Glasswool insulation, double glass built in door to view inside temperature, Temp controlled at 163°C ± 1°C. by means of a calibrated PID based DIGITAL TEMP. INDICATOR CONTROLLER. Inside platform rotated by external motor from 5 to 6 R.P.M. (supplied with cups). To work on 230 V AC single phase.	1	No	91,749	
25	BITUMEN	SP. GRAVITY	SPECIFIC GRAVITY BOTTLE	IS 1202	SPECIFIC GRAVITY BOTTLE - 50 ML - WIDE MOUTH FOR BITUMEN	5	No	3825	
26	BITUMEN	BINDER EXTRACTOR FULLY AUTOMATIC		ASTM 2172	BITUMEN EXTRACTOR - MOTORISED WITH VARIABLE SPEED WITH DIGITAL RPM INDICATOR SPECIAL MODEL WITH AC MOTOR AND DRIVE : This model facilitates precise speed control and vibration free smooth operation. Speed variation up to 3600 RPM.	1	No	48,423	

Bill of Quantities with price

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					Complies with following International Standards - ASTM D 2172, AASHTO T 58, T 164. Detailed specification as follows: Complete with 25 filter discs.				
27	BITUMEN	HOT AIR OVEN (FOR BITUMEN)			HOT AIR OVEN-DIGITAL-75 x 75 x 75 CM-250C-INNER S.S. CHAMBER Double walled, inner chamber S.S.304, Outer CRC powder coated , 65 mm thick glass wool insulation, 80/20 nichrome heating elements placed under ribs at bottom and sides for uniform heat distribution Temp. Range. 50°C to 250°C , Auto tune Dual Display Digital, forced air circulation, Working on 230 Volts AC Single Phase.	1	No	55,814	
28	General		Weighing scale	IS 1435	Electronic Weighing scale Platform type with Digital Display having capacity (a) 100 kg with least count 1 gram and (b) 50 Kg with least count 1 gram and (c) 15 Kg with least count 0.01 gram	1	No	18000	
29	CONCRETE / PAVER BLOCK	COMPRESSIVE STRENGTH	DIGITAL COMPRESSIVE MACHINE	IS 516, IS 1959 IS 14858	Digital dial Gauge and Micro Controller based COMPRESSION TESTING MACHINE (CTM) - 2000 KN-DIGITAL - AUTO PACE CONTROL-AUTO CALCULATION should be as per International design, Plate model for highest mechanical stability, accurate centering of load and excellent repeatability. Auto pace rate control, auto stop and manual release on failure of test specimen. Reading of Load in KN and N/mm ² with auto calculation with Pace Rate indication digitally. CTM with Automatic Pace rate control is recommended for accurate Pace rate setting having inbuilt Storage capacity of 3000 Reading. Detailed Specification as per Section-3	1	No	2,49,760	

Bill of Quantities with price

Sr. No	Material	Name of Test	Name of Instrument	As per Latest IS Version	Description (including 2 Years Calibration and 2 Years Maintenance after One Year Defect Liability Period/Warranty Period)	Qty.	Unit	Base price per Unit without GST (Rs.)	% age Above/ Below or at par
30	CONCRETE / PAVER BLOCK	COMPRESSIVE STRENGTH	DIGITAL COMPRESSIVE MACHINE		Recommend Accessories CTM SOFTWARE WITH PC INTERFACE	1	No	22,654	
31	CONCRETE / PAVER BLOCK	COMPRESSIVE STRENGTH	DIGITAL COMPRESSIVE MACHINE		Recommend Accessories BRICK TESTING ATTACHMENT FOR COMPRESSION TESTING MACHINE	1	No	5,720	
32	CONCRETE / PAVER BLOCK	COMPRESSIVE STRENGTH	DIGITAL COMPRESSIVE MACHINE		SPLIT TENSILE ATTACHMENT FOR CONCRETE CUBE AND PAVER BLOCK - BIS 516, BIS 15658, ASTM C496	1	No	32,282	
33	CONCRETE / PAVER BLOCK	COMPRESSIVE STRENGTH	DIGITAL COMPRESSIVE MACHINE	IS 516, IS 1959, IS 14858	COMPRESSION TESTING MACHINE - 3000 KN-DIGITAL -AUTO PACE CONTROL, AUTO CALCULATION Should as per International design, Plate model for highest mechanical stability, accurate centering of load and excellent repeatability. Auto Pace rate control, auto stop and auto release on failure of test specimen. Reading of Load in KN and N/mm ² with auto calculation. With Pace Rate indication on display. CTM with Automatic Pace rate control is recommended for accurate Pace rate Setting. Further details as mentioned in Technical Part on following pages.	1	No	2,49,760	

Bill of Quantities with price

Sr. No	Material	Name of Test	Name of Instrument	As per Latest IS Version	Description (including 2 Years Calibration and 2 Years Maintenance after One Year Defect Liability Period/Warranty Period)	Qty.	Unit	Base price per Unit without GST (Rs.)	% age Above/ Below or at par
34	CONCRETE / PAVER BLOCK	WATER ABSORPTION	ACCELERATED CURING TANK & OVEN	IS 9013	ACCELERATED CURING TANK-INNER S.S.-FOR 6 CUBES OF 150MM – IS 9013 Accelerated Curing Tank having capacity to accommodate various sizes of concrete cube moulds or Cement mortar Cube Moulds, with a facility for accelerated curing by boiling water method up to temperature range : 100 ± 2 °C as per IS standard IS : 9013. Also it will have capacity for curing by warm water method at temperature 55 ± 2 °C.	1	No	81,701	
35	CONCRETE BEAM	FLEXURAL STRENGTH	FLEXURAL STRENGTH TESTING MACHINE	IS 516	AUTOMATIC FLEXURAL STRENGTH TESTING MACHINE - DIGITAL Suitable to test as IS:9399. Used for the determination of modulus of rupture of concrete, that is, 15 x 15 x 70 cm or 10 x 10 x 50 cm beams by three or four point loading method, Complete with motorized pumping unit, Digital Load indicator, To work on 220 Volts AC single Phase inclusive of 26 BLADES Feeler guage metric & inch gap filler 0.04 to 0.63 mm thickness guage for measurement tool marking guage	1	No	1,69,259	
36	Computer & Printer				Computer and Geotechnical software system for testing, analyzing and reporting. Computer hardware latest version with necessary hardware features as per detailed specification/configuration	1	No	1,13,270	
					TOTAL Amount Rs. 37,42,625				
					Rounded to Rs. 37,60,000				